

Mid-Term Review – Belarus Green Cities

Official Project Title: *Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus*

Country: Belarus

UNDP PIMS# 5372

GEF Project ID# 4981

GEF Operational Focal Area: CCM (Climate Change Mitigation)

GEF Strategic Programs: CCM-4 (Promote energy efficient, low carbon transport and urban systems) and CCM-2 (Promote market transformation for energy efficiency in industry and the building sector)

Ministry of Natural Resources and Environmental Protection
United Nations Development Programme
Global Environment Facility

April 26, 2019

Mid-Term Review Timeline

Mission: February 11 – 23, 2019: Minsk, Novopolotsk, Polotsk, Novogrudok, Brest, and Baranovichy, Belarus

Main Work: January 6 – March 17, 2019 (from start of document review to draft report)

Report Reviews and Finalization: March 18, 2019 – April 26, 2019

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Project Information Table

Project Title	Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus (<i>Belarus Green Cities</i>)		
UNDP Project ID (PIMS#)	5372	PIF Approval Date:	June 20, 2013
GEF Project ID (PMIS#)	4981	CEO Endorsement Date:	June 18, 2015
Atlas Business Unit Award #: Project ID:	00081828 00090983	ProDoc Signature Date (date project began):	October 30, 2015
Country:	Belarus	Date project manager hired:	late 2016 (1 st PM) May 2017 (2 nd PM)
Region:	Europe & CIS	Inception Workshop date:	July 6, 2017
Focal Area:	CCM (climate change mitigation)	Midterm Review completion date:	March 17, 2019 (draft report) April 26, 2019 (response to UNDP CO and PMU comments and final report)
GEF Focal Area Strategic Objectives:	CCM-4: Promote energy efficient, low carbon transport and urban systems; CCM-2: Promote market transformation for energy efficiency in industry and the building sector	Planned project closing date:	March 1, 2021
Trust Fund:	GEF TF	If revised, proposed op. closing date:	NA (<i>leaving option open for extension to Sept. 1, 2022</i>)
Executing Agency/ Implementing Partner:	Ministry of Natural Resources and Environmental Protection (MNREP)		
Other Execution Partners:	Municipalities of Polotsk, Novopolotsk and Novogrudok		
Project Financing (USD)	<i>at CEO Endorsement (USD) - expected</i>		<i>at Midterm Review (USD) – realized as of 12/31/2018</i>
[1] GEF Financing:	3,091,000		907,398
[2] UNDP Contribution:	3,000,000		NA
[3] Government:	8,945,000		6,312,318 + NA portion
[4] Other Partners:	490,420		55,519 + NA portions
[5] Total Co-financing [2+3+4]:	12,435,420		6,367,837 + NA portions
TOTAL PROJECT COSTS [1+5]	15,526,420		7,275,235

Acronyms, Abbreviations, and Other Definitions

adaptive traffic lights: Smart traffic lights that can adjust based on changing traffic patterns.

Baranovichy: City in Brest Oblast of Southwest Belarus with population of 170,000. Baranovichy is one of five “replication cities” selected by the project for preparation of a SECAP.

BDB – Belarus Development Bank

BelNIIP: State institution under MoAC responsible for preparing master plans for all 311-312 small and medium cities in Belarus, which include all Belarusian cities except for Minsk.

Bike lane: In this report, refers to a lane for bikes that is part of a larger street accommodating motorized transport. In Belarusian cities, the lane may also be protected by bumps placed on the road.

Bike trail: in this report, refers to a specially made path, which may be paved and which only accommodates bikes and, possibly, pedestrians.

BNTU – Belarusian National Technical University. Experts from BNTU in both urban planning and transport have provided services to the project.

Brest: City in Brest Oblast of Southwest Belarus, neighboring Poland. Brest’s population is 320,000. The city has prepared a symbio city plan with support of the project.

BTU – Belarus Transport Union. One of the first NGOs in Belarus. Cooperates with many former government experts. BTU is preparing the ISUMP for the project.

Bus lane: A special lane painted typically on the far right lane of the road that only allows buses and prohibits cars, except for right turns. Bus lanes are a key component of bus rapid transit (BRT), in which conditions are optimized to speed up public transit and make it more attractive.

CDR – combined delivery report: UNDP document that shows realized and committed project expenditures.

CO₂ – carbon dioxide.

Co-financing: For a GEF project, co-financing is the funding provided by other sources to support the same outcomes and, often, the same outputs and activities as the GEF funds.

CER – GEF CEO Endorsement Request. A project design document submitted, along with the project document (“ProDoc”), to the GEF once full project design has been completed.

circular intersection: An intersection at which traffic flows around a circular center island instead of stopping at traffic lights. This kind of intersection used under appropriate conditions can reduce vehicle idling times and thus reduce emissions. Also known as “roundabout.”

Covenant of Mayors: A European-based movement for local energy and climate actions. Within two years of joining, signatories are required to prepare a SECAP (previously, a SEAP).

Department of Energy Efficiency: In Belarus, under State Committee for Standardization, the government department responsible for energy efficiency.

EBRD – European Bank for Reconstruction and Development

Ecopartnership – NGO registered in Belarus that has an EU-funded project supporting cities that are signatories of the Covenant of Mayors. The project is helping 13 cities prepare SECAPs and has a related small grants program for civil society organizations and cities.

EE – energy efficiency. Informal acronym used in this document.

Executive Committee: At the city-level in Belarus, the government organ responsible for most decision-making. It is led by a chair and deputy chairs.

GEF – Global Environment Facility. Core funding source of this project.

GHG – greenhouse gas

GHG DER – direct greenhouse gas emission reduction. In this report, “direct” means directly due to project activities.

GHG ER – greenhouse gas emission reduction

GPSC – Global Platform for Sustainable Cities. A program funded by the GEF and implemented by the World Bank. The platform partners with 28 cities in 11 countries and works to find solutions for

sustainable urban growth. It has USD 150 million in funding. Though Belarus is not included in its scope of funding, *Green Cities* has attended a GPSC conference.

GorSvet: Smart LED street lighting project in Polotsk, funded by EU. Project has similar timeline to Novogrudok smart LED street lighting project, with installation expected soon, but takes a more comprehensive and costly approach, replacing cables, etc.

GUD – green urban development. An approach to municipal development that emphasizes environmental sustainability and integrates sectoral aspects (energy, waste, and transport) with spatial planning.

GUDP – green urban development plan. Municipal plan taking a GUD approach and involving cities closely in development of the plan.

GU Planning – municipal planning that incorporates GUD/ GUDP approaches.

Interaction: NGO with activity in Belarus. Interaction, with EU funding, supported Polotsk in preparing its SUMP and developing its earliest bicycle lanes. Interaction now has an EU-funded project in which it is helping about ten Belarusian cities prepare SECAPs.

INV – funds designated for investment in equipment and infrastructure, in contrast with TA funds, which are to be used for services. The distinction between TA and INV is used in budget allocations for GEF projects.

IP – Implementing Partner. In a nationally implemented UNDP-supported GEF-financed project, the government agency responsible for implementation. MNREP is the IP of *Green Cities*.

ISUMP – Integrated SUMP. Used in this report to refer to a plan that integrates sustainable urban mobility planning for two cities, in the case of *Green Cities*, Polotsk and Novopolotsk. SUMPs (for one city each) are much more common than ISUMPs, but because these cities are so close together, there is strong need for an ISUMP.

M - million

M&E – monitoring and evaluation

MIA – Belarus’ Ministry of Internal Affairs. Relevant to the project due to its role in overseeing traffic and reviewing master plans via the State Traffic Police, a branch of MIA.

MinskGrado: State institution under MoAC responsible for preparing master plan for Minsk.

MNREP – Belarus’ Ministry of Natural Resources and Environmental Protection. MNREP is the project Implementing Partner.

MoAC – Belarus’ Ministry of Architecture and Construction. Oversees urban planning, among other areas.

MoE – Belarus’ Ministry of Economy. Responsible for economic forecasting and regional planning. MoE has been participating in project events.

MP – master plan. Informal abbreviation used in this report to refer to the urban plans prepared by BelNIIP for small and medium Belarusian cities and by MinskGrado for Minsk. These plans are also called “general plans.” They are spatial plans for structures and roads and include zoning aspects. They designate priority measures, but do not include costing.

MRV – monitoring, reporting, and verification. In the case of *Green Cities*, MRV refers to such work done to determine GHG emissions and GHG ERs achieved.

MTR – midterm review. An evaluation of a project taking place midway through its lifetime.

MTR team: In the case of this report, refers to the team of two, the international consultant and national consultant, that conducted the MTR and prepared this report.

NGO – non-governmental organization: NGOs are both non-profit and non-governmental.

Novogrudok: City in Grodno Region west of Minsk with population of 30,000. Novogrudok is the pilot city of the project’s municipal EE demos.

Novopolotsk: City in Vitebsk Oblast of northern Belarus with population of 107,000. Novopolotsk along with its neighbor city Polotsk (at closest just 2.5 km away) are the two pilot cities of the project’s SUT demos.

Oblast: Region. Belarus is divided administratively into six oblasts. These, in turn, are divided into districts.

PB – Project Board.

PIF – Project Information Form: initial proposal for a GEF project. The PIF is a rough concept document. Once approved, the GEF allocates funds for the full project, but detailed project design must be completed and cleared (via submission of ProDoc and CER) before funds can be released. (The GEF often provides separate funds for detailed project design around the time of PIF approval.)

PIR – Project Implementation Review. A template-based document that is prepared mid-year each year for active UNDP-supported GEF-financed projects. The document reviews progress towards results and quality of implementation. It includes an update on the status of each project indicator.

PIU – Project Implementation Unit. In the case of the project, the PIU consists of a full-time Project Manager, Administrative and Finance Officer, Communications Officer, and (as of recently) Procurement Officer. It also currently has three half-time experts, one for each of GUD, SUT, and EE.

PM – project manager. For *Belarus Green Cities*, the person leading the project team and responsible for day-to-day implementation.

P-NP – Polotsk and Novopolotsk. Informal abbreviation used for this report.

Polotsk: City in Vitebsk Oblast of northern Belarus with population of 85,000. Polotsk, along with its neighbor city Novopolotsk (at closest just 2.5 km away), are the two pilot cities of the project's SUT demos.

ProDoc – Project Document. A full project design document. In the case of UNDP-supported GEF-financed projects, the ProDoc is submitted to the GEF along with the CER to receive approval of the full project design.

Project team: In the case of this report, refers to the PIU/ individuals affiliated with the PIU.

Roundabout: An intersection at which traffic flows around a circular center island instead of stopping at traffic lights. This kind of intersection used under appropriate conditions can reduce vehicle idling times and thus reduce emissions. Also called “circular intersection.”

RTA – Regional Technical Advisor. For UNDP-supported GEF-financed projects, a regionally-based expert and manager who provides technical and management guidance to the design and implementation of projects in focal areas under his or her purview.

SD – sustainable development. An informal abbreviation used in this report.

SDGs – The Sustainable Development Goals: A set of 17 global goals set by the UN General Assembly in 2015 for achievement in 2030.

SEAP – sustainable energy action plan: A municipal plan to reduce energy use, which was previously required of Covenant of Mayors signatories. (Now a SECAP is required.)

SECAP – sustainable energy and climate action plan: A municipal plan to reduce energy use and adapt to climate change. A SECAP is required of Covenant of Mayors signatories within two years of committing to the Covenant.

SIDA – Swedish International Development Cooperation Agency

smart street lighting: Street lighting with automatic controls that allow each of a city's lights to be controlled individually from one location and enables late night dimming to save energy when people are not around.

smart meter: Utility meter that uses wireless communication to provide frequent remote readings to the utility company. Smart meters eliminate the need for in-person reading of meters.

SUMP – sustainable urban mobility plan. A plan for a city that describes various policies, strategies, and investments that together will improve mobility of the citizens in the city and reduce negative environmental impacts of transport, thereby improving quality of life. Ideally, the plan will include enough details so that it can lead seamlessly to implementation.

SUT – sustainable urban transport

sybio plan: A type of sustainable urban development plan developed under Swedish the concept of "smart city." Most provisions and goals are similar to a GUDP.

synchronized traffic lights: These traffic lights are coordinated from intersection to intersection so that vehicles going an appropriate speed down a main road may hit a “green wave,” in which they encounter a green light at each intersection, so that they don’t need to stop.

TA – technical assistance. Funds designated for service, in contrast with INV funds, which are to be used for equipment and infrastructure. The distinction between TA and INV is used budget allocations for GEF projects.

TE – terminal evaluation. An evaluation conducted towards the end of a project’s lifetime. A TE is required for all UNDP-supported GEF-financed projects.

TOR – terms of reference. A document describing work tasks. Often used to recruit consultants or contracting firms for a project.

UNDP – United Nations Development Programme. GEF Implementing Agency for the project.

UNDP CO – UNDP Country Office. In the case of the *Belarus Green Cities* project, UNDP CO refers to the UNDP Belarus Country Office.

UNDP-GEF Project: Project with core funding from GEF that is supported by UNDP as GEF Implementing Agency.

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The MTR team is highly appreciative of the contributions of the many stakeholders who supported the MTR through generous contributions of their time, effort, and insights. First and foremost, the *Green Cities* project team, including its affiliated experts and pilot city coordinators, both participated directly in in-depth consultations with us and expertly facilitated an incredible mission that allowed us to gain many other insights. UNDP Belarus and UNDP Istanbul Regional Hub provided strong guidance. The original project designers shared their perspective so we could better understand their original intention and experience with project design. National-level officials, state design institutes, private sector designers, educators, NGOs and other donor projects, and sub-contractors and consultants to the project provided a rich range of perspectives and useful insights. In the cities of Novopoltsk, Polotsk, Novogrudok, Brest, and Baranovichy, the executive committees, members of the demo or plan preparation coordinating committees, and, in some cases, citizens/NGOs and educators shared with us their experience, assessments, and hopes for their cities. Specific organizations and individuals are noted with more detail in the realized mission and consultation schedule provided in Annex 1. We wish to thank all of those listed as well as several who participated in group meetings whose names may not be included.

Executive Summary

The MNREP-UNDP-GEF *Belarus Green Cities Project* (official title: Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus) has as its objective “the development of green urban development plans and pilot green urban development projects related to energy efficiency and sustainable transport in small and medium cities in Belarus.” The project’s four targeted outcomes are: (1) “Green urban development plans successfully developed and adopted;” (2) “Successful projects on sustainable urban transport completed in Novopolotsk and Polotsk;” (3) “Successful pilots on energy efficiency completed in Novogrudok;” and (4) “Growth in green city development in Belarus,” the last being the “replication outcome.” The project’s three pilot cities are Novopolotsk, Polotsk, and Novogrudok. Ten replication cities are targeted, including Brest. MNREP is the project’s IP. UNDP is the primary provider of guidance and backstopping. MNREP chairs the PB, which is intended to meet at least two times per year. Core funds of USD 3,091,000 are provided by the GEF. With intended five-year duration, the project has an official start date of Oct. 30, 2015, but the inception workshop, after which there was true ramp-up of activities, wasn’t held until July 6, 2017, only about 1.5 years prior to launch of the MTR. This was due to the Government of Belarus requirement that donor projects be registered (accounting for about one year of delay) and to a change in project manager early on in implementation. The PIU consists of four full-time staff: project manager, administrative and finance officer, communications officer, and (recently added in anticipation of major procurements for the project demos) procurement officer. In addition, three half-time experts in each of GUD, SUT, and EE are affiliated with the PIU, as are two part-time local coordinators for the demo cities.¹ And, the project retains a number of other experts and contracting organizations on an assignment-by-assignment basis.

Status of project work: A brief description by outcome of progress on main outputs/ activities (per original design in the ProDoc²) follows:

1. *Outcome 1. Green Urban Development Plans:* The project has developed a methodology whereby indicators are first selected by cities and then GUDPs are designed based on indicator targets. For the three GUDPs targeted (one for each pilot city), a draft has been delivered to each respective municipal administration; and public discussions are planned for each city in April-May 2019. Officials/ employees in all three cities have been actively involved in GUDP preparation. A finalized GUDP-like plan (called “symbio city plan”) has been prepared for Brest with active participation of city officials/ employees and has been officially adopted by the city. (Strictly speaking, Brest’s plan is part of Outcome 4, but being finalized first, is included here.) As for targeted policy recommendations in EE and SUT, the project has prepared recommendations for smart LED street lighting standards and prepared a report on SUT legislation. As for target of integrating GUD into legal/ regulatory framework, the project has prepared a relevant report with recommendations and has made recommendations that have been adopted into the already-issued policy documents: (1) *Country Profile on Housing and Land Management of the Republic of Belarus* and (2) *Concept of the National Strategy of Sustainable Development*, including in the latter text that calls for “introduction of the principles and methods of green urban development.” In addition, the project plans to prepare recommendations for inclusion in the full new version of the *National Strategy of Sustainable Development*, for which a draft is to be issued soon. Related to the aim of carrying

¹ There is one local coordinator for the pair of nearby demo cities Polotsk and Novopolotsk and another local coordinator for the demo city of Novogrudok.

² It is important to note that outputs/ activities as designed in ProDoc can be modified to better enable project to achieve targeted outcomes. The text here on “progress on outputs/ activities” uses terms such as “targeted,” “intended,” and “with the aim of” to refer to outputs/ activities as conveyed in the ProDoc and CER. This text also notes items carried out that were not included in the ProDoc, but instead adopted by team as potentially effective ways to reach the targeted project outcomes and objective (e.g. study tours and finance study).

out national workshops on GUD, the project has carried out two study tours with approximately 20 participants each³ and held six major conference-like events with attendees varying from 50 to 132. Over the past year and a half, a number of smaller events have been held as well, so that events have totaled over ten per year. The project has also supported UNDP Belarus' role as coordinator of European Mobility Week. With regard to the aim of developing an MRV framework for GUD in Belarus, one of the originally intended outputs of Outcome 1, the project has prepared a 17-page report on MRV best practices and influenced the development of a new UNDP-GEF project, *Capacity Building for Emissions Trading and Strengthened MRV*, which will have USD 840,000 in GEF funding and had its ProDoc approved in November 2018. The project plans to prepare designs ("strategic concepts for transformation") for an "urban block" in each of the three pilot cities. These designs ("strategic concepts for transformation") will include several city blocks each and plans for mixed use development (residential and commercial), green spaces, transport, and other aspects of green urban development and include estimated costs of proposed measures.

2. *Outcome 2. SUT pilots and ISUMP*: For the targeted ISUMP, the project has conducted a transport survey in Polotsk/ Novopoltsk and prepared a draft version of the ISUMP. As for the intended feasibility study of integration of the two cities' bicycle networks, an extensive feasibility study covering a bicycle trail between the two cities, extension of the bicycle lanes within the cities, and incorporation of cycling storage infrastructure has been prepared. As for "targeted feasibility studies to address strategic transport needs," the project has prepared a feasibility study on public transport with substantial baseline data collection, but not on measures for private cars. As for the originally targeted output of an MRV program for measuring GHG reductions from SUT investments, the aforementioned feasibility studies estimate CO2 reductions for proposed activities. No specific work has been done yet on developing an MRV program for SUT investments, though this might follow demo implementation. In terms of the targeted demos, final agreement on the details of these have not been reached but progress has been made. The two cities appear in strong agreement on a 3 km cycle trail between them. There is significant enthusiasm from some groups of stakeholders about the trail, though city willingness to incorporate additional bicycle lanes on city roads is unclear. As for investment in public transit services, the main ideas under discussion at the time of the MTR mission were improved bus stops in Polotsk and LED signboards at bus stops in both cities. Enthusiasm for these measures is not that high; and the signboard initiative may face administrative and/or technical barriers. As for targeted bus priority lanes and traffic light synchronization, the cities indicated during the MTR mission that they will not be implementing bus lanes, though now (following post-MTR developments) it is understood that Polotsk has approved plans for piloting 4 km of bus priority lanes and is considering time of day restrictions on driving of private vehicles on certain city roads as recommended in the project-prepared traffic management document (originally intended to help Polotsk deal with temporary bridge closure). Final decisions on these measures will be decided upon by the traffic police by April 30, 2019. Novopolotsk is in agreement with the traffic light synchronization demo on its main thoroughfare, though there is some discussion among experts whether this would serve to mainly encourage private car use and not benefit large capacity buses. Another measure being considered are removal of pedestrian cross walks. The proposed items as understood during the MTR mission appeared to lack measures to discourage private car use and shorten trip times for public transport. Thus, it is considered a positive development that Polotsk is now said to be likely to adopt piloting of 4 km of bus priority lanes and time of day private car restrictions on certain city center roads. During the MTR mission, the team learned that the cities may be carrying out other measures (such as improvement of bus routes, a roundabout in Polotsk, pedestrian streets in both cities,

³ While the study tours were paid for from budget allocated for Outcome 2, which is focused on SUT pilots, the MTR team believes the tours conceptually are a better fit for Outcome 1, which promotes GUDP more broadly, and are thus included here. It is our understanding that the study tours were broader than SUT alone.

etc.) with their own funds/ company funds, but so far these are not being considered a part of the “package” of project demos.

3. Outcome 3. Municipal EE Pilots: Regarding the target of “detailed feasibility studies on energy efficiency in Novogrudok and other cities in Belarus,” the project has prepared a feasibility study on EE street lighting for Novogrudok. Regarding the targeted street lighting demo, the project has contracted this work in a combined design, equipment, and installation agreement. Installation should begin this year. The targeted municipal laundry demo was completed by Novogrudok prior to the project becoming active. Thus, the project, with approval of the Project Board, has decided to replace this output with a demo in which multiple smart meters (for heating, hot water, cold water, electricity, and gas) are installed in each of 60 apartments in a single apartment building. The apartments currently lack meters for heating and will get a regulator in addition to heating smart meter. The apartments already have meters for the other utilities indicated, but these meters are not smart. The smart meter demo will support the January 2019 Government of Belarus’ *New Decree on Modernization of Apartment Buildings*, which indicates that each apartment building in the nation should have smart meters. A feasibility study for the smart meter demo has recently been completed. A specific apartment building has been targeted. Of 60 apartment owners, 36 have now agreed to participate, 11 have refused, and 13 are undecided.

4. Outcome 4. Replication of Green Urban Development: Of the intended updated SEAPs for Polotsk and Novogrudok and the SEAP for Novopolotsk, a new SECAP for Novogrudok (minus the climate portion) was delivered in 2017, though some key city stakeholders are not aware of it. A SECAP for Novopolotsk and a new one for Polotsk were prepared (both minus the climate portion) in early 2019. As for the targeted SEAPs or GUDPs for 10 additional cities, the project has selected via competition five cities (among nine or ten applying) for which SECAPs (minus the climate portion) will be prepared; and four of these were completed in the first part of 2019. As noted under Outcome 1, Brest’s Symbio City Plan is finalized and adopted by the city. The project plans to prepare GUDPs for four other cities; and selection of these cities among the 24 that submitted proposals by the deadline of March 31, 2019 is expected by end of April 2019. As for the intended “mechanism for promoting low-carbon growth in Belarusian cities,” it is not yet clear how/ whether this will be pursued. Related to the “mechanism” idea, however, the project prepared a template tool to enable Belarusian cities (or experts working on behalf of the cities) to prepare SECAPs. The project has also set up a website, but has been unable to find a permanent institution that will agree to serve as its host and long-term home. Based on adaptive management, the project has seen a need to provide information on potential financing sources for initiatives included in GUDPs, SECAPs, and SUMP. It thus prepared a study on types of financing sources and plans to carry out additional work to identify specific sources of financing for Belarusian Cities wishing to carry out GUDP, SECAP, or SUMP measures. In addition, it plans to assist each of the three pilot cities in preparing a priority initiative and securing financing for that initiative.

Expenditures: By the end of 2018 (in USD), \$907,398 out of \$3,091,000 in GEF funds (about 30%) had been spent. When commitments (including about \$300,000 for the street lighting demos) are included, the share of GEF funds utilized rises to about 40%. Proportion of GEF TA funds spent for each component ranges from 66% to 72%, while none of the GEF demo funds (indicated as INV in the CER) have yet been spent. This result shows that the project has made good progress in utilizing its TA funds and that, if the demos materialize as expected, overall fund utilization will be strong. Reported co-financing from the three pilot cities up until the end of 2018 is \$6,312,318, which is about 51% of total committed co-financing from all sources of \$12,435,420. Information on the specific use of these funds is not yet available, though MNREP has requested this from the cities. Co-financing from BTU is reported to be \$55,518.55. Documented information on the four other committed sources of co-financing was not available at the time of the MTR, though the project team indicates \$3 million in co-financing from UNDP for its Green Economy Project and EE Building Project might be confirmed soon, as will \$1.6

million in co-financing from Interaction for its street lighting project in Polotsk. A further \$300,000 from Interaction for mobility work in Polotsk might also be counted as co-financing if it is confirmed this occurred during the *Green Cities* implementation period and not prior to that.

Relevance: Conclusions related to relevance are as follows:

Innovativeness: The project has developed a niche and network that is potentially very high impact and of critical importance to nation. That niche is planning originating at city level that incorporates energy-environment considerations and integrates spatial planning with transport, energy, and waste. Success of the project could greatly impact Belarus' approach to urban planning, which currently is conducted at the national level, with limited input from the cities and neither strong energy-environment considerations nor integration of spatial planning with other areas. *Green Cities* is the first international project related to integrated urban planning in Belarus and the first energy-environment project that brings together so many different aspects. The GUDP work, completely new to Belarus, has caught the attention of stakeholders, because the project has cooperated closely with cities to develop a long-term vision of their development and identify projects of interest to them. The GUDPs have a timeframe of 20 to 30 years, as compared to the 10 of Belarusian MPs. The GUDPs have both a strategic approach and cost estimates, which the MPs are said to lack. Should the new approaches promoted by the project catch on, it may represent the first major new thinking in urban planning thought in Belarus since the 1980s. Other innovative (or potentially innovative) aspects of the project include: (1) integrated SUMP for Polotsk and Novopolotsk (only one Belarusian city, Polotsk, has a SUMP and a joint SUMP for two cities is a completely new idea); (2) bicycle trail (first such trail in Belarus between two nearby cities); (3) some public transport/ private car measures as proposed in this report (e.g. bus lane, parking restrictions, etc.) if political will can be garnered (Polotsk 4 km test bus lane with barriers is quite likely to be carried out and will be the first true bus lane in the nation⁴); (4) smart street lighting demo (one of the first two such efforts in the country and the only low-cost effort suitable for replication by small cities); (5) and smart meter demo (would be first instance of installing multiple utility smart meters in each apartment of existing residential building in Belarus).

Need: Project is needed because: (1) MPs lack cost calculations and funding allocation, so most measures are not realized. (2) MPs as spatial plans are not integrated with different “sectors,” such as transport and thus do not fully incorporate energy/environment aspects. (3) MPs lack strategy and vision, not answering the question of what the city would like to look like in 20 years.

Confluence with national priorities: (1) Belarus' *National Urban Planning Policy 2016-2020* states a need to improve the quality of life, safety, and living standards in cities. (2) Thanks partly to the formulation work for this project, Belarus' *National Green Economy Action Plan (2016)* mandates that a GUDP-like plan (a “symbio plan”) be prepared for the city of Brest.

Overall impression: On the positive side, the overall impression conveyed by stakeholders and held by the MTR team as well is of a project working in an important area, a project team that is very dedicated and capable, affiliated experts of very high quality, and a communications strategy well delivered.⁵ The

⁴ Minsk is said to have bus lanes, but these have no barriers and cars drive in them.

⁵ “Working in an important area” is covered above. The MTR team was impressed with the quality of the GUD, SUT, and EE experts, as each explained their area well and had convincing views with good basis of best direction for their area of project going forward. The dedication and capability of the project team was noticed via magnitude of project work completed to date, strong communications with stakeholders, strong performance in arranging the mission, enthusiasm and positive attitude toward work, and noted efforts to constantly push project forward, addressing issues as they arose, arranging meetings with various experts to do so, and working weekends and

top concern is that the project has been highly tactical to date, delivering a slew of activities (many conferences, two study tours, and copious reports and planning documents), but has not done enough to strategically figure out what is needed to lead to long-term change and to focus instead on activities that will indeed facilitate such change.

Key Achievements: The most notable achievements of the project to date are: (1) Inclusion in Belarus Council of Ministers decree *National Green Economy Action Plan* (Dec. 2016) of requirement that Brest prepare GUDP-like symbio city plan. While direct attribution goes to MNREP, the project, with its focus on GUD and with MNREP as IP, is extremely likely to have had indirect influence. As a result of decree, BelNIIP has attached Brest Symbio Plan (prepared by the project) to the Brest MP, which was updated in 2018. These (the decree and annexing of Best Symbio Plan to the MP) are considered to be among the most impactful results of the project to date. (2) Incorporation of project recommendations related to GUDP in two policy documents, *Country Profile on Housing and Land Management of the Republic of Belarus* and *Concept of National Strategy for Sustainable Development*, including text in the latter that calls for “introduction of the principles and methods of green urban development.” Likely inclusion of detailed recommendations by the project into the new version of the full *National Strategy for Sustainable Development*. (3) Increased interest of city officials, their mindset change, and their great enthusiasm for GUD. Increasing trend in number of cities attending project events shows increased interest. Strong enthusiasm for GUD and mindset change noted during MTR consultations. (4) Large amount of project tasks completed during relatively short period of time (about 1.5 years) since inception workshop with high quality. Project is said to have held over ten events per year during this period. General quality of documents noted via MTR team review. High quality of study tours and conferences gleaned from MTR consultations. (5) Adaptive management in addressing lack of finance for projects in plans. Many stakeholders verified the need and applauded the initial effort. (6) Specific project reports or tools attracting attention by third-parties as of special interest/ utility: (a) Financing Report – Ministry of Finance and Ministry of Economy have reviewed and suggested more information be collected on green banking and green bonds. (b) Bicycle trail feasibility study – Stakeholder has noted high quality and that this can be used as a model for other cycling infrastructure initiatives. (c) SECAP preparation tool (EE portion) – Usefulness strongly endorsed by stakeholder. Tool may allow cities to prepare their own SECAPs, or at least will reduce time and cost needed when experts prepare these. (7) Strong visibility of communications work: Stakeholders have noticed *Green Cities* in the media. (8) Procurement finalization for smart LED lighting demo. Project is entering new areas in procurement for non-state entities, encountering special challenges and yielding new learnings for donors. (9) New MNREP-UNDP-GEF project, for which \$840,000 of GEF funding was allocated in September 2017, stimulated in part by *Green Cities* MRV work. This new project will be coordinated with the work of *Green Cities*.

Key Concerns: The greatest concerns about the project are: (1) Overall concern that the project is operating mainly at an activity/output level, generating a large number of events and reports/ documents, the latter of which may sit on a shelf, and lacks enough strategic tailoring of activities to achieve long-term, sustainable impacts. (2) Limited policy results in some desired areas, despite key policy reports and recommendations. (It is noted, however, that the project has made good initial progress in project recommendations being incorporated into *Country Profile on Housing and Land Management of the Republic of Belarus* and *Concept of the National Strategy of Sustainable Development*.) Lack of strategic activities to try and get the policies adopted (other than asking MRNEP to handle). Relatedly, there is only a weak level of interest among some key national officials, particularly those in MoAC, which oversees urban planning. (A positive development in proactive pursuit of policy adoption should be

evenings as needed. Strength of communications work evidenced by stakeholders seeing news of project in media, PM being first UNDP PM to appear on TV show *Good Morning Belarus*, and reporters being willing to travel to pilot cities for “press breakfasts.”

noted: The project has initiated plans with MNREP for a round table with Deputies of the House of Representatives of the National Assembly of the Republic of Belarus to take place on June 6, 2019.) (3) Lack of progress (aside from Brest precedent) in impacting the master planning process and lack of engagement with BelNIIP. (4) Despite some progress, lack of needed capacity of city officials. For example, in SUT area, at time of MTR mission, thinking of officials still appeared focused on expensive infrastructure fixes with lack of recognition of how effective and money-saving low-cost measures can be and lack of political will to adopt such measures. (Recent decision of Polotsk to pursue bus lanes and probably private car driving restrictions in city center shows that capacity is increasing and this concern is already beginning to be addressed.) And, some local officials do not see the point of the plans promoted by the project. (5) Relatedly, high risk of potential missed opportunity to implement impactful demos for the public transport/private car components of Polotsk and Novopolotsk demos. This is due to avoidance of high impact low-cost measures (such as bus lanes or parking restrictions) due to perceived risk of unpopularity with certain segments of the population (e.g. car drivers) and a focus on measures that may be less impactful (improved bus stops and bus timing signage). The aforementioned post-MTR decision by Polotsk to pursue bus lanes and potentially private car driving restrictions show that this risk is beginning to be addressed and mitigated. (6) Lack of clarity on mechanisms of energy savings for smart meter demo and lack of understanding of city and residents of these mechanisms. (7) Lack of financing options for initiatives included in plans promoted by project so that plans may just “sit on the shelf.” As noted, project has already begun to address this concern by assisting each of the three pilot cities in pursuing financing for one initiative included in their plans. (8) Lack of clear message on the purpose of the project. Some confuse GUD with planting of green areas (trees and grasses). General use of SDGs in project promotion may give a hazy picture. (9) Lack of close involvement of cities in some project plans (SUMP and SECAPs) and lack of involvement of citizens in all plans. There is excellent progress in involving city officials in GUDPs. Ideally, residents will also be involved, though the challenge of making two “huge leaps” instead of just one will be great. The MTR Team understands that the project plans public hearings on the GUDPs in the three pilot municipalities beginning in mid-April and on into May, 2019, and applauds this plan.

Ratings: Overall progress towards results is rated as Satisfactory. (Outcomes 1 and 4 are similarly rated as Satisfactory, while Outcomes 2 and 3, due mainly to concerns as to whether high impact measures will be selected for the demos, are rated as Moderately Satisfactory.) Project Implementation and Adaptive Management is Rated as Satisfactory. Sustainability is rated as Moderately Unlikely, because project is not on track to secure long-term sustainability, though recent adaptive management work suggests the project may be able to turn the situation around. While achieving long-term change is very challenging, not being under full control of project, maximizing the potential for its achievement urgently requires a more focused and strategic approach. Justification of ratings and rating scale are given in Annex 6.

Recommendations: Recommendations for project are given below. Elaboration and justification are provided in Section 12. The required Recommendations Table, with responsible parties, is given in Annex 7. Annex 12 includes for each recommendation elaboration and an “action plan”, with who, how, and targets/ timeline. The MTR team recognizes that the project is on path for achieving most of the outputs targeted by project design and that recommendations 1, 3, 4, 5, and 6 are especially challenging, as they target aspects beyond the full control of the project. Yet, in order to achieve real impact and sustainable change, it is important for the project to do as much as possible and be as strategic as possible in these areas.

(1) Shift from output-oriented approach (e.g. reports, plans, conferences) of first phase of project to full focus on long-lasting, sustainable, and impactful results (policy adoption, change in planning process, securing of financing for priority projects in the plans, additional mindset change, realization of meaningful, GHG-reducing demos that, together with priority projects in plans, achieve 91,100 ton CO₂e

direct ER target). This is an overall recommendation supported by several of the recommendations below, but is important in and of itself for: (a) setting the overall vision to shift the nature of activities undertaken from early-stage document preparation and conferences to activities more directly linked to achievement of sustainable results and (b) requiring a clear plan for achieving the GHG direct ER target.

(2) Apply for extension of up to 18 months, contingent on plan/ reallocation of budget so it is available over extended period to focus on achievement of aforementioned long-lasting and impactful results. In addition to providing needed time to monitor the demos, justification will be: opportunity to achieve more policy successes (likely exceeding targets), impact the planning process, assist cities in obtaining financing for priority projects (a new target added through adaptive management), and achieve the political will for more impactful SUT demos; additional time needed to ensure GHG direct ERs of 91,100 tons CO₂e targeted are achieved through demos combined with other priority projects.

(3) Pursue a set of meaningful national-level policy achievements (namely, the adoption or revision of national strategies, standards, acts, resolutions, policies, action plans, and/ or regulations to promote GUD, city EE, and SUT). Adopt a new and targeted approach to do so, with face-to-face one-on-one “briefings” of officials as centerpiece.

(4) Adopt new and targeted approach to influence the city planning process. Engage BelNIIP, and potentially other state and private sector urban planners (e.g. MinskGrado, Level80, etc.), in one-on-one meetings with project experts and in planning process/ policy related assignment, if possible. Bring the “clients” (MoAC and city executive committees) into the process once progress is made with the planners. Pursue other channels, such as standards and traffic authorities, to influence city planning process.

(5) Building on recently launched financing support work, put substantial focus on assisting cities to prepare and secure financing for specific priority projects in the plans that have been prepared.

(6) Revise approach for Polotsk/Novopolotsk demos building on recent, post-MTR mission progress in Polotsk: (i) reconsider selection of key measures, with emphasis on achieving long-term GHG ERs and making sure that the project targets, including direct ERs of 91,100 tonnes of CO₂e, are met; (ii) engage city executives and coordinating committees frequently with project experts so they understand demo goals, budget, and efficacy of various options; (iii) convince cities to adopt low-cost, high efficacy measures as part of demo “package.” (See 9iii.)

(7) Before moving forward with smart meter demo, clearly identify and confirm specific means and amount of energy savings and GHG ERs (current preliminary estimate is just 252 tons CO₂ direct ERs). Adjust demo plans accordingly to maximize savings and GHG ERs. Clarify to all involved.

(8) Develop clear means of communicating main aim of the project (e.g. “to incorporate environmental sustainability and people-centeredness in city planning and ensure priority projects are implemented”) and ensure all stakeholders understand from the start. Eliminate confusion that “green planning” is just about “green areas” or that project is just very generally addressing the SDGs.

(9) Increase focus of city official mindset change work, ensuring they understand: (i) why they need a plan rather than just measures; (ii) goals of measures; (iii) how low cost measures, such as those in transport can save money and be more effective than new infrastructure; (iv) how GUD and SUMP's should be promoted as TORs for Master Plan and its Transport Annex. Further leverage President's Academy of Public Administration and leverage official government site visits for heads of regions, districts, and cities.

(10) Engage city residents (and, possibly, other non-governmental and commercial stakeholders) in the planning process. Educate them as in item above. Work to achieve simple language in visions/plans that residents can understand. Ensure plans reflect their priorities.

(11) Consider expanding engagement to other key groups: (i) involving private sector designers and students via competition for design of urban blocks/pilot projects; (ii) working with education sector to incorporate GUD in official university urban design curriculum; (iii) leveraging relationship with select influential think tanks and NGOs to promote policy and process change.

(12) Exchange with GEF/WB Global Platform for Sustainable Cities to harmonize indicators and get information on/connections for channels for financing sustainable city initiatives.

(13) Building on plans for preparation in 2019 of a video on the street lighting demo, prepare comprehensive video on all demos and other initiatives for which financing is secured. Video should be quite attractive, such as through use of drones. Also, prepare a lessons learned study and short electronic brochures on the demo projects.

1. Project Background

Basic project design: The MNREP-UNDP-GEF Project *Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus (Belarus Green Cities)* is a five-year project fully launched (after Government registration) in October 2016. The stated objective of the project is “development of green urban development plans and pilot green urban development projects related to energy efficiency and sustainable transport in small and medium cities in Belarus.” GEF funding is USD 3,091,000 and committed co-financing is USD 12,435,420. The project has four targeted outcomes as follows:

1. Green urban development plans (GUDPs) successfully developed and adopted (GEF \$285,050; co-financing \$180,000⁶): The outcome as originally designed encompasses preparation and adoption of GUDPs and a related monitoring-reporting-verification (MRV) framework, as well as preparation and adoption of policies and regulations or amendments thereof related to public lighting, urban transport, and green urban design (GUD).

2. Successful projects on sustainable urban transport completed in Novopolotsk and Polotsk (GEF TA \$564,150, INV \$1.21 M; co-financing TA \$750,420, INV \$7.88 M): The outcome as originally designed encompasses preparation of an Integrated Sustainable Urban Mobility Plan (ISUMP) covering the two cities; investments in the bicycling network, public transit services, bus priority lanes, and synchronized traffic lights; and an MRV program to measure GHG ERs from sustainable urban transport (SUT). The investments are to be preceded by feasibility studies.

3. Successful pilots on energy efficiency completed in Novogrudok (GEF TA \$107,550, INV \$451,300; co-financing TA \$50,000, INV \$1.825 M): The outcome as originally designed encompasses feasibility studies on energy efficiency for Novogrudok and other cities and investments in LED street lighting (with energy management system) and in energy efficient equipment for the municipal laundry, both in Novogrudok.

4. Growth in green city development in Belarus (GEF \$356,150; co-financing \$1.295 M): The outcome, known as the “replication outcome,” as originally designed encompasses preparation or updating of Sustainable Energy Action Plans (SEAPs) for the three pilot cities, preparation of SEAPs or GUDPs for ten additional cities, and “a mechanism for promoting low carbon growth in Belarusian cities.”

Country context: *Urban planning process in Belarus:* All Belarusian cities have a Master Plan (MP), which is typically updated once every five years. There are two state institutes under Ministry of Architecture and Construction (MoAC) that prepare these: MinskGrado prepares the MP for Minsk (population of 2 M) and BelNIIP prepares the MPs for all the other 311 or 312 cities – the small and medium cities. Of these other cities, aside from Gomel with a population of almost 500,000, the largest cities have populations of around 350,000. About 75 percent of Belarus’ population lives in urban areas. For the larger of the medium cities, the MP may cost over \$300,000. The MP process is considered by most to be highly centralized, with limited input from the cities and their residents, though in recent years, some public meetings for comments are held after the draft plans have been prepared. The MPs, which now have a ten-year time horizon, do not include costing of proposed measures. Some of the MPs have a transport annex. Staffing of BelNIIP is said to have dropped from a high in years past of 700 to just 100

⁶ Amounts indicate funding for the outcome from the GEF and Belarusian co-financing sources, respectively. The full funding amount for Outcomes 1 and 4 is classified as “technical assistance” and does not involve purchase of equipment or investment in infrastructure. Funding for Outcomes 2 and 3 is split between technical assistance funding, indicated by “TA”, and equipment/ infrastructure funding, indicated by “INV,” which stands for investment. “INV” funding is expected to go towards the project demos, though feasibility studies in support of these demos is to use “TA” funding.

people at present. While many things that cities may do, such as reorganization of traffic, can be done without change to the MP, work involving substantial pouring of concrete or paving, such as new roads or buildings, or rezoning, typically require revision of the MP. As this can be expensive, the situation is seen by some to hinder flexibility at the local level. The MP is said to address certain indicator targets, but to lack indicators related to environmental sustainability.

Municipal governance and finance in Belarus: Decisions at the municipal level are made mainly by the city's Executive Committee, led by a chair and deputy chairs. Most of the funds for municipal expenditures are provided by the central government. Taxes collected and kept by the municipalities are very limited. Thus, municipalities in Belarus cannot take out loans, though some enterprises of the municipalities may be qualified to take out loans.

Baseline situation at project start vis-à-vis key project initiatives: At the full launch of the project in October 2016, there were no cities in Belarus with GUDPs. Only one city, Polotsk, had a SUMP, though, as noted, some cities had transport annexes to their MPs. Only about ten cities in Belarus were members of the Covenant of Mayors, a European organization whose signatories commit to improving energy efficiency and using renewable energy to reduce GHG emissions. Some, but not all, of these cities had SEAPs (a plan required to be submitted to the organization within one year of joining) by 2016.

Pilot cities and other partner cities: The project's pilot cities, where the demos will be carried out, are Polotsk (population 85,000) and Novopolotsk (population 107,000) in Vitebsk Region in Northern Belarus and Novogrudok (population 30,000) in Grodno Region, west of Minsk. Polotsk and Novopolotsk are sister cities, at closest within about 3 km of each other. Polotsk is considered the oldest city in Belarus, while Novopolotsk is a newer, industrial city with a major refinery employing 10,000 persons and a polymer factory, employment of which has dropped over the years. The project has prepared the energy portion of SECAPs (either updates or new ones) and draft GUDPs for each of the three pilot cities.

Brest (population 320,000), located in Brest Region in Southwest Belarus bordering Poland, is significant to the project in that its ambition to prepare a Symbio City Concept/ Plan (similar in aim to a GUDP, but prepared with Swedish methodology) was put into national level policy in 2016, with plan preparation later supported by the project. The project has recently selected five additional cities for which to prepare SECAPs, one of which is Baranovichy (population 170,000), also located in Brest Region, and targets to select four other ones for which to prepare GUDPs.

Project team: The project team consists of a full-time project manager (PM), a full-time communications officer, and a full-time finance and administrative officer. In 2019, the project added a full-time procurement officer, to support major procurement work for the project demos. The project has three core part-time experts, who are approximately 50 percent time with the project: the GUD expert, the SUT expert, and the EE expert. It also has a part-time coordinator located in Polotsk-Novopolotsk and one in Novogrudok. A number of other experts are affiliated with the project on an assignment-by-assignment basis, such as the finance expert, the GUDP indicator expert, the municipal procurement expert, etc. International consultants involved in the project have also been hired on an assignment-by-assignment basis.

Project governance: The project board (PB) is chaired by the First Deputy Minister of MNREP, the project Implementing Partner (IP). Members include UNDP, MoAC, Ministry of Transport, Department of Energy Efficiency (EE)⁷, and Executive Committees of Novopolotsk, Polotsk, and Novogrudok, with observers from relevant institutes, companies, and NGOs. The PM serves as the PB secretary. The PB is

⁷ The Department of Energy Efficiency is under the State Committee for Standardization ("BELST").

intended to meet at least twice per year and provide direction and needed major decisions for the project. In practice, it has met at least once per year with, in addition, typically one remote “vote meeting” per year.

Main stakeholders: Main stakeholders for the project as originally envisioned are the cities, including their executive committees, local city enterprises of relevance, and residents; national level officials (especially MNREP, MoAC, Dept. of EE); BelNIIP; and other interested stakeholders in academia, think tanks, and NGOs, especially those with sector relevance, such as BTU (Belarus Transport Union). More recently, Ministry of Economy (MoE), given its role in regional planning and economic forecasting, has also been added as a significant stakeholder.

2. Mid-Term Review Approach

Purpose of Mid-Term Review: The purpose of the mid-term review (MTR) is two-fold: (1) transparency – information and assessment on whether the funds spent are leading to progress towards intended results; (2) course correction – recommendations of how the project may shift its activities or approach to increase the likelihood of achieving desired impacts by end of project. MTR analysis may also yield lessons learned or other insights applicable to future projects.

Methods of MTR: The MTR team made use of document review, extensive consultations, and additional information requests in its methodology. They reviewed a set of basic documents provided by the team and reviewed certain parts of a much larger set of documents that represent products of the project to date. Both sets of documents are listed in Annex 2, along with a third set provided after the MTR mission. The MTR team prepared a set of hypotheses for testing and list of target consultations based on the document review and exchanged with the project team on both in preparation for the mission. The team conducted a two-week mission in Belarus from Feb. 11 – 23, 2019, with extensive consultations. Cities visited include Minsk, Novopolotsk, Polotsk, Novogrudok, Brest, and Baranovichy. Skype consultations were also carried out before and after the mission. In total, fifty consultations were conducted, with organizations of interviewees shown below. The mission schedule is provided in Annex 1. The two MTR team members exchanged ideas frequently prior to, during, and after the mission to develop the MTR conclusions and recommendations.

Content of MTR report: The main body of the MTR report includes 12 sections. It is preceded by the Executive Summary, which includes a description of the project and its progress as determined by the MTR, along with main conclusions and recommendations. Section 1, Project Background, includes a brief summary of the project as designed, background on the country situation (particularly that of urban planning in Belarus), and introduction to involved cities, project team, project board, and stakeholders. This section, Section 2, introduces the MTR purpose, methods, and report content. Section 3 covers findings about the project overall, including overall relevance and innovativeness, overall impressions of stakeholders and the MTR team, most outstanding achievements, most notable concerns, and the cross-cutting area of project communications. Sections 4 – 7 look in more depth at each of the project outcomes. Section 4 addresses the GUDP outcome (Outcome 1), with a look at results and needs related to GUDPs, policy and legislation, and the urban planning process in Belarus. Section 5 reviews results and needs with regard to the SUT pilots (Outcome 2) in the areas of bicycles, public transport, and private cars, as well as the integrated SUMP for Polotsk and Novopolotsk. Section 6 reviews results and needs with regard to the Novogrudok EE pilots (Outcome 3) in the areas of EE lighting and utility metering. Section 7 reviews results and needs with regard to the “replication outcome” (Outcome 4), covering Sustainable Energy and Climate Action Plan (SECAP) work and additional GUDP work, financing of measures in plans, and “replication mechanism.” Section 8 covers findings and needs with regard to project implementation, including project timeline, project management, M&E, UNDP role, governance,

and stakeholder engagement. Section 9 covers findings and needs with regard to project design and indicators. Section 10 covers project expenditures and co-financing. Section 11 covers sustainability. Section 12 explains each of the key recommendations listed in the Executive Summary by providing for each elaboration of what is being recommended and justification of the conclusions leading to the recommendation.

Stakeholder Interviews
50 interviews conducted

Project Team and UNDP	
Project Manager (<i>multiple interviews</i>)	UNDP Belarus Programme Officer
Project Communications Officer	Project Green Urban Design (GUD) Expert
Project Administrative and Finance Officer	Project Sustainable Urban Transport (SUT) Expert
Project Procurement Officer	Project Energy Efficiency (EE) Expert
UNDP Regional Technical Advisor (RTA, <i>Skype</i>)	
Project Designers	
Project Designer (International) (<i>via Skype</i>)	Polotsk/Novopolotsk Demo Designer (National)
Demo Designer (International) (<i>via Skype</i>)	
National Government and National Institutes	
MNREP – Project Board Chair	MoAC – Urban Planning Development Department
MNREP – Responsible Officer	MoAC – previous Urban Planning Development Dept.
Ministry of Economy	BelNIIP
Department of Energy Efficiency	MinskGrado
	National Traffic Police (Ministry of Internal Affairs)
Consultants and Contractors to the Project (Minsk)	
Belarus Transport Union (BTU)	Green Finance Expert
BNTU ⁸ – Head of Urban Planning	SECAP Adaptation Expert (<i>via Skype</i>)
BNTU – Transport Experts	GUD Indicator Expert
NGO, Academic, and Private Sector Partners and other Experts (Minsk)	
Ecopartnership	Minsk Bicycle Society
Interaction	BNTU – Vice Dean of Architecture
Former PM of UNDP EE Buildings Project	Level 80 (a design company involved in urban design)
Polotsk / Novopolotsk	
Polotsk/ Novopolotsk Coordinator	Polotsk-based Designer of Project
Novopolotsk Ex. Com. Chair and Team	Polotsk Executive Committee, First Vice Chair
Tram Park Company (Novopolotsk)	Polotsk Coordinating Committee
Novopolotsk Bus Company	Polotsk-based Operator of Transport
Novopolotsk Bicycle Club	P-NP Inspection of Natural Resources Director
	Gor-Svet Project (LED street lighting in Polotsk)
Novogrudok	
Coordinating Committee	Housing and Communal Services – Engineering
Novogrudok Coordinator	
Brest	
Executive Committee Vice Chair	Brest Symbio Plan, National Consultant
Baranovichy	
Coordinating Committee	

⁸ Belarus National Technical University

Annexes provide additional material. Annex 1 provides the realized schedule of the mission and other consultations as well as the specific stakeholders consulted. Annex 2 provides a list of documents reviewed. Annexes 3 and 4 provide proposed revisions: Annex 3 has preliminary suggestions for output and activity revisions to support further discussion of the project team. Annex 4 offers proposed indicator revisions as well as comments on how activities need to be adjusted so that indicator targets can be met. Annexes 5-7 provide tables as suggested by UNDP for MTRs of GEF Projects: Annex 5 shows the MTR team's assessment of progress towards indicator targets (with color ratings and recommendations). Annex 6 provides an explanation for the project ratings presented in the Executive Summary. And, Annex 7 arranges the MTR recommendations in a table that shows to which outcome each applies and the parties that will be involved in implementing each recommendation. Annex 8 provides the master list of interview topics and questions that the MTR team used as a framework for consultations. Annex 9 is the standard UN Evaluation Group Code of Conduct for Evaluators. Annex 10 is the TOR for the MTR consultants. Annexes 11 and 14, per UNDP guidance, are submitted as separate documents. The first is the UNDP and PIU review comments on the MTR report and the responses of the MTR team. The second is the project GEF Climate Change Mitigation Tracking Tool at mid-term. Annex 12 provides an action plan for each of the 13 key recommendations, including "who," "how," and "targets/ timeline" and is considered a key part of this report for the project team to follow up on. Annex 13 provides expenditure analysis tables showing input of the project team on expenditures by main activity areas. It also includes projections of spending in these main areas for the scenario in which the project is closed on schedule (in about 1.5 years) and for the scenario in which it is extended 18 months (so that it closes in about 3 years).

3. Project Overall

Innovativeness: The *Belarus Green Cities Project* has developed a niche and network that is potentially very high impact and of critical importance to nation.⁹ That niche is planning originating at city level that incorporates energy-environment considerations and integrates spatial planning with transport, energy, and waste. Success of the project could greatly impact Belarus' approach to urban planning, which currently is conducted at the national-level, with limited input from the cities, and which has neither strong energy-environment considerations nor integration of spatial planning with other areas, such as energy and transport. *Belarus Green Cities* is the first international project related to integrated urban planning in Belarus and the first energy-environment project that brings together so many different aspects. There have been some smaller projects related to participatory urban planning, but this is the first project promoting integrated urban planning in combination with participation. And, past energy-environment projects have had much narrower scope, focusing on a specific type of measure.

While the project aims to impact Belarus's approach to urban planning through all four of its components, so far it is the GUDP work of Outcome 1 that has done the most to establish a niche and network in this potentially high-impact area. The GUDP work has caught the attention of stakeholders, because, through it, the project has already been engaged in cooperating closely with cities to develop a long-term vision of their development and identify projects of interest to them. The GUDPs have a long time frame, such as 20 to 30 years, compared to the ten years at present of the Belarusian MPs. The GUDPs have both a strategic approach and cost estimates, which the MPs are said to lack. According to one stakeholder, should the new approaches promoted by the project catch on, it would represent the first major new thinking in urban planning thought in Belarus since the 1980s. Comments of other stakeholders attesting to the innovativeness of the project are given below, along with some contrasting comments that suggest more caution in assessing the GUDP approach. The contrasting comments show that, despite the excitement about GUDPs, there is still a need to prove their practical value.

⁹ The network is evidenced to the MTR team by the range of people both in Minsk and at the local level who were able to speak about the project efforts. The niche is evidenced by the content of discussions with those people.

While the GUDPs stand out, the project’s other areas of work are also related to the overall innovation of integrated, participatory planning at the city level; and some exhibit their own innovation. In addition to the GUDPs, the project supports preparation of two other types of city-level plans, a SUMP and some SECAPs. For these, the MTR team found a lack the evidence of the local participation noted with regard to the GUDPs. Yet, the integrated SUMP for Polotsk and Novopolotsk is considered an innovative initiative, as only one city in the nation to date, Polotsk, has a SUMP¹⁰ and as a joint SUMP for two cities is a completely new idea. Further, the bicycle trail of the SUT demo work is considered innovative (first such trail in Belarus between two nearby cities). While public transport/ private car measures of the SUT demo work are facing some challenges, there is strong potential for innovativeness in these areas if political will can be garnered. Recent, post-MTR mission developments with regard to a pilot 4 km bus lane (which would be the first true bus lane in the nation) and city center time of day private car driving restrictions in Polotsk suggest that this innovativeness and political will is beginning to happen. The smart EE lighting demo in Novogrudok is one of the first two such efforts in the country and differentiates itself from the other one (a larger project in Polotsk funded by another donor) by being a low-cost effort suitable in design for replication by other small cities. Finally, while there are questions about the proposed smart meter demo’s energy efficiency benefits, its plan of installing multiple utility smart meters in each apartment of a residential building is new to Belarus.

Stakeholders Comments Attesting to Innovativeness of Project, Especially GUDP Work
<p><i>Minsk-based and International Stakeholders</i></p> <p>-“GUDP is important – definitely an important issue. The description of it should be in all the books.”</p> <p>-“The experience [study tour] was very innovative....The second thing [in addition to innovative projects, such as the recycling facility] that is very innovative is that citizens are involved in planning [from the start]. There is participation at all stages, even the stage of collecting ideas. This is very interesting.”</p> <p>-“As compared to the MP, a GUDP is a visionary plan for long-term strategic goals. It is like a ‘cover’ to the MP. It can add elements to the MP – a description of context and trends with which the MP should be developed.”</p> <p>-“It is unique what the project is trying to do. Past projects were focused on things like EE, but this project is trying to change the system – that is really difficult. The experts are the best. And the team is energetic and creative, going in lots of directions, but that’s good.”</p>
<p><i>Small and Medium City Stakeholders</i></p> <p>-“GUDP helped us see our city in a new way. It was very helpful to exchange with experts.”</p> <p>-“The GUDP is very convenient for citizens. It is a locally made plan that takes the local particulars into consideration....The MP is only a general idea, without particular small features.”</p> <p>-“This [GUDP] is completely new....The methods are what is important... We are in great need of the GUDP....Yes, there are new issues raised in the GUDP not in our other plans.”</p> <p>-“The GUDP helps us to go from thinking narrowly to a broader vision of our city. We would like to be a leader in sustainability and this will help. About 50% of initiatives [in the GUDP] are new, 30% are ideas we had before but see in a new way, and 20% are not changed.”</p>
Stakeholder Comments Suggesting Caution in Assessing Project’s New Approaches to Planning
<p>-A lot of nice sounding language may be used, but it’s not clear how concrete or practical the content of these [GUDPs] is. (<i>paraphrased comment</i>)</p> <p>-Whether or not this approach should be spread to other parts of the country will depend on the results we see. (<i>paraphrased comment</i>)</p> <p>-We prefer to do real projects rather than talk about plans; main use of these plans seems to be just packaging/ promotion (<i>paraphrased and combining comments from city stakeholders</i>)</p>

¹⁰ Stakeholders report that not many of the Polotsk SUMP’s initiatives have been implemented, though some progress is being made.

Relevance/ need: The project overall is in line with needs and national policy. The project is needed because: (1) MPs lack cost calculations and funding allocation, so some measures that are in the public interest/ socially important are not realized. (2) MPs as spatial plans are insufficiently integrated with different “sectors” such as transport and thus lack sufficient consideration of energy and environmental issues. (3) MPs lack strategy and vision, not answering the question of what the city would like to look like in 20 years. As for congruence with national policy: (1) Belarus’ *National Urban Planning Policy 2016-2020* states a need to improve the quality of life, safety, and living standards. (2) Thanks partly to the formulation work for this project, Belarus’ *National Green Economy Action Plan (2016)* mandates that a GUDP-like plan (a “symbio plan”) be prepared for the city of Brest.

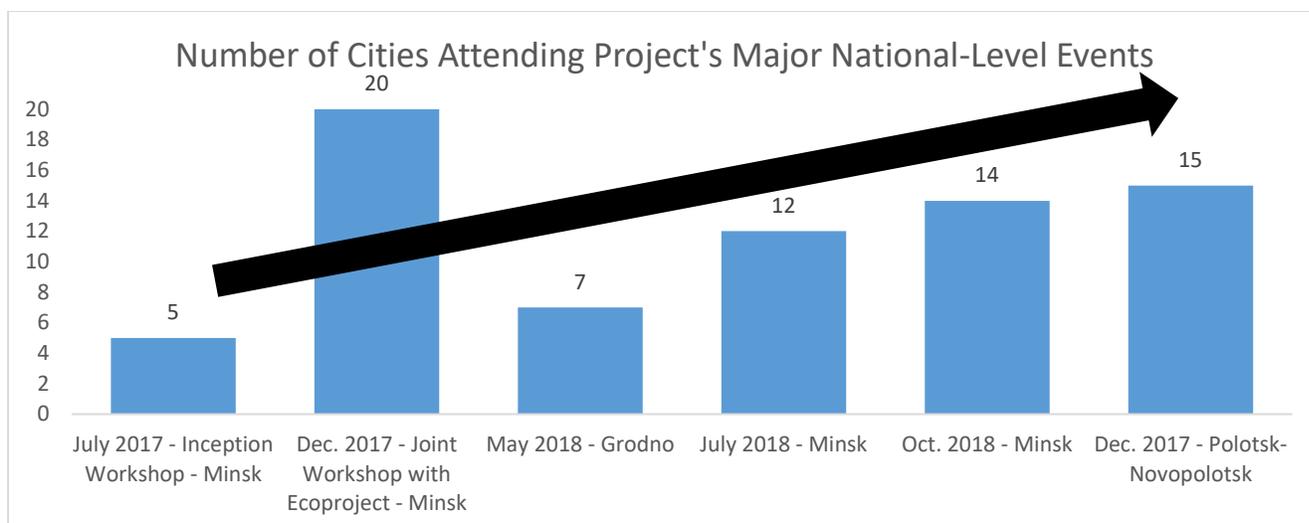
Overall impression of stakeholders and MTR team: The overall impression conveyed by stakeholders is of a project working in an important area, a project team that is very dedicated and capable, affiliated experts of very high quality, and a communications strategy well delivered. The overall impression of the MTR team includes all of these aspects as well.¹¹ At the same time, a minority of stakeholders point out issues of true concern. The MTR team likewise sees major risks that could inhibit the project from making a long-term impact. One key concern is that the project appears mostly tactical to date, delivering a slew of activities (many conferences, two study tours, and a huge amount of long reports and planning documents), with insufficient focus on activities that will strategically facilitate long-term change. The reports and conferences have led to the distillation of recommendations that are now actively being made in the policy sphere and positive developments in this regard are apparent. Yet, the MTR team finds that there is a need at this point to more fully shift from an output-oriented approach to an outcome/ impact-oriented approach in selection of project activities. The concern that the project won’t, in the end, have real, long-term impact may be broken down into the following areas: risk that the project does not achieve enough of the needed change in policy/ legislation, risk that the project does not impact the urban planning process in Belarus, risk that the plans being prepared are in theory meaningful but in practice not of high quality, risk that initiatives in the plans cannot get financed so that plans “sit on the shelf,” and risk that the demos are either not realized or don’t have good quality or adequate GHG ERs. Below is a listing of comments by stakeholders regarding their overall impressions of the project.

Most notable achievements: The most notable achievements of the project to date are: (1) Inclusion in Belarus Council of Ministers decree *National Green Economy Action Plan (Dec. 2016)* of requirement that Brest prepare GUDP-like symbio city plan. While direct attribution goes to MNREP, the project, with its focus on GUD and MNREP as IP, is extremely likely to have had indirect influence. As a result of decree, BelNIIP has attached Brest Symbio Plan (prepared by the project) to the Brest MP, which was updated in 2018. These (the decree and annexing of Best Symbio Plan to the MP) are considered among the most impactful results of the project to date. (2) Incorporation of project recommendations related to GUDP in two policy documents, *Country Profile on Housing and Land Management of the Republic of Belarus* and *Concept of National Strategy for Sustainable Development*, including text in the latter that calls for “introduction of the principles and methods of green urban development.” Likely inclusion of detailed recommendations by the project into the new version of the full *National Strategy for Sustainable Development*. (3) Increased interest of city officials, their mindset change, and their great enthusiasm for GUD. Increasing trend in number of cities attending project events (graph below) shows increased interest. Strong enthusiasm for GUD and mindset change noted during MTR consultations. (4) Large

¹¹ “Working in an important area” is covered above. The MTR team was impressed with the quality of the GUD, SUT, and EE experts, as each expert explained their area well, had professional views with good basis, and had convincing ideas of best direction for their areas of the project going forward. The dedication and capability of the project team was noticed via magnitude of project work completed to date, strong communications with stakeholders, strong performance in arranging the mission, enthusiasm and positive attitude toward work, and noted efforts to constantly push project forward, addressing issues as they arose, arranging meetings with various experts to do so, and working weekends and evenings as needed. Communications work is addressed later in this section.

Overall Impression of Project – Positive Stakeholder Comments
<p><i>Comments by national-level officials</i></p> <p>-“I have experience working with different projects and this one, for me, is in the first position, because they gathered very good experts who know what to do, know their field. Their attitude is very good. In their project there is a very good atmosphere, good communication....Project knows where and why they can have an impact – now is the time to realize it.”</p> <p>-“There is a lot of information in social media and TV, including interviews, about the project.”</p> <p>-”My impression is based on having seen several projects. The Green Cities Project is implemented quite well. The project is of great importance for the country, the Covenant of Mayors is of great importance....The most important thing is that the psychology is being changed....I attended a study tour of the project and was able to exchange with technical specialists from Polotsk and Novopolotsk and could see that their psychology had changed already and that they want change and want to contribute to it. They have seen – they know what they need to improve their town.”</p>
<p><i>Comments by experts/ professionals/ NGO staff</i></p> <p>-The project is very important because there is a lack of understanding of what green planning is. So the project has the function to let people know what it is....On Belarusian TV, there have been ads about green planning. (<i>paraphrased</i>)</p> <p>-“Project is very good. Study tours and conferences very good. No one else is having a lot of conferences on this topic. I have heard comments that the Green Cities study tour was very good. The Green Cities conferences are very serious....The conferences always bring very good experts....The study tours are needed as some local authorities have never been abroad and don’t have a vision of how they could develop.”</p> <p>-“I am not that familiar with the project, but attended one workshop and the ideas were exciting and can be applied....It was great. I was excited about the proposition....It was clever.”</p>
Overall Impression of Project – Stakeholder Comments Expressing Concern
<p><i>Comments by experts, professionals, and local stakeholders</i></p> <p>-The project is working on an activity level/ an output level – they are not thinking about impacts. (<i>paraphrased</i>)</p> <p>-There have been a lot of workshops before there are any results to show from the demos. It is hard to interest officials this way. (<i>paraphrased</i>)</p> <p>-“The project is very difficult. Of all the projects we have done, this one is the most difficult...It was difficult to start...It is really difficult to understand what the project is like and what the result will be.”</p>

amount of project tasks completed during relatively short period of time (about 1.5 years) since inception workshop with high quality. Listing of main documents issued by the project is below. Project is said to have held over ten events per year during this period. General quality of documents noted via MTR team review. High quality of study tours and conferences gleaned from MTR consultations. (5) Adaptive management in addressing lack of finance for projects in plans. Many stakeholders verified the need and applauded the initial effort. (6) Specific project reports or tools attracting attention by third-parties as of special interest/ utility: (a) Financing Report – Ministry of Finance and Ministry of Economy have reviewed and suggested follow up work on green banking and green bonds. (b) Bicycle trail feasibility study – Stakeholder has noted high quality and that this can be used as a model for other cycling infrastructure initiatives. (c) SECAP preparation tool (EE portion) – Utility strongly endorsed by stakeholder. Tool may allow cities to prepare their own SECAPs, or at least will reduce time and cost needed when experts prepare these. (7) Strong visibility of communications work: Stakeholders have noticed *Green Cities* in the media. (8) Procurement finalization for smart LED lighting demo. Project is entering new areas in procurement for non-state entities, encountering special challenges and yielding new learnings for donors. (9) New MNREP-UNDP-GEF project, for which \$840,000 of GEF funding was allocated in September 2017, stimulated in part by *Green Cities* MRV work. *Green Cities* will coordinate its work with this new project.



Clear increasing trend for project-only events over time (outlier is joint event to which EKAPRAEKT also invited its partner cities). Number of cities invited to each event (around 50) is the same. Travel and lodging in each case covered by the project. Increase attributed to media promotion of strong set of reports/studies prepared in 2017-2018, along with general promotion of the project.

Greatest concerns: The greatest concerns about the project are: (1) Overall concern that the project is operating mainly at an activity/output level, generating a large number of events and reports/ documents, the latter of which may sit on a shelf, and lacks enough activities tailored to achieving long-term, sustainable impacts. (2) Limited policy results as compared to what is needed, despite key policy reports and recommendations and some policy successes to date, and a lack of strategic activities to try and get policies adopted (other than asking MRNEP to handle). Relatedly, there is only a weak level of interest among some key national officials, particularly those in MoAC, which oversees urban planning. (3) Lack of progress (aside from Brest precedent) in impacting the master planning process and lack of engagement with BelNIIP. (4) Despite some progress, lack of needed capacity of city officials. For example, in SUT area, thinking at time of MTR mission still focused on expensive infrastructure fixes with lack of recognition of how effective and money-saving low-cost measures can be and lack of political will to adopt such measures. (Post-MTR mission decision of Polotsk to pursue 4 km bus lane pilot and likely time-of-day city center driving restrictions suggest this concern and the following one are beginning to be addressed successfully.) And, some local officials do not see the point of the plans promoted by the project. (5) Relatedly, in public transport/private car aspect of Polotsk and Novopolotsk demos, high risk of potential missed opportunity to have an impactful demo - an avoidance of high impact low-cost measures due to perceived risk and a focus on measures that may be less meaningful. (See comment in foregoing item about recent, post-MTR mission positive developments in Polotsk.) (6) Lack of clarity on mechanisms of energy savings for smart meter demo and lack of understanding of city and residents of these mechanisms. (7) Lack of financing options for initiatives included in plans promoted by project so that plans may just “sit on the shelf.” (Project has begun to address this concern through adaptive management.) (8) Lack of clear message on the purpose of the project. Some confuse GUD with planting of green areas (trees and grasses). General use of SDGs may give a hazy picture. (9) Lack of close involvement of cities in some project plans (SUMP and SECAPs) and lack of involvement of citizens in all plans. There is excellent progress in involving city officials in GUDPs. Ideally, residents will also be involved, though the challenge of making two “huge leaps” instead of just one will be great. (Post MTR-mission, the project has made plans for public hearings on GUDPs.)

Cross-cutting work – project communications: Project communications to the general public in Belarus employs a compelling strategy of being unconventional and has seen strong results in terms of

Project Reports, Recommendations, and Tools Available as of MTR

GUD: Plans – GUD and Symbio – and supporting documents: 1. Best Symbio-City (also, six sub-plans, each with KPIs, and situational analysis and planning approach); 2. Novogrudok GUD Methodological Plan; 3. Novogrudok Strategic Documents, Forecasts, and Alternative Scenarios; 4. Novopolotsk GUD Methodological Plan; 5. Novopolotsk Strategic Documents, Forecasts, and Alternative Scenarios; 6. Novopolotsk Review of Current Situation with Efficiency Indicators; 7. Table of Plans and Measures for Novopolotsk; 8. Polotsk GUD Methodological Plan; 9. Polotsk: Strategy Documents, Forecasts, and Alternative Scenarios; 10. Polotsk Analytical Review of Current Situation with Indicators; 11. Polotsk Plan Measures, 12. Polotsk GUDP (draft) 13. Expert Evaluation of Novogrudok, Novopolotsk and Polotsk GUDP Projects; 14. Alternative Scenarios for the Green Plan of Novopolotsk; 15. Novopolotsk GUDP (draft); 16. Novogrudok GUDP (draft); **GUD Reports and Summaries:** 1. Improving the system of legal regulation of urban planning activities in the Republic of Belarus in accordance with the principles of green urban planning; 2. Improving National Policy for Developing Urban Plans; 3. Materials for Discussion: Suggestions for Using Green Planning Approaches in the Development of Urban Areas in Belarus; 4. Summary of National GUDP Recommendations based on Project Consultations, Reports, and Seminars.

Energy: Plans – SECAP: 1. Novogrudok SECAP; 2. Polotsk SECAP; 3. Novopolotsk SECAP; 4. Baranovichy SECAP; 5. Mstslavl SECAP; 6. Pruzhany SECAP; 7. Slavgorod SECAP; 8. Template for Preparing Belarusian SECAP; 9. Excel Spreadsheet for Belarusian SECAP Calculations. **EE Reports:** 1. Recommendations for Standards and Rules for Design of LED Lighting Systems; 2. Analysis of Existing Standards and Norms for Design of Street Lighting for Public and Residential Buildings, 3. Structure for questionnaire to determine measures for reducing CO2 emissions, Part 1 and Part 2; **EE Feasibility Studies:** 1. Feasibility Study for EE Street Lighting in Novogrudok; 2. Feasibility Study on Smart Metering in Novogrudok.

Transport: Plans – SUMP/ Transport: 1. Polotsk/Novopolotsk Integrated SUMP (draft). **Transport Reports:** 1. Analysis of Effectiveness of Low Budget Measures for SUMP; 2. Analysis of Implemented SUMPs; 3. Annexes of International Cases of SUT; 4. National Legislation for Sustainable Urban Transport; 5. Review of Best International Sustainable Transport and Urban Mobility Practices. **Transport Feasibility Studies and Data Collection:** 1. Technical/ Economic Justification of Bike Routes Expansion in Polotsk and Novopolotsk Stage 1; 2. Technical/ Economic Justification of Bike Routes Expansion in Polotsk and Novopolotsk Stage 2; 3. Business Model of Cycling Movement Polotsk and Novopolotsk; 4. Baseline Data Collection to Prepare Feasibility Study on Public Transport in Polotsk and Novopolotsk; 5. List of Tram and Bus Stops in Novopolotsk Territory.

Cross-Cutting: Green Finance and Procurement Reports: 1. Green Finance Report; 2. Green Procurement, Analysis, and Recommendations. **MRV:** 1. MRV System Best Practices

->Large amount of quality work completed in 1.5 years since inception workshop. Most of the reports and feasibility studies targeted by the project have now been completed

reach. Multiple stakeholders commented to the MTR team that they had seen the project promoted in the media. Avoiding the conventional (such as brochures), the project has gotten its two animated videos shown on 26 channels (for free); and these continue to be shown. The project manager appeared on the popular TV show *Good Morning Belarus*, the first UNDP project manager to do so. The project has achieved 180 articles in the press (a typical level for UNDP projects in Belarus), three live radio shows on the most popular of the serious stations, and has held press breakfasts, which impressively have attracted the press to visit the pilot cities. All of this has been achieved prior to having the project demos launched, which should be among the most newsworthy of project achievements. Launch of the project website was delayed until recently as the project looked for a partner to host it long-term, before deciding to go ahead on its own. The website is attractive and rich in content, though lacks a long-term home. The MTR team noted attractive project calendars hanging on the wall in a number of the offices they visited to confer with stakeholders.

Cross-cutting work - outreach to and awareness raising for specific types of stakeholders: The greatest communications issues the project now faces have less to do with promotion to the general public, which is going quite well, and more to do with specific messages for specific audiences, including national officials, BelNIIP, city officials, and residents of partner cities. With these groups, there is a need for focusing the message of what the project is about (especially for national and city officials),

developing a rapport to discuss ideas and effect change (especially for national officials and BelNIIP and probably to be carried out in one-on-one meetings), and building awareness of how locally developed plans can benefit cities and how low-cost measures can be impactful (especially for city officials and local residents of partner cities). Improving communications to these specific groups is likely a job for the entire project team and affiliated experts, rather than one specific to the Communications Officer, who leads and implements the outreach to the general public. It will require strategic thinking, an ability to understand the situation and psychology of the target group (e.g. national-level officials are really busy, though may have an interest in quality, “well-digested” information). The MTR team understands that the project has recently developed a communications strategy with messages tailored to various target groups and has been implementing this in 2019. It is hoped that this strategy addresses or can be adjusted to address the key communications concerns conveyed in this report. In addition to the core one-on-one or small group work needed to address the foregoing needs, some attractive ideas for outreach to specific groups raised during the mission are: (1) Development of a course on GUD to be delivered to municipal officials at the Presidents Academy for Public Administration/ Management. This course would need to ensure only students serious about the content are selected. (2) Inclusion of project demos in site visits held by Council of Ministers for regional and municipal officials at different times of year. (3) Preparation of an innovative video on the project demos. The project is considering using drones for such a video.

4. Outcome 1. Green Urban Development Plans

This section and the subsequent three cover the work and needs associated with each of the project outcomes. For Outcome 1, the main areas of work and desired impact are GUDPs, policy/ legislation, and the planning process.

GUDPs: Considered a key highlight of the project, the innovativeness and need for GUDPs has been covered above, along with the favorable review of the GUDP process by municipal stakeholders and the success of the Brest Symbio Plan being annexed to its MP. The team noted a high level of enthusiasm and smiles when municipal stakeholders expressed their experience with GUDPs (or the similar symbio plan).

The project has taken great care and a thoughtful approach to developing its GUDP methodology. The approach now being used starts with indicator selection, which then drives design of the plan. The project started with one set of GUDP indicators and then shifted to another more easily understood by Belarusian cities. To make the process truly city-driven, the project involves cities from the start in indicator selection. Aside from the project GUDPs, the only other such activity in Belarus is EBRD’s Green City Action Plan work for Minsk. According to one stakeholder, the project’s GUPDs encompass much more than EBRD’s work (focused on environment and energy), as they also encompass city planning, smart cities, etc. Because this is a GEF project, the question arises, then, of whether these plans are on-target for the aim of GHG emission reduction. While the plans are broader, it appears that at least some of the priorities selected by the cities are indeed in line with GHG ERs. For example, priorities noted in the case of Polotsk are primarily transport oriented (transport system, safety problem of trucks avoiding tolls using Republic Road around city, and city being split up by railroad) and in the case of Novopolotsk partly transport oriented (transport system and green and open areas), while in the case of Novogrudok less related but still having some possible links to energy (historical heritage, safety issues with regard to fire, drainage system, and condition of residential buildings). Further, the MTR team has learned that the project plans to prioritize GHG emission reduction in the GUDPs and add sections related to GHG emission reduction to the final versions, with calculation of emission reductions facilitated by initiatives in the plans currently underway. Consultation with local stakeholders involved in GUDP (or symbio plan) preparation confirms that the process is generating ideas/ plans for completely new initiatives, as well as elaboration of pre-existing ideas. The process in the case of Brest (which used the Symbio Plan approach)

may have been somewhat different than the GUDP approach developed by the project. Stakeholders confirm, however, that the project introduced a locally-driven brainstorming approach for involved Best officials and companies that was completely new to them. The “horizontal cooperation” between these stakeholders from different sectors was also said to be completely new, as work is usually carried out vertically. In the case of Brest, an international expert first prepared a concept that the team built upon. There was reportedly some problem at the start, as the consultant prepared a 160 page report before visiting the city that was suitable to a much less developed version of Brest. These problems, however, were quickly resolved after the visit; and stakeholders are happy with the product.

One of the real challenges is that, without financing, these GUD plans (like the SUMP and SECAPs developed by the project) may sit on a shelf. The project has pursued a study on financing and plans to go deeper into identifying specific financing sources. And, the three GUDPs prepared thus far propose sources of financing for each of the main initiatives. At the end of 2018, the team began to take the concept further and decided to support each of the pilot cities in financing one project. The MTR team applauds this effort. The project may want to broaden the work to a search for financing for one project for all partner cities, of which there are 13 in total (including the ten “replication” cities). This would allow the team to take more potential projects to each potential financier¹² and to have more of a portfolio approach, thus ensuring higher potential of success in getting some initiatives financed, assuming resources are not too stretched. In the case of Brest, the MTR Team heard that the plan is already being implemented, though was not able to get confirmation of whether new initiatives introduced in the plan were actually under implementation. It was explained that, because the Brest plan includes existing sectoral programs, though perhaps with some new content, implementation is considered likely. Further, the project team has worked with Brest to develop a concept for procuring electric vehicles to support social institution work. Now, both the project team and Brest Executive Committee are looking for financing for this initiative.

While there is real merit in the work being done and excitement about its innovation, as noted earlier, there is a need to ensure the GUDPs are of high quality and something that will be really useful in Belarus and result in concrete action. In review of the Polotsk draft GUDP, the MTR Team found it to be a comprehensive document containing all the elements of previously developed documents, three strategies for transformation of urban spaces, strategy for green urban development (covering land-use management, population density, transport/ mobility, public and "green" spaces), indicators and targets, and an action plan with list of activities, dates, resources, and costs. While this is a vision/strategic oriented document, the MTR Team sees some room to develop it further, with more specifics and concrete content. With some further development, it appears the document, if adopted by the city, will definitely be useful to Polotsk in its development. The Novopolotsk and Novogrudok GUDPs are in an earlier draft phase and need finalization of specific action plans, activities cost estimates, and sources of funding. All of the draft GUDPs are somewhat heavy on the descriptions and could benefit from more specifics. The Polotsk and Novopolotsk GUDPs might give more attention to the subject of the two cities as an agglomeration/ metropolplex.

While the GUDPs and Symbio Plan represent a major step forward in deeply engaging city officials and companies in urban planning, these efforts have not yet involved local citizens much. In the case of Brest, the team heard that local citizens and private designers doing other projects in the city were not at all familiar with the content of Brest’s Symbio Plan. The MTR team understands that the project has concrete plans in a next phase of development of the draft GUDPs to involve local citizens.¹³

¹² The MTR team has heard that some financiers, such as EBRD and Belarus Development Bank, have an interest in making loans to municipal projects, but have said not have enough such projects are coming their way.

¹³The project team is now in the process of organizing public hearings on the GUDPs to take place in the second half of April and in May 2019. Further, the PIU is developing a methodology for GUDP preparation in the future that

As another aspect of its GUDP work, the project has the idea of preparing an integrated “urban block” (comprised of several city blocks) for each of the pilot cities. These designs will encourage multi-use development in areas that are mainly residential, thus bringing together business, residential, and transport plans. The project will not be providing funding to realize these plans, but it is hoped that funding will eventually be found by proponents. One stakeholder proposed that these designs be open to competition. In this way, they could attract innovative, private sector designers and potentially even involve college students studying urban design. This may attract national attention to the efforts and, by focusing on discrete projects, help residents better understand GUDP concepts. Belarus has some young, innovative design companies that are doing urban design work, such as Level 80, which has prepared the conceptual design for some developments that have attracted the attention of the Presidential Administration. At present, the project is planning an open tender announced on April 19th, 2019, for design of the urban blocks. While this is different than the proposed competition in which multiple parties may prepare such design, it’s possible the project may consider such a competition for additional urban block design efforts.

Policy: While policy adoption is ultimately beyond the control of the project, the MTR team believes it is important for the project to develop more targeted actions to raise the probability that key national policy and legislative recommendations of the project are adopted. From meeting with both national government officials and experts familiar with such officials, the team understands that officials are really busy and may lack the time to attend conferences. Yet, many of them are seriously interested in high quality input on policy and legislative matters. It is thus recommended that the project develop plans for a series of strategically designed, brief one-on-one meetings and prepare well-digested briefing materials of key project products (e.g. perhaps one of two pages each). From the project’s side, meetings should be conducted by an expert and someone who is skilled and well-prepared in delivering a succinct, very focused and compelling message. And, meetings should also be framed as an exchange, with the project seeking the advice of the official. Work should be done in determining the most appropriate persons (influencers and decision-makers who are serious and interested in input) with whom to request such meetings. While policy/ legislation will be drafted by government officials, high-quality focused interaction with such officials may be an effective approach to raising their awareness (“mindset change”) and conveying key policy ideas developed by the project. This would be in addition to the formal channel already developed by the project of MNREP sharing policy recommendations with other ministries. Along with the foregoing and as previously noted, the team should develop a clear, focused description of what the project is all about and ensure officials understand this. Currently there is some confusion among officials about the project, such as the impression of some that GUD is about green areas only.

So far, in the policy area, the project is to be applauded for its initial “big wins” and pipeline expected success (as shown in the box below). In addition, the MTR team is impressed that the project, in each of its key areas (GUD, SUT, EE, and cross-cutting), has clearly identified the policy/ legislation it would like to target (also shown in the box below). Thus, the next step is to come up with a focused set of activities to try and raise the chances that desired policy/ legislation is adopted. UNDP and MNREP, if willing, can certainly provide strong support in this effort, though it will be up to the project to provide quality content and quality one-on-one delivery of ideas to targeted officials and influencers. Further, the project may wish to consider cooperating with influential think tanks, NGOs, and bloggers whose thought pieces and other efforts are respected and considered by decision makers and influencers.

will involve citizens. It is in addition working with the NGO EKAPRAEKT to prepare a list of methods for involving citizens. Some of these methods will be tested in the aforementioned public hearings. Finally, a presentation on these methods will be given in the joint seminar the project is planning for May 2019 with UNECE, UN Habitat, and MOAC.

Policy/ Legislative Achievements and High Priority Targets to be Pursued

Achievements (Realized and Expected Soon)

Realized: (1) Requirement for Brest to prepare Symbio Plan included in *National Green Economy Action Plan* (Dec. 2016) – indirect influence of project preparation likely. As a result, Brest Symbio Plan (prepared under support of project) annexed to Brest MP prepared in 2018. (2) Inclusion of GUD-related project recommendations in already-issued policy document *Country Profile on Housing and Land Management of the Republic of Belarus*. (3) Inclusion of GUD-related project recommendations in already-issued policy document *Concept of the National Strategy of Sustainable Development*, including those related to green urban development, mobility and sustainable transport, smart metering, green finance, and green procurement.

Pipeline – Expected Soon: (1) Inclusion of detailed project recommendations that will be prepared soon in the next version of *Nation Strategy of Sustainable Development*, a draft of which is expected soon. (2) Inclusion of project recommendations related to GUDP in the *Urban Planning Code*.

Targets Requiring Strategic Actions by Project

GUDP: *National Urban Development Policy (2021-2026)* to be prepared by BelNIIP in 2020 includes GUD; supporting regulations for *National Urban Development Policy* developed and include GUD measures (last version of policy did not include supporting regulations); new *Green Urban Development Action Plan* developed and cross-ministerial working group established to address GUD; new standards requiring indicators related to GUDP incorporated into the urban planning process (to be adopted by the State Committee for Standardization).

SUT: *Law of Road Traffic* amended to include specific SUT measures (at present, it has only general reference to SUT) and new Council of Ministers Resolution for SUT in city planning: The MTR team finds it very promising that the project has involved stakeholders from the State Traffic Police, Ministry of Internal Affairs (MIA) to cooperate in this area. MIA approves the traffic aspects of MPs and, at the national level, is supportive of SUT; *Parking Policy* amended to allow fees for parking in city center: In the past, Polotsk tried to initiate parking fees in city center, but was blocked at the oblast level, due to national legislation. If legislation is changed, parking fees might be a meaningful measure to be adopted as part of the project SUT demos.

EE: 12 new smart LED lighting standards adopted: recommendations prepared by project, interest by EE Dept. achieved; challenge is that standards development costs about \$10,000 per standard and state budget for standards setting has already been set for 2019 and 2020 and does not include these items. Project might consider whether supporting one of these standards could be means of negotiating support for the rest.

Cross-Cutting: *Municipal Procurement Regulations* revised to consider lifecycle costs; new green infrastructure financing regulations developed, municipal finance process changed, and competitive green infrastructure loan fund for cities established

Given the ambitiousness of the project's aim to incorporate GUD into the city planning process on a national level and given the multiple ministries that would ideally be involved in integrated city planning, an executive order would be the best way to achieve this aim and the cross-ministerial cooperation needed to support it. Thus, while it would be a long-shot, the project may wish to consider, if UNDP and MNREP are supportive, a carefully crafted letter to Head of Presidential Administration, who interestingly, as mayor of Novopolotsk, interacted with the project during its preparation. The aim of the letter would be to achieve an executive order to make the issue of GU Planning important with some associated action, such as the setting up of a cross-ministerial working group. Such a letter would convey that green urban planning addresses all the problematic areas of cities where 75 percent of the population lives and that there is a need to move from dispersed efforts of the 15 ministries to a coordinated approach, with one person/ ministry appointed to coordinate a national effort to develop green urban planning.

Planning Process: While the project's most compelling overall aim is to impact the nation's city planning process, no progress has been made to date in cooperating with or influencing the approach of BelNIIP, the institution responsible for preparing the MPs of all cities other than Minsk. A concrete manifestation of this overall aim, as conveyed by several stakeholders, may be for BelNIIP to use the GUDP as a sort of TOR for the MP and the SUMP as a sort of TOR for the MP's transport annex. (The third type of plan supported by the project, the SECAPs, are not seen to be as relevant to the MPs and are considered more of an action plan, while the GUDPs and SUMP are more strategic and vision-oriented.)

As noted, it is considered a success that BelNIIP has annexed the Brest Symbio Plan to the city's 2018 MP, but the Symbio Plan was not used as a TOR to inform the preparation of the MP. And, some suggest it was only annexed because of the policy support behind Brest's Symbio Plan (namely the requirement by the *National Green Economy Action Plan* that such a plan be prepared).

In the project design, BelNIIP is included as one of the co-financing parties. And, efforts were made to include BelNIIP as a potential provider of contract work to the project. Two challenges were met in this regard. First, much of the project GUDP related work is being handled by individual experts, which can be lower-cost than sub-contracts to organizations. Yet, BelNIIP staff are prohibited from taking on such assignments. Second, earlier discussions regarding a possible BelNIIP bid for a sub-contract as an organization ended, because BelNIIP, as a certain type of state organization, could not accept certain UNDP contract terms, such as a UNDP option to cancel the contract at any time. While BelNIIP has been invited to project events, it has not participated much in these.

During MTR consultations, the team consulted with stakeholders on the importance of the MP to the various plans the project is promoting. It was learned that many of the measures sought, particularly with regard to the SUMP and SECAPs, though also with regard to the GUDPs, could be pursued without revision to the MP and thus would be more of a matter of local level policy and initiative. For example, institution of bike lanes and bus lanes would not require revision of the master plan. Generally, activities involving building major structures or paving roads or rezoning areas for different activities than currently allowed do require revision of the MP. Thus, while some stakeholders suggest the project pursue its targeted impact without worrying about the MP preparation process, a general conclusion was reached that, for real, long-term sustainable impact, an integration of GUDP and SUMP with the MP and annex process should be pursued. While the MP process in Belarus might eventually be changed (one stakeholder reported that in Russia, the MPs are no longer required and have been replaced with a more strategic document), there is no clear move in that direction at present. The current legislation calls for BelNIIP preparation of MPs for all cities besides Minsk and that these plans be changed before major structural changes can be carried out in the cities.

Thus, it is recommended that the project redesign its strategy for engaging BelNIIP, while at the same time pursuing influence via MOAC, which oversees BelNIIP. It is a promising development that the project is actively pursuing engagement with MOAC's Department of Urban Planning, Design, Science and Technology, and Innovation Policy, which oversees BelNIIP and issues TORs for the MPs that BelNIIP prepares. The MTR team found that BelNIIP is, in fact, quite aware of concepts like participatory planning and incorporation of SDGs in planning. As evidence, BelNIIP has a Department of Sustainable Urban Development that is currently carrying out a participatory planning project with SIDA funding. Based on various consultations, the MTR team understands that BelNIIP will very likely be receptive to small meetings with the project, namely meetings between project experts and BelNIIP experts. It is thus suggested that, as with government officials, the project pursue one-on-one or small group meetings with BelNIIP. The purpose would be not only to explain what the project is doing, but also to get BelNIIP's feedback on this work and particularly on how GUDPs might be improved and integrated with MPs and SUMPs, with transport annexes. One-on-one or small group meetings are preferred as a means to deeply exchange on the issues, as compared to the more general discussions of conferences. If relevant, the project may also consider including private firms involved in innovative design in a select subset of these discussions. An important point to consider is that, while BelNIIP has not yet seen any of the GUDPs and is not clear on their content, it may have concerns as to whether these have concrete practical measures or are instead mainly inspirational and also whether they are congruent with regional strategies. Thus, it will be important for the project to provide the GUDPs, when ready, to BelNIIP and engage in a discussion with them about the strength and weaknesses of these. Also, it will be important to consider the practical situation that BelNIIP, which used to have 700 staff, now has perhaps just 100 persons. Thus, the preparation of 311-312 master plans each five years, or an average of 62 plans

per year, is now carried out by a much smaller team, which may be very pressed for time. Thus, there will be a need to develop innovative solutions to address any new responsibilities that GUDP incorporation into MPs might bring to BelNIIP, which may already be stretched thin in its work. Ideally, the project might adopt a new output or activity on integration of GUDP/SUMP with MP/Transport Annex and, via exchange with BelNIIP, come up with an approach for such integration. The project may also use the focused exchanges between its experts and BelNIIP to provide input on *National Urban Development Policy (2021-2026)* to be prepared by BelNIIP in 2020. While the last such policy did not have supporting regulations, the project has an aim to provide input for such regulations, which may also be discussed with BelNIIP. In addition, this year (2019), BelNIIP is preparing the draft *Architectural, Urban Planning, and Construction Code*, on which, if relevant, the project may also provide input.

In addition to these informal discussions, if at all possible, the project should look at whether there is a way in which BelNIIP may bid on a project assignment and, if so, if there is mutual interest between BelNIIP and the project on any key topics. Foremost among such topics would be development of a formal methodology for integrating GUDP and MP work (and SUMP and Transport Annex work) and draft national legislation to support GUDP. It is possible that there are insurmountable issues with regard to BelNIIP's bidding on a project assignment, but the MTR team found that the exact issues impeding their participation are hazy and need to be clarified. On the one hand, clarification will involve the question of what, exactly, an institution such as BelNIIP is allowed to accept for contract terms and, on the other, the question of whether UNDP CO has in its power to adjust contract terms if needed.

In addition to engaging BelNIIP and MOAC, as part of its efforts to bring about change in the nation's urban planning process, the project may also engage MinskGrado, responsible for preparing Minsk's MP, and private design institutes. Interestingly, the situation in the outskirts/ suburbs of Minsk with regard to urban planning, may in some ways be similar to that in small and medium cities. Thus, learnings from the project and related developments will be of interest to MinskGrado.

5. Outcome 2. SUT Pilots and ISUMP

For Outcome 2, the main area of work and desired impact is SUT in Polotsk and Novopolotsk, with subareas being bicycles and public transport/ private car use. The project has commissioned feasibility studies in the area of both bicycles and public transport and aims to carry out SUT demos. In addition, the project has recently prepared a draft integrated SUMP (ISUMP) for the two cities. Ideally, the ISUMP would have been prepared first and used to inform the content of the feasibility studies with the benefit of surveys conducted for the SUMP. Instead, the feasibility studies were prepared first, based partly on the original initiatives proposed in the project document (e.g. bike trail between the two cities, improved bus stops, schedule signage for bus stops, etc.). The findings from the feasibility studies, as a result, were used to inform the preparation of the ISUMP.

A challenge facing the SUT demos is that the cities consider the project-financed work quite separate from any work the cities carry out. The MTR team strongly recommends that the project work to convince the cities of the benefit of developing an integrated package of project-financed and city-financed measures. The cities should understand that the project will be widely promoting the joint achievements of the project and the cities, so that integrating efforts will benefit all involved.

Bicycles: The project aims to pave a bicycle trail between the two cities, which are at closest 2.5 km apart and support additional bicycle lanes in the cities. The current plan is that the total route will be 11 km, including 3km of an independent bicycle-pedestrian trail between the cities that also passes through various villages along the way and an additional 8 km of bicycle lanes incorporated into urban roads. Based on the feasibility study and expert opinion, the MTR team suggests the project urge the cities to

provide additional support for 22 km of bicycle lanes added to city roads, bringing the total to 30 km, as recommended in the feasibility study, and that this additional work be presented as a “package” with project work.¹⁴ Further, it is recommended that the project consider using a small portion of the total investment on the bicycle side (e.g. \$20,000 to \$40,000 of the \$300,000 to \$400,000 total) to equip the city with places to park the bikes. This would involve providing bike racks across both cities (some supported by the project and some perhaps supported by institutions) and, as the project may be planning, a pilot overnight bike storage structure at a residence courtyard or university or perhaps bike storage facilities within apartment buildings where the trash chute used to be. Bike racks on the front of buses going between the two cities may be of interest, though some stakeholders believe these are not necessary at present, as bikes can be taken aboard buses. An additional issue for the project team to raise with the cities is the removal in winter of the bumps that separate the bicycle lanes from car traffic lanes. These are removed because they make cleaning snow off the streets difficult, but ideally a solution would be developed so that the bumps can remain in the winter to support year round riding of bicycles.¹⁵

The MTR team found a strong enthusiasm for cycling and fairly strong support for the bicycle trail between the two cities. Previous work of an Interaction-EU project in Polotsk to develop bicycle lanes inspired various residents to purchase bicycles. It is likely that additional bicycle lanes in the two cities will, at much lower cost, lead to higher GHG benefits than the trail, which will be quite expensive. Yet, the trail is symbolic, creates enthusiasm, and is the only integrated transport measure the cities have been able to agree upon, so is an important first step.

The potential GHG ER benefits of project bicycle efforts are considered to be much less than those that might be achieved with well-chosen measures related to public transport/ private cars. Analysis by the Minsk Bicycle Society has found that, when the economic savings related to various benefits of bicycles are computed, benefits such as health have a much higher value than GHG ERs. For all of Minsk, with less than two percent of trips by bicycle in a population of 2 million persons, they estimate the annual GHG ER benefit to be less \$500,000 out of \$16 million in total benefits. Polotsk and Novopolotsk, with a combined population around one-tenth that of Minsk and similar share of biking in transport, may be realizing an annual GHG ER benefit of less than \$50,000. Yet, the bicycle measures overall may play a symbolic, inspiring role to the cities in efforts to reduce GHG ERs and improve local air quality. At the same time, it is critical that the cities come up with measures with strong GHG ERs for the public transport/ private car aspect of the demos. As noted, the bicycle feasibility study (prepared by an organization in Saint Petersburg, Russia) has received praise as a model that might be used for work in other cities in Belarus.

Public Transport and Private Cars: The MTR team, at the time of the MTR mission, found plans for the other part of the demos, which involve public transport, to lack high impact, transformative measures – the ones most likely to increase use of public transport and decrease the use of private cars as compared to business as usual. Here we include measures for private cars along with those for public transport, because it is generally agreed that efforts to attract people to ride buses by improving public transport (“pull measures”) will only work well when accompanied by measures to discourage private car use (“push measures”). The MTR team found that key items among the measures being considered at the time of the MTR mission may have limited impact on long-term GHG ERs and are unlikely to be meaningful game changers that attract attention and inspire replication. And, other measures that were being considered are controversial with regard to GHG ER benefit. Generally, during consultations, the team found a lack of enthusiasm about the public transport measures under consideration, contrasting with

¹⁴ The MTR team understands that both cities have some interest in expanding street availability for cycling and pedestrian ways and that further investigation is being undertaken on barriers and needed funds.

¹⁵ The project has suggested Swedish-style barriers that can be left in place year round. The MTR Team encourages the project to continue to promote such year-round solutions.

strong enthusiasm for the bicycle related demos. Yet, because the much greater GHG potential will be in this public transport/ private car category, it is imperative that work be done to ensure the measures eventually selected have strong GHG ER benefits, high replication potential, and high stakeholder enthusiasm. The MTR team understands that, since the time of submission of the draft MTR report, Polotsk has begun to consider some more impactful measures to promote public transport.

The measures under consideration at the time of the MTR mission include: (1) Synchronized traffic lights on the main thoroughfare in Novopolotsk. While there is agreement that these lights will have a short-term benefit in reducing GHG ERs due to less idling time at lights, there is disagreement about whether such lights will benefit buses or mainly benefit cars and, in the long run, simply encourage an increase in the private vehicle fleet. Further analysis and open debate is needed. If adopted, it will be critical to ensure the traffic lights are designed specifically to serve the flow of large capacity buses, rather than cars. It has been indicated by the project team that this will be achieved, in part, by tailoring the synchronization to a maximum speed of 40 km per hour. (2) Improved bus stops in Polotsk. All bus stops in city center have shelter/ roofs, though many outside of city center lack shelter. Yet, the city has already upgraded 12 of these shelters (at six stops). The project is considering upgrading about five more with innovative designs. One stakeholder suggested adding something to many stops (such as wifi) rather than completely outfitting a limited number of stops. This general measure of improving bus stops can make public transport more attractive, but is not considered as impactful as measures that decrease the public transport trip times or make cars less attractive. (3) Possibly, LED signs at bus stops that show timing of buses. Such signs are used in Minsk and are being tested at a few stops in Vitebsk. Different stakeholders mentioned different technical and administrative challenges with these, though more follow up is needed. It's possible the cities may be less interested in supporting these as the funds will go to the operating organizations, which might use their own money anyway to finance such signs. And it is unclear who will be responsible for operating and servicing these signs in the long run. As with enhanced bus stop structures, this measure can make public transport more attractive, but is not considered as impactful as measures that decrease public transport trip times or make cars less attractive. (4) A traffic management study to advise Polotsk how to reroute traffic for an upcoming bridge closure for repair of a bridge: Since the study was to address a short-term issue and also is a TA activity rather than a true investment expenditure, the MTR team had concerns whether it was an appropriate use of investment funds. Yet, after submission of the draft MTR Report, it was learned that the report had been completed and was a broader traffic management study dealing with various aspects, such as bike lanes, bus lanes, and private cars. Further, it had the impressive benefit of convincing Polotsk to carry out a pilot 4 km bus lane and, likely, time-of-day private car driving restrictions in city center. It may be a lesson learned that this traffic management study, which is considered a design document, was able to do what neither the ISUMP nor the public transport feasibility study was able to do. (5) Removal of pedestrian crosswalks in Novopolotsk on main thoroughfare to make way for the "green wave" associated with the synchronized traffic lights: Some of this work has already been carried out. This measure is also controversial, eliciting different views among stakeholders. One side believes it will make walking and taking the bus less attractive, while the other believes the current crosswalks are too close together.

While there is some variation in view among the several experts consulted, there is general agreement that more ambitious measures involving priority for public (large capacity) buses and, possibly, restrictions on private cars (parking and/or driving) would be the most impactful measures and preferable to most of those measures being considered at the time of the MTR mission. The challenge may be political will to adopt such measures. Indeed, the public transport feasibility study was expertly carried out, but final recommendations vis-à-vis the demos appear to be constrained by what the cities had said they were actually willing to do. Yet, there are some promising signs that, with additional liaison work, there may be room to incorporate more impactful measures in the demos. As mentioned, after submission of the draft MTR Report, Polotsk became more interested in such impactful measures and has agreed to test a 4 km bus lane with barriers in city center (the first true bus lane in the country) and is likely also to adopt

time-of-day private car restrictions in certain places in city center. As for Novopolotsk, less concrete progress has been made, but conducive background conditions exist. Previously, a bus (or, in the long term, bus-tram) corridor was proposed in *Recommendations for Planning Sustainable Urban Mobility - Let's Make the City Comfortable for Life* in 2015 and approved for further action by city authorities. The corridor includes Ekiman 1st, Molodezhnaya St., Katorov St., and Promyshlennaya St. This corridor is now also planned to accommodate part of the bike path between the two cities, so that a reduction in maximum car speed from 90 km per hour to 40 to 60 km per hour has been called for by the PIU, which may reduce the amount of private cars on this corridor. Another background condition of interest is that Polotsk, a few years back under the Interaction-EU project, tried to charge for parking in city center, but was blocked by this at the oblast level. Further, officials in both cities in the area recognize that, according to recent research, the greater emissions in city areas is due to the transport sector rather than the Novopolotsk petrochemical facilities, as might be expected. And, it has been indicated that Novopolotsk and Polotsk are the most progressive medium sized cities in Belarus when it comes to SUT. Thus, the project is, in a sense, a golden opportunity to push for some impactful measures, despite the seeming lack of receptivity at the time of the MTR mission. Because of the great challenge in convincing the cities to adopt impactful measures and despite the original aim to adopt integrated measures, for the time being, for transport and private car demos measures, it is recommended separate initiatives for each city be the focus, though the project can aim for incremental progress in getting the cities to discuss joint initiatives. The ISUMP will then serve as the primary means to advocate future integrated measures. So far, it has been reported that the cities have had joint discussions (involving the bus companies of both cities) on public transit routes in Polotsk.

The range of measures either currently being considered by the cities or raised by experts and other stakeholders as potentially impactful, along with comments, is given below. Generally, it is thought that measures that affect the movement of buses and cars, such as bus lanes, bus route improvements, and parking or driving restrictions, will have the greatest impact. Further, special attention might be given to key congestion points, such as “wall-to-wall” traffic during rush hour on the road to the refinery from Novopolotsk or congestion on road in from the train station in Polotsk, or future expected congestion points. It is recognized that some items will be very difficult, but hoped that at least the more moderately difficult will be considered. What is needed at this point is for the project to adopt a new strategy for working with the cities, as well as for the involved experts to come to consensus on the utility of measures so as to advise the cities. The project has assembled extremely knowledgeable and capable experts from the Transport Department and Mobility Center of BNTU (public transport feasibility study), from BTU (ISUMP), and from ETS Consult (project SUT expert); and the cities also have some knowledgeable experts, such as the head of the Novopolotsk bus company. As a first step, these experts might be organized to exchange on the optimal measures to promote with the cities. As for the cities, the MTR team found that the understanding of city stakeholders of the aims of project’s public transport/private car related measures is weak and that they generally lack a grasp on the full scope of the project and potential options available. The approach of the coordinating committees of each city that have been set up to discuss the measures seems somewhat chaotic. It is recommended the project provide strong expert consultation, coaching, and meeting facilitation to the city teams working on the SUT demos, as well as one-on-one expert consultation to the key city leaders (who appear to be the ultimate decision makers on the measures). This work should educate the teams and city leadership on the pros and cons and costs of the various measures involved. The project may also inform the teams of the total budget available so they will understand budgeting constraints. Further, it may institute a practice of preparing two-page newsletters specifically to promote progress of the coordinating committees in determining the project SUT demos, so that the coordinating committee members can have something on paper showing the demo options, the pros and cons, the costs, and, eventually, the input of various stakeholders on these options. The project and its experts should work to convince the cities of three things: (1) More impactful measures should be adopted for the demos, despite some risk of unpopularity with certain segments of the population (namely, car drivers). (2) Low-cost or no-cost transport measures can be among the most

impactful and save them money to use for other purposes. (3) Measures that the city carries out with its own funding (or at no cost) should be integrated into the “package” of demo measures: This will be win-win for the project and for the city, as the project will be promoting the demos widely, such as through an innovative video and site visits by regional and local authorities organized by the Council of Ministers.

Range of SUT Measures to Consider, Discuss, Debate with City Stakeholders
some to be implemented with project funds, some with city funds, some are low or no-cost

Bikes: 1. Bike trail between cities (3 km). 2. Additional city bike lanes (30 km). 3. Removal of high curbs. 4. Overnight bike storage demo in one apartment courtyard or university or in former waste chute area of apartment building. 5. Bike storage racks around city. 6. Maintaining of bike lane barrier bumps in winter. (Foregoing all high priority. Items 1-5 should be relatively easy. Item 6 may be challenging due to snow removal.) 7. Bike racks on front of buses travelling between cities: Some indicate these are not needed, because riders can carry bikes on the buses.

Bus/ car: 1. Test bus lane of up to 3 km on Molodezhnaya St. and parking ban on other parts of the bus corridor (e.g. rest of Molodezhnaya and on Katarov/ other streets) approved for further action in 2015 by Novopolotsk: There is some debate among experts as to the need for this due to limited congestion. Internationally, bus priority lanes are known to be some of the most effective measures. Further confirmation of benefit or lack thereof is highly recommended. 2. Synchronized and adaptive traffic lights on Molodezhnaya in Novopolotsk: Some do not feel these will benefit buses and may encourage cars. Further assessment of how these can benefit high capacity buses and risk of long-term increased traffic is needed. If adopted, these traffic lights should be focused on prioritizing high capacity bus flow. 3. Removal of pedestrian crosswalks in Novopolotsk to benefit foregoing synchronization: Some of this has already been done. Decision is controversial and further discussion may be needed to assess SUT impact. 4. Improvement of Polotsk bus routes as proposed in feasibility study. 5. Removal of mashtruktas on busy routes and replacement with more frequent large capacity buses (both cities). 6. Improved bus stops in Polotsk: Consider option of small improvements to many stops versus small number of fully new stops. Stops in city center have shelter; some outside of city center have been refurbished. Those with needs for shelter are outside city center. 5. LED signs at bus stops showing bus arrival times. 6. Unification of bus operations of two cities, so single ticket can be used. 7. Test bus lane of 4 km in city center areas of Polotsk (idea already approved by city, awaiting approval of Traffic Police).

Car: 1. Fee for car parking in Polotsk City Center, pending policy change. 2. Pedestrian/ bus/ bike road in Polotsk city center that is closed to cars; similar one in Novopolotsk: Polotsk is working on pedestrian road already; Novopolotsk is considering one on Park Street. 3. Reconstruction of Zygin St. – Bogdanovice St. intersection in Polotsk to turn it into circular intersection and thus reduce idling: Design is underway. Bus lane, based on recent traffic management study may also be added. 4. Closure of one of two roads between the two cities to cars, so that buses, bikes, pedestrians only use it. 5. Closure of road to refinery one hour morning/ one hour evening to cars or lagging of work hours by refinery. 6. TA traffic management study for rerouting traffic in face of temporary Polotsk bridge closure. While this originally seemed not to be an appropriate use of investment funds, the study is complete and convinced Polotsk to adopt high impact measure of bus lane and, likely, private car restrictions. 7. Time-of-day restrictions on private cars in certain areas of city center in Polotsk (likely to be adopted).

Other: 1. Idea of small grants approach with a portion of funds to support a variety of low-cost measures with attractive GHG benefits, such as roundabouts, traffic calming zones, etc.

Not needed: 1. Park and ride lots. 2. Traffic modelling software: Design companies preparing Traffic Annexes to MPs already have such software. There is lack of capacity in cities to utilize it.¹⁶

Only once the above steps have been taken, with both additional expert input on the demo options and with additional education of the cities by the experts on the benefits and costs of various measures, should further debate be held and decisions made on which measures to adopt and how the demo budget will be divided.¹⁷ In line with the theme that low-cost or no-cost transport measures can be very impactful, the

¹⁶ A “sister” SUT project in Batumi, Georgia, that has purchased transport software has faced challenges in getting someone in the city assigned to use this. While that project is proactively pursuing solutions, the experience has, in part, informed the decision of the Belarus Green Cities project not to purchase the software.

¹⁷ As with other aspects of the project, it is important for the implementers to realize that activities and even outputs can be changed as needed. This is true for all activities, but particularly true in the case of the transport measures, as

project and its stakeholders may want to consider an approach of spreading the funds across many low cost measures if indeed these are what will have the most impact. One idea raised in discussions is to use part of the demo funds for a small grant fund to which state organizations or NGOs may apply to implement such low cost measures.¹⁸ While the project modality may not allow this approach, involvement of activists and NGOs in project public hearings for the ISUMP and GUDPs may provide the opportunity for individuals to promote their ideas for such measures to city officials.



Left: Polotsk street with bike lane markings. Bumps that serve as protective barriers are removed in winter. Right: Polotsk newly established bus stop structure away from city center.



The MTR team was interested to note that there is strong support among transport experts for extension of the Novopolotsk tram. Extension of the tram is a widely debated issue; and the idea has been around since the 1970s. The MTR team learned that one-third to one-half the cost of the feasibility study for tram extension planning has been completed. Some stakeholders question why the project is not supporting the tram initiative. Now that the project team has decided to assist cities in pursuing funding for priority projects, the tram is likely to be one of these projects. The MTR team sees a need to further confirm the cost effectiveness of tram extension, as compared to other options, before further project resources, whether for feasibility study or assistance securing financing, be expended. As public transport is often not profitable, the goal will not be to prove the tram extension investment will be profitable, just that its combination of costs and benefits outweigh those of other options when considered on a lifetime basis. The tram might be compared not only to regular buses, but to the option of having dedicated bus roads, such as in Curitiba, a Brazilian city that decided against rail transit in favor of bus rapid transit. Experts have pointed out that, while the tram has high up-front costs, its operational costs are lower than buses. The city of Novopolotsk is also highly in favor of tram extension and has been since the time of project design. While Polotsk is not yet on board, design for extensions within Novopolotsk and to the refinery are first steps that Novopolotsk could take unilaterally. Estimates of investment costs for this first phase (with two segments) are \$15 to \$20 million. The estimate for extension to Polotsk (with additional trams,

it was recognized during project design that the transport survey and ISUMP would be required to confirm measures of greatest impact.

¹⁸ Examples as shared by one stakeholder include: construction of roundabouts, setting up of traffic calming zones, increasing the accessibility of bus stops, training in eco-driving, construction of bicycle racks or sheds, setting up of recreational bicycle routes, retrofitting of buses and trucks with gas engines.

but the majority of cost going to a bridge that will accommodate a single lane of traffic and bikes and pedestrians) is \$150 to \$200 million.

Integrated SUMP: At this point, a draft integrated SUMP (ISUMP) for the two cities has just been prepared.¹⁹ As noted above, integration of transport measures between the two cities remains a challenge, so that for the public transport/ car aspect of the demos, separate measures are recommended. The ISUMP, then, faces the challenge of presenting forward-looking thinking on transport integration in the face of a current situation that is not yet ready to support most integrated measures. Yet, in this regard, preparing the ISUMP after the feasibility studies may have made sense after all, as the ISUMP then becomes the plan for the future beyond the project demos. The ISUMP strongly promotes the idea of tram extension within Novopolotsk and on to Polotsk, something for which Polotsk is not that receptive at present. The draft ISUMP does not present information on lifecycle costs and benefits of the tram extension and comparison to the no-tram-extension scenario, though this is something that would be very helpful for the finalized ISUMP to address to validate its recommendation of tram extension. The ISUMP appears to provide in-depth recommendations on improvement of bus routes and needed road and highway networks to address integration of the two cities' transport systems and their incorporation into the wider region, which should be quite useful and is something envisioned as very important at the time of project design. The first 32 pages of the 45 page draft ISUMP focus mainly on the results of the transport survey. This survey includes 9,000 persons working for companies with 100 or more employees and does not include individual persons independent of companies, probably because the large company persons were seen as most relevant to integration of transport between the two cities. Through the survey, BTU discovered that just one-quarter of working persons in the two cities work at these large companies.

While the ISUMP is forward looking and focuses on measures that could be said to truly integrate transport between the two cities, the MTR team suggests that, as work to improve and finalize the ISUMP is carried out, consideration also be given to the range of measures that might be carried out in the nearer term. These should include, but not limited to, the ones listed above as under consideration for the demos, even if these are localized in one city or the other. For each, it would be useful for the ISUMP to assess potential benefits as well as viability of adoption. Further, in line with the project strategy of emphasizing how low-cost transit measures can have strong impacts and save money, it is recommended that the ISUMP look at such measures and even consider the type of measures proposed under a small grants approach (e.g. roundabouts, traffic calming zones, etc.). For parking, it would be worthwhile for the ISUMP to assess the option of fee parking, since this is something Polotsk once considered. If the ISUMP takes this approach to scan all the possible measures, in addition to proposing long-term truly integrative measures, it may prove useful in guiding improvement in the project demos as discussed above. It might carry out this scan in consultation with the other transport experts that have been involved with the project, namely those at BNTU and ETS Consult, as well as local experts, such as the head of the Novopolotsk bus company.

6. Outcome 3. Municipal Energy Efficiency Pilots

For Outcome 3, the main area of work is EE demonstration. The original outputs include: feasibility studies for EE in Novogrudok and other cities, demo of LED lighting for streets and public areas with control gear, and demo of EE equipment for Novopolotsk laundry. In the end, the project is supporting feasibility studies for the Novogrudok demos only, though these studies might well be used as models for other cities. The lighting demo has been narrowed from street lighting and public area lighting to street

¹⁹ As noted, Polotsk already has a SUMP, prepared under a project with Interaction-EU. Polotsk's SUMP has been officially annexed to its MP. It was prepared in 2012 and goes out to 2030. Novopolotsk does not have a SUMP, but the aforementioned 2015 study, which includes bus/tram corridors, and decision by the city to take action are notable.

lighting only. And, the laundry demo (due to the city moving ahead with the laundry retrofits on its own) has been changed to plans for a multi-utility smart meter demo. Because city-owned laundries are not that common in Belarus, this demo may have lacked replication potential, anyhow.

Street lighting demo: Among all project demos, the Novogrudok street lighting demo is the one closest to implementation. The contract for installation (which includes design and equipment as well) has been signed and work is to begin soon. The project team decided to focus on street lighting only, as they believe the GHG benefits will be higher per dollar spent than for public area lighting. The design originally called for inclusion of outside lighting in public areas, so that people could have a complete path that was well-lit, from the street to the end of their journey. Yet, at the time of design, many of the original lights in outside public areas were missing, suggesting it may not have made sense to replace them under the same conditions should they go missing again. By the time project implementation began in late 2016, LED street lights were already fairly common in Belarus. Today, 1,500 of Novogrudok's 2,000 street lights already have LED bulbs. Thus, the main innovation of the demo is the automatic control system, which will allow individual control of each light and dimming late in the night to save energy.²⁰ As noted earlier, this is completely new to Belarus. The only other cases are a small area demo in Minsk and a concurrent demo planned for Polotsk (a larger city than Novogrudok) that will have 1,500 street lights. The Polotsk demo will be higher cost per light included as all the cabling will be replaced. The project's Novogrudok demo will not replace cabling and aims to be a model for small cities that would like to prepare a similar, low-cost smart LED streetlight installation. The PIU has provided an estimate of 730 tons of CO₂ emissions reduced over ten years for the Novogrudok LED streetlight installation. This is substantially less than the 3,140 tons of direct GHG ERs indicated for the streetlight demo in the ProDoc, which also uses a ten-year lifetime.

Smart meters: In January 2019, the Government of Belarus issued *New Decree on Modernization of Apartment Buildings*. The decree indicates that each apartment building in the nation should have smart meters. While there have been previous demonstrations of a single type of smart meter in apartment buildings (for example, some for heating meters and some for water meters), there has been no demonstration fully supporting this decree by installing smart meters for multiple utility services in a single building. The demo now planned for the project would install multiple smart meters in each of sixty flats in a single residential building in Novogrudok. The smart meters to be included are those for heating, electricity, hot water, cold water, and gas. To prepare for the demo, the project did energy audits of 45 apartment buildings and found that only three of the 45 had horizontal heating, which is a prerequisite to retrofits for individually metering heating in apartments. So, one of these three apartment buildings was chosen for the demo.

The main concern of the MTR team with regard to this planned demo is whether, as part of a GEF climate change mitigation project, the energy savings justification and potential replication of that savings are in place. For the incorporation of individual meters for heating where there was no individual metering before (along with regulators, so households can control heating levels), the case of energy savings potential is clear, though not dependent on having a smart meter instead of non-smart meter. Right now, residents in Belarus pay only 17 percent of the cost of their heating, with the rest subsidized. As the government plans to increase the share paid by residents, the metering of heating is thought to be good preparation for this eventuality, though such demos have been done before. Nationwide, about ten to 15 percent of apartment buildings have horizontal heating, so while it's a minority, such demos still have substantial replication potential.

²⁰ At the time of demo design, each of the Novogrudok street lights had to be turned on and off individually and manually.



Left: Street light in Novogrudok. Right: Novogrudok apartment building targeted for smart meter demo.

The other utilities are already metered on an individual apartment level, so that existing meters will be replaced with smart meters. In this case, the energy savings benefit is less clear. The international literature on smart meters is quite mixed in terms of whether they enable energy savings. Some reports indicate that savings have failed to materialize as promised (particularly savings related to end use behavior change). One study shared by the project team with the MTR team pointed out time-of-day variable pricing as a main benefit of smart meters, though Belarus does not currently have time-of-day pricing and this benefit may mainly serve to shift the load to a different time of day, rather than save energy anyway, unless behavior change is also stimulated by the time of day shift in usage. The main benefit of replacing regular meters with smart meters in this demo as explained to the MTR team will be on the supply side. For example, electricity suppliers using smart meter data will be able to identify and address distribution losses that they could not find with regular meters.

The MTR team found that there is a lack of clarity in Novogrudok and generally among stakeholders about the energy savings benefit of the smart meters (beyond the benefit of incorporating heating regulators and heating meters, whether smart or not smart, where there were none before). The team recommends that before this demo moves forward that the specific nature of energy savings of the demo be confirmed. If the savings is to be supply side, are the involved utilities prepared to do the analysis that needs to be done to realize the savings? If and when the specific nature and estimated magnitude of energy savings is confirmed, it should be communicated clearly to all involved. On the consumer side, the demo is facing a challenge in that only 36 of the 60 families in the apartment block have agreed to installation of the smart meters. It is important that, once confirmed, the energy savings benefit and any other benefits are clearly explained to the householders. Other benefits might be being able to check the status of one's utilities when on vacation (and detect, say, water flowing when it shouldn't be) and not having to read meters and call in with readings in order to pay bills. In some countries, there is skepticism that consumers have had to bear the cost of smart meters without realizing any benefit, while the utilities are the main beneficiaries. In Novogrudok, consumers are said to be skeptical as they had bad experience with another item (water filters) that they were encouraged to buy, but that turned out not to have the promised benefits.

If the planners of the smart meter demo can clearly confirm the sources and magnitude of expected energy savings, this could make the demo really beneficial to the country. Upon clearly defining the areas of expected energy savings, it could be ensured that the smart meter demo (and subsequent roll out of smart meters, as called for in the Governments January 2019 decree) is designed and carried out in such a way that it really does deliver promised energy savings in the various areas specifically targeted. The PIU has provided preliminary estimates of GHG ERs per household and per resource type for the smart meter

demo. These include 0.303 tons per year CO₂ ER per household for heating, 0.075 tons for hot water, 0.025 tons for electricity, and 0.022 tons for natural gas, thus totaling 0.42 tons CO₂ ER per household per year. Assuming 60 households and a lifetime of ten years, the total lifetime direct CO₂ ERs for the smart meter demo are 252 tons CO₂. This is much less than the 10,190 tons lifetime direct CO₂ ERs estimated for the laundry demo, which the smart meter demo is to replace.

7. Outcome 4. Replication of Green Urban Development

Outcome 4 is considered the “replication outcome,” with the purpose of replicating GUD in other cities and setting up a sustainable mechanism whereby replication will continue. As originally designed, the main outputs of Outcome 4 included preparing a SEAP for Novopolotsk, an updated SEAP for each of Polotsk and Novogrudok, preparing SEAPs or GUDPs for ten other cities, and developing a mechanism for promoting low-carbon growth in Belarusian cities.

SECAPs and GUDPs: Under the Covenant of Mayors, what were SEAPs at the time of project design are now SECAPs, with climate change adaptation/ resilience added to the original content of energy efficiency and renewable energy. There are now two other organizations preparing SECAPs for Belarusian cities that become signatories to the Covenant of Mayors. These are Ecopartnership, which has a total of 13 completed or pipeline SECAPs, and Interaction, which has about 10. *Green Cities*, in addition to its three SECAPs being prepared for the pilot cities (for which the energy portions are now complete), has recently held a competition and, of eight or nine applicants, selected five for which the project would prepare SECAPs. The energy portion of four out of five of these promised replication SECAPs has already been prepared. A question that comes immediately to mind is why, given the strong entry of two other players into the field of SECAPs, did the project not shift its replication activity and focus more on GUDPs or SUMP. The project is the only one working on GUDPs (aside from the work by EBRD in Minsk); and only Polotsk of Belarusian cities has a SUMP. There may be some different factors in the project’s decision to go ahead and do five more SECAPs. For one thing, SECAPs focus more squarely on energy efficiency and renewable energy, areas directly related to the project’s climate change mitigation role, whereas the project’s GUDPs are broader. Second, while the SECAP field suddenly became more “crowded,” cities joining the Covenant of Mayors commit to developing a SECAP within two years of joining. And, the number of Belarusian Cities joining ballooned from around ten in 2016 to about 45 at present. The two NGOs working in this area could not provide enough support to prepare SECAPs for all of these cities. The cities are generally interested in joining and preparing the required SECAPs, as they believe it will give them access to grant opportunities, something that GUDP preparation does not offer. Further, SECAPs appear to be much lower cost per plan than GUDPs, probably because less field work and consultation is involved and because the SECAPs are much briefer than the GUDPs. Lastly, the methodology used by the three different groups supporting SECAP preparation has varied. *Green Cities*, in conjunction with preparation of its three initial SECAPs, has developed a methodology that can be used for the energy aspects of SECAP preparation. This is considered valuable for Belarus and thus an important benefit of the project continuing to be involved in SECAP preparation. Although a general European methodology is accessible, Belarusian data is available in a different format than typical European data. So a Belarusian-tailored methodology is considered quite helpful.

Another question asked by the MTR team is whether updates of the existing plans of Novogrudok and Polotsk were needed. Stakeholders that were aware of this situation seemed to agree that they were needed. Not only have many things changed since initial preparation of these plans, but the addition of climate change adaptation also requires new content be added to the plans. Further, the Covenant of Mayors requires that member cities prepare monitoring reports and updated versions of the SEAPs every two years. Further, Novogrudok and Polotsk have targeted to increase their CO₂ reductions from 20 percent to 30 percent, so that revisions to their SEAPs are needed. The project completed the energy

portion of Novogrudok's updated SECAP in 2017 and that for Polotsk in 2019. The energy portion of the SECAP for Novopolotsk and four of the replication cities was also completed in 2019. The MTR team found that some key stakeholders in Novogrudok are unaware of this 2017 SECAP. They are aware of the original SEAP from 2014, which has provided ideas that are now being implemented, such as the street lighting project. The MTR team finds it concerning that some key Novogrudok stakeholders are unaware of the SECAP prepared by the project in 2017, but know about the one in 2014. Their awareness of the 2014 version suggests that the stakeholders are not completely uninformed, but that the 2017 SECAP has not involved them and has not attracted attention of the city. The extremely positive reaction with regard to the GUDPs contrasts sharply with this finding. It is recommended that the project try and replicate a "GUDP-like experience" in the preparation of the one remaining SECAP it still has to prepare. As for the energy portions of the eight SECAPS already prepared, the project may carry out an information campaign to ensure people know about them. Or, if city participation in their preparation did not occur, these might be revised on the basis of city involvement in their finalization.

To reach its total target of ten replication plans, the project plans to have a competition to select four cities to be supported in preparation of GUDPs. Given the strong enthusiasm of the pilot cities for the GUDPs, the quality content as noted in the case of Polotsk's draft GUDP, and the potential for national impact on the city planning process, the MTR team highly supports this move. One idea to consider is that cities whose MP is up for revision in a year or two might be interesting candidates, as they could then push to have their GUDPs used as TORs for the MPs, though this may depend on the success of project discussions with BelNIIP and/ or policy work. Another consideration might be priority regions of the country, especially Orsha Region, which has been prioritized at the highest levels for industrial development. At the same time, perhaps what matters most is what the project has already been prioritizing in city selection – the proactiveness and open-mindedness of the city to try new approaches to improve their cities and the lives of their citizens. Given that the project has as its major aim influencing the urban planning process and that this will likely require one-on-one/ small group engagement with government officials and BelNIIP, it seems important to accelerate city selection and preparation of these additional four GUDPs. With a total of eight GUDPs (actually 7 GUDPs and 1 symbio plan), the project may be in a stronger position to demonstrate the utility of GUDPs to these stakeholders in its discussions.

Financing of Measures: As noted, lack of financing for implementation of measures proposed in SECAPs, GUDPs, and SUMPs is of great concern. Without financing, much of what the project is promoting will end up as dusty documents on a shelf. The project recognized this with its financing study, a positive example of adaptive management, given that financing activities were not included in the project document. This first activity will be followed by an identification of potential financing sources, including debt and equity financing, trying to broaden the narrow focus of Belarusian cities competing in a crowded field for a limited number of European grants. Finally, something highly recommended by the MTR team and already initiated by the project team is support of cities in finding funding for specific priority measures. Recommendations for this work are included elsewhere, though here we reiterate that it should be very active support, including reaching out to potential financiers, holding meetings, etc., and that it could well be expanded from the three pilot cities to include the ten replication cities as well.

Replication Mechanism: While the ProDoc mentions a replication mechanism, it is somewhat vague about its nature. The PIF had indicated the mechanism would be a GUD association, but this is not mentioned in the ProDoc, which instead mentions a "designated government agency" as the replication mechanism. It was envisioned that this agency would assist in preparation of the ten additional SEAPs/ GUDPs targeted under this outcome, though this has not been the case. The ProDoc also mentions the project website in its discussion of the replication mechanism. Thus far, we understand that the project is not planning to set up an association and is not optimistic that the website will be adopted by a government agency and serve a role in replication. And, it does not seem any agency is targeted to assist in preparation of the ten additional plans. Indeed, what may be most important at this point is for the

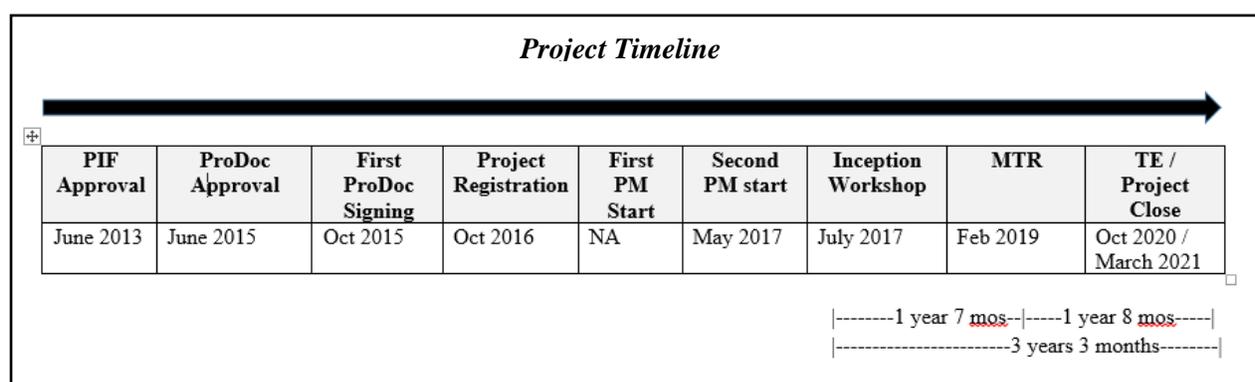
project to prepare additional GUDPs and prove their merit before attempting to secure an institutional home for replication. For now, the idea has been raised that the tool for preparing SECAPs (a draft of which for the energy portion of SECAPs is ready) and the tool for preparing GUDPs (still to be done) may be considered part of a replication mechanism.

With regard to financing, the project team and its experts are discussing the idea of an “urban lab,” an organization that would help cities prepare priority projects under their GUDPs and seek financing for them. While so far this idea has been raised as the content for another project, the MTR team encourages the project to consider moving this concept as far forward as possible, if, after further assessment, it seems viable. Because new projects can take years to develop, anything that can be done under the current project to promote a replication mechanism for GUD, such as an urban lab, should be done.

At the same time, once it develops a stronger portfolio of high quality GUDPs and satisfied GUDP cities, the project may wish to consider existing institutions as channels for replication mechanisms. If discussions with BelNIIP and policy work go well, some of the GUD function might be incorporated into BelNIIP’s activities. Or, alternatively, there may be private sector organizations interested in taking up the replication role if they believe the role can generate income or other benefits. It is quite common, for example, for fundraisers and project designers to charge a fee for their services. The former sometimes charge a success fee based on funds raised.

8. Implementation

Project Timeline and Extension: Milestones in the project timeline are shown below. The project suffered substantial delay between ProDoc approval in June 2015 and project registration in October 2016, after which hiring of the project team could begin. Project registration with the Government is a required step for all technical assistance projects in Belarus. And, the registration process can only begin once the ProDoc is cleared by the GEF. While the time needed for project registration varies, it is typical to have this magnitude of delay in UNDP-GEF projects in Belarus. A second challenge is that the first project manager left the post after just a few months on the job, due to finding a more attractive position. The current project manager was hired in May 2017 and the inception workshop held in July 2017, one year and seven months prior to the MTR mission. If the project were to close on schedule, the terminal evaluation (TE) of this five-year project would be conducted just 3.25 years after the inception workshop.



Given the potential for high impact on the city planning approach in Belarus and the possibility of supporting the cities in securing financing for high priority projects in the plans developed, it is recommended that the project apply for an extension of 18 months. This extension will give the project three years two months from the MTR mission until completion, or a total duration of four years nine months from the time of the inception workshop, which is in the vicinity of the originally intended five-year duration of the project. This recommendation is made because there is potential for the project to be

really good, but additional time to build on what has been done and pursue higher level impacts is required. Extension should be contingent on the project coming up with a focused set of activities that can lead it toward achieving the higher-level impacts proposed in this report, such as those in the areas of policy and the urban planning process, as well as on achieving optimization in the selection of transport demo measures in Polotsk and Novopolotsk. As discussed earlier, the transport demos face special challenges, but are also a golden opportunity, given the relatively progressive nature of these cities in the transport area as compared to other Belarusian cities. Thus, it will be well-worth the effort of aiming to reach consensus with the cities on a package of impactful measures that will attract note, achieve strong GHG ERs, and stimulate replication. Having the additional time to support cities in finding financing for priority initiatives in the plans will also be important in enabling to project to maximize the GHG ERs that it facilitates. Without these additional initiatives and an improved set of public transport/ private car measures for the transport demos, the project is unlikely to meet its GHG lifetime direct ER target of 91,100 tons CO₂e. Given challenges with regard to both procurement and land use rights (vis-à-vis the bicycle trail), the project will, in addition, benefit from having more wiggle room with regard to demo implementation. This will provide a buffer in case there are related delays, and more time, once the demos are implemented, to carry out meaningful monitoring and dissemination of results.

Project Management: *Green Cities'* project management is quite strong. As noted, the MTR team sees a high level of dedication and capability in the project team, as evidenced via the large amount of project work completed in the one year seven months between the inception workshop and MTR mission, the strong communications as praised by stakeholders, the conceptual mastery of a complex project, and proactiveness in addressing issues and opportunities as they arise. The key suggestion regarding project management is, as noted, that there be a shift from a mostly activity/output based approach to an outcome/impact based approach. That is, the team should clearly identify the higher level impacts the project targets to achieve and adjust or, even redesign, activities and outputs as needed. The team should realize that certain activities in the ProDoc may be dropped if no longer relevant or of low priority compared to what is needed to be done to strive for desired project impacts. Another issue that has been noted is that carrying out the SUT feasibility studies prior to preparing the ISUMP may be considered out of sequence. The ISUMP, informed by its survey, was to present the overall strategy of what should be done, with the feasibility studies later providing the details. Yet, as has also been noted, the challenges encountered in reaching city agreement on truly integrated public transport/car related activities suggest that the sequencing may make sense after all, with the feasibility studies and demos focusing on individual initiatives for each city, while the ISUMP presents a longer-term plan for integration.

An additional area of recommended improvement is with regard to experts and sub-contracting organizations. It is suggested that the project ensure these parties have the big picture of what the project is trying to do in their area vis-à-vis higher level impact, demo design, etc., and also that their TORs more clearly state the end goals of their work. For example, the experts involved with the project demos should understand roughly the total budget available for the demos so that they can make recommendations accordingly. And, when their work is related with that of other contractors/ experts, a means of enabling exchange (with all parties clear on the end goal) should be developed. This is especially needed with regard to the SUT demos, for which coming up with the best measures is quite challenging and thus could benefit from the combined brain-power of BNTU (public transport feasibility study contractor), BTU (ISUMP contractor), and ETS Consult (PIU SUT expert), as well as local transport experts in the pilot cities, such as the Novopolotsk bus company head.

M&E: Also attesting to the strength of project management, M&E has been strong. The MTR team is particularly impressed by the level of detail provided in the Annual Project Progress Reports, by additional tools such as Monitoring Logs and Lessons Learned Logs, and by the updating of the risk and issues logs. These strengths are believed to be due to UNDP Belarus' special, enhanced M&E procedures.

UNDP: The project is extremely well-suited to UNDP's comparative advantage; and UNDP has provided strong, expert support to the project. UNDP is known for its comparative advantage in the policy, planning, and capacity building areas, for its strong attention to country needs and understanding the real country situation in working towards results, and for piloting innovative approaches that can later be taken up and replicated on large scale. For a project that aims to build capacity in cities, introduce new types of urban plans (GUDP, SUMP, and SECAP), and enhance the national urban planning process, UNDP's comparative advantages are important. The MTR team finds that UNDP has thus far provided the project with both administrative support and expert advising on content as needed. In addition, the project has benefited from the network of other UNDP projects and especially from exchange with the UNDP-GEF *Batumi Green Cities Project* in Georgia, which is also carrying out SUT demos. As the project moves forward and, hopefully, begins to focus more on higher level impacts, UNDP can provide additional backing, such as in pursuing a high-level government order for cross-ministerial action on urban planning.

Implementing Partner: The project benefits from an enthusiastic and supportive IP, which will play an important role in the project's success. So far, MNREP has pushed, on a policy level, for inclusion in the *National Green Economy Action Plan* of the requirement that Brest prepare a symbio plan. Further, MNREP has achieved, as recommended by the project, inclusion of cities as an object of sustainable development in the new version of the *Concept of the National Strategy of Sustainable Development*, including text that calls for "introduction of the principles and methods of green urban development." It is also likely to push for more detailed content on GUD, as will be recommended by the project, to be included in the new version of the *National Strategy of Sustainable Development*, a draft of which is to be issued soon. As the project moves forward and, hopefully, begins to focus more on higher level impacts, MNREP can work with UNDP to provide additional backing, such as in pursuing a high-level government order for cross-ministerial action on bringing GUDP into the urban planning process. This may occur after the project has produced a solid set of eight high quality GUDPs, with strong involvement and buy-in from city stakeholders.

Project Governance: Project Board meetings have been less content-rich and less frequent than might be desired. While the project design targets a minimum of two board meetings per year, in practice only one "live" board meeting per year has been achieved, while the other has typically been an "email vote" meeting. It is hoped that the project, by pursuing a more focused strategy of engaging national level officials, by sharpening its key message to ensure all understand what the project is really about, and by enhancing the understanding of city officials about the aims and strategies of project work, will increase enthusiasm for its project board meetings. It is also hoped that at least two in-person board meetings per year, rich in content and discussion, will be held going forward. To facilitate richer content and more engagement at project board meetings, it is suggested the agenda be designed to discuss some of the higher level impacts that the project aims to achieve and the recommended strategies for achieving them. That is, the Project Board, like the project team, should now move from an activity-output level of thinking to an outcome-impact level of thinking.

Stakeholder Engagement: The MTR team is impressed with the breadth of the project network as evidenced by the large number and broad range of stakeholders able to speak on the project's content during the MTR mission. In general, real strengths in stakeholder engagement were found, particularly with regard to GUDP preparation involving city officials and companies. Deficiencies and recommendations with regard to stakeholder engagement have been noted elsewhere in this document. At the national level, a need is seen for a new approach for engaging government stakeholders, particularly MoAC, and for engaging BelNIIP. At the level of municipal officials and companies, positive results in awareness and engagement need to be further enhanced. These stakeholders need a better understanding, for example, of how low-cost measures in SUT can be effective, the benefits of the plans promoted, etc. And, they should be involved not only in GUDP preparation, but also in the ISUMP and SECAP

processes. And, the project should move forward with engaging local citizens in preparation of the GUDPs and other plans. Already, the project has taken a great step forward from business-as-usual in closely involving city officials and companies in GUDP preparation. Making two such great steps forward by involving both city officials and residents may be quite a challenging aim for one project, but should be pursued. In this, the project may wish to look at the methodologies of others in participatory urban design²¹ and/or cooperate with partners to achieve citizen involvement. Since the time of the MTR mission, the project has planned citizen hearings on the GUDPs in the three pilot cities, which is in line with the recommendations of bringing citizens into the process of preparing the plans promoted by the project.

So far, aside from BTU (which is preparing the ISUMP), NGOs have been involved mainly as consumers of project content rather than active participants. At the same time, NGO staff have been engaged as individual consultants by the project. The project may consider whether deeper engagement of think tanks, NGOs, and the private sector could be effective in supporting progress toward targeted impacts. For example, some think tanks, NGOs, and bloggers may produce well-respected thought pieces that might influence policy makers and/or institutions engaged in preparing MPs. The project might also consider engaging innovative private sector design firms more closely in the project. These might be included in a subset of the expert discussions held with BelNIIP on GUDP and its integration into the planning process. The project may also consider holding a competition open to the private sector for the design of urban blocks that it is planning. Lastly, the project might also look to involve the educational sector by engaging students in the competition or engaging those responsible for curriculum and certification in urban design in a discussion of how to incorporate GUDP into urban planning education in Belarus.

So far, the project has not focused much on gender. Indeed, the MTR team found that women are well-represented among the project team and experts working with the team. The project is planning to conduct special outreach to women and girls as it begins to engage citizens in pilot cities in the GUDP enhancement process. Because women are known to take special interest in the family, health, and the environment, the project may find ways to leverage this interest and get support from women in championing GUDP and SUT in partner cities.

Cooperation with Other Projects: The project has done well in cooperating with the NGOs EcoPartnership and Interaction with regard to their Covenant of Mayors projects and related SECAP work. The three projects coordinate to ensure that they each support different cities in SECAP preparation. *Green Cities* has also cooperated with a number of other projects and entities in holding conferences. Further, the project has engaged with the Global Platform for Sustainable Cities (GPSC), led by the World Bank, which is a forum for knowledge sharing and partnership on urban sustainability supported by the GEF. The PM attended a GPSC conference in India. Going forward, as it refines its GUDP approach and begins to pursue financing for city initiatives in the plans, the project should consider stepped up involvement with GPSC. This might be in the area of harmonizing its GUDP indicators and method with that of the Platform and in getting advice on and introductions for financing channels. *Green Cities* may also want to see if there is room to cooperate with other projects in terms of the higher level impacts this report has recommended it pursue. For example, the new EU project *Support to effective air emissions and radiation monitoring and improved environmental management in Belarus* aims to influence traffic policy and thus may have synergies with *Green Cities* work in this area.

²¹ One organization with an interesting methodology is Canactions. Information on Canactions can be found at http://eng.canactions.com/integrated_spatial_planning_for_amalgamated_hromadas

9. Design and Indicators

Project Design: The project design receives high marks for being innovative, relevant and needed, in line with national priorities, and presenting the potential of especially high and meaningful impact. These aspects of the design are covered in Section 3 (Project Overall). Perhaps the main issue noted with regard to project design is that the project proposes specific SUT measures for the demos, while at the same time calling for an ISUMP and public transport feasibility studies. Ideally, the specific measures would emerge from this planning and feasibility study work. Yet, it is also recognized that such an open design in UNDP-GEF projects can be problematic and that is likely why it was decided to design possible demos to be included in the project rather than wait for them to emerge from the plans. On another design topic, in retrospect, the project may have included activities to encourage implementation of initiatives in the plans, so that they don't just "sit on the shelf." In this regard, while maintaining its current elements (the plans, the demos, and the replication), the project might have added a financing component, such as the team by adaptive management is now planning to implement. At the same time, it is recognized that the designers probably realized how challenging success in the financing area would be and may for that reason have not included it. With adaptive management, the team will try to get initiatives financed and any progress they make, such as identification of financing channels and increased capacity of cities in this area, should be useful progress. Another aspect, in retrospect, from which project design might have benefited is inclusion of work in institutional development, namely work coordinating the different government bodies and institutions relevant to urban planning. Based on the insights of project implementation to date and in accord with recommendations that the project revise its course to target higher level impacts, a sample of what post-MTR project output/activity revision might look like is included as Annex 3.

Project indicators: The project indicators are generally well-designed, though with experience gained in implementation and evolution of the project, some adjustments are suggested. In particular, the policy/legislative indicator is now considered too narrow in scope (encompassing only public lighting and urban transport) as it is now clear it will be important for the project also to pursue policy/legislation related to GUD and perhaps financing. Thus, a broadening of this indicator is suggested. In addition, one of the indicators for Outcome 4 ("number of officers in government who are dedicated to the promotion of urban low carbon growth in Belarusian cities by EOP") is considered difficult to assess as "dedicated" may be subjective (unless the meaning is "full-time position," in which case the indicator is unlikely to be achieved). Thus, this indicator might be revised to one that may be objectively measured and is achievable. A sample of how the indicators in the Project Results Framework might be revised is provided in Annex 4. In addition to the two foregoing changes, some changes in indicators for the SUT demos may be needed. Stakeholders explain that the project has found a very high level of public transport use already in Polotsk and Novopolotsk (50 percent) and suggest that the goal will be to maintain that level, as compared to the business as usual scenario in which that level would go down as more and more cars are purchased following trends of past years.

10. Expenditures

Expenditures of GEF funds to date: The table below shows expenditures of GEF funds by outcome through the end of 2018. The next to the last column on the right displays percent of ProDoc budget spent. It shows that the demo outcomes are much further from being spent down (at 20.2 percent for Outcome 2 and 13.7 percent for Outcome 3) than are the non-demo outcomes (at 71.5 percent for Outcome 1 and 66 percent for Outcome 4). This is just as would be expected, as the project has finished the majority of its TA work, but has not begun implementing the project demos. The rightmost column shows that the TA portion of the demo outcomes has, indeed, been spent down similarly to the pure TA outcomes (at 65.7 percent for Outcome 2 and 71.3 percent for Outcome 3). Overall, the project budget

was 29.5 percent spent at the end of 2018, but, with about USD 300,000 committed in contract to the street lighting demo, the total amount spent or committed was over 39.1 percent at the end of 2018, perhaps roughly 40 percent. Based on these figures, it is concluded that the project has properly reserved funds for the project demos and, at the same time, has made good progress in moving its other funds.

In terms of pursuing the proposed 1.5 year extension, a key question is whether enough funds remain in the budget to support the full-time project team and key PIU experts for another three years. The experts, or at least some of them, will be critical to the shift towards impact-oriented activities in the areas of policy/ legislation and the municipal planning process. It is thus recommended that, as the team looks at revising its activities to pursue such impacts, it also makes decisions with regard to the budget to ensure funds for the team and needed PIU experts are available. The team will also need to ensure enough funds are available to support an expert or experts over the next three years who will assist the cities in preparing priority initiatives from their plans and finding funding for these.

**Outcome-wise Annual and Total Project Expenditures of GEF Funds based on CDRs
(USD, if not indicated as %)**

Outcome	Spent in 2016	Spent in 2017	Spent 2018 (still to be finalized)	Total spent 2016-2018	Full project budget	% of budget spent by end of 2018	For outcomes with pilots, % of TA budget spent*
Outcome 1: GUDPs	29,389	60,279	94,930	184,598	258,050	71.5%	NA
Outcome 2: SUT Pilots*	4,335	197,304	157,210	358,849	1,774,150	20.2%	65.7%
Outcome 3: EE pilots**	0.0	23,923	52,743	76,666	558,850	13.7%	71.3%
Outcome 4: Replication	27,244	80,450	127,529	235,223	356,150	66.0%	NA
Project Management	11,479†	22,596‡	17,987	52,062	143,800	36.2%	NA
Total	72,447	384,552	450,399	907,398	3,091,000	29.5%	NA

*In CER, Outcome 2 budget is divided into two parts: USD 564,150 for TA and USD 1,210,000 for investment.

**In CER, Outcome 3 budget is divided into two parts: USD 107,550 for TA and USD 451,300

†In CDR, PM Expenditures for 2016 are USD 12,2887. A separate entry subtracting USD808 for construction/engineer is entered. To ensure the annual total is correct and for simplicity, we subtract that amount from the project management sub-total to come up with a new sub-total of USD 11,479.

‡The same USD808 for construction/ engineer mentioned in the note above is added back in for 2017. Thus, we add it to the PM expenditure total for 2017, which is 21,788, to get a new sub-total of 22,596.

*Calculations assume no investment funds have been spent yet as pilots have not been implemented. For the most advanced pilot, the street lighting one, tender has been recently awarded and funds of about \$300,000 committed by year end, but not yet spent.

Expenditures by type of activity: Annex 13 provides expenditure analysis tables. The first set shows realized expenditures and committed expenditures as of April 10, 2019 by “aggregated activities,” which are defined as major activities or major activity area. The template was prepared by the MTR team and the aggregated information provided by the PIU. The line items allow for easy assessment of major expenditure levels and cost areas. Expenditures to date and committed for various types of reports are \$66,228, though the cost level of most reports is not that high (e.g. less than \$10,000). As for the plans, the ISUMP is clearly the most expensive (at \$90,369). At this level, it is expected that the final product will go far beyond the draft that has been delivered so far, though the work also included a survey of companies. The total spent for GUDPs was \$40,911 for 3, or \$13,637 per GUDP. The SECAPs are much cheaper, probably because less consultation was involved, with total expenditures or commitments at \$14,939, or \$1,867 per SECAP. The cost level of the transport feasibility studies is relatively high, while that of the EE feasibility studies is low. The bicycle feasibility study was \$36,406 and the public transport one, which included annexes on bus stops and bus routes, was \$54,409, while the lighting one was \$9,223 and the smart meter one \$6,187. Total spending on workshops and European Mobility Week

was \$83,547. Spending on study tours was \$144,208. Spending on PIU staff was \$252,661. The amount spent or committed for the lighting demo is \$310,000. While the other demos are less advanced, preliminary projections (as shown in the last part of the annex for the case that the project has 1.5 more ears remaining) are that the bicycle trail demo will cost about \$418,000, about \$652,000 will be spent on the public transport/ private car demos, and \$98,000 will be spent on the smart meter demo.

GEF budget remaining vis-à-vis extension: The last part of Annex 13 provides projections of how additional funds will be spent over the next 1.5 years to project close if the project does not have an extension (projections provided by the PIU) and over the next 3 years to project close if the project does have an extension (projections extrapolated by the MTR team). The projections for 1.5 years to project close suggest the GEF funds will be easily spent over that time period, assuming the demos can be achieved on time. This raises the question of whether there would be sufficient funds to finance an effective extension, which would require funds for project team (including expert) salaries, as well as some funds for outside consultants, so that recommended activities can be carried out. For the no extension case, projections show demo funds being about 11% below their level in the CER. If funds for another 1.5 years support of the project team and PIU experts are taken from the demo funds, it will increase the amount by which the demo funds are reduced to a total of 24% their level in the CER.

Co-financing expenditures: The table below shows realized co-financing amounts reported, co-financing amounts committed (as in CER), and proportion of committed funds realized and reported. Stakeholders explained that the largest area of committed co-financing, that from the pilot cities, is not expected to go towards the same activities as GEF funds, but will instead support “parallel activities.” This was explained to be official government policy for donor projects in Belarus. During consultations, the MTR team learned of a case in which the government did allow co-financing to go toward specific donor activities, but in this case the amount was a small percentage of the total (10 percent co-financing, 90 percent donor funding), whereas in the case of GEF projects the co-financing is required to be substantially larger than the GEF funds. The MTR team asked for information on the activities on which realized co-financing amounts have been spent. While this information has not yet been received, we understand that MNREP has requested it from the cities. Without such information, it is difficult to assess the quality of the co-financing. As noted earlier, the MTR team believes the SUT demos will be much more impactful if the cities can carry out their own low cost activities as part of the demo package. In addition, other relevant activities the cities carry out, if appropriate, should be included as part of that demo package. This might include items like the pedestrian street or roundabout intersection that Polotsk is developing. Of the five other co-financing entities indicated in the CER, information on co-financing

Co-financing Realized and Reported (USD, if not indicated as %)

Co-financer	2016 realized and reported	2017 realized and reported	2018 realized and reported	Total realized and reported	CER Target	% of Target Realized and Reported
Polotsk	---	1,239,327	489,553	1,728,880	3,130,000	55.2%
Novopolotsk	---	747,446	930,236	1,677,682	4,240,000	39.6%
Novogrudok	907,149	855,621	1,142,986	2,905,756	1,125,000	258.3%
MNREP	---	---	---	---	150,000	0%
BelNIIP	---	---	---	---	300,000	0%
UNDP GEP*	---	---	---	---	3,000,000	0%
EU PSP**	---	---	---	---	377,420	0%
BTU	27,759.28	27,759.27	---	55,518.55	113,000	49.1%
Total	934,908	2,870,153	2,562,775	6,367,836	12,435,420	51.2%

*UNDP Green Economy Project; **EU Polotsk SUMP Project

from BTU was provided, but that for the four other entities was not available. The project team, however, has communicated that they expect to confirm about \$3 million in co-financing from UNDP associated with its Green Economy and EE building projects, as well as \$1.6 million from Interaction for its Polotsk street lighting project and \$300,000 from Interaction for its Polotsk sustainable transport work. The MTR team suggests that it should be confirmed that this co-financing was all spent during the implementation period of the project.

11. Sustainability

The MTR team sees major risks to the sustainability of project results. Sustainability issues and possible ways to address them have been emphasized throughout this report. Thus, the main contribution of this section will be to organize brief summaries of sustainability risks into key categories.

Financial Risk: It is quite likely that financial resources will not be available to sustain project results once the project ends. That is, it is unlikely that the cities will have funds to initiate GUDP, SECAP, and SUMP initiatives. And, it is unlikely that there will be funding to prepare more of these plans, unless additional donors come along to fund them. Thus, the MTR team has recommended the project do work to assist cities in identifying funding sources and in actually securing funding, both of which the project, in fact, had already planned to do prior to the MTR mission. The MTR team has also recommended that the project do work to get GUDP and SUMP incorporated into the urban planning process at the national level. If this is achieved, state funds for urban planning may cover GUD and SUT planning work in the future, or at least will cover its incorporation into the MP and Transport Annex preparation processes.

Socio-Economic Risk: There is also socio-economic risk to the sustainability of the project, particularly with regard to the mindset of local and national officials, of state-employed urban planners, and of local city residents. While progress has been made in raising the awareness of city officials about the needs and benefits of GUD, SUT, and EE, more work is needed. As shown in the case of the Polotsk and Novopolotsk transport demos at the time of the MTR mission, for example, city officials can be hesitant to make the bold moves needed for effective SUT measures. And, other cities may be even further behind, not seeing the real value (beyond “packaging”) of the plans the project is promoting. National officials, aside from MNREP, do not show much ownership in this work. And, the key organization for medium and small city urban planning, BelNIIP, has no ownership at all at present. Measures have been recommended in this report to address the mindset and sense of ownership of all these groups. Lastly, the project has yet to engage residents of cities to a meaningful extent. If residents are happy and engaged, this will provide positive feedback to city officials and strengthen their support for sustaining work on the types of plans promoted by the project. The citizen hearings for the three pilot city GUDPs, planned by the project after the MTR mission, are on the right track in this regard.

Institutional and Governance Risk: Institutional and governance risk is also very high, as policies and legislation to promote replication of project demos and plans and incorporation of these plans into the national urban development process are lacking. The project team has many good policy and legislative targets going forward. This report has made recommendations of how to develop focused actions to increase the potential of achieving those policy and legislative targets.

12. Recommendations

A list of the MTR team’s recommendations is provided in the Executive Summary on pages xii - xiv. Below, each recommendation, shaded in grey, is followed by elaboration of the recommendation and justification/ evidence for conclusions leading to the recommendation. Annex 13 provides an action plan

for each recommendation, with “who,” “how,” and “target/ timeline” following the basic recommendation statement and elaboration.

<p>1. Shift from output-oriented approach (e.g. reports, plans, conferences) of first phase of project to full focus on long-lasting, sustainable, and impactful results (policy adoption, change in planning process, securing of financing for priority projects in the plans, additional mindset change, realization of meaningful, GHG-reducing demos that, together with priority projects in plans, achieve 91,100 ton CO₂e direct ER target). This is an overall recommendation supported by several of the recommendations below, but is important in and of itself for: (a) setting the overall vision to shift the nature of activities undertaken from early-stage document preparation and conferences to activities more directly linked to achievement of sustainable results and (b) requiring a clear plan for achieving the GHG direct ER target.</p>
<p><i>Elaboration:</i> The recommendation is supported by other recommendations on policy adoption, changing the urban planning process, securing financing for priority projects, promoting deeper mindset change of local officials, and refining the project demos. It is, however, distinct in calling for cross-cutting project management actions (e.g. revision of log frame and indicators) and preparation of realistic GHG ER strategy to achieve the 91,100 ton CO₂e direct ER target. The recommendation should be achieved via adaptive management, which allows changes, deletions, and replacements of original project outputs and activities in favor of revised ones focused on achieving project outcomes and higher level impacts. As a general rule of thumb, in the revised activities for the project going forward, report preparation/ holding of workshops should be stopped or reduced to a minimum. These have provided a good basis of information that the project is now able to distill into key recommendations.</p>
<p><i>Evidence:</i> The main activities of the project to date have been preparation of reports and plans and holding of conferences. The project is said to be holding ten or more events per year. Reports, plans, and feasibility study documents (not including project management documents) number around 60. Of these, over ten are over 90 pages. The project is to be applauded for meeting its target of three policies being adopted/ revised with project input, though one is attributed to work during the project design stage. To have the transformative impact on urban planning, urban transport, and urban EE that the project hopes to achieve, several more policy adoptions need to be achieved, yet progress towards most of these is limited. Installation of the demos has not begun. Most cities are unclear how, aside from the project demos, initiatives in the project-supported plans will be financed, though the project has begun via adaptive management to address financing issues. Residents of cities have not been substantially engaged in plan preparation, though post-MTR mission, plans for public hearings were begun to be made. Stakeholders see no significant change in master plan preparation process for small/medium cities and are not optimistic change will come.</p>
<p>2. Apply for extension of up to 18 months, contingent on plan/ reallocation of budget so it is available over extended period to focus on achievement of aforementioned long-lasting and impactful results. In addition to providing needed time to monitor the demos, justification will be: opportunity to achieve more policy successes (likely exceeding targets), to impact the planning process, to assist cities in obtaining financing for priority projects (a new target added through adaptive management), and to achieve the political will for more impactful SUT demos; additional time needed to ensure GHG direct ERs of 91,100 tons CO₂e targeted are achieved through demos combined with other priority projects.</p>
<p><i>Elaboration:</i> Before applying for extension, project should have clear plan and budget reallocation to ensure high-impact results referenced in recommendation 1. Budget should allow for retaining of experts throughout project duration to promote policy change to policy makers/ change in planning approach to planners and to assist cities in preparing priority projects and securing financing. Reallocation may require a reduction in investment amounts for project demos. While this is not typically encouraged, in the case of the SUT demos, findings suggest the most impactful demos are</p>

those that are lower cost, but that require political will to achieve (e.g. bus lanes, restrictions on driving of private cars, parking restrictions or parking fees, etc.). Thus, more funds for TA (to convince local officials to adopt such measures and to ensure local residents are on board) and less for investment may make sense in this case. According to current budget plans (if the project were to end on schedule, with TE in about 1.5 years), about 11% of demo investment funds will be spent on TA instead. If project is extended an additional 1.5 years, leaving three years to the TE, then about 24% of demo investment funds may be spent on TA instead.

Justification: Project is poised for potential very high impact – to incorporate environmental concerns and people-centeredness into the nation’s urban planning process - but needs more time to achieve this. Evidence of potential is that, influenced by project preparation, requirement for Brest to prepare a “symbio plan” was included in nation’s *Green Economy Action Plan* in 2016; and, in 2018, BelNIIP was required to annex that plan to Brest’s Master Plan. Also, project has the potential to expand impact, leveraging outside investment, if it has time to pursue financing for cities so that SECAPs, GUDPs, and SUMP don’t just “sit on the shelf.” Results of project’s financing study show financing of city “green” projects is indeed very challenging, so that support in pursuing financing is needed. And, the project is unlikely to meet its CO2 GHG DER target without these additional pilots. Further, after showing a lack of promise during the MTR mission, the SUT demo efforts have finally begun to show good successes, with Polotsk recently committing to 4 km of experimental bus lanes and likely time-of-day based private car driving restrictions in city center, showing that time and diligence on the part of the project can result in more impactful demos. Lastly, given one-year delay in start, extension is needed to monitor and assess demo results.

3. Pursue a set of meaningful national-level policy achievements (namely, the adoption or revision of national strategies, standards, acts, resolutions, policies, action plans, and/ or regulations to promote GUD, city EE, and SUT). Adopt a new and targeted approach to do so, with face-to-face one-on-one “briefings” of officials as centerpiece.

Elaboration: The new approach will: (i) have as its main method high-level briefings (brief, 15 to 20 minute, one-on-one meetings) of relevant national officials in which an expert and person skilled in delivering very succinct to-the-point briefings educate and exchange with the policy maker on policy recommendations, key findings/ results of project studies and plans, approach of GUD, SUT/SUMP, and urban EE/SECAP, etc.; (ii) include preparation of “digested” versions of key project reports, typically just one or two pages, along with, for each meeting, a written one or two page summary of the same briefing content that will be delivered live; (iii) concurrently pursue policy achievement and shift in mindset. The project will have roughly 11 policy targets beyond what has been achieved already, as detailed in the footnote associated with this sentence.²² Given the challenge of achieving policy

²²In addition to three project-related policy successes of inclusion of requirement that Brest prepare Symbio Plan in *National Green Economy Action Plan* and adoption of project GUD-related recommendations in already-issued policy documents of *Country Profile on Housing and Land Management of the Republic of Belarus* and *Concept of the National Strategy of Sustainable Development*, including in the latter text that calls for “introduction of the principles and methods of green urban development,” preliminary, post-MTR policy targets with increasing level of difficulty are: (1) Detailed project input included in chapters of *National Strategy of Sustainable Development* (likely), (2) 12 new EE lighting standards adopted, (3) *Traffic Act* amended to include specific SUT measures, (4) new Council of Ministers Resolution for SUT in city planning issued, (5) *Parking Policy* amended to allow fees for parking in city center, (6) *National Urban Development Policy (2021-2026)* to be prepared by BelNIIP in 2020 includes GUD, (7) supporting regulations for *National Urban Development Policy* developed and includes GUD measures (last version of policy did not include supporting regulations), (8) new *Green Urban Development Action Plan* developed and cross-ministerial working group established to address GUD, (9) new standards requiring indicators related to GUDP incorporated into the urban planning process (to be adopted by the State Committee for Standardization), (10) *Municipal Procurement Regulations* revised to consider lifecycle costs, and (11) new green infrastructure financing regulations developed, municipal finance process changed, and competitive green infrastructure loan fund for cities established.

adoption, the project certainly won't be expected to achieve all of 11 these targets, but can pursue all of them in hopes of getting some of them, perhaps 3 to 5, adopted during the lifetime of the project and setting the stage for several of the others to be adopted after project close. Already, the project has achieved three policy successes/ adoptions (with four targeted in original design), so these additional 11 targets fit with an ambitious approach in pursuing higher level project impacts. It may also include, pending support of UNDP CO and MNREP, a carefully crafted letter to Head of Presidential Administration, formerly mayor of Novopolotsk during project preparation, in pursuit of an executive order to make the issue of GU Planning important, so that some action is taken.²³ Project may also consider working with certain think tanks and NGOs that are influential in affecting national level thinking on policy (namely via their thought pieces) to convey its key messages to policy makers.

Evidence: Key policy makers are not attending project events or reading project reports. They conveyed to the MTR team that they are very busy, particularly due to reductions in staffing. Some think GUD is just about "green areas" (trees/ grasses) in cities. Stakeholders experienced in interacting with government officials in Belarus convey: (i) While officials themselves draft policy, they may refer to respected outside documents for support. (ii) Certain officials are quite serious and will appreciate briefing input if of high quality – they may not see benefit in attending conferences, but respond well to "ad hoc" meetings. Stakeholders agree an executive order is the best way to bring GU Planning to the forefront/ achieve cross-ministerial attention and, while a long-shot, worth a try. Influence of the Head of the Presidential Administration is widely recognized. Her role in Novopolotsk during project design may be a positive if plans for the public transport/ car aspects of demo are made bolder/ more compelling. Experienced stakeholders indicate certain highly respected think tanks and NGOs influence national-level policy in Belarus through their thought pieces and blogs.

4. Adopt new and targeted approach to influence the city planning process. Engage BelNIIP, and potentially other state and private sector urban planners (e.g. MinskGrado, Level80, etc.), in one-on-one meetings with project experts and in planning process/ policy related assignment, if possible. Bring the "clients" (MoAC and city executive committees) into the process once progress is made with the planners. Pursue other channels, such as standards and traffic authorities, to influence city planning process.

Elaboration: A. Small meetings between BelNIIP and project experts will focus on GUDPs and SUMP, with BelNIIP feedback on how these could be useful to master plan process. BelNIIP may be concerned that GUDPs are too general, but has not seen any yet. BelNIIP is working on draft *Architectural, Urban Planning, and Construction Code* and next year (2020) will prepare draft *National Urban Development Policy* - new ideas/ insights, measures, etc. from the project might be useful input. Innovative private urban design firm might be included in some small group discussions with BelNIIP. B. In the past, BelNIIP could not participate in bids for project assignments, because UNDP contract norms do not fit with requirements of certain type of state organizations. It's not clear if these problems can be overcome. If so, areas of possible contract work to discuss are: (1) integration of GUDP with the master plan process and (2) draft national legislation to promote GUDP. C. MoAC and city executive committees, as the "clients" of the MP preparation process, can also influence desired changes in the process. They should be consulted and their views and ideas incorporated into the discussion with the planners. These consultation with the "clients" can be integrated with other activities. In the case of MoAC, policy briefings under the Action Plan for Recommendation 3 can and should include, in additions to discussions about targeted policies, discussions on the planning process. Work with city executive committees in executing pilots, preparing plans, and getting priority projects financed will also be an opportunity for incorporating discussions of the planning process, seeking their

²³ Letter will have three main points: (1) Green Urban Planning addresses all the problematic areas of cities where 75% of population lives. (2) It is necessary to move from dispersed efforts of 15 ministries to coordinated approach. (3) To carry out this work, a person responsible for coordinating the national effort to develop Green Urban Planning should be identified.

views to share with the planners, and encouraging them as customers also to independently seek improvement of the process. D. Other avenues to influence the city planning process include pursuit of establishment of urban planning standards by the standards authority, pursuit of support of Traffic Police (who have approval authority of transport aspects of city plans), and pursuit of relevant policies (see recommendation 3). Project is pursuing many of these; and should fashion them into a coherent strategy to influence the urban planning process.

Evidence: A/B. BelNIIP has not been attending project events. While many SECAP, SUMP, and GUDP measures that do not involve “pouring concrete” would not require revision of general plan, most stakeholders concur that BelNIIP, as the entity responsible for all city master plans in Belarus except Minsk’s, needs to be engaged in order to find a way to integrate the GUDP and SUMP process with the master plan and transport annex process. The MTR team found substantial criticism of BelNIIP in the urban planning sector, possibly making public events to discuss new approaches unattractive/ unconstructive to BelNIIP. BelNIIP’s role in drafting key urban planning policies is also important to project’s aim. C. MoAC’s input can be very influential in terms of efforts to change the urban planning process, as they are the organization that orders the master plans prepared by BelNIIP, so are a key client. The city executive committees can be considered a client or the end user for whom the plans are prepared. Bottom up push from the cities is believed by stakeholders to be part of an effective mechanism for influencing the master planning process. D. Some of the alternative avenues have already been seen to have an influence. The Traffic Police, for example, did not approve a certain master plan prepared by BelNIIP until the transport section was improved.

5. Building on recently launched financing support work, put substantial focus on assisting cities to prepare and secure financing for specific priority projects in the plans that have been prepared.

Elaboration: This will be a key shift in the project’s focus from preparing plans, which may be at risk of “sitting on the shelf,” to actively helping cities get priority projects realized. The team has already launched this kind of “securing financing” support to one additional project in each pilot city (for a total of 3 projects). The project may wish to extend this support to its 5 other SECAP and 5 other GUDP partners (including Brest). This will diversify risk, allow the project to present options and/or packages to various financiers, and expand chances of success. Focus should be on projects that reduce GHG emissions so that the project will meet or exceed its target of 91,100 tons CO₂e of direct GHG ERs. For Novopolotsk tram extension, an assessment of life cycle costs/benefits as compared to other options should be carried out before putting substantial effort into proposal.²⁴ Support should be very proactive. Involved experts should actively reach out to funding institutions including EBRD, BDB, Chinese loans, other banks and donors, as well as sources associated with the state budget, and assist cities in holding meetings and negotiating with these parties. Since the time of the MTR mission, the project team has already held fruitful discussions with EBRD, which could be continued as the project proposals are prepared. The aim to achieve financing of such projects is very challenging, because cities in Belarus depend mainly on state funding and do not have much of their own revenue sources with which to repay loans. Yet, it is clearly a missing link, and any progress the project can make in this area will be valuable.

Evidence: Most cities consulted were unclear how, aside from the project demos, initiatives in the project-supported plans will be financed. Results of project-supported financing study show how challenging financing is. At same time, city officials’ lack of experience and connections suggest that project support can make a difference in getting their projects visibility with potential financiers.

Recommendation 6. Revise approach for Polotsk/Novopolotsk demos building on recent, post-MTR mission progress in Polotsk: (i) reconsider selection of key measures, with emphasis on achieving long-term GHG ERs and making sure that the project targets, including direct ERs of 91,100 tonnes of

²⁴Proposal has the support of top transport experts and city and, thus, should receive careful attention and analysis.

CO₂e, are met; (ii) engage city executives and coordinating committees frequently with project experts so they understand demo goals, budget, and efficacy of various options; (iii) convince cities to adopt low-cost, high efficacy measures as part of demo “package.” (See 9iii.)

Elaboration: Project should aim for a package of measures, including both those financed by the project and low-cost measures adopted concurrently by the cities.²⁵ The measures should be those that do the most to reduce GHGs/ local emissions and enhance mobility, making sure that the project’s CO₂e targets are met. Cost effectiveness should be considered. For bicycles, in addition to 3 km of paved, separate trail, the project should continue to encourage the cities to adopt as much of the proposed 30 km of bicycle lanes on roads as possible, as these are likely to achieve more GHG ERs than the separate trail, and to keep bump barriers for bicycle lanes in place year-round. A low-cost investment of around USD20,000 - 40,000 might be used to equip city with bike racks, institute pilot courtyard bike storage or storage where trash chute in buildings used to be, and (if needed) provide bike racks to buses. While the bicycle work is symbolically quite positive, stakeholders should be presented with the evidence that high impact public transport/ private car measures have the potential for much greater GHG ERs and improvement in local air quality/ reduction in congestion, but that measures must be selected strategically.²⁶ They should also be presented with the evidence that low-cost measures are often among the most effective in achieving such results. After the MTR mission, the project achieved very notable success in that its Traffic Management Study for Polotsk convinced the Polotsk Executive Committee to agree to adopt 4 km of bus lanes (with barriers) in city center as an experiment, likely to be accompanied by driving restrictions for private cars in city center at certain times of day. These will be the first real bus lanes in Belarus. (Efforts in Minsk did not include barriers, were not continuous, and did not really deter cars from entering bus lanes.) It is recommended that the project build on these initial successes in Polotsk to encourage the adoption of more such measures and to ensure the Polotsk experimental bus lanes are successful and adopted for the long run. For public transport in Novopolotsk, strong effort should be put on convincing Novopolotsk to institute test bus lane of up to 3 km on Molodezhnaya St. and parking ban on other parts of the bus/tram corridor approved for further action in 2015.²⁷ Benefits of improvement of bus stops and provision of signboards with bus arrival times (currently targeted to be among the main expenditure areas of the SUT demos) should be compared to options that speed up buses or make cars less attractive. If it is still decided to improve bus stops, the question of whether an incremental addition to 20 or more bus stops will be more impactful than full renovation of 5 may be considered. Contentious issue of whether synchronized traffic lights can benefit buses or simply serve to increase cars should be carefully assessed. If adopted, synchronized traffic lights should focus on improving flow of large capacity buses, rather than catering to private cars. (Recent developments indicate agreement to keep the “ideal speed” for the synchronized traffic lights to a speed suitable to large capacity buses.) To reduce private cars, other measures, such as parking restriction, parking fees (with concurrent work under recommendation 3 on parking policy), and roads that do not allow cars, should be promoted. Innovative low cost measures, such as lagging work times at the refinery to reduce congestion, should also be considered. To ensure city executives and coordinating committees understand the goals, budget, and efficacy of various options, project transport experts should become more closely engaged in advising the cities and facilitating their meetings at which the measures will be decided upon.

²⁵For public transport/ private car measures that are especially challenging to achieve (e.g. bus lane, private car parking or driving restriction, parking fees), the focus of measures for now will be on each city individually. The project can prioritize allocating GEF funds for infrastructure to support these challenging measures, if any is needed.

²⁶ A fuller listing of possible SUT demo measures raised during consultations and that may be considered are shown on page 19.

²⁷ The Novopolotsk bus (long term bus-tram) corridor was proposed in *Recommendations for Planning Sustainable Urban Mobility - Let's Make the City Comfortable for Life* in 2015 and approved for further action by city authorities. The corridor includes Ekiman 1st, Molodezhnaya St., Katorov St., and Promyshlennaya St. Large capacity buses with disciplined schedules and stops should be prioritized for benefits from these measures.

Evidence: The MTR team found during the MTR mission that selection of measures is currently not following an orderly process that emphasizes long term GHG ERs/ local air quality benefit. The controversy on the synchronized traffic lights (of whether they will benefit buses or instead simply increase cars) is a serious one that has not been worked through, though recent feedback from the project team suggests a lower ideal speed for the traffic lights will favor buses for the “green wave.” The pilot bus lane in Novopolotsk, considered by designers to be a critical measure for public transport, does not appear to be going forward. Yet, just recently, a month or two after the MTR mission, Polotsk has agreed to a 4 km experimental bus lane with barriers, which is a very promising development, the sort of thing the project should pursue more of. At the time of the mission, it seemed that most stakeholders were not very enthusiastic about the public transport measures that were at the time the main ones being considered (improved bus stops and signboards), perhaps because their impact on bus ridership is uncertain. The new bus lane initiative in Polotsk is likely to be generating more excitement now that it has been raised and is approved. The project supported a traffic management study for Polotsk to support the need to understand how to reroute traffic for its upcoming, temporary bridge closure. The MTR team questioned the long-term benefit and suitability of reallocating infrastructure funds for a study, but recently learned it is this study that convinced Polotsk to test a 4 km experimental bus lane with barriers and potentially private car restrictions (based on time of day) in city center. It may be a lesson learned that neither the public transport feasibility study nor the ISUMP seemed to have much influence in convincing Polotsk to take such actions, while the detailed design of the Traffic Management Study did. Experts generally agree that in addition to improving public transport, there needs to be a push, making cars less attractive through parking fees or driving restrictions, to get people to choose public transport over cars. Thus, it is encouraging that Polotsk is considering private car restrictions, though more are needed, including in Novopolotsk. Coordinating committees do not seem to have clear goals (such as GHG ERs, improvement of local air quality, reduction of congestion). They have not been empowered with an understanding of the budget available, so are providing input to decision makers without full understanding of the situation.

7. Before moving forward with smart meter demo, clearly identify and confirm specific means and amount of energy savings and GHG ERs (current preliminary estimate is just 252 tons CO₂ direct ERs). Adjust demo plans accordingly to maximize savings and GHG ERs. Clarify to all involved.

Elaboration: It is agreed that adding meters for heating (whether smart or not smart) where there were none before will save energy. Yet, the source of expected energy savings from replacing regular meters for electricity, water, and gas with smart meters needs to be clearly explained. One explanation is that data collected by utilities from smart meters can lead to identification and reduction of line losses. Whether this will be the case with the proposed demo needs to be verified specifically. If utility action will be a main source of savings, it should be confirmed that the utilities indeed will be following up as needed to achieve the savings. If the smart meters will not lead to energy savings, alternatives (such as a focus on heating meters only) might be considered. If it is confirmed that the other smart meters will save energy, how they will do this should be explained to all; and the demos carefully designed so that this targeted smart meter savings is indeed achieved. Preliminary estimates for the total lifetime direct CO₂ ERs for the smart meter demo are 252 tons CO₂. This is much less than the 10,190 tons lifetime direct CO₂ ERs estimated for the laundry demo, which the smart meter demo is to replace.

Evidence: The MTR team found that, aside from the benefit of metering heating (where there were no meters before), the source of energy saving via smart meters is not well understood by stakeholders in Novogrudok. Internationally, the evidence/ experience of smart meters resulting in energy savings (as compared to regular meters) is quite mixed. Some residents of demo building are hesitant to agree to participate, probably because the benefit is unclear. After the MTR mission, estimates of the proposed smart meter demo’s GHG ERs were provided. Yet, the mechanism of these ERs (aside from those of providing heating meters where there were none before) have not yet been clarified.

8. Develop clear means of communicating main aim of the project (e.g. “to incorporate environmental sustainability and people-centeredness in city planning and ensure priority projects are implemented”) and ensure all stakeholders understand from the start. Eliminate confusion that “green planning” is just about “green areas” or that project is just very generally addressing the SDGs.

Elaboration: The team should work together to develop a clear vision of the main aim of project (such as that described above) that can be considered to unify its many activities. This main aim should be used to test the relevance of activities and refine them as needed. Efforts should be made to ensure that all stakeholders understand this main aim of the project, which should be introduced early in the conversation and reiterated throughout. Specific measures should be taken to clear up confusion that the project is just generally about the SDGs or that “green planning” is only about “green areas.”

Evidence: Both government officials and NGO stakeholders consulted confused GUDP with “green area” work. Project includes 7 SDGs on letterhead. Project design is complex with three different types of plans and demos related to bicycles, public transport, city lighting, and apartment metering.

9. Increase focus of city official mindset change work, ensuring they understand: (i) why they need a plan rather than just measures; (ii) goals of measures; (iii) how low cost measures, such as those in transport can save money and be more effective than new infrastructure; (iv) how GUD and SUMP should be promoted as TORs for Master Plan and its Transport Annex. Further leverage President’s Academy of Public Administration and leverage official government site visits for heads of regions, districts, and cities.

Elaboration: Good progress has been made in city official mindset work, but gaps remain. Mindset efforts focused on the four items above should be carried out continuously with demo cities and other cities project supports in preparing SECAPs/ GUDPs. A course on GUD might be designed for and held at the President’s Academy,²⁸ if it can be ensured that only officials with real interest will attend. Several times a year, Council of Ministers organizes local officials to carry out site visits, so project should ensure its demos, once operational, are among those visited. To better understand the mindset change initially intended, project team may wish to discuss with original local designers of SUT demos.

Evidence: Some officials see SECAPs and GUDPs as mere “packaging” for donors and don’t see underlying benefit of having a strategy or vision. Initial aim of SUT demo was to emphasize benefits of low-cost measures (e.g. bus lanes, parking fees). At the time of the MTR mission, it was found that the cities were no longer planning these. In a positive development, since then, Polotsk is now planning experimentation with bus lanes in city center and possibly private car driving restrictions, but Novopolotsk lacks plans for these kind of measures. While the project has agreement with President’s Academy to share materials, no specific GUD curriculum has been developed and no specific GUD course is planned.

10. Engage city residents (and, possibly, other non-governmental and commercial stakeholders) in the planning process. Educate them as in item above. Work to achieve simple language in visions/plans that residents can understand. Ensure plans reflect their priorities.

Elaboration: Work should be done, especially in the case of GUDPs, to ensure that vision and content of plans reflect priorities of residents. Because there may be some history of a “complaint relationship” between city officials and residents, work may be needed to develop a positive exchange. Project might consider working with NGOs or other initiatives that have experience in positive engagement of local residents, especially those with experience engaging city residents in urban design process. At the time of the MTR mission, citizens had not yet been involved in any way in the process of preparing GUDPs,

²⁸Green Cities has already agreed with the President’s Academy of Public Administration to share project materials for incorporation into training programs. A next step would be to ensure this agreement is fully leveraged in development of a GUDP course offered by the Academy.

SECAPs, or the ISUMP, though city officials had been extensively involved. After the MTR mission, the project team began to plan public hearings in pilot cities to discuss the GUDPs and ISUMP, a move that is quite congruent with this recommendation.

Evidence: So far, local residents have not been involved in GUDP, SECAP, or SUMP design, though plans for public hearings are encouraging. One source found Brest residents are not aware of main ideas/ content of Symbio City and their main concerns may not be reflected in the plan.

11. Consider expanding engagement to other key groups: (i) involving private sector designers and students via competition for design of urban blocks/pilot projects; (ii) working with education sector to incorporate GUD in official university urban design curriculum; (iii) leveraging relationship with select influential think tanks and NGOs to promote policy and process change.

Elaboration: A. Involvement of private sector designers and students in a competition for the project's urban block design could generate new ideas, attract national attention and potentially investment, and provide a positive feedback loop for improving the city's GUDP. Currently, project is planning urban block design for each of the three pilot cities. It may wish to expand work to its other GUDP cities and especially, given national government attention to the Symbio Plan, Brest. B. Education of future urban designers may be one channel for the project to pursue its aim of changing the urban planning process. Working with department chairs in the field, such as at BNTU, may be a means to achieve curriculum and accreditation change that incorporates GUD. C. Working with influential think tanks and NGOs via their "thought pieces" may be a means to influence policy as targeted in recommendation 3.

Evidence: A. So far, private sector designers and students are involved in the project only as consumers of content, not as active participants. Yet, the urban design work of innovative designers, such as Level 80, have attracted Presidential-level attention. B. Nowadays, student urban design projects are of new developments only, rather than improvement of existing urban blocks. C. Experienced stakeholders indicate certain highly respected think tanks/ NGOs influence national-level policy in Belarus through their thought pieces and blogs. So far, project has not engaged such groups as active participants.

12. Exchange with GEF/WB Global Platform for Sustainable Cities to harmonize indicators and get information on/connections for channels for financing sustainable city initiatives.

Elaboration: Project has worked hard to select GUDP indicators suitable to Belarus. Involvement with the Platform will ensure Belarus follows international best practice in indicators and gets access to information on international sources and methods of financing GUDP measures.

Evidence: Platform involves 28 cities in 11 countries and USD 151 million in grants. Platform is funded by GEF and reflects GEF's interest in promoting international best practice in unified fashion.

13. Building on plans for preparation in 2019 of a video on the street lighting demo, prepare comprehensive video on all demos and other initiatives for which financing is secured. Video should be quite attractive, such as through use of drones. Also, prepare a lessons learned study and short electronic brochures on the demo projects.

Elaboration: Project Communications Officer has worked hard to avoid "business as usual" in communications; and the same principle should be used to develop an out-of-the-ordinary video covering all demos and other initiatives for which financing is secured and installation achieved during the lifetime of the project. The lessons learned study should be based both on findings from monitoring of the demos and other installed initiatives and earlier experience gained during demo preparation. The project has found that paper brochures no longer catch reader attention, though electronic brochures that succinctly highlight demo results may be prepared and circulated.

Evidence: Videos are widely used by content marketers in private sector, suggesting their effectiveness. Project has already faced and overcome challenges, such as getting Polotsk on board with pursuing low cost, high impact SUT measures that may be politically challenging, such as the nation's first true bus lanes. Thus, lessons on what worked and what didn't will be valuable.

Annex 1. Mid-Term Review Mission and Other Consultations – Realized Schedule

Consultation Segments

Pre-Mission: January 25, February 6, and February 7, 2019

Mission: February 11 – 23, 2019

Post-Mission: February 27, March 13, 2019, and April 22, 2019

Note: In addition, a number of post-mission follow-up “consultations” were effected via email exchange follow up with those previously consulted. These are not included in the below listings.

Consultations

1. Pre-Mission (all via Skype)

Date	Name, Role, and Organization
Jan. 25, 2019	Ms. Iryna Usava, <i>Green Cities</i> PM, and Ms. Natallia Labaznava, <i>Green Cities</i> Administrative and Finance Officer (together)
Feb. 6, 2019	Mr. John O’Brien, Regional Technical Advisor (RTA) on Climate Change Mitigation, Istanbul Regional Hub, UNDP Regional Bureau for Europe & CIS
Feb. 7, 2019	Mr. Timothy Crawshaw, Crawshaw Urban Design (project’s original demo designer)

2. Mission in Belarus: Feb. 11-23, 2019

Feb. 11 Minsk
1. PIU EE Expert: Mr. Ivan Filiutsich, Consultant on Energy Efficiency
2. UNDP Belarus: Mr. Igar Tchoulba, Programme Officer
3. PIU GUD Expert: Dr. Vera Sysoyeva, Associate Professor of Urban Studies, BNTU
4. PIU SUT Expert: Mr. Pavel Astapenia, Head, ETS Consult
5. PIU Procurement Officer
Feb. 12 Minsk
6. MNREP Vice Minister: Ms. Iya Malkina
7. MNREP Air Quality Officer/Transport: Ms. Ms. Oksana Yuchkovich (officer responsible for <i>Green Cities</i>)
8. MoAC Director of Urban Development Department: Mr. Artyom Yushkevich
9. MoAC Former Vice Director of Urban Development Department, current officer responsible for Profiles Project
10. MoE: Ms. Alena Sinilo, Expert Economist, and Mr. Dmitry Skvortsov, Infrastructure Specialist
11. PIU Communications Officer: Mr. Ruslan Khilkevich
12. EE Department, State Committee for Standardization: Mr. Vladimir Kamashko
Feb. 13 Minsk (night: travel to Novopolotsk/ Polotsk)
13. BNTU Dept. of Urban Planning Chair: Dr. Georgi Potaev, Professor (also consultant to project for GUDP and urban planning policy recommendations)
14. BNTU Architectural Faculty Deputy Chair: Dr. Helen Nitievskaya, Assoc. Prof. Urban Planning
15. BNTU Transport Dept.: (a) Chair: Dr. Yauheni Kot, Assoc. Professor and (b) Head of Mobility Center: Mr. Vasili Kuzmenka (also, sub-contracting organization to project for public transport feasibility study)
16. BTU: (a) President: Ms. Valentina Leonchik and (b) Executive Director: Mr. Igar Pankov (also, sub-contracting organization to project for ISUMP)
17. GUDP Indicator Consultant to Project: Ms. Paulina Vardevanyan, Senior Lecturer, Urban Planning, BNTU

18. Interaction Foundation: Mr. Ivan Schedrenok
Feb. 14 Novopolotsk (evening in Polotsk)
19. PIU P-NP Coordinator: Ms. Anastasia Pachkouskaya
20. Novopolotsk Executive Committee and <i>Green Cities</i> Coordinating Group: Mr. Albert Shakel, Deputy Chair of Executive Committee and Coordinating Group members: Mr. S.V. Bobrik, Mr. S.N. Girven, Mr. L.B. Kylagenko, Mr. T.V. Zaprudnik, Mr. S.N. Shamrilo, and Ms. E.E. Kondratieva
21. Novopolotsk Tram Park: (a) Mr. Nickolai Fedorovich Petrushenko, Director; (b) Mr. Vladimir Kupreshkin, Chief Engineer
22. Novopolotsk Bus Company and Mobility Center: Mr. Ivan Ivanovich Raschinskii, Director (also Member of <i>Green Cities</i> Coordinating Group)
23. Novopolotsk inclusive school (“Gymnasium #8”): School visit and discussion with Ms. I.V. Kaspytis, Principal and teachers (<i>this was visit offering perspective rather than standard consultation</i>)
24. Novopolotsk Bicycle Club (“Versta”): Alexander R. Kireev, Chair, and Mr. Anton Medel, member
25. Polotsk-Based Member of Original <i>Green Cities</i> SUT Design Team (interview in Polotsk): Ms. Anastasia Adamovich
Feb. 15 Polotsk (night: travel back to Minsk)
26. Polotsk Executive Committee, First Deputy Chair: Mr. Sergey Leichanka,
27. Polotsk <i>Green Cities</i> Coordinating Group members: (a) Ms. Maria Muranova, Polotsk Housing and Utilities Dept.; (b) Ms. Tatiana Bogdanovich, Polotsk Chief Architect; and (c) Ms. Natallia Maslenikova, Polotsk Economic Control Dept.
28. Transport Operator, Vitebsk Municipal Transport Unitary Enterprise (Polotsk Sector): Mr. Nickolai Bliznev (also member of <i>Green Cities</i> Coordinating Group)
29. P-NP Agency for Inspection of Natural Resources and Environment Protection, Chief: Mr. Vladimir Kuksenok (also member of <i>Green Cities</i> Coordinating Group)
30. GorSvet Project Chief Engineer: Mr. Viacheslav Soshalsky
31. PIU P-NP Coordinator and, later, PM: Ms. Anastasia Pachkouskaya and then Ms. Iryna Usava
Feb. 16 Minsk
32. Original National Designer of SUT Demos: Mr. Sergei Gotin
Feb. 18 Minsk
33. Ecopartnership: Ms. Natallia Andreyenka, Project Manager
34. Minsk Bicycle Society: Mr. Pavel Gorbunov, Chair
35. BelNIIP: (a) Ms. Alena Kasyanenko, Head of Department of Sustainable Urban Development, (b) Anna Uskovich, Head of Transport Dept., (c) Elena Pavlova, Head of Environmental Protection, (d) Vladimir Taynikov, leading specialist (in Sustainable Urban Development Department)
36. MinskGrado: Ms. Iryna Gaisenok, Head of Master Planning Workshop
37. Ecoproject: Ms. Maria Falaleeva (also consultant to project on adaptation for SECAPs)
Feb. 19 Novogrudok (morning travel to Novogrudok, night travel to Brest)
38. Novogrudok Executive Chair: Mr. Sergei Fedchenko (<i>this was chance for PM to brief Executive Chair, who was in post just a few days, rather than consultation</i>)
39. Novogrudok Coordinating Committee: (a) Ms. Oksana Fedorovna, Head of Novogrudok Dept. of Economy; (b) Ms. Elena V. Perko, Head of Novogrudok Planning Dept.; (c) Ms. Ekaterina Petrovna Kivach, Head of Tourism Dept.; and (d) Mr. Alexander Sergevich Kolyuk, Vice Chief, Dept. of Communal Services
40. Novogrudok Housing and Communal Services Enterprise: (a) Mr. Vladimir Anatolyevich Kozlov, former Chief Engineer, Housing and Communal Services, now head of regional gas supply Novogrudok; (b) Mr. Alexander Kaliuk; (c) Mr. Nikolaj Baranovskiy; (d) Mr. Dmitry Buzuk Adamovich, new Chief Engineer, Housing and Communal Services; © Victor Pavlovich Talish, responsible for energy/ power, Housing and Communal Services
41. PIU Novogrudok Coordinator: Ms. Viktoriya Hryb
42. PIU Administrative and Finance Officer: Ms. Natallia Labaznava

Feb. 20 Brest and Baranovichy (night travel to Minsk)
43. Brest Deputy Executive Chair: Mr. Nicholas Kubensky
44. Coordinator of Brest Symbio City Plan Preparation Group: Ms. Tatiana Pachenko, consultant to project and Assistant Professor of Urban Planning, Brest State Technical University
45. Baranovichy <i>Green Cities</i> Coordination Group: (a) Sergei Konstantinovich Mozol, Deputy Chair of Executive Committee; (b) Mr. Mikhail Nikolaevich Mencha, GM Utilities, Housing and Communal Services; (c) Galina Gennadyevna Alekseeva, specialist in landscape architecture, Housing and Communal Services; (d) Pavel Alexandrovich Orlovsky, Chief Architect
Feb. 21 Minsk
46. UNDP-GEF completed project EE in Residential Buildings in Belarus: Mr. Alexander Grebenkov, former PM of completed project and now Team Leader for “Support to effective air emissions and radiation monitoring and improved environmental management in Belarus,” an EU project
47. Green Finance Consultant to Project: Ms. Iryna Pyl
48. State Traffic Police (UGAI Police Dept. of Minsk City Executive Committee): Mr. Sergei Pivovarov (consultant to project) and Mr. Dmitriy Navoy
Feb. 22 Minsk
49. PM: Ms. Iryna Usava
50. Level 80: Mr. Kirill Skorynin, CEO/ Founder with pre-prepared input from Mr. Alexey Zalouski
51. MTR Debrief: Igar Tchoulba (UNDP CO), Ms. Oksana Yuchkevich (MNREP), Iryna Usava (<i>Green Cities</i>), and (via Skype) Mr. John O’Brien (UNDP Regional HQ)
Feb. 23 Minsk
52. PM: Ms. Iryna Usava

3. Post-Mission (all via Skype)

Date	Name, Role, and Organization
Feb. 27, 2019	Ms. Iryna Usava, <i>Green Cities</i> PM
March 13, 2019	Mr. Roland Wong, Original Lead Project Designer of <i>Green Cities</i>
April 22, 2019	Ms. Iryna Usava, <i>Green Cities</i> PM, and Ms. Natallia Labaznava, <i>Green Cities</i> Admin and Finance Officer

Annex 2. Document Review

Document Review: The document review includes four sets of documents:

1. Documents obtained online, such as via the GEF website and online search: These documents include the PIF, GEF Review Sheet, STAP Review Sheet, CER, CEO Letter to Council, and ProDoc.

2. Key documents provided by the PIU on January 4, 2019, all provided in both English and Russian: Annual Progress Reviews (APRs) 2017 and 2018, Project Implementation Reports (PIRs) 2017 and 2018, Project Board Meetings 2017 and 2018, CDRs (expenditures) for each year by Outcome, Project Inception Report, Lessons Learned logs (3 logs), Monitoring logs (2 logs), Issues logs (3 logs), Risk logs (3 logs), and Annual Work Plans (3 annual work plans, 2017, 2018, and 2019).

3. Various reports and other documents prepared as a part of project activities under the four project components, provided on January 15, 2019. Most of these documents are in Russian only. This third set of documents is quite large, so has been reviewed selectively. The documents, which are organized into eight different folders, are (with “English” noted when not in Russian or in both English and Russian):

(1) 10 Plans Folder: 1. *Long Term Sustainable Plan for the Energy Development of Novogrudok District* (2017; 62 pages); 2. Symbio-City Brest sub-folder: 2-1 *Smart Sustainable Development: Brest – Symbio-City 2050* (Sept. 12, 2018, approved, 35 pages), 2-2. *Urban System 1: Transport* (3 page table with KPIs for 2020, 2035, and 2050). 2-3. *Urban System 2: Energy* (4 page table with KPIs). 2-4. *Urban System 3: Architecture and Green Culture* (3 page table with KPIs), 2-5. *Urban System 4: Waste* (4 page table with KPIs), 2-6. *Urban System 5: Water Supply and Water Support* (4 page table with KPIs), 2-7. *Urban System 7 – Biodiversity and Landscape* (2 page table with KPIs), 2-8. *Situation Analysis – Preparing for Smart Sustainable City Plan for Brest 2050* (Feb. 11, 2019, 43 pages, in English, by Liugi Cipolla, international consultant), 2-9. *Smart Sustainable City Planning Approach for Brest* (March 19, 2018, 143 pages in English, by Liugi Cipolla, international consultant)

(2) MRV System Folder: 1. *MRV System Best Practices* (17 pages, 2017)

(3) Project Brief Folder: 1. *Project Brochure* (2 pages, in English, Russian, and Belarusian)

(4) Information Events Folder: 1. Educational Trips (Tallinn and Strausbourg) sub-folder: 1-1 Frieberg Study Tour sub-sub-folder (14 presentations - English), 1-2. Estonia and Finland sub-sub-folder (15 presentations - English); 2. National Green City Planning Seminars sub-folder: 2-1. Dec. 5-6 2017 sub-sub-folder (17 presentations for Dec. 5 and 21 presentations for Dec. 6), 2-2. May 31- June 1 2018 Grodno sub-sub-folder (Agenda only), 2-3. Dec. 4-5 2018 Polotsk and Novopolotsk (19 presentations); 3. Trainings and Seminars sub-folder: 3-1. Inception Workshop sub-sub-folder (6 presentations), 3-2. Sustainable Mobility to Smart City – Oct. 2018 sub-sub-folder (15 presentations), 3-3. Architectural Forum – Sept. 2018 sub-sub-folder (14 presentations), 3-4. Workshop on Green Procurement March 2 2018 sub-sub-folder (13 presentations), 3-5. Second Workshop on Green Procurement March 26, 2018 sub-sub-folder (4 presentations), 3-6. Seminar on Green Financing Jan. 31, 2018 sub-sub-folder (8 presentations), 3-7. Creating a City for All – Polotsk – Oct. 26, 2018 sub-sub-folder (9 presentations)

(5) Mobility and Sustainable Transport: Polotsk and Novopolotsk Folder: 1. PUGM sub-folder: 1-1. *Analysis of Effectiveness of Low Budget Measures for SUMP* (32 pages, in English, 2018, Christina Gauce, International Consultant), 1-2. *Analysis of Implemented SUMPs* (32 pages, in English, 2018, Christina Gauce, International Consultant); 2. TEO Velo-Infrastructure of Societies Transport sub-folder: 2-1. *Technical/ Economic Justification of Bike Routes Expansion in Polotsk and Novopolotsk Stage 1*

(273 pages, 2018), 2-2. *Technical/ Economic Justification of Bike Routes Expansion in Polotsk and Novopolotsk Stage 2* (150 pages, 2018), 2-3. *Business Model of Cycling Movement Polotsk and Novopolotsk* (Excel file), 2-4. *Baseline Data Collection to Prepare Feasibility Study on Public Transport in Polotsk and Novopolotsk* (222 pages, 2018), 2-5. *List of Tram and Bus Stops in Novopolotsk Territory* (170 pages, 2018).

(6) Reports of International and National Experts Folder: 1. Green Town Planning sub-folder: 1-1. *Improving the system of legal regulation of urban planning activities in the Republic of Belarus in accordance with the principles of green urban planning* (42 pages, 2018, Fedorov Grigory Yurievich), 1-2. *Improving National Policy for Developing Urban Plans* (52 pages, 2018, G.A. Potaev), 1-3. *Steps for Improving Urban Planning System* (3 pages, resolution agreed by workshop participants, 2018), 1-4. *Materials for Discussion: Suggestions for Using Green Planning Approaches in the Development of Urban Areas in Belarus* (139 pages, 2018), 1-5. *Alternative Scenarios for the Green Plan of Novopolotsk* (5 pages, 2018, Vera Sysoeva); 2. Green Financing sub-folder: 2-1. *Green Finance Report* (167 pages, 2018); 3. Green Purchases sub-folder: *Green Procurement, Analysis and Recommendations* (73 pages, 2018); 4. Mobility and Sustainable Transport sub-folder: 4-1. *Annexes of International Cases of SUT* (2018, Christina Gauge, English, associated with report in Folder 5 above), 4-2. *National Legislation for Sustainable Urban Transport* (107 pages, 2018), 4-3. *Review of Best International Sustainable Transport and Urban Mobility Practices* (33 pages, Jan. 2018, Frank Wefering, English), 4-4 to 4-8. Six presentations by Frank Wefering for Oct. 2010 Minsk Urban Mobility Workshop (Session 1 Concepts, Session 2 Cooperation, Session 3 Monitoring and Assessment, Session 4 Small and Medium Cities, Session 5 Concepts Focus on Polotsk and Novopolotsk, Session 6 Vision Goals and Polotsk Novopolotsk Workshop – all in English); 5. Energy Efficiency sub-folder: 5-1. *Recommendations for Standards and Rules for Design of LED Lighting Systems* (version 2, 53 pages, 2018), 5-2. *Analysis of Existing Standards and Norms for Design of Street Lighting for Public and Residential Buildings* (95 pages, 2017)

(7) Development of Green Urban Plans Folder: 1. Novogrudok sub-folder: 1-1. *Novogrudok GUD Methodological Plan* (23 pages), 1-2. *Novogrudok Strategic Documents, Forecasts, and Alternative Scenarios* (38 pages), 1-3. *Novogrudok Working Group* (2 pages), 1-4. Maps (31 in total). 2. Novopolotsk sub-folder: 2-1. *Novopolotsk GUD Methodological Plan* (15 pages), 2-2. *Novopolotsk Strategic Documents, Forecasts, and Alternative Scenarios* (28 pages), 2-3. *Novopolotsk Review of Current Situation with Efficiency Indicators* (18 pages, color brochure-like), 2-4. *Table of Plans and Measures for Novopolotsk* (8 pages), 2-5 *Novopolotsk Working Group* (1 page). 3. Polotsk sub-folder: 3-1. *Polotsk GUD Methodological Plan* (28 pages), 3-2. *Polotsk: Strategy Documents, Forecasts, and Alternative Scenarios*, 3-3. *Polotsk Analytical Review of Current Situation with Indicators* (67 pages, color brochure-like), 3-4. *Polotsk Plan Measures* (8 page table), 3-5. *Polotsk Working Group Document* (1 page), 3-6 Maps (7 in total). 4. National Level sub-folder: 4-1. *Summary of National GUDP Recommendations based on Project Consultations, Reports, and Confernces* (5 pages); 5. Other sub-folder: 5-1 and 5-2. *Structure of questionnaire about the current state of the city for use when developing measures to reduce CO2 emissions, Part 1* (72 pages) and *Part 2* (82 pages), 5-3. *Expert Evaluation of Novogrudok, Novopolotsk and Polotsk GUDP Projects* (85 pages)

(8) Energy Efficiency Folder: 1. *Feasibility Study for EE Street Lighting in Novogrudok* (38 pages, Oct. 2017)

4. Additional Documents Requested and Provided Post-Mission: (a) *Polotsk-Novopolotsk ISUMP* (Draft, Russian, Feb. 2019, 48 pages), (b) *Polotsk GUDP* (draft, Russian, 2019, 81 pages), (c) *Novopolotsk GUDP* (draft, Russian, 2019, 96 pages), (d) *Novogrudok GUDP* (draft, Russian, 2019, 92 pages), (e) *Polotsk SECAP* (Russian, 2019, 28 pages), (f) *Novopolotsk SECAP* (Russian, 2019, 23 pages), (g) *Baranovichy SECAP* (Russian, 2019, 25 pages), (h) *Mstslavl SECAP* (Russian, 2019, 26 pages), (i) *Pruzhany SECAP* (Russian, 2019, 23 pages), (j) *Slavgorod SECAP* (Russian, 2019, 22 pages), (j)

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Template for Preparing Belarusian SECAP (Russian, 2018, 40 pages), (k) Excel Spreadsheet for Belarusian SECAP Calculations (ten worksheets), (l) Smart Meter Demo Feasibility Study (Russian, 2018, 105 pages)

Annex 3. Preliminary Suggestions for Output and Activity Revisions

The first part of this annex, in the format of a table, shows preliminary suggestions for revision of the project outputs. These suggestions are meant as a basis for discussion of how the project outputs can better be revised both to reflect the current direction of the project (as it has changed since project design) and to reflect the mid-term review recommendations. In the second part of this annex, below the outputs table and in open text format (no table), the outputs (both existing and new) are shown again, this time along with preliminary suggestions for revisions for project activities. (Not all activities are shown: Only suggestions for new activities or suggestions for revising existing activities are shown.) Both of the two parts of the annex use color coding of text, so that newly suggested content can be distinguished from text representing the project design of the ProDoc and CER.

Part 1. Proposed Adjustments to Outputs

Note: Proposed adjustment to outputs are shown in red (suggested additions) and strikethrough (suggested deletions).

Outcomes	Outputs
Green urban development plans successfully developed and adopted	1.1 Proposed enhancements of national policies and regulations for public lighting and urban transportation. 1.2 : Green Urban Development Plans for Cities of Polotsk, Novopolotsk and Novogrudok 1.3: Green urban development activities, requirements, standards, and guidelines that are integrated into existing legal and regulatory framework 1.4: National Workshops on development of GUDPs for other cities 1.5 MRV framework for GUD in Belarus 1.6 Briefings of key policy makers and state design institutes and provision of succinct briefing materials 1.7 Cross-ministerial working group on GUD 1.8 GUD block designs for Cities of Polotsk, Novopolotsk, Novogrudok, and possibly Brest and other partner cities, via competitions that attract national attention
Successful projects on sustainable urban transport completed in Novopolotsk and Polotsk	2.1: Integrated Sustainable Urban Mobility Plan (ISUMP) for Polotsk and Novopolotsk 2.2: A detailed feasibility study for the integration and extension of the Cycle Network for Polotsk and Novopolotsk and piloting of bike storage infrastructure 2.3: Feasibility studies to address strategic transport needs, including the promotion of public transport, the discouragement of private car use, and the reduction of carbon emissions from both 2.7: MRV programme for measuring GHG reductions from SUT investments 2.8 Increased capacity of officials in Polotsk and Novopolotsk for the making of effective decisions with regard to sustainable urban transport 2.9 Monitoring and dissemination of results of project SUT demos
	2.4: Investment in the cycling network 2.5: Investment in public transit services and, as relevant, parking measures and driving restriction measures to discourage private car use 2.6: Investment in bus priority lanes, driving and parking restriction signs/infrastructure, parking fee infrastructure, and traffic light synchronization
Successful pilots on energy efficiency	3.1: Detailed feasibility studies on energy efficiency in Novogrudok and other cities in Belarus

<p>completed in Novogrudok</p>	<p>3.4 Monitoring and dissemination of results of project energy efficiency demos</p> <p>3.2: Investment in LEDs for lighting streets and public areas, control gear, and Energy Management Information Systems (EMIS)</p> <p>3.3: Investment in meters and/or smart meters in apartment buildings to promote energy efficiency equipment, plant and machinery for municipal laundry</p>
<p>Growth in green city development in Belarus</p>	<p>4.1: A completed SECAP for Novopolotsk</p> <p>4.2: Updated SECAPs for Polotsk and Novogrudok</p> <p>4.3: Mechanism Support for promoting implementing low carbon growth projects in Belarusian cities, including support in identifying priority projects, obtaining financing, taking a life-cycle approach in procurement, and adopting low-cost high-benefit approach</p> <p>4.4: Completed or updated SEAPs or green urban development plans for another 10 municipalities in Belarus</p> <p>4.5: Mechanism for promoting ongoing advances in GUD in Belarus</p>

Part 2. Suggestions for Additions/ Adjustments to Project Activities

Note: All outcomes and outputs are shown. Any proposed revisions to outputs are **in red font (for additions)** or black font with strikethrough (for deletions). Activities included **in blue** are proposed additions to or clarifications of existing activities. Other existing activities are not listed (with the exception of a few activities listed in black font to increase clarity with regard to added activities **in blue**). Many of the existing activities have been completed already and some, if no longer relevant, might be deleted by the project team based on priorities identified by the MTR and other adaptive management initiatives of the project.

Objective: The development of green urban development plans and pilot green urban development projects related to energy-efficiency and sustainable transport in small and medium cities in Belarus.

Outcome 1: Green urban development plans successfully developed and adopted

Output 1.1: Proposed enhancements of national policies and regulations for public lighting and urban transportation.

Activity 1.1.x: Prepare proposed legislation that will enable small and medium sized cities to charge and enforce parking fees in city center or other congested areas and to restrict parking in various areas, as needed for bus lanes, further discouragement of driving to congested areas, etc. Adoption of proposed legislation will then be taken up as part of Activity 1.6.1.

Activity 1.1.x+2: Prepare recommended revisions to *Law of Road Traffic* and recommendation for new Council of Ministers Resolution for SUT in city planning. Adoption to be taken up as part of Activity 1.6.1.

Output 1.2: Green Urban Development Plans for Cities of Polotsk, Novopolotsk and Novogrudok

Activity 1.2.x: Conduct interactive outreach to citizens of pilot cities to get their input for GUDPs and adjust GUDPs accordingly

Output 1.3: Green urban development activities, **requirements, standards, and guidelines** that are integrated into existing legal and regulatory framework

Activity 1.3.x: Prepare recommendations and draft legislation for incorporation of green urban planning, sustainable urban transport, and urban energy efficiency into master plan and master plan annex

preparation process. This may include proposed urban planning standards and guidelines. To be promoted to policy makers as part of Activity 1.6.1

Activity 1.3.x+1: Prepare with BelNIIP proposals for incorporating GUD in to *National Urban Development Policy (2021-2026)* and for preparing supporting regulations to the policy that also address incorporation of GUD measures.

Activity 1.3.x+2: Prepare proposal for *Green Urban Development Action Plan* to be submitted to cross-ministerial working group of Output 1.7. Adoption of proposal will be taken up as part of Activity 1.6.1.

Activity 1.1.x+3: Prepare: proposed revisions to *Municipal Procurement Regulations* to consider lifecycle costs, proposed new green infrastructure financing regulations, proposed changes to municipal finance process, and proposal for establishment of a competitive green infrastructure loan fund. Adoption will be taken up as part of Activity 1.6.1.

Output 1.4: National Workshops on development of GUDPs for other cities

Output 1.5: MRV framework for GUD in Belarus

Output 1.6: Briefings of key policy makers and state institutions and provision of succinct briefing materials

Activity 1.6.1: Carry out program to brief key policy makers and influencers thereof as means of achieving adoption of proposed amended and new policy and legislation

- Based on project's policy and legislative work to date, identify and prioritize needed amendments and new policies and legislation in the area of urban development, including those related to energy efficiency, sustainable urban transport, and low carbon planning, procurement, and financing. Develop strategies for realizing adoption of each priority item, including identification of key decision makers and influencers.
- Based on project policy and legislative work to date and identified priorities of item above, prepare short, high-level briefings (e.g. 2 pages each).
- Secure and hold brief and highly focused one-by-one meetings with key policy makers and influencers regarding proposed policy and legislation.
- Write brief and convincing letters or letter to relevant decision makers at the highest levels to promote concept that something needs to be done about green urban development and that coordinated cross-ministerial effort is needed to determine next steps.

Activity 1.6.2: Carry out program to brief state urban planning organizations, especially BelNIIP

- Develop practical model/ methodology of how green urban design can become integrated with state urban planning process (This work may be carried out in cooperation with BelNIIP.)
- Prepare briefing materials on model/ methodology developed in item above, as well as strong rationale for inclusion of green urban design in state planning process (This work may be carried out in cooperation with BelNIIP.)
- Conduct highly-focused meetings with state urban planning organizations, especially BelNIIP, on green urban design, sustainable urban transport, urban energy efficiency and how these can be integrated into master plan and master plan annex preparation work. Target agreement of state planning organizations to incorporate green urban planning into their master plan and annex work and target their support for legislation to promote this integration process as designed under Activities 1.3.x and 1.3.x+1 and promoted under Activity 1.6.1.

Activity 1.6.3: Cooperate with respected think tanks, NGOs, and bloggers in preparing and promoting thought pieces related to the policy and process recommendations.

Output 1.7: Cross-ministerial working group on GUD

Activity 1.7.1: Provide support for establishment of working group and for meetings of cross-ministerial working group via proposed agendas, briefing materials, and meeting coordination

Output 1.8: GUD block designs for Cities of Polotsk, Novopolotsk, Novogrudok, Brest, and other partner cities via competitions that attract national attention

Activity 1.8.1: Prepare methodology for urban block design

Activity 1.8.2.: Design, promote nationally, and carry out of competition for urban block design

Activity 1.8.3: Select winning designs and promote nationally

Outcome 2. Successful projects on sustainable urban transport completed in Novopolotsk and Polotsk

Output 2.1: Integrated Sustainable Urban Mobility Plan (ISUMP) for Polotsk and Novopolotsk

Output 2.2: A detailed feasibility study for the integration and extension of the Cycle Network for Polotsk and Novopolotsk **and piloting of bike storage infrastructure**

Output 2.3: Feasibility studies to address strategic transport needs, **including the promotion of public transport, the discouragement of private car use, and the reduction of carbon emissions from both**

Activity 2.3.x: Enhance feasibility study work to date by adding private car aspects and identifying high impact public transport and car private car measures

Output 2.7: MRV programme for measuring GHG reductions from SUT investments

Output 2.8: **Increased capacity of officials in Polotsk and Novopolotsk for the making of effective decisions with regard to sustainable urban transport**

Activity 2.8.1: Carry out one-by-one meetings with top municipal officials and members of the Polotsk and Novopolotsk coordinating committees for *Belarus Green Cities* to educate them on how to assess the impact and desirability of various SUT options, including GHG emission reduction and local air quality and traffic benefits. Promote key parallel, low-cost co-financed activities that will be considered part of the “demo package,” including: (1) Extension of bike lanes in the two cities so that total bike lanes (not including independent bike trail) will cover the 30 km recommended in project feasibility study (This may call for an additional 19 km beyond the 8 km of the project and the 3 km already existing in Polotsk.) (2) Parking restriction and parking fees in city center of Polotsk and parking restriction on planned bus/tram corridor of Novopolotsk. (3) Special bus, bicycle, pedestrian only streets (no cars) and private car driving restrictions in other places. (4) Roundabout intersection construction in Polotsk. (5) Lagging of work times at refinery to reduce congestion. (6) Improvement of bus routes. (7) Bus lane pilots in Polotsk and Novopolotsk.

Activity 2.8.2: Provide focused expert facilitation for coordinating group meetings so that group is aware of goals of the SUT measure selection process for the project, potential budget, potential costs of various measures, and of how to determine the options that will bring the greatest benefit in terms of GHG emission reduction, local air quality, and traffic and comfort improvement. Promote key parallel, low-cost co-financed activities as outlined in Activity 2.8.1.

Output 2.9: **Monitoring and dissemination of results of project SUT demos**

Activity 2.9.1: Monitor results of SUT demos in Polotsk and Novopolotsk. Provide recommendations for adjustment. Disseminate results to national policy makers and other cities. Ensure that SUT demos are included in periodic Council of Ministers organized site visits across the country for regional and local government officials. Prepare video of SUT results (same video may also include results of energy efficiency demos in Novogrudok).

Output 2.4: Investment in the cycling network

Activity 2.4.1: Invest in and construct 11 km total of newly paved bike trail (3 km) and bike lanes (8 km) between the two cities (GEF financed).

Activity 2.4.2: Invest in and construct an additional 19 km of bike lanes in the two cities as recommended by the feasibility study (co-financed by municipalities).

Activity 2.4.3: Develop snow removal approach that will allow bike lanes to remain open with safety bumps to keep cars out during the winter.

Activity 2.4.4: Invest in and install public bike racks city-wide for Polotsk and Novopolotsk, pilot bike parking storage equipment either in previous location of garbage chute in apartment buildings or in courtyards of such buildings, and, possibly, bike racks for the front of selected buses. (GEF financed).

Output 2.5: Investment in the public transit services **and, as relevant, parking measures and driving restriction measures to discourage private car use**

Activity 2.5.1: Invest in and construct measures that increase comfort of and speed of public transport system, including possibly innovative bus stops (with shelter) in Polotsk, possibly LED bus schedule signs in both Polotsk and Novopolotsk, and definitely improved bus routes that lower transit time, especially to refinery (GEF financed)

Activity 2.5.2: Adopt parking restrictions on proposed bus/tram corridor (Novopolotsk) and paid parking in city center (Polotsk) (measures are co-financed by municipalities, though parking meters, if used, may be GEF financed)

Activity 2.5.3: Develop bus-bicycle-pedestrian only streets or segments of streets in Polotsk and Novopolotsk (co-financed by municipalities), as well as private car driving restrictions (e.g. time of day driving restrictions in city center in Polotsk and on road to refinery in Novopolotsk)

Output 2.6: Investment in bus priority lanes and traffic light synchronization

Activity 2.6.1: Establish 3 km pilot bus lane on main thoroughfare of Novopolotsk

Activity 2.6.2: Establish 4 km pilot bus lane in city center areas of Polotsk

Outcome 3: Successful pilots on energy efficiency completed in Novogrudok

Output 3.1: Detailed feasibility studies on energy efficiency in Novogrudok and other cities in Belarus

Activity 3.1.x: Carry out additional analysis to confirm potential energy savings of various types of meters or smart meters in proposed Novogrudok apartment building metering demo. Compare energy saving benefits for metering different types of energy or water: heating, electricity, gas, hot water, and cold water and determine whether smart meters (as opposed to non-smart meters) enhance the potential energy savings benefit. Based on findings, adjust/ refine proposed metering demos in residential housing in Novogrudok so that meters adopted are those that promote the greatest energy savings for the funds invested.

Activity 3.1.x+1: Based on findings of Activity 3.1.x, develop clear message on the ways in which the metering demo will save energy and how it will benefit consumers. Communicate this message to local officials, local utilities, and, especially, consumers.

Output 3.4: Monitoring and dissemination of results of project energy efficiency demos

Activity 3.4.1: Monitor results of energy efficient street lighting demo and apartment building utility meter energy efficiency demo in Novogrudok. Provide recommendations for adjustment. Gather information on other automated efficient street lighting demos (Polotsk) and other meter demos in the country. Prepare comparison of the strengths and weaknesses of these various demos. Disseminate results of Novogrudok demos (along with other related demos across the country if their strengths are attractive and comparison to Novogrudok case instructive) to national policy makers and other cities. Ensure that Novogrudok EE demos are included in periodic site visits across the country organized by Council of Ministers for regional and local government officials. Prepare video of results of Novogrudok EE demos. (Same video may also include results of SUT demos in Polotsk and Novopolotsk.)

Output 3.2: Investment in LEDs for lighting streets and public areas, control gear and Energy Management Information Systems (EMIS)

Output 3.3: Investment in meters and/or smart meters in apartment buildings to promote energy efficiency equipment, plant and machinery for municipal laundry

Outcome 4: Growth in green city development in Belarus

Output 4.1: A completed SECAP for Novopolotsk

Output 4.2: Updated SECAPs for Polotsk and Novogrudok

Output 4.3: Mechanism Support for promoting implementing low carbon growth projects in Belarusian cities, including support in identifying priority projects, obtaining financing, taking a life-cycle approach in procurement, and adopting low-cost high-benefit approach

Activity 4.3.1: Identify realistic sources of financing for GUD, SUT and EE initiatives in Belarusian cities, including key contacts and recommendations for securing such financing. This work should include

direct discussions with the potential financing sources about the potential of financing Belarusian municipal GUD projects, rather than pure desk research.

Activity 4.3.2: Provide one-on-one assistance to small and medium sized Belarusian cities to identify top priority GUD, SUT, and EE projects, ensuring that they understand life-cycle approach for procurement (analyzing costs over full lifetime instead of just up-front costs) and the availability of low-cost high-benefit options, particularly in transport.

Activity 4.3.3: Assist selected cities in securing financing for priority projects identified as a part of Activity 4.3.2. Assistance will include one-on-one support for liaising with financing sources, preparing documentation, and carrying out any negotiations and follow up necessary. The project will support about 13 cities in this effort and target to bring at least six such projects (with six different cities) to financial close. These projects will have strong GHG emission reduction benefits to enhance the project's total direct GHG emission reductions.

Output 4.4: Completed or updated SECAPs or green urban development plans for another 10 municipalities in Belarus

Output 4.5: Mechanisms for promoting ongoing advances in GUD in Belarus

Activity 4.5.1: Liaise with the President's Academy for Public Administration to secure their agreement for a course on GUD for local officials, including one course for chairs and deputy chairs of executive committees and one course for chief architects. Based on the various reports, recommendations, feasibility studies, and plans prepared by the project to date, develop curriculum for these two courses and carry out first offering of the courses, ensuring there is a mechanism for attracting only officials that are seriously interested to attend. Determine mechanism to ensure that course is continued and updated for the long-term.

Activity 4.5.2: Liaise with faculties responsible for urban design/ planning in Belarusian universities regarding the incorporation of GUD, SUT, and EE into urban design/ planning curriculum. Work with chairs and other leaders of urban design/ planning departments to achieve adjustment of national urban design/ planning curriculum to include GUD, SUT, and EE. Provide assistance in designing a course on GUD, SUT, and EE to be a part of the standard curriculum for urban design/ planning in Belarus. Determine mechanism to ensure the course is continued and updated for the long-term.

Activity 4.5.3: Liaise with GEF sustainable cities platform managed by World Bank and with other international platforms to secure Belarus' long-term engagement in international green cities initiatives as a means of (i) providing ongoing input to Belarus on the latest trends and successes with regard to GUD approaches and measures and (ii) identifying potential financing for GUD, SUT, and municipal EE for Belarusian cities.

Annex 4. Proposed Indicator Revisions

Belarus Green Cities Project Results Framework – with Proposed Revisions at Time of Mid-Term Review

Red and strikethrough indicate recommended changes. Blue indicates comments.

Outcomes	Indicator	Baseline	Targets End of Project (EOP)	Source of verification	Risks and Assumptions
Project Objective: The development of green urban development plans and pilot green urban development projects related to energy-efficiency and sustainable transport in small and medium cities in Belarus	<ul style="list-style-type: none"> Cumulative lifetime project CO₂ emission reductions resulting from pilot projects and technical assistance by EOP, ktonnes CO₂. Cumulative direct energy savings (TJ) from Project investments in sustainable transport and energy efficiency measures by EOP % of persons in green cities (Polotsk, Novopolotsk, and Novogrudok) who are either aware of or have benefitted from green initiatives from the Project at EOP. 	<ul style="list-style-type: none"> 0 0 0 	<ul style="list-style-type: none"> 91.1²⁹ 112.2³⁰ 50³¹ 	<ul style="list-style-type: none"> Project final report as well as annual surveys of energy consumption & GHG reduction estimates from Project investments APRs and PIRs Random sample survey conducted by project in each of Polotsk, Novopolotsk, and Novogrudok towards EOP 	<ul style="list-style-type: none"> The recent drop in oil prices does not reduce stakeholder urgency of green city development.
Outcome 1: Green urban development plans successfully developed and adopted	<ul style="list-style-type: none"> Number of enhanced amended or new national policies and regulations in the area of urban development, including those related to energy efficiency, public lighting and sustainable 	<ul style="list-style-type: none"> 0 	4 ³² Project is now targeting adoption/ revision of many policies/ legislation, so this number should be surpassed (3 have been achieved already)	<ul style="list-style-type: none"> Official documentation on policies and regulations 	<ul style="list-style-type: none"> Continued government support for enhancing current legal framework as well as regulations, standards and codes towards GUD

²⁹ This is the direct emission reductions from investments made during the course of the 5-year Project, and extrapolated over the lifetime of these investments. The breakdown of the demos and other pilots in achieving this target is as follows: XX tons CO₂e from Component 2 (SUT demo) investments, 6.4 Xxx tons CO₂e from Output 3.2 investment (EE street lighting demo), and 86.2 Xxx tons CO₂e TJ from Output 3.3 investment (smart meter demo), and Xxx tons CO₂e from other initiatives included in plans supported by the project that secure financing and are implemented during the lifetime of the project.

³⁰ 49.6 Xxx TJ from Component 2 (SUT demo) investments, 6.4 Xxx TJ from Output 3.2 investment (EE street lighting demo), and 86.2 Xxx TJ from Output 3.3 investment (smart meter demo), and Xxx TJ from other initiatives included in plans supported by the project that secure funding and are implemented during the lifetime of the project.

³¹ This should include persons who are aware of or have used sustainable transport (transport with improved comfort/ attractiveness and/or decreased emissions per person km travelled) in Polotsk or Novopolotsk, and are aware of or have benefitted from EE initiatives in Novogrudok. The EOP target of 50% will be measured as a survey near the EOP date with the impact purpose of measuring the human impact of the Project

³² This includes two national policies and two sets of regulations on sustainable urban transport and EE public lighting incorporation of requirement of preparation of Brest Symbio Plan into National Green Economy Action Plan (achieved in Dec. 2016), incorporation of project recommendations into Country Profile on Housing and Land Management of the Republic of Belarus (achieved in 2019) and Concept of the National Strategy of Sustainable Development (achieved in 2019), including in the latter text that calls for “introduction of the principles and methods of green urban development,” and at least 1 of the other policies or regulations indicated in the MTR Report main text, or of policies and regulations similar to those indicated in that report. It is quite possible that the project will surpass the target, with several of the policy targets included in the MTR Report being achieved.

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Outcomes	Indicator	Baseline	Targets End of Project (EOP)	Source of verification	Risks and Assumptions
	<p>urban transportation, and low carbon planning, procurement, and financing, that have been reviewed and approved by EOP</p> <ul style="list-style-type: none"> Number of officially approved green urban development plans in Project cities by EOP 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> 3³³ Project is targeting preparation of 8 GUDPs total and should aim to get all adopted – this is within reach 	<ul style="list-style-type: none"> Reports on workshop proceedings Policy circulars and advisories Municipal executive committee records 	
<p>Outcome 2: Successful pilots on sustainable urban transport completed in Novopolotsk and Polotsk</p>	<ul style="list-style-type: none"> Kilometers of private car travel displaced from modal switches to public transport by EOP Average number of minutes of reduced rush hour bus journey time through sustainable urban transport measures in Novopolotsk and Polotsk. 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> 4.3 million³⁴ To achieve target, strong measures to “pull” people to public buses and “push” people out of private cars are needed. Measures currently under consideration (based on post-MTR mission developments) that may do this are bus lanes and restriction on private car use in city center in Polotsk. More such measures are probably needed (in both cities) to achieve target. Higher impact measures to pursue are bus lanes, bus routes that speed up travel times (especially to refinery), parking restrictions, driving restrictions, parking fees, etc. 10³⁵ Bus lanes in Polotsk may help achieve this target. More measures, such as bus lanes, restriction on car parking along proposed bus/tram corridor, and improved bus routes should be considered to achieve targeted impact, 	<ul style="list-style-type: none"> Completed feasibility studies Awareness raising campaign assessments and feedback from participants M&E reports on pilot project usage and energy saved 	<ul style="list-style-type: none"> State funds are available to finance these capital intensive projects.

³³ For pilot cities of Polotsk, Novopolotsk and Novogrudok.

³⁴ To be done as a survey, the details of which are provided under Output 2.7 in Para 79. The target was estimated as 250 cars not traveling some 26 km/day during 220 days per year over a 3-year period during the Project.

³⁵ To be done as a survey and based on Route No. 5 to and from Polotsk and the Naftan Refinery where dedicated bus lanes and synchronized traffic lighting have reduced corridor journey times. Details of activities to design the survey are provided under Output 2.7

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Outcomes	Indicator	Baseline	Targets End of Project (EOP)	Source of verification	Risks and Assumptions
	<ul style="list-style-type: none"> Number of persons using improved public transport services during Year 5 	<ul style="list-style-type: none"> 0 0 	<p>particularly on road to refinery.</p> <ul style="list-style-type: none"> 75,000³⁶ This number assumes that all people using public transport in the two cities benefit from the improvements. Improvement of a small number of bus stops outside of city center as is being considered for Polotsk will benefit a much smaller number of riders of public transport. Bus lanes in Polotsk city center, such as are being planned, based on post-MTR mission developments, and other broader measures as raised with regard to the two indicators above are needed, especially faster service along main corridors and substantial improvements to routes. 		
Outcome 3: Successful pilots on energy efficiency completed in Novogrudok	<ul style="list-style-type: none"> GJ saved on LEDs installed for street lighting and public areas (indoor and outdoor), as well as new control gear and EMIS by EOP Lifetime GJ saved by meter and/or smart meter installation from EE measures on municipal laundry by EOP 	<ul style="list-style-type: none"> 0 0 	<ul style="list-style-type: none"> 21,423 Due to revisions to demo plans since ProDoc, new calculation of potential GJ savings from Novogrudok demo is needed, along with potential GJ savings by EOP from EE street lighting replications that will use project design/ RFP as model and be implemented before EOP. 215,605³⁷ Need to ensure smart meter demo is designed with energy savings as the focus. Potential savings should be calculated and discussed 	<ul style="list-style-type: none"> Feasibility studies Replication plans M&E reports on energy saved through the use of EE lighting in Novogrudok 	<ul style="list-style-type: none"> State funds are available to finance these energy efficiency measures

³⁶ Based on TEEMP analysis of an estimated 55.75 million passengers using the system during Year 5. This would translate into 152,700 person-trips on average each day or approximately 75,000 persons using the improved public transport systems (if they make 2 person-trips daily)

³⁷ Based on 10 XX years of service life from laundry equipment smart meters (see Table II-10)

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Outcomes	Indicator	Baseline	Targets End of Project (EOP)	Source of verification	Risks and Assumptions
			before moving forward with demo. To reach this target, substantial replication during lifetime of project would be needed.		
Outcome 4: Growth in green city development in Belarus	<ul style="list-style-type: none"> Number of completed or updated SEAPs and/or GUDPs by EOP Number of cities promoting green urban development as evidenced by their having a high level municipal official level in government who are is newly responsible for green infrastructure projects dedicated to the promotion of urban low carbon growth to Belarusian cities by EOP Number of hits on national website for promoting GUD by EOP 	<ul style="list-style-type: none"> 2³⁸ 0 0 	<ul style="list-style-type: none"> 1339 (including Ecopartnership and Interaction's SECAPs)³⁹ This includes a total of 16 supported by project (3 SECAPs for demo cities, 3 GUDPs for demo cities, 5 SECAPs for replication cities and 5 GUDPs for replication cities). Yet, Interaction and Ecopartnership are supporting about 23 SECAPs. If, instead, we limit this to project supported plans then baseline should be zero and target 16. 8 If the indicator is changed according to the proposed revision here, project may need to recommend cities give official responsibility to a deputy executive committee chair to facilitate cooperation on GUDPs and SECAPs or on pursuing the financing of initiatives within those plans 10,000 	<ul style="list-style-type: none"> Municipal SEAP reports Municipal green urban development planning reports Reports from the Green Cities of Belarus 	<ul style="list-style-type: none"> Continued government support and availability of state funds for scale-up of GUD in other municipalities

³⁸ Includes completed SECAPs for Polotsk and Novogrudok which need to be updated towards the EOP

³⁹ Includes SECAP for ~~Novogrudok~~, Novopolotsk, an updated SECAP for Polotsk and Novogrudok, ~~40~~ 5 new SECAPs for ~~40~~ 5 additional municipalities as supported by the project's replication work, 3 GUDPs for pilot cities, 5 GUDPs for replication cities, so total of 16 new or revised plans supported by project, and 23 SECAPs supported by Ecopartnership and Interaction combined.

Annex 5. Progress towards Indicator Targets

Note: Please see Annex 4 for proposed indicator revisions. Some of the indicators may be either no longer appropriate (e.g. indicator about laundry) or not as specific as needed for good assessment. For the table in this annex, however, the original indicators and targets are used. Also, please see Annex 6 for “Justification of Achievement Ranking.” Annex 6 gives ratings of the “progress towards results” type for the objective and outcomes (ratings are the same as those shown here) and explains the justification of those ratings in depth. The MTR team recognizes that from viewing the “traffic lights” for the objective indicators, the objective achievement ranking of “S” may seem high. Yet, the MTR team believes the indicators do not fully reflect the overall achievements of the project to date when the magnitude and nature of the key aim of the project - to introduce a new aspect of municipal planning into Belarus - is considered. Other aspects of project achievement to date, it is believed, support the rating given.

Progress towards Results Matrix (Achievement of Objective and Outcome Indicators against End-of-project Targets)

Indicator assessment color key provided below table

Project Strategy	Indicator	Baseline Level	Level in 1 st PIR (self-reported)	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Explanation of “Traffic Light Assessment of Indicators” and Associated Recommendations – for Justification of Achievement Rating, Please see Annex 6
Objective: The development of green urban development plans and pilot green urban development projects related to energy-efficiency and sustainable transport in small and medium cities in Belarus	Cumulative lifetime project CO2 emission reductions resulting from pilot projects and technical assistance by EOP, ktonnes CO2	0	0	91.1	0	S	At present, there is risk of the project meeting neither GHG ER targets nor energy savings targets. The key challenges to be addressed are: (1) Some of the SUT demo measures most likely to be adopted are not those that will be most effective in reducing GHGs and energy use. (Note: Post-MTR mission, the project agreed with Polotsk to implement a bus priority lane demo and likely private car driving restriction measures, both which are considered effective measure in terms of GHG ER potential and thus a positive step.) (2) The energy savings for the smart meter demo (to replace the laundry demo) is much lower than that for the laundry; and, even the low amount is not confirmed. In addition to addressing these two items, the team should put strong focus on efforts to help additional EE/SUT initiatives get
	Cumulative direct energy savings (TJ) from Project investments in sustainable transport and energy efficiency measures by EOP	0	0	112.2	0		
	% of persons in green cities who are either aware of or have benefitted from green initiatives from the Project at EOP.	0	up to 8%	50%	<10%		

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							financing and consider expanding such support to include the 10 replication cities. As for the last indicator, with broad initiatives such as street lighting or public transport, once these are implemented it likely that 50% of residents will benefit or at least hear about the work.
Outcome 1: Green urban development plans successfully developed and adopted	Number of enhanced national policies and regulations in the area of public lighting and urban transportation that have been reviewed and approved by EOP	0	0	4	0 -- but 3 if the scope of policy is broadened as recommended	S	As detailed in the MTR Report, the project has had 3 successes in impacting adopted policies, though these are not in the lighting and urban transport areas. Annex 5, with its recommended revisions of the indicators, recommends broadening this indicator to encompass GUD, etc. as well. On the other hand, the project has prepared a range of other policy recommendations but lacks a targeted strategy for getting these approved. While approval is not within the full control of the project team, strategic actions might improve the odds of approval. At present, approach has been to submit the recommendations to policy makers, but there has been limited pro-active ad hoc meetings with relevant authorities to explain and promote proposals. This report proposes a more proactive strategy with one-on-one briefing meetings and one to two page briefs prepared for target decision makers and influencers. As for the second indicator, while Brest is not one of the three pilot cities and instead is a replication city, its GUDP-like Symbio Plan prepared by the project has been approved and annexed to its master plan. And, a draft GUDPs for each of the 3 demo cities recently became available. While it is in need of further development, the usefulness of the draft GUDP to Polotsk looks promising, especially
	Number of officially approved “pilot” green urban development plans by EOP	0	0	3	1 (Brest)		

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							because preliminary costing is included.
Outcome 2: Successful pilots on sustainable urban transport completed in Novopolotsk and Polotsk	Kilometers of private car travel displaced from modal switches to public transport by EOP	0	0	4.3 M	0	MS	At the time of the MTR mission, the measures being considered for the SUT demos lacked the needed level of “pull” to public transport by making it more attractive and completely lacked “push” from making private cars less attractive, so that the first two indicators were considered unlikely to be met. Since that time, Polotsk has decided to test a 4 km bus lane and is likely to also enact some private car driving restrictions, by time of day, in city center. This is considered progress in the direction of achieving these indicators, though more such progress is needed. As explained in more detail in the report, further consideration and adoption of the most impactful options, such as more bus lanes, parking restrictions, parking fees, and more driving restrictions are recommended. Experts should assess most desirable measures and then provide extensive facilitation to local coordinating groups to ensure they understand the merits of various options. The last indicator might not be met if the public transport measures only cover a small handful of bus stops as was envisioned at the time of the MTR mission. If the reach of the public transport measures are more comprehensive, such as implied by the latest developments with Polotsk (plans for bus lane and likely adoption of some private car driving restrictions), this number might be achieved, since half of the population in P-NP use public transport (and total population is roughly 200,000).
	Average number of minutes of reduced bus journey time through sustainable urban transport measures in Novopolotsk and Polotsk	0	0	10	0		
	Number of persons using improved public transport services during Year 5	0	0	75,000	0		

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Outcome 3: Successful pilots on energy efficiency completed in Novogrudok	GJ saved on LEDs installed for street lighting and public areas (indoor and outdoor), as well as new control gear and EMIS by EOP	0	0	21,423	0	MS	The smart LED lighting demo is on track to be achieved, though the energy savings (judging from preliminary GHG ER figures provided by the project team post-MTR mission) is unlikely to be as high as originally targeted. Thus, it will be important to stimulate and achieve replications during the project's lifetime so as to achieve targeted energy savings. As for the laundry demo, this has been replaced by a smart meter demo. The sources of energy savings from the smart meter demo has some associated confusion at present, which should be clarified before further action is taken. Post-MTR mission provision by the project team of GHG ERs for the smart meter demo suggest energy savings are likely to be far less than that projected for the laundry demo.
	Lifetime GJ saved from EE measures on municipal laundry by EOP	0	0	215,605	0		
Outcome 4: Growth in green city development in Belarus	Number of completed or updated SEAPs and/or GUDPs by EOP	2	1	13	8	S	The baseline and target levels of the first indicator are a bit confusing. The baseline is indicated as 2. Yet, the footnote in the PRF indicates 13 new or improved plans will be prepared, so the target might be 15. So far, seven SEAPs have been prepared (though these are not yet SECAPs with the climate component). Brest's Symbio Plan has been finalized, so brings the total completed plans to eight (if the climate issue for the SECAPs is not considered). The three GUDPs for the demo cities are in draft form, so not included in the total. The total also does not include SEAPs prepared by Ecopartnership and Interaction, which would bring the total much higher. The second indicator is a bit ambiguous in its wording; and revision has been recommended. Yet, the project is making good progress in raising
	Number of officers in government who are dedicated to the promotion of urban low carbon growth to Belarusian cities by EOP	0	6	8	NA		
	Number of hits on national website for promoting GUD by EOP	0	0	10,000	NA		

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						awareness/ changing mindset of city officials, so progress in this general direction is good. As for the third indicator, though the project hasn't yet found a host institution for the website, it has now launched an attractive website. Given the strong promotion of the project via its communications work, the site is likely to attract many hits.
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Indicator Assessment Color Key

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved
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Annex 6. Explanations of Project Ratings Given and Rating Scales

The table below provides explanation of the ratings of the project given by the MTR team for each of (1) progress toward results, (2) implementation and adaptive management, and (3) sustainability. The rating scales are taken from UNDP guidelines, which are provided below the table.

Explanation of MTR Ratings Given

Type of Rating	Project Strategy	Rating and Achievement Description
Progress Towards Results	Objective: The development of green urban development plans and pilot green urban development projects related to energy-efficiency and sustainable transport in small and medium cities in Belarus	S: Project had an early policy “win” with incorporation of requirement that Brest prepare a symbio plan into the <i>Green Economy Action Plan</i> . As a result, this plan was prepared with support of the project and annexed in 2018 to Brest’s master plan. The project has had two other policy wins, with its recommendations incorporated into <i>Country Profile on Housing and Land Management of the Republic of Belarus</i> (achieved in 2019) and <i>Concept of the National Strategy of Sustainable Development</i> (achieved in 2019), including in the latter text that calls for “introduction of the principles and methods of green urban development.” Project has made steady progress in preparing various types of urban plans: GUDPs (three drafts prepared plus Brest’s symbio plan), ISUMP (draft prepared), and SECAPs (seven prepared, though do not yet include climate portion). It has developed a wide network of stakeholders and promoted ideas about these plans. It has made substantial progress towards demonstrations in EE and SUT via feasibility studies and has already signed a contract to install EE street lighting. The main shortcomings are in the areas of (a) ensuring results that are necessary to sustainability (especially with regard to relevant policy/ legislation, MP process, and financing of initiatives in plans) and (b) ensuring demo measures selected are meaningful (i.e. lead to substantial reduction in emissions and attractive co-benefits) and likely to stimulate interest and replication. The project team has used adaptive management to address the need for financing to achieve implementation of priority initiatives in the plans. The continuation of this work to support specific projects should be a top priority going forward. This MTR report also provides recommendations for other items key result areas relating to sustainability including: (i) developing focused approaches to promote adoption of policies and legislation recommended by the project and (ii) working with state urban planners to get GUDP and SUMP incorporated into the standard master plan preparation process.
	Outcome 1: Green urban development plans successfully developed and adopted	S: The project has already engaged each of the 3 pilot cities in the GUDP preparation process. It has prepared 3 draft GUDPs. The draft GUPD for Polotsk was reviewed by the MTR team and seen to have definite potential to be useful to the city, although it needs more development and a clearer indicator system. Enthusiasm for these plans was found in all three cities. The MRV work has resulted in design of a new project which has received funding. Project has held successful study tours and conferences (assessed as such based on positive stakeholder feedback). Policy and legislative work, along with influence of the master planning process, are the main areas that needs course correction (despite three policy “wins” to date), such as that noted above.
	Outcome 2: Successful projects on sustainable urban transport completed in	MS: The project is making strong progress in the bicycle segment of this work. Its bicycle feasibility study is of high quality and may be used as a model for other similar work. Both pilot cities are enthusiastic about the bicycle trail, though more work is needed to ensure the cities will adopt additional measures to extend bicycle lanes in the cities to the total of 30 km of additional lanes recommended in the feasibility study. The greater concern

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	Novopolotsk and Polotsk	<p>for this outcome is the public transport/ private car aspect of the demos. Enthusiasm at the time of the MTR mission was not strong for measures under discussion at that time and there was disagreement about the value of various measures. More work is needed to ensure the cities understand how to select effective measures and to convince them to focus on potentially high impact measures (both with regard to emissions and co-benefits). After the MTR mission, the project team reported that Polotsk will be carrying out a 4 km bus lane demo and, likely, time of day restrictions on driving in parts of city center. These are considered very positive developments in the direction needed to ensure SUT demos have a real impact on mobility and GHG ERs, though more shift of the demo plans in this direction is still needed. The draft ISUMP has been prepared and includes results of a survey of 9,000 persons. It includes forward looking ideas for the integration of transport of the two cities. More assessment is needed on the comparative cost effectiveness of the tram extension option. It will be helpful if the ISUMP also more fully addresses the cost/benefits of the many measures that might be adopted in the short term by each city as part of the public transport/ private car aspect of the project demos.</p>
	Outcome 3: Successful pilots on energy efficiency completed in Novogrudok	<p>MS: The street lighting demo is moving forward well. The contract has been signed and the city is enthusiastic. The demo will be one of the two first such smart street lighting systems in small and medium cities in Belarus and the key model for small cities that would like to develop a lower cost system. The second demo, for installing multiple utility smart meters in each of 60 apartments of an apartment building replaces the EE laundry demo, which was completed by the city on its own. This demo could be very meaningful as national policy was issued in January 2019 that promotes such multiple utility smart meter installations. Yet, the sources of energy savings beyond those gained from adding a heat meter and regulator where there was no meter before need to be clarified. If savings in going from regular meters to smart meters for electricity, gas, and water is on the supplier side, then it should be confirmed that the suppliers/ utility companies will indeed make use of the smart meter data to achieve energy savings. If the savings is supposed to be on the end user side, the mechanism by which behavior change will be achieved should be clarified. Once the sources of savings are confirmed, the demo can be designed to ensure savings from these specific means will be achieved. At present, the city and residents are not clear of the sources of savings, so communications on this once the sources are confirmed will be important.</p>
	Outcome 4: Growth in green city development in Belarus	<p>S: Although this is the replication outcome, which is typically left for the second half of UNDP-GEF projects, good progress has already been made. While the Brest Symbio Plan was mentioned under Outcome 1 (for its relevance to policy and the master planning process), strictly speaking, the plan itself is considered a replication GUDP as part of Outcome 4. SECAPs have been prepared for each of the three pilot cities (minus the climate portion), and four of the replication SECAPs (minus the climate portion) have been prepared. Unfortunately, Novogrudok stakeholders are unaware of their SECAP prepared in 2017 under the project. (Other SECAPs were not available at the time of the MTR mission and were not prepared until 2019.) The project has also developed an appreciated tool for preparing the energy side of SECAPs using the type of data available to cities in Belarus. The project selected the five “replication” cities for SECAP preparation via a competition. The project plans to select four more cities via competition for preparation of GUDP plans. The project is still unclear of the exact nature of the “replication mechanism” that will be pursued, but has some ideas under discussion.</p>

<p>Project Implementation and Adaptive Management</p>	<p>NA</p>	<p>S: The project is very strong in most areas of project implementation and adaptive management. UNDP support appears strong both in terms of technical guidance and administrative help, with UNDP proactively pursuing resolution of problem areas and keeping in close touch with the project. The IP is supportive of the project content, leading the project to indirect policy “wins.” Project management team has accomplished an impressive amount of progress in the one year nine months since the inception workshop. Adaptive management is evidenced by the very important financing work that has been added to fill a key gap. Communications, as attested to by stakeholders, is very good. Expenditures are well on track, especially considering that the demos, once implemented, will entail quite a large proportion of the budget. The nature of co-financing is unclear and it is likely that co-financing is not as directly related to the project (e.g. focused on EE, SUT, or GUD) as would be hoped, though it is the country-wide situation that most co-financing is “parallel” rather than direct. Project M&E and reporting, as confirmed by review of related documents, is strong and detailed. The project has developed a wide network of stakeholders which is very positive. At the same time, work is needed in engaging key stakeholders at the national level, especially BelNIIP and MoAC. And work is needed to engage local residents in pilot cities. (Post-MTR mission, the project has begun to plan hearings in the demo cities to discuss the GUDPs.) Implementation should be shifted to an impact-outcome level approach rather than an activity-output level approach. There is also a need, especially in SUT work, to ensure that experts and contractors have the full picture of the project. In SUT, it would be helpful if the three different contracting groups/ individuals could be coordinated to discuss together the challenges of selecting impactful measures for the public transport/ private car aspect of the project SUT demos and come up with recommendations that can then be presented to the cities through extensive liaison and capacity building.</p>
<p>Sustainability</p>	<p>NA</p>	<p>MU: Sustainability is of great concern. On the current trajectory, GUD is unlikely to be incorporated into the national planning process; and the GUDPs prepared likewise will not be incorporated into the MPs. Work is needed to ensure adoption of policies that promote GUDP and incorporate it into the planning process. Work is also needed to bring the key agency for small and medium city master plans, BelNIIP, onboard. Further, there is unlikely to be funding for implementation of initiatives in the GUDPs, ISUMP, and SECAPs, aside from limited EU grant funding, though this is a sustainability challenge that the project team has already begun to address.</p>

Rating Scales taken from UNDP Guidelines

Progress towards results rating scale:

Highly Satisfactory (HS): The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as “good practice.”

Satisfactory (S): The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.

Moderately Satisfactory (MS): The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.

Moderately Unsatisfactory (MU): The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.

Unsatisfactory (U): The objective/outcome is expected not to achieve most of its end-of-project targets.

Highly Unsatisfactory (HU): The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.

Project implementation and adaptive management rating scale:

Highly Satisfactory (HS): Implementation of all seven components – (1) management arrangements, (2) work planning, (3) finance and co-finance, (4) project-level monitoring and evaluation systems, (5) stakeholder engagement, (6) reporting, and (7) communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as “good practice.”

Satisfactory (S): Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.

Moderately Satisfactory (MS): Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.

Moderately Unsatisfactory (MU): Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive management, with most components requiring remedial action.

Unsatisfactory (U): Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.

Highly Unsatisfactory (HU): Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.

Sustainability rating scale

Likely (L): Negligible risks to sustainability, with key outcomes on track to be achieved by the project’s closure and expected to continue into the foreseeable future

Moderately Likely (ML): Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review

Moderately Unlikely (MU): Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on

Unlikely (U): Severe risks that project outcomes as well as key outputs will not be sustained

Annex 7. Recommendations Table

Notes: This table is suggested by UNDP as a guidance template for designing the recommendations. It shows each recommendation organized mainly by outcome or set of outcomes and summarizes the main parties that will be involved in acting on the recommendation. Because it is organized by outcome, the numbering of recommendations in this table is different than that in the Executive Summary, the Recommendations Section of the main text, and the Action Plan for Key Recommendations (Annex 13). While this annex provides the “who” (“responsible parties”) for each recommendation, Annex 13 provides the full action plan (who, how, and target/timeline) for each recommendation.

Recommendations by Outcome, with Main Parties to be Involved

Recommendations	Responsible Parties
Key Overall Recommendation	
1. Shift from output-oriented approach (e.g. reports, plans, conferences) of first phase of project to full focus on long-lasting, sustainable, and impactful results (policy adoption, change in planning process, securing of financing for priority projects in the plans, additional mindset change, realization of meaningful, GHG-reducing demos that, together with priority projects in plans, achieve 91,100 ton CO ₂ e direct ER target). This is an overall recommendation supported by several of the recommendations below, but is important in and of itself for: (a) setting the overall vision to shift the nature of activities undertaken from early-stage document preparation and conferences to activities more directly linked to achievement of sustainable results and (b) requiring a clear plan for achieving the GHG direct ER target.	PM supported by rest of PIU team, with UNDP CO and UNDP RTA feedback. For GHG ER Achievement Plan (see “How” below), the PIU EE Expert and MRV Consultant (with support from the SUT Expert) are likely to carry out the work, as they are considered among the most experienced persons in Belarus in GHG ER calculations. If needed, however, project may also consider an outside GHG ER consultant (either international or national) to prepare GHG ER Achievement Plan.
Outcome 1: Green Urban Development Plans and Policy/ Legislation	
2. Pursue a set of meaningful national-level policy achievements (namely, the adoption or revision of national strategies, standards, acts, resolutions, policies, action plans, and/ or regulations to promote GUD, city EE, and SUT). Adopt a new and targeted approach to do so, with face-to-face one-on-one “briefings” of officials as centerpiece.	PIU GUD-SUT-EE Experts and project consultants in GUD, SUT, and EE implement, PM oversees, PIU Com. Officer assists with messaging/ packaging and strategy
3. Adopt new and targeted approach to influence the city planning process. Engage BelNIIP, and potentially other state and private sector urban planners (e.g. MinskGrado, Level80, etc.), in one-on-one meetings with project experts and in planning process/ policy related assignment, if possible. Bring the “clients” (MoAC and city executive committees) into the process once progress is made with the planners. Pursue other	PIU GUD Expert and GUD consultants, also PIU SUT Expert and contractors, PM oversees, PIU Com. Officer assists in messaging/packaging

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channels, such as standards and traffic authorities, to influence city planning process.	
Outcome 1 and Outcome 4 (Replication of GUD) together	
4. Develop clear means of communicating main aim of the project (e.g. “to incorporate environmental sustainability and people-centeredness in city planning and ensure priority projects are implemented”) and ensure all stakeholders understand from the start. Eliminate confusion that “green planning” is just about “green areas” or that project is just very generally addressing the SDGs.	PIU Team, esp. PM, GUD-SUT-EE Experts, Communications Officer, and Local Partner City Coordinators
5. Consider expanding engagement to other key groups: (i) involving private sector designers and students via competition for design of urban blocks/pilot projects; (ii) working with education sector to incorporate GUD in official university urban design curriculum; (iii) leveraging relationship with select influential think tanks and NGOs to promote policy and process change.	PIU Team, esp. GUD Expert and PM for all items, and SUT and EE Experts for item iii, Communications Officer for packaging/ message
Outcomes, 1,2, and 4 together	
6. Building on recently launched financing support work, put substantial focus on assisting cities to prepare and secure financing for specific priority projects in the plans that have been prepared.	Project prep/ financing consultants and/or PIU GUD-SUT-EE Experts, PM oversees
7. Engage city residents (and, possibly, other non-governmental and commercial stakeholders) in the planning process. Educate them as in item 12 below. Work to achieve simple language in visions/plans that residents can understand. Ensure plans reflect their priorities..	PIU GUD-SUT-EE Experts and consultants/ contractors preparing plans, Communications Officer to promote local citizen involvement, possibly NGO partner, PM oversees
Outcome 2: SUT Pilots and ISUMP	
8. Revise approach for Polotsk/Novopolotsk demos building on recent, post-MTR mission progress in Polotsk: (i) reconsider selection of key measures, with emphasis on achieving long-term GHG ERs and making sure that the project targets, including direct ERs of 91,100 tonnes of CO ₂ e, are met; (ii) engage city executives and coordinating committees frequently with project experts so they understand demo goals, budget, and efficacy of various options; (iii) convince cities to adopt low-cost, high efficacy measures as part of demo “package.” (See 9iii.)	PIU SUT Expert working with Public Transport Feasibility Study Contractor, ISUMP Contractor, and transport experts in cities (such as Novopolotsk Bus Company Head); PM oversees
Outcome 2 and 3 together	
9. Building on plans for preparation in 2019 of a video on the street lighting demo, prepare comprehensive video on all demos and other initiatives for which financing is secured. Video should be quite attractive, such as through use of drones. Also, prepare a lessons learned study and short electronic brochures on the demo projects.	PIU Communications Officer (and contracted video maker), SUT Expert, EE Expert, GUDP Expert
Outcome 3: Municipal EE Pilots	
10. Before moving forward with smart meter demo, clearly identify and confirm specific means and amount of energy savings and GHG ERs (current preliminary estimate is just 252 tons CO ₂ direct ERs). Adjust demo plans accordingly to maximize savings and GHG ERs. Clarify to all involved.	PIU EE Expert, Novogrudok Coordinator, local utilities

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Cutting Across All Outcomes	
11. Apply for extension of up to 18 months, contingent on plan/ reallocation of budget so it is available over extended period to focus on achievement of aforementioned long-lasting and impactful results. In addition to providing needed time to monitor the demos, justification will be: opportunity to achieve more policy successes (likely exceeding targets), to impact the planning process, to assist cities in obtaining financing for priority projects (a new target added through adaptive management), and to achieve the political will for more impactful SUT demos. Additional time needed to ensure GHG direct ERs or 91,100 tons CO2e targeted are achieved through demos combined with other priority projects.	PM and PIU Admin /Finance Officer (with some input from PIU GUD, EE, and SUT experts); UNDP CO and UNDP RTA provide feedback
12. Increase focus of city official mindset change work, ensuring they understand: (i) why they need a plan rather than just measures; (ii) goals of measures; (iii) how low cost measures, such as those in transport can save money and be more effective than new infrastructure; (iv) how GUD and SUMP should be promoted as TORs for Master Plan and its Transport Annex. Further leverage President’s Academy of Public Administration and leverage official government site visits for heads of regions, districts, and cities.	PIU: PM, GUD-SUT-EE Experts; Communications Officer for packaging/ messaging
13. Exchange with GEF/WB Global Platform for Sustainable Cities to harmonize indicators and get information on/connections for channels for financing sustainable city initiatives.	PM and PIU GUD Expert, project prep/ financing consultants (or PIU EE and SUT Experts if involved in project prep/ financing work)

Annex 8. Master Interview Topic and Question List

Note: The topics and questions below were used to guide interviews as appropriate to the particular stakeholder being consulted. The list and preceding introduction were provided to stakeholders prior to consultations, with some editing carried out since then.

Master Interview Topic and Question List – *Green Cities* Mid-Term Review Consultations

The purposes of the *Green Cities* Mid-Term Review fall into two main categories (1) determination of what has happened – a review of the project’s achievements and challenges, for the purpose of (a) transparency, so that all will know the result of funds spent to date and (b) lessons learned that may be applied to this project or other ones; and (2) developing suggestions for course correction – insights and recommendations for the second half of the project to ensure it is on track to achieve the targeted outcomes of the project. The recommendations may involve suggestions for (a) redesign of some activities (including possible deletion of some activities and addition of others); (b) actions to improve the implementation of activities underway; (c) actions to improve effectiveness of general approaches of project, such as stakeholder engagement methods and methods of briefing policymakers; (d) reorientation of emphasis among various project activities (e.g. such as heavier emphasis on achieving actual implementation and funding of green urban development measures as compared to generation of knowledge products); (e) measures to ensure that work completed in the first half of the project is fully leveraged, etc.

The following is a master list of topics and questions that the MTR Team will draw from during its interviews with stakeholders. In many cases, depending on the background of the person being consulted, only a portion of the questions will apply. The MTR team also hopes that, if there are special issues the consulted stakeholder believes are important to the mid-term review, he or she will raise them.

I. Cross-Cutting/ Big Picture

1. Overall relevance/ need for this project: Suitability to Belarus’ needs and the needs of Polotsk/ Novopolotsk/ Novogrudok / Barnovichy/ Brest, etc.? Suitability to their stated priorities? How innovative and different is the project from what others have done/ are doing (such as other donors, government, private sector, etc.?)
2. Most major impacts/ accomplishments of project, in your view
3. Most major problems/ shortcomings of project, in your view
4. Overall quality of project and quality of work to date
5. Baseline Situation (that is, the situation with regard to key items in June 2017, when the project began to make progress) and changes from baseline (as of Feb. 2019 at time of mid-term review) Key highlights of “changes from the baseline” in your view? Are any positive changes due to the project itself or due mainly to other factors outside the project? Specific items that may be discussed in terms of changes from baseline situation (e.g. in July 2017 at start of inception workshop) and now (Feb. 2019) are:
 - Number of cities that have each of GUDP, SUMP, and SEAP/SECAP or elements thereof (such as SUT and EE lighting) in their plans
 - Number/type of national policy measures promoting SUT, EE municipal lighting, and/or GUD
 - Availability of high quality knowledge products on GUDP specific to Belarus
 - Level of stakeholder know-how on GUD
 - Most advanced level/ type of municipal EE street lighting demonstrated

- Most advanced level/ type of EE lighting outside and inside municipal buildings demonstrated
- % energy savings demonstrated via new metering of heat and via meter replacement with smart meters, along with resident education
- km of independent bicycle trails as well as of bike lanes in medium and small cities
- Progress in identification and prioritization of most cost-effective, impactful SUT measures by medium and small cities
- Achievements in SUT measures demonstrated in medium and small cities
- Achievements in citizens in medium and small cities shifting from cars to buses/ bikes or planning to
- Existence of mechanism to promote GUD planning and implementation on ongoing basis
- Cities actively implementing GUDPs (or portions or elements thereof) – especially EE lighting/ SUT
- Procurement channels for EE and SUT equipment: Status of quality and price of products available
- Availability of financing for EE, SUT, and GUD

6. How do progress/ results/ quality of this project compare to those of other donors projects you've seen in Belarus?

II. City Level Plans

1. Would you agree that SUMP and SEAP/SECAP can be considered portions of GUDP? If not, how are these different? What does GUDP have that these others do not have? Does a city need all of them?

a. The project indicates both GUDP and SECAP for three pilot cities, as well as SUMP for P-NP. Are these redundant/ overlapping? What has actually been prepared? And what will be prepared by end of project?

b. How many SECAPs/ “replications” will be pursued by the project? (Will it be 5 or 10?) How were the cities selected? Do any of the cities already have SEAPs or similar plans? What about SUMP or GUDPs?

c. For the project's “replication” component: In order to try and generate action instead of just document pages, would it make sense to focus plans (SECAPs) on a handful of more actionable measures, assisting with more detailed plans for these agreed upon measures, and even assist with finding financing, rather than preparing long, exhaustive plans? Could there be a shift in approach to replication with strong focus on assistance in identifying and pursuing/ applying for funding for select, priority measures?

2. Which cities already had SUMP, SEAP/SECAP, or GUDP prior to the project? What has the project done when there were preexisting plans? Was this necessary/ helpful?

3. Which plans has the project supported? Are these new or elaboration of existing plans?

4. How is the quality of these plans that the project supported? Of the ones that already existed?

5. Do the project-supported plans have measures that are ready-to-implement or is more information needed?

6. Are the plans useful? How likely are these plans to be implemented? What needs to happen for them to be implemented?

7. Who are key decision makers for implementation of the measures in such plans and are they aware of these plans? How do they need to be influenced in order for the GUDP measures to be implemented?

8. The project calls for a two-city/ integrated SUMP for Polotsk and Novopolotsk: Is this a unique situation in Belarus, or is this a good example for other places that have two cities so close together in Belarus? (We ask, because GEF projects like to demonstrate things that can be replicated elsewhere.)

9. PRF (which contains indicators of the project) targets official approval of 3 GUDPs: Is approval meaningful in terms of getting measures implemented? Who approves the GUDPs? Are the three GUDPs of the pilot cities “approved” yet? Is there much chance the measures will be implemented?

III. SUT and SUT Pilots

1. What had been happening in cities nationwide with regard to SUT prior to the project or in parallel? What had been happening already in Polotsk (P) and Novopolotsk (NP) with regard to SUT prior to project?
2. Are traffic jams a problem in P and NP? What about air pollution from traffic?
3. What is the status of the SUT pilots in P-NP? Why was it decided not to purchase traffic software? If measures are chosen will they achieve energy savings targeted in ProDoc?
4. Was traffic survey done for P and NP or had those been done previously for the Polotsk SUMP, etc.?
5. What SUT measures will be most effective (and also within budget/ cost effective) for P-NP pilots? Why? (Please consider increasing parking fees, reducing city center parking, park and ride lots, improving bus routes, bus lanes, more bike trails, synchronized traffic lights, LED boards with bus information, improved bus stops, electric or CNG buses for your assessment.) Has this prioritization already been done? What is the rationale for the prioritizations? Also, of the measures to be adopted, will any be new/ innovative or have something new/ innovative about them not yet demonstrated in Belarus?
- 5a. Has the MRV system developed by the project for SUT been considered in making these decisions? Will it be useful?
- 5b. How many minutes will bus travel time be reduced on the routes you will work on (such as with bus lanes)?
- 5c. How many people (distinct persons) ride the buses per year in P-NP these days? Will the pilots increase that number much?
- 5d. Will the pilots really cause many people to switch from cars to public transport (how many) or bikes (how many)?
6. How likely are the pilots for P-NP to be implemented? What is the timeline?
7. Will co-financing materialize? How much?
8. Who are the decision-makers and influencers? How can they be convinced?
9. Has the project had an impact on the thinking of officials and citizens in P- NP? Also, will the project do a survey of citizens for the PRF indicator that asks about percentage of citizens aware of SUT?
10. Is there a need to find better procurement channels to obtain quality equipment at a low price for the pilots or in general for SUT and municipal EE projects across the country? Can the project improve upon previous procurement of such products and services?
11. About bicycle paths: How common is bike riding (estimated number of distinct bikers in each of P-NP or elsewhere in Belarus)? Is there real potential to ramp up bicycles ridership and by how much? What about the weather? What about safety? Are people more likely to shift from cars to bicycles or from cars to buses/ trams? How can you get people to shift? Will the bicycle paths alone do it, or do you need parking measures that discourage cars in city center? What's special and new about the bicycle paths designed under the project?
12. Has there as yet been any shifts away from private cars in any Belarusian cities? Are promotion campaigns envisioned to encourage shifts?
13. Are the feasibility studies (for the bike and public transport measures) completed? Can the pilots be started once these are completed, or is more design planning work needed?

IV. EE Lighting (Municipal) and EE Pilots

1. What had been happening in cities nationwide regarding EE street lighting and EE lighting for municipal buildings (especially outside) prior to project or in parallel with it? What had been happening in Novogrudok (NG)?
2. Are costs to the city for lighting considered a burden?
3. What is the status of the EE street lighting pilot in NG? Will control gear and EMIS be included? Is the feasibility study enough to carry out purchase and installation? Why is further design work needed?

4. How many street lights of what wattage in Novogrudok? How long do they stay on each night? What are total costs?
5. Will co-financing be provided? How much?
6. Does human capacity need to be built to maintain the EE lighting systems? How will that be done?
7. Why doesn't the pilot include municipal building lighting/ especially outdoor building lighting?
8. Who are the decision makers and influencers for adopting EE street and municipal building lighting in NG and elsewhere? How can they be influenced?
9. Once these lights are installed, will others remain to be upgraded? If so, is it likely those will be upgraded as well?
10. Is there a need to find better procurement channels to obtain quality equipment at a low price for the pilots? Can the project improve upon previous procurement of such lights for Belarus projects and share this info to raise the quality and lower the cost of EE lighting projects?

V. Smart Meter Pilot and Other Alternatives

1. What is the status of smart meters in Belarus? Are they installed anywhere else?
2. How are the smart meters going to save energy? What is the evidence that energy will be saved? Will this energy savings be similar to that targeted in ProDoc for the laundry?
3. If it is through behavior change of households that energy will be saved, how will that work?
4. What kind of meters are these (gas or electricity)? Did the households have meters before or did they pay a fixed fee?
5. Who has been the driving force in proposing smart meters? Who will benefit?
6. How many smart meters will be installed? Is this just in one building? What will be the total cost?
7. Will there be co-financing? How much?
8. Who are the decision makers and influencers? How can they be influenced?
9. If the project does not pursue smart meters for this demo, do you have other ideas for an EE demo in NG that will have good energy savings? What about using the funds for outdoor lighting of municipal buildings, such as the hospital?
10. Is there a need to find better procurement channels to obtain quality equipment at a low price for the pilots? Can the project improve upon previous procurement of such products and share the info across the country?

VI. Mechanism to Promote Ongoing GUD

1. Will an association be set up or will an existing organization be empowered to promote GUD on an ongoing basis? How can this organization be financially sustainable?
2. What other mechanism are you considering to promote GUD Planning and GUD measure implementation on a long-term basis?
3. What about financing of GUD? Do you see the potential to find outside sources for financing GUD in Belarusian cities? Which sources? Could the project in its second half assist in securing financing for the replication cities? How? Is it worth making this a key focus during the second half of the project – would success in securing financing be likely?
4. Why has the project been slow to set up a project website? Do you think an ongoing GUD website will be useful? How? If so, which organization should host it?

VII. Information/ Knowledge Products

1. Has the project created information products specifically tailored for Belarus? Or instead has it reinvented the wheel in producing general documents on GUD, etc.?
2. Which information documents do you believe are most notable and why?

3. Are any of the information documents produced by the project being used? If so, by whom and for what? Do you think the documents could be useful to someone in the future? If so, who and for what?
4. Do you think more needs to be done/ can be done to ensure the information documents already produced by the project so far will be utilized? If so, what can be done? Do you agree that the project has produced enough documents, so that during the second half focus should shift to other activities, such as implementation of GUD measures and securing of financing for such measures?

VIII. Knowhow Imparted and Capacity Built

1. Has this project resulted in increased know-how among stakeholders? If so, which groups of stakeholders and what kind of know-how?
2. What has been most effective in building know-how: documents produced, conferences, and/or study tours? Were all of these a good use of funds? Why?
 - 2a. For conferences/ workshops, were there a lot of people who attended multiple ones of these? What kind of organizations are they with? Do you think they are making use of the knowledge?
 - 2b. What about the study tours? Who attended? Do you think they are making use of the knowledge?
3. Project has an indicator: “Number of officers in government who are dedicated to the promotion of urban low carbon growth to Belarusian cities by EOP.” Does “dedicated” mean “main job” or just “committed to/ cares about?” Do you believe the project has resulted in new officers “dedicated to...” by this definition? How many? Were there some already “dedicated to..” before the project?

IX. National Level Policy and Plans

1. What was the status of EE lighting policy before project ramped up? (Of SUT policy?)
2. What has the project contributed to this EE lighting policy? (To SUT policy?)
3. If there is only a report now, what needs to be done to come up with EE lighting policy recommendations that can be submitted in the right format? (With SUT policy recommendations?)
4. What needs to happen for EE lighting policy to be adopted? (For SUT policy?)
5. The PRF (project indicator table) targets 4 policies (1 policy and 1 regulation for each of EE lights and SUT). Are you clear on which these are and could you explain if they are pre-existing policies to be updated or completely new ones?
6. Has the project prepared recommendations related to GUD for national level policy? If so, what type of recommendations?
7. What kind of national policy does the project hope to impact with regard to GUDP? Does it hope to have a national GUDP? Or instead, require that GUD measures are included in city master plans?
8. Is financing a challenge for GUD measures? Can the project target national policy to allocate funds to GUD? Or, can it promote something more specific like a revolving GUD EE lighting fund?
9. What about GUD procurement? Has progress been made on national policy so that lifecycle costs are considered in procurement?
10. Who needs to be influenced to get these national level policies adopted? How should it be done? Who needs to be influenced to get national level funding for GUD?
11. What about the MRV framework for GUD in Belarus? Will that be useful? Can it be adopted as policy as well? How is the MRV program for SUT different? Is there overlap? Is the latter useful? Can it be adopted nationally?

X. Timeline/ Progress

1. Delay in national approval of project: Can something be done about this in the future? Different approach?

2. How do you see rate of progress since about 1.5 years ago, when the new PM came on board? Do you agree that progress on reports, knowledge products and plans, and capacity building is extremely good? Do you agree that progress on pilots and policy and plan adoption is weak, or do you instead think that with just 1.5 years having passed since the project got truly active, these items are on track to be achieved in another, say, two years? Are there challenges in the country situation that make these aspects (pilot implementation, policy adoption, plan adoption) really difficult as compared to other countries? Or should it be about the same? Are there things that can be done to increase likelihood of success in these areas?
3. Issue of project extension: Is one needed and for how long? (Note: Without extension, there are about 1.8 years left in the project.) Do you agree with the idea that granting of extension should be contingent on project having a solid plan for ramping up impact by achieving: (i) realized pilots with co-financing, (ii) adopted and enforced policies, and (iii) adopted plans with key measures in the pipeline for implementation with funding secured or likely to be secured?

XI. Other Topics

1. Any comments on project design?
2. Comments on indicators?
3. Involvement of women and gender?
4. Project board?
5. UNDP role?
6. Project team? Any implementation challenges? Was it useful to have the part-time national expert PIU team members? What about international consultant role? Did they play a useful role?
7. Role of various other stakeholders: How can the national government get more engaged? Are other categories of stakeholders (such as NGOs) important to achieving targeted impacts? How so? If so, how can the project engage them more?
8. What about MoAC involvement? How can the project get them more involved? Is it important that they be involved in order to achieve targeted impacts?
9. Co-financing realization: What typically happens in Belarus when projects have promised government (local or national) co-financing? Does it usually materialize? How is it going for this project in that regard?
10. Cost effectiveness? If you are aware of the costs of various activities or other budget aspects, how has cost effective been? Is the project getting good results for the money spent on various items (e.g. study tour, conference, reports). In which areas has the most money been spent? Are study tours cost effective? Are there activities that you consider less cost-effective (less worth the money) and those that you consider more cost-effective?

XIII. Recommendations

1. Do you have any other recommendations (not covered already) that could enable the project to have real impacts in its second half?
2. Or, of the recommendations we've already discussed, which do you think are the most important?

Annex 9. UNEG Code of Conduct for Evaluators/ Midterm Review Consultants

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

International MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: Eugenia Katsigris

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Dallas, Texas, USA (Place) on March 16, 2019 (Date)

Signature: Eugenia Katsigris

National MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: Viktoryia Kalosha

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Minsk, Belarus (Place) on March 16, 2019 (Date)

Signature: Kalosha

Annex 10. TOR for MTR Consultants

Note: This is the TOR for the TOR for the International Consultant, though the National Consultant TOR is in most respects quite similar.

UNDP-GEF Midterm Review Terms of Reference

Post title:	International Consultant for the Midterm Review (MTR) of UNDP-GEF Project “Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus”
Type of contract:	Individual Contract (IC)
Country / Duty Station:	Home Based with one mission of at least 10 working days (not including travel and weekend days) to the Republic of Belarus
Expected places of travel (if applicable):	Minsk, Belarus, one-day field visits to the Project’s sites in Polotsk and Novopolotsk (Vitebsk Region, Belarus), to Novogrudok (Grodno Region, Belarus), other cities in Belarus as according to the mission schedule to be agreed before the mission start date. Any additional travel that might be deemed necessary should be thoroughly justified and discussed with the UNDP Country Office and the UNDP/GEF Regional Technical Advisor. If required, the travel costs and per diem related to the additional missions, will be paid separately, in addition to the contract amount but the time spent on such missions would be included in the overall 27 days of the assignment.
Languages required	English
Expected start date of the assignment:	2 nd January 2019
Duration of Contract:	1 st December 2018 – 31 st May 2019
Duration of Assignment:	27 working days during a 3 months period from the 2 nd January 2019 until the 31 st March 2019
Payment conditions:	The total lump-sum contract amount will be paid in three installments (payments linked to satisfactory performance and delivery of results) in the following way: 15% of the approved contract amount will be paid following contract signing and upon completion, submission and acceptance of MTR Inception Report; 40% of the total contract amount will be paid following MTR mission to the Republic of Belarus and upon submission and approval of the draft MTR report; 40% of the total contract amount will be paid upon submission and approval by UNDP Belarus and UNDP Regional Technical Adviser of the MTR report. Each of the installments shall be paid within 30 business days after completion and approval of the reports as required in Section 7 “Midterm Review Deliverables” below.
Administrative arrangements:	The principal responsibility for managing MTR resides with the Commissioning Unit - UNDP Country Office in Belarus. The Commissioning Unit will contract the consultants and ensure the timely provision of payments according to the above said schedule and travel arrangements within the country for the MTR team. The Project Team will be responsible for liaising with the MTR team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

Evaluation method:	Desk Review and Interviews of Short-Listed Candidates
Direct Supervisor:	Midterm Review of the Project will be conducted by a team of two independent consultants – one team leader (an international consultant with experience and exposure to projects and evaluation in other regions globally) and one team expert (from the country of the project).

1. INTRODUCTION

This is the Terms of Reference (ToR) for the Individual Consultant who will act as a leader of the team conducting UNDP-GEF Midterm Review (MTR) of the full-sized project titled Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus (PIMS #4981) implemented through the Ministry of Natural Resources and Environmental Protection of Belarus (Ministry of Environment), which is to be undertaken in January 2019 - March 2019. The project officially registered in the Republic of Belarus on 27 October 2016 and is in its second year of implementation. In line with the UNDP-GEF Guidance on MTRs, this MTR process was initiated before the submission of the second Project Implementation Report (PIR). This ToR sets out the expectations for this MTR. The MTR process must follow the guidance outlined in the document [Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects](http://web.undp.org/evaluation/documents/guidance/GEF/mid-term/Guidance_Midterm%20Review%20_EN_2014.pdf) (http://web.undp.org/evaluation/documents/guidance/GEF/mid-term/Guidance_Midterm%20Review%20_EN_2014.pdf).

The MTR team will consist of two members: International Consultant who will act as a team leader and a Local Consultant who will assist the International Consultant in collecting data, scheduling the visits and meetings with the involved parties, providing clarifications on the national regulations, other issues connected to or related with the project implementation.

2. PROJECT BACKGROUND INFORMATION

Belarus is a highly urbanized country with the majority of population living in the cities. The strongest economic sectors are service industries and manufacturing. The Government of Belarus is an Annex I Party to the UNFCCC since the year 2000 and is a Party to the Kyoto Protocol since 2005. The Government of Belarus also signed up to the Copenhagen Accord (2009) and pledged to reduce GHG emissions to 12% below 1990 levels by the year 2020 as according to Doha Amendment to the Protocol.

The current challenge for Belarus is being able to design and implement a comprehensive set of sustainable actions towards green city status by saving energy, reducing GHG emissions, as well as other measures that are beneficial to the economies and environments of these cities. In Belarus, there are no cities which currently meet this definition of a green city. There are only cities which aspire to this status but are impeded in realizing this goal by a lack of knowledge, experience and planning capacity related to green urban development.

The objective of the Project is the growth of development of green urban development plans and pilot green urban development initiatives related to energy efficiency and sustainable transport in small and medium cities in Belarus. This objective is to be achieved through 4 components: i) Development and adoption of green urban development plans; ii) Development of pilots on sustainable urban transport in Novopolotsk and Polotsk; iii) Development of pilots on energy efficiency in Novogrudok; and iv) Replication mechanisms for green urban development in Belarus.

The Project is expected to generate lifetime direct GHG emission reductions of 77.8 ktonnes of CO₂ equivalent through improved urban transport efficiencies in the cities of Polotsk and Novopolotsk and

13.3 ktonnes of CO₂ equivalent through energy efficiency pilots in Novogrudok municipality. Indirect emission reductions (top-down and bottom-up) will range from 25.2 to 231 ktonnes of CO₂ equivalent.

3. OBJECTIVES OF THE MTR

The MTR will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document, and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The MTR will also review the project's strategy, its risks to sustainability.

4. MTR APPROACH & METHODOLOGY

The MTR must provide evidence based information that is credible, reliable and useful. The MTR team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Environmental & Social Safeguard Policy, the Project Document, project reports including Annual Project Review/PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review). The Consultant will review midterm GEF focal area Tracking Tool that must be completed before the MTR field mission begins.

MTR Evaluation team is expected to follow a collaborative and participatory approach⁴⁰ ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), the UNDP Country Office(s), UNDP-GEF Regional Technical Advisers, and other key stakeholders. Engagement of stakeholders is vital to a successful MTR.⁴¹ Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to the following organizations and officials: UNDP Belarus Country Office, Ministry of Natural Resources and Environment Protection of the Republic of Belarus, Organizations - Members of the Project Board: *Ministry of Architecture and Construction of the Republic of Belarus, Ministry of Economy of the Republic of Belarus, Ministry of Transport and Communications of the Republic of Belarus, Ministry of Finance of the Republic of Belarus, Department of Energy Efficiency under the State Committee for Standardization, Novogrudok District Executive Committee, Novopolotsk City Executive Committee, Polotsk Regional Executive Committee, Institute of Regional and Urban Planning "BelNIIPGradostroitelstva", Republican Public Association "The Belarusian Union of Transport Workers"*, Project Manager and members of the Project Implementation Unit, selected vendors and individual consultants.

The final MTR report should describe the full MTR approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the review.

5. DETAILED SCOPE OF THE MTR

The MTR team will assess the following four categories of project progress. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for extended descriptions (http://web.undp.org/evaluation/documents/guidance/GEF/mid-term/Guidance_Midterm%20Review%20_EN_2014.pdf).

⁴⁰ For ideas on innovative and participatory Monitoring and Evaluation strategies and techniques, see [UNDP Discussion Paper: Innovations in Monitoring & Evaluating Results](#), 05 Nov 2013.

⁴¹ For more stakeholder engagement in the M&E process, see the [UNDP Handbook on Planning, Monitoring and Evaluating for Development Results](#), Chapter 3, pg. 93.

The International Consultant will act as a team leader and take overall supervision of the midterm review process and responsibility of organizing and completing the review, developing MTR methodology, preparing MTR inception and final reports with the support and contributions provided by the National Consultant, team member.

i. Project Strategy

Project design:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.
- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?
- Review the extent to which relevant gender issues were raised in the project design and if there are major areas of concern, recommend areas for improvement.

Results Framework/Logframe:

- Undertake a critical analysis of the project's logframe indicators and targets, assess how "SMART" the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project's objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART 'development' indicators, including sex-disaggregated indicators and indicators that capture development benefits.

ii. Progress Towards Results

Progress Towards Outcomes Analysis:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and following the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects*; colour code progress in a "traffic light system" based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as "Not on target to be achieved" (red).

Table. Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)

Project Strategy	Indicator ⁴²	Baseline Level ⁴³	Level in 1 st PIR (self-reported)	Midterm Target ⁴⁴	End-of-project Target	Midterm Level & Assessment ⁴⁵	Achievement Rating ⁴⁶	Justification for Rating
Objective:	Indicator (if applicable):							
Outcome 1:	Indicator 1:							
	Indicator 2:							
Outcome 2:	Indicator 3:							
	Indicator 4:							
	Etc.							
Etc.								

Indicator Assessment Key

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved
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In addition to the progress towards outcomes analysis:

- Compare and analyse the GEF Tracking Tool at the Baseline with the one completed right before the Midterm Review.
- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.

iii. Project Implementation and Adaptive Management

Management Arrangements:

- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by the GEF Partner Agency (UNDP) and recommend areas for improvement.

Work Planning:

- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Has the work planning been carried out in a manner which is consistent with the project document and with the project workplan or are there significant deviations?
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project’s results framework/ logframe as a management tool and review any changes made to it since project start.

⁴² Populate with data from the Logframe and scorecards

⁴³ Populate with data from the Project Document

⁴⁴ If available

⁴⁵ Colour code this column only

⁴⁶ Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?

Project-level Monitoring and Evaluation Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

Stakeholder Engagement:

- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?

Reporting:

- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfil GEF reporting requirements (i.e. how have they addressed poorly-rated PIRs, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

iv. Sustainability

- Validate whether the risks identified in the Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the GEF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

Conclusions & Recommendations

The MTR Evaluation team will include a section of the report setting out the MTR's evidence-based conclusions, in light of the findings.⁴⁷

Recommendations should be concise suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for guidance on a recommendation table.

The MTR team should make no more than 15 recommendations total.

Ratings

The MTR Evaluation team will include its ratings of the project's results and brief descriptions of the associated achievements in a *MTR Ratings & Achievement Summary Table* in the Executive Summary of the MTR report. See Annex E for ratings scales. No rating on Project Strategy and no overall project rating is required.

⁴⁷ Alternatively, MTR conclusions may be integrated into the body of the report.

Table. MTR Ratings & Achievement Summary Table for the Project “Belarus: Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus”

Measure	MTR Rating	Achievement Description
Project Strategy	N/A	
Progress Towards Results	Objective Achievement Rating: (rate 6 pt. scale)	
	Outcome 1 Achievement Rating: (rate 6 pt. scale)	
	Outcome 2 Achievement Rating: (rate 6 pt. scale)	
	Outcome 3 Achievement Rating: (rate 6 pt. scale)	
	Etc.	
Project Implementation & Adaptive Management	(rate 6 pt. scale)	
Sustainability	(rate 4 pt. scale)	

6. TIMEFRAME

The Terms of Reference comprise three components: 1) start-up, a period of up to 5 days during which the International and National Consultants, working from their home base, will familiarize themselves with background materials and prepare MTR inception report; 2) field mission to Belarus for conducting consultations with stakeholder and project implementation team, visits to project sites, report drafting and in-country presentation; and 3) finalization of the MTR Report.

The total duration of the MTR will be approximately 27 working days (15 home-based, 10 on mission to Belarus, 2 travel days) over a time period of (3 months) starting January 04, 2019, and shall not exceed five months from when the consultant(s) are hired. The tentative MTR timeframe is as follows:

Options for site visits should be provided in the Inception Report.

TIMEFRAME*	Number of working days spent on the assignment	ACTIVITY	RESPONSIBLE PARTY
<i>30 October 2018-</i>	-	Public advertisement of the post vacancy	UNDP Belarus
<i>19 November 2018</i>	-	Application closes	UNDP Belarus
<i>7 December 2018</i>	-	Select MTR Evaluation Team/contracting the successful applicant(s)	UNDP Belarus
<i>04 January 2018</i>	-	Prep the MTR Evaluation Team (handover of the Project related documents)	Green Cities Project
<i>11 January 2019 -</i>	5	Documents review and preparing draft MTR Inception Report	MTR Team
<i>21 January 2019 -</i>	2	Finalization and Validation of MTR Inception Report	MTR Team

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28 January 2019 – 8 February 2019	10 (+2 travel days)	MTR mission: stakeholder meetings, interviews, field visits	MTR Team
22 February 2019	5	Preparing draft MTR report	MTR Team
04 March 2019	-	Reviewing and commenting on the draft MTR report	UNDP Belarus
11 March, 2019	3	Finalization of the MTR report (incorporating comments received on the draft report)	MTR Team
25 March 2019	-	Preparation & Issue of Management Response	UNDP Belarus
29 March 2019	-	Expected date of full MTR completion	MTR Evaluation Team

* Dates said in this column are preliminary scheduled milestones. Actual dates will be agreed with the contracted Individual Consultant upon awarding the contract.

7. MIDTERM REVIEW DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	MTR Inception Report	Leader of MTR Evaluation Team (International Consultant) clarifies objectives and methods of Midterm Review	No later than 1 week before the MTR mission: 21 January 2019	Leader of MTR Evaluation team (International Consultant) submits to the Commissioning Unit and project management
2	Presentation	Initial Findings	End of MTR mission: 8 February 2019	MTR Evaluation Team presents to project management and the Commissioning Unit
3	Draft Final Report	Full report (using guidelines on content outlined in Annex B) with annexes	Within 2 weeks after the MTR mission: 22 February 2019	Sent to the Commissioning Unit, reviewed by RTA, Project Coordinating Unit, GEF OFP
4	Final Report*	Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTR report	Within 1 week after receiving UNDP comments on draft: 18 March 2019	Sent to the Commissioning Unit

*The final MTR report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

8. MTR ARRANGEMENTS

The principal responsibility for managing this MTR resides with the Commissioning Unit. The Commissioning Unit for this project's MTR is UNDP Country Office in Belarus.

The commissioning unit will contract the consultants and ensure the timely provision of payments and travel arrangements within the country for the MTR Evaluation team. The Project Team will be

responsible for liaising with the MTR Evaluation team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

9. TEAM COMPOSITION

A team of two independent consultants will conduct the MTR - one team leader (with experience and exposure to projects and evaluations in other regions globally, International Consultant) and one team expert from Belarus (National Consultant). The International Consultant is designated as the team leader and will be responsible for the entire midterm review and respective MTR deliverables mentioned above in line with this ToR, with inputs from the project. The National Consultant will provide assistance to the International Consultant in line with a separate ToR focusing on preparation of the baseline data, organizing and participation in the midterm review mission to Belarus, incorporation of detailed comments received into the MTR report.

The consultants cannot have participated in the project preparation, formulation, and/or implementation (including the writing of the Project Document) and should not have a conflict of interest with project's related activities.

The selection of consultants will be aimed at maximizing the overall "team" qualities in the following area:

Qualifications for Team Leader:

I. Academic Qualifications:

- Advanced university degree (at least the Master level) in environmental studies, sustainable development, urban planning and development, economics or law;
- University degree (at least Master level) in other sciences with not less than 10 years of practical experience in one of the said professional fields would also be acceptable;

II. Years of experience:

- Minimum seven years of relevant professional experience (in one of the above said professional fields: environmental studies, sustainable development, urban planning and development, economics or law); Recent experience (within last five years) with result-based monitoring and/or evaluation methodologies in mid-term or final performance evaluation of at least two international and/or regional projects demonstrated by examples of an evaluation report (abstracts from evaluation reports, references to the corresponding documents, etc.);
- Experience or knowledge of UNDP and GEF monitoring and evaluation policy demonstrated by performance evaluation of at least one other UNDP-GEF project will be considered as an asset;

III. Competencies:

- Technical knowledge in the targeted focal area(s) such as urban development and planning, climate change, sustainable urban mobility, energy efficiency, etc. demonstrated by at least 5 relevant publications and/or evidences in professional experience records (e.g., certifications, lecturing, training, participation in exhibitions and professional events, presentations, etc.);
- Excellent written and spoken English;
- Working knowledge of written and spoken Belarusian or Russian is an advantage;
- Strong report writing skills and experience in writing and presenting reports to a high professional level (an example of a report and presentations that include graphs, pictures, diagrams, figures and other illustrative tools to enhance the reporting quality shall be provided).

10. PAYMENT MODALITIES AND SPECIFICATIONS

The total amount of the lump sum contract for the assignment of MTR Team Leader will be paid in 3 installments as specified in the table below:

Installment No.	MTR Deliverables (section 7 above)	% of total contract amount
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1	Following contract signing and upon completion, submission and acceptance of MTR Inception Report (deliverable 1)	15%
2	Following MTR mission to the Republic of Belarus and upon submission and approval of the draft MTR report (deliverables 2 and 3)	40%
3	Following submission and approval (by UNDP-CO and UNDP RTA) of the MTR report, which takes into account and addresses all the comments that have been provided by both the Government stakeholders, UNDP Project Manager, UNDP Belarus, and UNDP IRH (deliverable 4)	45%

Each of the installments shall be paid within 30 days after completion and approval of the reports as required in Section 7 - "MTR Deliverables" above. Travel expenses shall be included in the lump sum.

Annex 12. Action Plan for Key Recommendations

This annex includes the key recommendations and their elaboration from the recommendations section of the main text. Building on these, an action plan for reach recommendation, including (a) who will be responsible, (b) how they will achieve the recommendation, (c) targets and timeline, is given.

<p>Recommendation 1. Shift from output-oriented approach (e.g. reports, plans, conferences) of first phase of project to full focus on long-lasting, sustainable, and impactful results (policy adoption, change in planning process, securing of financing for priority projects in the plans, additional mindset change, realization of meaningful, GHG-reducing demos that, together with priority projects in plans, achieve 91,100 ton CO₂e direct ER target). This is an overall recommendation supported by several of the recommendations below, but is important in and of itself for: (a) setting the overall vision to shift the nature of activities undertaken from early-stage document preparation and conferences to activities more directly linked to achievement of sustainable results and (b) requiring a clear plan for achieving the GHG direct ER target.</p>
<p><i>Elaboration:</i> The recommendation is supported by other recommendations on policy adoption, changing the urban planning process, securing financing for priority projects, promoting deeper mindset change of local officials, and refining the project demos. It is, however, distinct in calling for cross-cutting project management actions (e.g. revision of log frame and indicators) and preparation of realistic GHG ER strategy to achieve the 91,100 ton CO₂e direct ER target. The recommendation should be achieved via adaptive management, which allows changes, deletions, and replacements of original project outputs and activities in favor of revised ones focused on achieving project outcomes and higher level impacts. As a general rule of thumb, in the revised activities for the project going forward, report preparation/ holding of workshops should be stopped or reduced to a minimum. These have provided a good basis of information that the project is now able to distill into key recommendations.</p>
<p style="text-align: center;"><i>Recommendation 1 Action Plan</i></p>
<p><i>Who:</i> PM supported by rest of PIU team, with UNDP CO and UNDP RTA feedback. For GHG ER Achievement Plan (see “How” below), the PIU EE Expert and MRV Consultant (with support from the SUT Expert) are likely to carry out the work, as they are considered among the most experienced persons in Belarus in GHG ER calculations. If needed, however, project may also consider an outside GHG ER consultant (either international or national) to prepare GHG ER Achievement Plan.</p>
<p><i>How:</i> (1) Prepare a revised version of project outputs and activities for the project as a whole. Annex 3 (“Preliminary Suggestions for Output and Activity Revisions”) of the MTR Report can be used as a starting point or at least as a model of the format to be used. Changes made as compared to the ProDoc in already realized or soon-to-be-realized outputs/ activities, such as types of plans prepared, measures to be adopted for demos, and methodologies used can be reflected in these revisions. Each output and activity intended for implementation during the rest of project duration should reflect a direct link to the pursuit of long-term results (such as in policy adoption, change in planning process, securing financing for priority projects in the plans, mindset change, and realization of high impact, GHG reducing SUT and EE demos). Reports and conferences should be eliminated or minimized. Revised outputs should encompass any installations that will be a part of the project’s GHG ER Achievement Plan (see item three in this Action Plan). As supplement to the new “Output-Activity Document” a “justification table” should be prepared. The table will explain how each output and activity is directly linked to pursuit of long-term sustainable results in the aforementioned priority areas. The revised Output-Activity Document should be agreed upon by the PIU, UNDP CO, and RTA. Once the Output-Activity Document is agreed upon, the 2019 annual work plan should be revised accordingly. (2) Prepare a revised version of the Project Results Framework (PRF, the indicators table) to reflect project course correction and to ensure that indicators are measurable and reflections of progress towards long-term, sustainable results. Annex 4 (“Project Indicator Revisions”) of the MTR Report can be used as a</p>

starting point or at least a model of the format to be used. (3) Prepare a plan for achieving project's targeted direct lifetime GHG ERs of 91,100 tons CO₂ ("GHG ER Achievement Plan"). This work will include adjustment of plans for the demos in pilot cities to ensure GHG ERs are as high as possible and will include calculation of the direct lifetime GHG ERs for each of the demos/ all of their components (namely, all aspects of the SUT demos in Polotsk-Novopolotsk and the two EE demos in Novogrudok). If findings show that it will be impossible for the demos to achieve the 91,100 tons CO₂ direct ERs targeted in the ProDoc, this work will also include GHG ER estimates for the additional priority projects connected with project activities and expected to achieve financing and launch before project close. These may include projects in SECAPs prepared by *Green Cities*, replication street lighting projects which have benefited from *Green Cities* dissemination of design and RFP documents, and priority projects in SECAPs and GUDPs prepared by *Green Cities* for which *Green Cities* also provides assistance in securing financing.

Targets and Timeline: (1) Revised Outputs / Activity Document and Justification Table (PM) – by May 25, 2019. Review of and reaching of consensus on revised Outputs / Activity Document (UNDP CO, RTA, PM) – by June 10, 2019. Revised 2019 work plan – by June 25, 2019. (2) Revised PRF – by May 25, 2019. Review of and reaching consensus on revised PRF (UNDP CO, RTA, PM) – by June 10, 2019. (3) Draft GHG ER Achievement Plan to achieve direct lifetime ERs of 91,100 tons CO₂ (PIU EE Expert, MRV Consultant, and PIU SUT Expert and/or outside GHG consultant if needed, with PM coordinating) - by June 25, 2019. Review of and reaching consensus on GHG ER Achievement Plan (RTA, PIU EE Expert – MRV Consultant – PIU SUT Expert, PM) – by July 15, 2019.

Recommendation 2. Apply for extension of up to 18 months, contingent on plan/ reallocation of budget so it is available over extended period to focus on achievement of aforementioned long-lasting and impactful results. In addition to providing needed time to monitor the demos, justification will be: opportunity to achieve more policy successes (likely exceeding targets), to impact the planning process, to assist cities in obtaining financing for priority projects (a new target added through adaptive management), and to achieve the political will for more impactful SUT demos; additional time needed to ensure GHG direct ERs of 91,100 tons CO₂e targeted are achieved through demos combined with other priority projects.

Elaboration: Before applying for extension, project should have clear plan and budget reallocation to ensure high-impact results referenced in recommendation 1. Budget should allow for retaining of experts throughout project duration to promote policy change to policy makers/ change in planning approach to planners and to assist cities in preparing priority projects and securing financing. Reallocation may require a reduction in investment amounts for project demos. While this is not typically encouraged, in the case of the SUT demos, findings suggest the most impactful demos are those that are lower cost, but that require political will to achieve (e.g. bus lanes, restrictions on driving of private cars, parking restrictions or parking fees, etc.). Thus, more funds for TA (to convince local officials to adopt such measures and to ensure local residents are on board) and less for investment may make sense in this case. According to current budget plans (if the project were to end on schedule, with TE in about 1.5 years), about 11% of demo investment funds will be spent on TA instead. If project is extended an additional 1.5 years, leaving three years to the TE, then about 24% of demo investment funds may be spent on TA instead.

Recommendation 2 Action Plan

Who: PM and PIU Admin /Finance Officer (with some input from PIU GUD, EE, and SUT experts); UNDP CO and UNDP RTA provide feedback

How: (1) Building on Revised Outputs Activity Document (prepared under recommendation 1), prepare indicative Activity-wise Excel Budget for remaining outputs/activities and include project management and PIU expert costs. Aim to engage PIU experts for the duration of project until intended TE date. (With 18 months extension, TE date will move from Oct. 2020 to April 2022 and project close from March 2021 to Sept. 2022.) Budget may build on initial rough allocation found in Annex 13, which reduces investment in demos to provide TA funds for experts, financing consultant, and PMU

staff during period of extension. (2) Prepare application for project extension with justification focusing on additional policy and planning process achievements and additional GHG ERs via support for finding financing for priority projects of cities.

Targets and Timeline: (1) Excel Activity-wise Budget – PM and PIU Admin/Finance Officer – by June 30, 2019. Review and consensus (UNDP CO, UNDP RTA, and PM/ PIU Admin/Finance Officer – by July 15, 2019). (2) Draft application, including justification, to GEF for 18 month extension (PM with input from PIU GUD, EE, and SUT experts on additional achievements expected with extension) – Sept. 1 2019. Review and reaching of consensus and submission of extension request (UNDP CO, UNDP RTA, PM) – Oct. 1 2019 (about one year before previous intended TE date).

Recommendation 3. Pursue a set of meaningful national-level policy achievements (namely, the adoption or revision of national strategies, standards, acts, resolutions, policies, action plans, and/ or regulations to promote GUD, city EE, and SUT). Adopt a new and targeted approach to do so, with face-to-face one-on-one “briefings” of officials as centerpiece.

Elaboration: The new approach will: (i) have as its main method high-level briefings (brief, 15 to 20 minute, one-on-one meetings) of relevant national officials in which an expert and person skilled in delivering very succinct to-the-point briefings educate and exchange with the policy maker on policy recommendations, key findings/ results of project studies and plans, approach of GUD, SUT/SUMP, and urban EE/SECAP, etc.; (ii) include preparation of “digested” versions of key project reports, typically just one or two pages, along with, for each meeting, a written one or two page summary of the same briefing content that will be delivered live; (iii) concurrently pursue policy achievement and shift in mindset. The project will have roughly 11 policy targets beyond what has been achieved already, as detailed in the footnote associated with this sentence.⁴⁸ Given the challenge of achieving policy adoption, the project certainly won’t be expected to achieve all of 11 these targets, but can pursue all of them in hopes of getting some of them, perhaps 3 to 5, adopted during the lifetime of the project and setting the stage for several of the others to be adopted after project close. Already, the project has achieved three policy successes/ adoptions (with four targeted in original design), so these additional 11 targets fit with an ambitious approach in pursuing higher level project impacts. It may also include, pending support of UNDP CO and MNREP, a carefully crafted letter to Head of Presidential Administration, formerly mayor of Novopolotsk during project preparation, in pursuit of an executive order to make the issue of GU Planning important, so that some action is taken.⁴⁹ Project may also

⁴⁸In addition to three project-related policy successes of inclusion of requirement that Brest prepare Symbio Plan in *National Green Economy Action Plan* and adoption of project GUD-related recommendations in already-issued policy documents of *Country Profile on Housing and Land Management of the Republic of Belarus* and *Concept of the National Strategy of Sustainable Development*, including in the latter text that calls for “introduction of the principles and methods of green urban development,” preliminary, post-MTR policy targets with increasing level of difficulty are: (1) Detailed project input included in chapters of *National Strategy of Sustainable Development* (likely), (2) 12 new EE lighting standards adopted, (3) *Traffic Act* amended to include specific SUT measures, (4) new Council of Ministers Resolution for SUT in city planning issued, (5) *Parking Policy* amended to allow fees for parking in city center, (6) *National Urban Development Policy (2021-2026)* to be prepared by BelNIIP in 2020 includes GUD, (7) supporting regulations for *National Urban Development Policy* developed and includes GUD measures (last version of policy did not include supporting regulations), (8) new *Green Urban Development Action Plan* developed and cross-ministerial working group established to address GUD, (9) new standards requiring indicators related to GUDP incorporated into the urban planning process (to be adopted by the State Committee for Standardization), (10) *Municipal Procurement Regulations* revised to consider lifecycle costs, and (11) new green infrastructure financing regulations developed, municipal finance process changed, and competitive green infrastructure loan fund for cities established.

⁴⁹ Letter will have three main points: (1) Green Urban Planning addresses all the problematic areas of cities where 75% of population lives. (2) It is necessary to move from dispersed efforts of 15 ministries to coordinated approach. (3) To carry out this work, a person responsible for coordinating the national effort to develop Green Urban Planning should be identified.

<p>consider working with certain think tanks and NGOs that are influential in affecting national level thinking on policy (namely via their thought pieces) to convey its key messages to policy makers.</p>
<p><i>Recommendation 3 Action Plan</i></p>
<p><i>Who:</i> PIU GUD-SUT-EE Experts and project consultants in GUD, SUT, and EE implement, PM oversees, PIU Com. Officer assists with messaging/ packaging and strategy</p>
<p><i>How:</i> (1) Prepare list of target officials/ departments: Identify target officials and departments that need to be influenced to achieve adoption of the eleven policy targets listed in the first footnote associated with this recommendation (or a PIU prepared revised list of policy targets). Prepare a table listing these officials/ departments and the policy targets that are relevant to each of them. As a rough “guesstimate,” the list may include seven to ten officials / departments. (2) Prepare summaries of key policy related reports: Prepare a table listing the eleven policy targets in the first footnote associated with this recommendation (or a PIU prepared revised list of policy targets) showing, for each policy target, project reports (and possibly conference proceedings) that have useful content related to the target. Prepare “digested” two-page versions of the relevant reports tailored towards informing targeted policy makers. (3) Prepare for round one briefings: Identify best team member to deliver the round one briefing to each official/ department on the target list. The briefing should be focused on those policies among the 11 or so targeted for which the official is most relevant. (As some officials will be relevant for several policies, it may be necessary in terms of focus to cover only a few target policies in each briefing meeting.) It is likely the team member selected will be the relevant PIU expert or other expert associated with the project and/or someone especially skilled in delivering concise, convincing, and interactive briefings. The project team and especially the selected project team member should prepare a concise ten minute explanation and justification for the desired policy outcome and a full plan for the 15 to 20 minute meeting, which should include sufficient attention to getting feedback from the official. The ten minute explanation/ justification should be rehearsed in front of other team members and a one or two page written briefing prepared to accompany it. (4) Set up the round one briefing meetings and deliver the live briefings, along with the relevant two-page written briefing and any relevant two-page summaries of project reports. (5) Repeat the process (3 and 4) quarterly for a total of 12 rounds of briefings during the extended life of the project (the upcoming 3 years until the TE). (6) Prepare letter to head of presidential administration. (7) Assess option of working with think tanks and NGOs to promote policy messages (to get the 11 or so target policies adopted) and follow up: Determine NGOs and think tanks that may be influential in getting project’s target policies adopted. Hold meetings with these NGOs/ think tanks about potential cooperation in disseminating policy proposal messages through their thought pieces. Follow up on cooperation.</p>
<p><i>Targets and Timeline:</i> (1a) List of policy targets (building on 11 items referenced in footnote to this recommendation) (PIU GUD, EE, SUT experts and PM, Communications Officer) – by May 10, 2019. (1b) List of target officials/ departments (perhaps 7 to 10 of these) (PIU GUD, EE, SUT experts, PM, and Communications Officer) – by May 10, 2019. (2a) List of project’s key policy-related reports as relate to 11 or so identified policy targets (PIU GUD, EE, SUT experts, PM, and Communications Officer) – by May 10, 2019. (2b) Two-page summaries of key policy reports (PIU GUD, EE, SUT experts and/or other project experts who prepared original reports) – by June 10, 2019. (3) Identification of team member to deliver each briefing, preparation for live briefing meetings, and preparation of associated one or two-page written briefing, all for round 1 briefings (PIU GUD, EE, and SUT experts, as well as other project experts, PM, Communications Officer) – by July 10, 2019. (4) Round 1 briefing meetings (PIU GUD, EE, and SUT experts, other project experts, PM, Communications Officer) – by July 15, 2019. (5) Subsequent rounds of identification of best briefer, briefing preparation (both for live and for written briefing) and briefing delivery (PIU GUD, EE, and SUT experts, as well as other project experts, PM, Communications Officer) – round 2 by Oct. 15, 2019, round 3 by Jan. 15, 2020, round 4, by April 15 2020, round 5 by July 15, 2020, round 6 by Oct. 15, 2020, round 7 by Jan. 15, 2021, round 8 by April 15, 2021, round 9 by July 15, 2021, round 10 by Oct. 15, 2021, round 11 by Jan. 15, 2022, round 12 by April 15, 2022. (6) Letter to head of Presidential Administration drafted and delivered (PM and PIU GUD, EE and SUT experts, Communications</p>

Officer) – Aug. 1, 2019 (after first round of briefings, so as to benefit from input). (7a) Listing (by target policy) and assessment of think tanks/ NGOs that may be influential in getting each of the 11 or so target policies adopted, especially via their thought pieces (Communications Officer, PM, and PIU GUD, EE, and SUT experts, other experts associated with project for additional input) – May 20, 2019. (7b) Holding of meetings with any think tanks/ NGOs identified as having high potential for influence in terms of the 11 or so target policies to discuss potential cooperation (Communications Officer, PM, and PIU GUD, EE, and SUT experts) – by July 15, 2019. (7c) Ongoing follow up as needed with NGOs/ think tanks to achieve their issuing of influential thought pieces by Jan. 2020. (Ten such thought pieces by two or three such partners may be targeted, depending on finding of assessment.)

Recommendation 4. Adopt new and targeted approach to influence the city planning process. Engage BelNIIP, and potentially other state and private sector urban planners (e.g. MinskGrado, Level80, etc.), in one-on-one meetings with project experts and in planning process/ policy related assignment, if possible. Bring the “clients” (MoAC and city executive committees) into the process once progress is made with the planners. Pursue other channels, such as standards and traffic authorities, to influence city planning process.

Elaboration: A. Small meetings between BelNIIP and project experts will focus on GUDPs and SUMP, with BelNIIP feedback on how these could be useful to master plan process. BelNIIP may be concerned that GUDPs are too general, but has not seen any yet. BelNIIP is working on draft *Architectural, Urban Planning, and Construction Code* and next year (2020) will prepare draft *National Urban Development Policy* - new ideas/ insights, measures, etc. from the project might be useful input. Innovative private urban design firm might be included in some small group discussions with BelNIIP. B. In the past, BelNIIP could not participate in bids for project assignments, because UNDP contract norms do not fit with requirements of certain type of state organizations. It's not clear if these problems can be overcome. If so, areas of possible contract work to discuss are: (1) integration of GUDP with the master plan process and (2) draft national legislation to promote GUDP. C. MoAC and city executive committees, as the “clients” of the MP preparation process, can also influence desired changes in the process. They should be consulted and their views and ideas incorporated into the discussion with the planners. These consultation with the “clients” can be integrated with other activities. In the case of MoAC, policy briefings under the Action Plan for Recommendation 3 can and should include, in additions to discussions about targeted policies, discussions on the planning process. Work with city executive committees in executing pilots, preparing plans, and getting priority projects financed will also be an opportunity for incorporating discussions of the planning process, seeking their views to share with the planners, and encouraging them as customers also to independently seek improvement of the process. D. Other avenues to influence the city planning process include pursuit of establishment of urban planning standards by the standards authority, pursuit of support of Traffic Police (who have approval authority of transport aspects of city plans), and pursuit of relevant policies (see recommendation 3). Project is pursuing many of these; and should fashion them into a coherent strategy to influence the urban planning process.

Recommendation 4 Action Plan

Who: PIU GUD Expert and GUD consultants, also PIU SUT Expert and contractors, PM oversees, PIU Com. Officer assists in messaging/packaging

How: (1) Prepare multi-pronged strategy for influencing the urban planning process, so that it incorporates GUDP and SUMP. (2) Hold small group meetings with BelNIIP to discuss draft GUDPs, draft ISUMP, planning process, and its draft *Architectural, Urban Planning, and Construction Code* (which it is working on in 2019) and its draft *National Urban Development Policy* (which it will work on in 2020). Discuss possible cooperation on integration of GUDP with master plan process and draft national legislation to promote GUDP. (3) Hold meetings with other key players in the urban planning process, including MinskGrado and private companies (such as Level80), and discuss options for improving the master plan preparation process and incorporating GUD/ GUDPs into that process. (4) Once progress is made in discussions with urban planners, bring “clients” into the discussion, including

MoAC and the executive committees of cities to discuss how to improve the city master planning process. The project can discuss the planning process with these entities during meetings for other purposes (i.e. briefing meetings on policy with MoAC per Recommendation 3 Action Plan and meetings with executive committees on GUDPs, SECAPs, ISUMPs, financing of included measures, and pilot implementation). It can solicit their feedback and bring this back into the discussion with the planners and also encourage these parties to liaise independently with the planners to share their input on the process. (5) Prepare proposal for establishment of urban planning standards and meet with standards authority to discuss. (6) Prepare for and hold meeting with traffic police to pursue their support for incorporation of GUDP and SUT into the MP process.

Targets and Timeline: (1) Written strategy for influencing the urban planning process so that it incorporates GUDP and SUMP (PIU GUDP and SUT experts, PM, Communications Officer) – by May 30, 2019. (2) Small group meetings with BelNIIP (PIU GUDP and SUT expert) – first meeting by June 15, 2019; second meeting by Sept. 15, 2019; third meeting by Dec. 15, 2019. (3) Small group meetings with other key players in urban planning, especially MinskGrado and Level 80 (PIU GUDP and SUT experts, PM, Communications Officer) - first round of meetings by June 15, 2019; second round of meetings by Sept. 15, 2019; third round of meetings by Dec. 15, 2019. (4) Discussions with “clients” (MoAC and executive committee) on master plan preparation process and documentation and sharing of their feedback with planners by Dec. 15, 2019. (5a) Proposal for establishment of urban planning standards (PIU GUDP and SUT experts, PM) – by Aug. 15, 2019. (5b) Meeting with standards authority to discuss proposal – by Sept. 15, 2019. (6) Preparation for and meeting with traffic police regarding urban planning process (PIU GUDP and SUT experts, PM) – by Sept. 15, 2019.

Recommendation 5. Building on recently launched financing support work, put substantial focus on assisting cities to prepare and secure financing for specific priority projects in the plans that have been prepared.

Elaboration: This will be a key shift in the project’s focus from preparing plans, which may be at risk of “sitting on the shelf,” to actively helping cities get priority projects realized. The team has already launched this kind of “securing financing” support to one additional project in each pilot city (for a total of 3 projects). The project may wish to extend this support to its 5 other SECAP and 5 other GUDP partners (including Brest). This will diversify risk, allow the project to present options and/or packages to various financiers, and expand chances of success. Focus should be on projects that reduce GHG emissions so that the project will meet or exceed its target of 91,100 tons CO2e of direct GHG ERs. For Novopolotsk tram extension, an assessment of life cycle costs/benefits as compared to other options should be carried out before putting substantial effort into proposal.⁵⁰ Support should be very proactive. Involved experts should actively reach out to funding institutions including EBRD, BDB, Chinese loans, other banks and donors, as well as sources associated with the state budget, and assist cities in holding meetings and negotiating with these parties. Since the time of the MTR mission, the project team has already held fruitful discussions with EBRD, which could be continued as the project proposals are prepared. The aim to achieve financing of such projects is very challenging, because cities in Belarus depend mainly on state funding and do not have much of their own revenue sources with which to repay loans. Yet, it is clearly a missing link, and any progress the project can make in this area will be valuable.

Recommendation 5 Action Plan

Who: Project prep/ financing consultants and/or PIU GUD-SUT-EE Experts, PM oversees

How: (1) Identify initiatives that project will support by finding them financing, including at least one in each pilot city and possibly one in Brest, and one in each of the 5 SECAP and 4 other GUDP partners. Prepare brief preliminary project proposals including assessment of funding needs, revenues, and payback period. (2) Identify high potential funding sources and hold meetings with these to introduce them to full range of projects (up to 13 or so) seeking financing. (3) Based on feedback of

⁵⁰Proposal has the support of top transport experts and city and, thus, should receive careful attention and analysis.

funding institutions, arrange meetings between project proponents and funding sources. (4) For Novopolotsk tram extension, prepare assessment of life cycle costs/ benefits and compared to other options to determine viability of proposal and whether to continue with it. (5) Continue to support proposed projects in preparing documentation and liaising with financiers as needed to achieve financial close.

Targets and Timeline: (1a) List of 13 or so identified initiatives that project will support in seeking financing (PIU GUDP, SUT, and EE experts, financing/ project prep expert, PM) –by June 15, 2019. (1b) Brief preliminary proposal for each initiative (PIU GUDP, SUT, and EE experts, financing/ project prep. expert) – by Aug. 1 2019. (2a) List of high potential funding sources (Financing expert) – by July 1, 2019. (2b) Meeting with each high potential funding source to introduce range of projects (PIU GUDP, SUT, and EE experts, financing/ project prep. expert) – by Aug. 1, 2019. (3) Facilitation of meetings between project proponents and funding sources (Financing/ project prep. expert PIU GUDP, SUT, and EE expert) – round 1 by Sept. 1, 2019, round 2 by Dec. 1, 2019, round 3 by March 1, 2019. (4) Assessment of viability of Novopolotsk tram extension (PIU SUT expert and financing/ project prep. expert) – by July 15, 2019. (5) Ongoing support in document preparation and liaison with financiers results in financial close for at least 6 of the 13 projects (April 1, 2022).

Recommendation 6. Revise approach for Polotsk/Novopolotsk demos building on recent, post-MTR mission progress in Polotsk: (i) reconsider selection of key measures, with emphasis on achieving long-term GHG ERs and making sure that the project targets, including direct ERs of 91,100 tonnes of CO₂e, are met; (ii) engage city executives and coordinating committees frequently with project experts so they understand demo goals, budget, and efficacy of various options; (iii) convince cities to adopt low-cost, high efficacy measures as part of demo “package.” (See 9iii.)

Elaboration: Project should aim for a package of measures, including both those financed by the project and low-cost measures adopted concurrently by the cities.⁵¹ The measures should be those that do the most to reduce GHGs/ local emissions and enhance mobility, making sure that the project’s CO₂e targets are met. Cost effectiveness should be considered. For bicycles, in addition to 3 km of paved, separate trail, the project should continue to encourage the cities to adopt as much of the proposed 30 km of bicycle lanes on roads as possible, as these are likely to achieve more GHG ERs than the separate trail, and to keep bump barriers for bicycle lanes in place year-round. A low-cost investment of around USD20,000 - 40,000 might be used to equip city with bike racks, institute pilot courtyard bike storage or storage where trash chute in buildings used to be, and (if needed) provide bike racks to buses. While the bicycle work is symbolically quite positive, stakeholders should be presented with the evidence that high impact public transport/ private car measures have the potential for much greater GHG ERs and improvement in local air quality/ reduction in congestion, but that measures must be selected strategically.⁵² They should also be presented with the evidence that low-cost measures are often among the most effective in achieving such results. After the MTR mission, the project achieved very notable success in that its Traffic Management Study for Polotsk convinced the Polotsk Executive Committee to agree to adopt 4 km of bus lanes (with barriers) in city center as an experiment, likely to be accompanied by driving restrictions for private cars in city center at certain times of day. These will be the first real bus lanes in Belarus. (Efforts in Minsk did not include barriers, were not continuous, and did not really deter cars from entering bus lanes.) It is recommended that the project build on these initial successes in Polotsk to encourage the adoption of more such measures and to ensure the Polotsk experimental bus lanes are successful and adopted for the long run. For public transport in Novopolotsk, strong effort should be put on convincing Novopolotsk to institute test bus

⁵¹For public transport/ private car measures that are especially challenging to achieve (e.g. bus lane, private car parking or driving restriction, parking fees), the focus of measures for now will be on each city individually. The project can prioritize allocating GEF funds for infrastructure to support these challenging measures, if any is needed.

⁵² A fuller listing of possible SUT demo measures raised during consultations and that may be considered are shown on page 19.

lane of up to 3 km on Molodezhnaya St. and parking ban on other parts of the bus/tram corridor approved for further action in 2015.⁵³ Benefits of improvement of bus stops and provision of signboards with bus arrival times (currently targeted to be among the main expenditure areas of the SUT demos) should be compared to options that speed up buses or make cars less attractive. If it is still decided to improve bus stops, the question of whether an incremental addition to 20 or more bus stops will be more impactful than full renovation of 5 may be considered. Contentious issue of whether synchronized traffic lights can benefit buses or simply serve to increase cars should be carefully assessed. If adopted, synchronized traffic lights should focus on improving flow of large capacity buses, rather than catering to private cars. (Recent developments indicate agreement to keep the “ideal speed” for the synchronized traffic lights to a speed suitable to large capacity buses.) To reduce private cars, other measures, such as parking restriction, parking fees (with concurrent work under recommendation 3 on parking policy), and roads that do not allow cars, should be promoted. Innovative low cost measures, such as lagging work times at the refinery to reduce congestion, should also be considered. To ensure city executives and coordinating committees understand the goals, budget, and efficacy of various options, project transport experts should become more closely engaged in advising the cities and facilitating their meetings at which the measures will be decided upon.

Recommendation 6 Action Plan

Who: PIU SUT Expert working with Public Transport Feasibility Study Contractor, ISUMP Contractor, and transport experts in cities (such as Novopolotsk Bus Company Head); PM oversees

How: (1) Prepare list of full range of desirable SUT measures for each city and include nature and scale of expected benefits. (2) Engage executive committee officials in meetings to explain each of the measures on the list, the benefits of low cost measures, and the importance of including city financed measures and GEF financed measures in the same “package” of demos. (3) Engage Polotsk and Novopolotsk SUT demo coordinating committees through preparation of email newsletter once every two weeks on demo options and any progress; facilitate their meetings to ensure progress towards selecting effective SUT demos. (4) Achieve finalized plan for SUT demos that includes high impact public transport and private car measures (e.g. bus lanes, parking restrictions/ fees, driving restrictions for private cars, refinery work start lag times, etc.) and coordinate with work of recommendation 1 to ensure that expected GHG ERs are calculated and maximized via appropriate design of the demos.

Targets and Timeline: (1) List of possible measures and their benefits (PIU SUT expert with input from other transport consultants to project and local transport experts) – by June 1, 2019. (2) Series of meetings with Executive Committee officials (PIU SUT expert and PM) – round 1 by July 1, 2019; round 2 by August 1, 2019; round 3 by Sept. 1, 2019. (3a) Newsletters for SUT coordinating committee (PIU SUT expert and Communications Officer) – by June 1, 2019, by June 15, 2019, by July 1, 2019, etc. on until Oct. 15, 2019 for a total of ten newsletters. (3b) In-person facilitation of SUT coordinating committee meetings (PIU SUT expert and Communications Officer) – round 1 by July 1, 2019, round 2 by Aug. 1 2019, round 3 by Sept. 1, 2019. (4) Finalized plan for SUT demos (on paper with budget and timeline and expected GHG ERs) that include demonstration of bus lanes, private car driving restrictions, parking restriction and/or parking fees, and measures to reduce traffic on road to refinery, such as lags in work times or driving restrictions (PIU SUT expert, PM – coordinated with GHG Achievement Plan work under recommendation 1) – by Sept. 30, 2019.

Recommendation 7. Before moving forward with smart meter demo, clearly identify and confirm specific means and amount of energy savings and GHG ERs (current preliminary estimate is just 252 tons CO2 direct ERs). Adjust demo plans accordingly to maximize savings and GHG ERs. Clarify to all involved.

⁵³ The Novopolotsk bus (long term bus-tram) corridor was proposed in *Recommendations for Planning Sustainable Urban Mobility - Let's Make the City Comfortable for Life* in 2015 and approved for further action by city authorities. The corridor includes Ekiman 1st, Molodezhnaya St., Katorov St., and Promyshlennaya St. Large capacity buses with disciplined schedules and stops should be prioritized for benefits from these measures.

Elaboration: It is agreed that adding meters for heating (whether smart or not smart) where there were none before will save energy. Yet, the source of expected energy savings from replacing regular meters for electricity, water, and gas with smart meters needs to be clearly explained. One explanation is that data collected by utilities from smart meters can lead to identification and reduction of line losses. Whether this will be the case with the proposed demo needs to be verified specifically. If utility action will be a main source of savings, it should be confirmed that the utilities indeed will be following up as needed to achieve the savings. If the smart meters will not lead to energy savings, alternatives (such as a focus on heating meters only) might be considered. If it is confirmed that the other smart meters will save energy, how they will do this should be explained to all; and the demos carefully designed so that this targeted smart meter savings is indeed achieved. Preliminary estimates for the total lifetime direct CO₂ ERs for the smart meter demo are 252 tons CO₂. This is much less than the 10,190 tons lifetime direct CO₂ ERs estimated for the laundry demo, which the smart meter demo is to replace.

Recommendation 7 Action Plan

Who: PIU EE Expert, Novogrudok Coordinator, local utilities

How: (1) Prepare detailed explanation of how energy savings and GHG ERs will be achieved with smart meter demo in the case of each type of resource (heating, hot water, electricity, natural gas), specifically in the proposed Novogrudok smart meter demo. (2) If mechanism of energy savings in any case will depend on supplier, hold discussions with relevant utility to confirm that they will carry out measures needed to achieve projected savings. (3) Adjust demo plans (such as shifting focus to heating meters only) if findings on energy savings and GHG ERs suggest this. Note: The laundry demo, which the smart meter demo is replacing, had (at 10,190 tons CO₂e) roughly 40 times the preliminarily estimated lifetime direct GHG ERs of the current smart meter demo (252 tons CO₂e). Action is needed to achieve a demo with higher GHG ERs, or alternatively ensure strong replication, some beginning during the project implementation period. Achieving higher GHG ERs may involve enhancing the smart meter demo and adopting specific measures to ensure replication or leaving it altogether for a demo that has higher EE benefits. (4) Ensure that all Novogrudok stakeholders understand the specific means of energy savings via smart meters (if indeed it is decided the smart meter demo will have good enough GHG ER benefits to merit going forward with it).

Targets and Timeline: (1) Written explanation of mechanism of energy savings and GHG ERs for each type of smart meter targeted to be involved in demo, including amount of projected savings and GHG ERs for each type of meter (PIU EE expert) – by May 15, 2019. (2) Meetings with Novogrudok utilities to ensure they will adopt needed measures (if any) to realize project smart meter energy savings (PIU EE expert, Novogrudok Coordinator) – by June 15, 2019. (3) Written finalization of demo plans (with shift from current plans if needed to maximize energy savings potential and with budget and GHG ER estimates, as coordinated with GHG work under recommendation 1) (PIU EE Expert) – July 15, 2019.

Recommendation 8. Develop clear means of communicating main aim of the project (e.g. “to incorporate environmental sustainability and people-centeredness in city planning and ensure priority projects are implemented”) and ensure all stakeholders understand from the start. Eliminate confusion that “green planning” is just about “green areas” or that project is just very generally addressing the SDGs.

Elaboration: The team should work together to develop a clear vision of the main aim of project (such as that described above) that can be considered to unify its many activities. This main aim should be used to test the relevance of activities and refine them as needed. Efforts should be made to ensure that all stakeholders understand this main aim of the project, which should be introduced early in the conversation and reiterated throughout. Specific measures should be taken to clear up confusion that the project is just generally about the SDGs or that “green planning” is only about “green areas,”

Recommendation 8 Action Plan

Who: PIU Team, esp. PM, GUD-SUT-EE Experts, Communications Officer, and Local Partner City Coordinators

How: (1) Hold a team meeting to discuss each team member’s view of main aim of project based on prior written submission by each team member on this topic. (2) Prepare written description of main aim of project and how outcomes and revised outputs and activities all fit with into this main aim. (3) Revise project’s communication materials to project this more focused, main aim of the project. Materials, such as stationary, should emphasize that project is about GUD city planning and getting associated measures implemented, rather than leave recipient with vague view that project is just generally about SDGs.

Targets and Timeline: (1a) PIU team member written submissions on main aim of project (PM, PIU experts, Communications Office, Finance and Administrative Officer, Procurement Officer, local coordinators) – by May 15, 2019. (1b) Team meeting to discuss main aim of project (PM, PIU experts, Communications Office, Finance and Administrative Officer, Procurement Officer, local coordinators via Skype) – by June 1, 2019. (2) Written description of main aim of project and how main outcomes, outputs, and activities fit with this main aim (PM, GUDP Expert, Communications Officer) – by July 1, 2019. (3) Revised communication materials (letterhead, etc.) based on agreed upon main aim of project (Communications Office with input of PM) – by July 15, 2019.

Recommendation 9. Increase focus of city official mindset change work, ensuring they understand: (i) why they need a plan rather than just measures; (ii) goals of measures; (iii) how low cost measures, such as those in transport can save money and be more effective than new infrastructure; (iv) how GUD and SUMP should be promoted as TORs for Master Plan and its Transport Annex. Further leverage President’s Academy of Public Administration and leverage official government site visits for heads of regions, districts, and cities.

Elaboration: Good progress has been made in city official mindset work, but gaps remain. Mindset efforts focused on the four items above should be carried out continuously with demo cities and other cities project supports in preparing SECAPs/ GUDPs. A course on GUD might be designed for and held at the President’s Academy,⁵⁴ if it can be ensured that only officials with real interest will attend. Several times a year, Council of Ministers organizes local officials to carry out site visits, so project should ensure its demos, once operational, are among those visited. To better understand the mindset change initially intended, project team may wish to discuss with original local designers of SUT demos.

Recommendation 9 Action Plan

Who: PIU: PM, GUD-SUT-EE Experts; Communications Officer for packaging/ messaging

How: 1. Discuss original intention of mindset change work with national demo designers (especially those involved in Polotsk-Novopololotsk demos). (2) Prepare written list of key elements that project aims for local officials to understand and adopt as part of their “mindset change” and convey in series of meetings with and/or video calls to each of 13 pilot or partner cities. (3) Meet with President’s Academy to discuss potential course, prepare curriculum for course, ensure course attracts serious students, launch course. (4) Get project demos put on agenda for Council of Minister organized site visits for local officials.

Targets and Timeline: 1. Meetings with original national demo designers (PM, SUT Expert, Communications Officer) – by May 15, 2019. (2a) Written list of key elements desired for local official mindset change, referring to four items listed in recommendation as starting point (PM, Communications Officer, GUD-SUT-EE Experts) – by June 15, 2019. (2b) Ongoing meetings and phone calls with pilot city and SECAP/GUDP partner city executive committee officials to convey content of mindset change list (PM, Communications Officer, GUD-SUT-EE Experts) – at least three meetings or video calls with each of 13 administrations by April 2022 . (3a) Meeting with President’s Academy (PM, GUD-SUT-EE Experts, Communications Officer) – Sept. 1, 2019. (3b) Curriculum for

⁵⁴Green Cities has already agreed with the President’s Academy of Public Administration to share project materials for incorporation into training programs. A next step would be to ensure this agreement is fully leveraged in development of a GUDP course offered by the Academy.

course (GUD Expert, SUT Expert, EE Expert) – by Jan. 1, 2020. (3c) Identification of serious students and launching of course (PM, Communications Officer, GUD-SUT-EE Experts) – by March 1, 2020. (4a) Meetings with persons organizing Council of Minister field trips (PM and Communications Officer) – by Dec. 1 2020. (4b) Project demos confirmed in agenda for Council of Minister filed trips for local officials (PM and Communications Officer) – by March 2021. (4c) Project demos visited by at least three Council of Ministers Field Trips (PM and Communications Officer) – by March 2022.

Recommendation 10. Engage city residents (and, possibly, other non-governmental and commercial stakeholders) in the planning process. Educate them as in item above. Work to achieve simple language in visions/plans that residents can understand. Ensure plans reflect their priorities.

Elaboration: Work should be done, especially in the case of GUDPs, to ensure that vision and content of plans reflect priorities of residents. Because there may be some history of a “complaint relationship” between city officials and residents, work may be needed to develop a positive exchange. Project might consider working with NGOs or other initiatives that have experience in positive engagement of local residents, especially those with experience engaging city residents in urban design process. At the time of the MTR mission, citizens had not yet been involved in any way in the process of preparing GUDPs, SECAPs, or the ISUMP, though city officials had been extensively involved. After the MTR mission, the project team began to plan public hearings in pilot cities to discuss the GUDPs and ISUMP, a move that is quite congruent with this recommendation.

Recommendation 10 Action Plan

Who: PIU GUD-SUT-EE Experts and consultants/ contractors preparing plans, Communications Officer to promote local citizen involvement, possibly NGO partner, PM oversees

How: (1) Determine methodology for involving citizens (and possibly NGOs and commercial stakeholders) in GUDP preparation process and SUMP and SECAP process. (2) Hold events with citizens (and possibly NGOs and commercial stakeholders) in GUDP cities (3 pilot cities, Brest, and 4 GUDP replication cities) to get their input, as well as possibly in SUMP and SECAP cities. (3) Ensure citizen (and possibly NGO and commercial stakeholders) input is incorporated into GUDP design, as well as possibly SUMP and SECAP design.

Targets and Timeline: (1a) Team meetings on methodology to involve citizens and review of approach of others initiatives that have involved citizens in urban design (GUD Expert and GUD consultants, PM, Communications Officer, SUT Expert, EE Expert) – by June 1, 2019. (1b) Written plan on methodology to engage citizens including budget and timeline (GUD Expert and GUD consultants, PM, Communications Officer, SUT Expert, EE Expert) – July 1, 2019. (2) Events to involve citizens in GUDP design, SUMP design, and SECAP design (GUD Expert and GUD consultants, SUT Expert, EE Expert, PM, Communications Officer) – events for pilot cities and Brest by August 1, 2019; events for nine other replication cities by August 1, 2020. (3) Citizen input incorporated into plans (GUD Expert and GUD consultants, SUT Expert and consultants, EE Expert and consultants) – for three pilot cities and Brest by Oct. 1, 2019; for nine other replication cities by Oct. 1, 2020.

Recommendation 11. Consider expanding engagement to other key groups: (i) involving private sector designers and students via competition for design of urban blocks/pilot projects; (ii) working with education sector to incorporate GUD in official university urban design curriculum; (iii) leveraging relationship with select influential think tanks and NGOs to promote policy and process change.

Elaboration: A. Involvement of private sector designers and students in a competition for the project’s urban block design could generate new ideas, attract national attention and potentially investment, and provide a positive feedback loop for improving the city’s GUDP. Currently, project is planning urban block design for each of the three pilot cities. It may wish to expand work to its other GUDP cities and especially, given national government attention to the Symbio Plan, Brest. B. Education of future urban designers may be one channel for the project to pursue its aim of changing the urban planning process.

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<p>Working with department chairs in the field, such as at BNTU, may be a means to achieve curriculum and accreditation change that incorporates GUD. C. Working with influential think tanks and NGOs via their “thought pieces” may be a means to influence policy as targeted in recommendation 3.</p>
<p>Recommendation 11 Action Plan</p>
<p><i>Who:</i> PIU Team, esp. GUD Expert and PM for all items, and SUT and EE Experts for item iii, Communications Officer for packaging/ message</p>
<p><i>How:</i> (1) Plan and hold competitions for urban block design. (2) Hold meetings with Urban Planning Department of Belarus Technical University or other universities to discuss incorporation of GUD into curriculum. Provide support for incorporation of GUD into curriculum of urban planning students. (3) Hold meetings with influential think tanks and NGOs regarding cooperation on policy thought pieces and follow up. (Note: This overlaps with one of the action items under recommendation 3.)</p>
<p><i>Targets and Timeline:</i> (1a) Competition design (GUD Expert) – Oct. 1, 2019. (1b) Competition (GUD Expert and Communications Officer) – Oct. 1, 2020. (2a) Meetings with Urban Planning Department of relevant university (GUD Expert and PM) – Dec. 1, 2020. (2b) Elements of GUDP prepared and incorporated into urban planning curriculum (GUD Expert) – June 1, 2021. (3) See recommendation 3 (7a-7c under targets/ timeline).</p>
<p>12. Exchange with GEF/WB Global Platform for Sustainable Cities to harmonize indicators and get information on/connections for channels for financing sustainable city initiatives.</p>
<p><i>Elaboration:</i> Project has worked hard to select GUDP indicators suitable to Belarus. Involvement with the Platform will ensure Belarus follows international best practice in indicators and gets access to information on international sources and methods of financing GUDP measures.</p>
<p>Recommendation 12 Action Plan</p>
<p><i>Who:</i> PM and PIU GUD Expert, project prep/ financing consultants (or PIU EE and SUT Experts if involved in project prep/ financing work)</p>
<p><i>How:</i> (1) Gather information on Global Platform’s indicators, work to harmonize Belarus GUDP indicators with these, prepare table showing relationship between Global Platform indicators and indicators adopted by <i>Green Cities</i> for GUDP in Belarus. (2) Liaise with Global Platform to determine best funding sources for Belarus GUDP projects and compile list of funding sources and contacts. Obtain personal introductions if possible. (3) Follow up with each of the funding sources recommended by Global Platform contacts, with special attention to those with personal introductions. Introduce to these funding sources the portfolio of initiatives in pilot and other partner cities that the project aims to support in the securing of financing.</p>
<p><i>Targets and Timeline:</i> (1) Table showing harmonization / relationship between Global Platform indicators and indicators used by Green Cities for GUDP (PIU GUD Expert, PM) – Jan. 1 2020. (2) Listing of funding sources/ contacts recommended by Global Platform Project (prep/ financing consultants and/or PIU GUD-EE-SUT Experts if involved in project prep/ financing work) – July 1, 2019. (3) Calls with all funding sources on the foregoing list, introducing portfolio of Belarus initiatives the project aims to support in securing financing, with special attention to those financiers for which personal introductions are obtained from Global Platform contacts (Project prep/ financing consultants and/or PIU GUD-EE-SUT Experts if involved in project prep/ financing work) – Sept. 1, 2019.</p>
<p>13. Building on plans for preparation in 2019 of a video on the street lighting demo, prepare comprehensive video on all demos and other initiatives for which financing is secured. Video should be quite attractive, such as through use of drones. Also, prepare a lessons learned study and short electronic brochures on the demo projects.</p>
<p><i>Elaboration:</i> Project Communications Officer has worked hard to avoid “business as usual” in communications; and the same principle should be used to develop an out-of-the-ordinary video covering all demos and other initiatives for which financing is secured and installation achieved during</p>

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the lifetime of the project. The lessons learned study should be based both on findings from monitoring of the demos and other installed initiatives and earlier experience gained during demo preparation. The project has found that paper brochures no longer catch reader attention, though electronic brochures that succinctly highlight demo results may be prepared and circulated.

Recommendation 13 Action Plan

Who: PIU Communications Officer (and contracted video maker), SUT Expert, EE Expert, GUDP Expert

How: (1) Determine main desired content of video. (2) Recruit video maker. (3) Make video and disseminate. (4) Prepare lessons learned study covering demos and each of the other financed projects that are installed during the project's lifetime. (5) Prepare short electronic brochures on each demo and each of the other financed projects installed during the project's lifetime. (Projects of the same type, such as EE lighting projects, may be included in the same electronic brochure.)

Targets and Timeline: (1) Basic script of video (Communications Officer) – by Jan. 1, 2021. (2) Contract signing with video maker (Communications Officer) – by March 1, 2021. (3a) Video (contracted entity) – by July 1, 2021. (3b) Wide dissemination of video as evidenced by link with 5,000 hits (Communications Officer) – Jan. 1, 2022. (4) Lessons learned study on each demo and other financed projects installed (SUT Expert, EE Expert, GUDP Expert, each handling relevant demos and other financed projects) – July 1, 2021. (5) Short electronic brochures on each demo and each of the other financed projects, combining those that are of the same time (Communications Officer) – Sept. 1, 2021.

Annex 13. Expenditure Analysis Tables

1. Expenditures by “Aggregated Activity” for each Component

Component 1 – Development and Adoption of Green Urban Development Plans (USD)

Aggregated activity or activity	Expenditures to date (as of 10/04/2019)	Commitments (as of 10/04/2019)
1. Reviews of existing legislation on urban planning and development of recommendations	28,888.00	-
2. Review of the existing policy, standards and rules in the field of development of sustainable urban transport. Development of the recommendations	4,200.00	9,000.00
3. Review of the existing national standards and norms on lighting systems in cities. Development of recommendations	6,000.00	-
4. Development of Green Urban Development Plans	22,379.17	18,532.00
5. MRV for green urban development	-	4,990.00
6. Workshops and Seminars	30,998.88	-
7. Publications	10,027.71	-
8. PMU staff salaries	54,742.48	-
9. Other (MTR, travel, transport, translation, insurance, bank fee and etc.)	38,951.14	3,524.00
Total spent in Component 1 to date	196,187.38	36,046.00

Source: Green Cities PIU

Component 2: Development of pilots on SUT in Novopolotsk and Polotsk (USD)

Aggregated activity or activity	Expenditures to date (as of 10/04/2019)	Commitments (as of 10/04/2019)
1. Bicycle trail/ lane feasibility study transport survey and feasibility study	33,406.00	3,000.00
2. Public transport survey and feasibility study	38,839.07	15,570.70
3. Sustainable Urban Mobility Plan	52,652.03	37,707.00
4. Workshops and seminars on sustainable transport and mobility	1,854.45	-
5. Study tours	144,208.43	-
6. Publications	384.19	-
7. PMU staff salaries	58,475.27	-
9. Other (MTR, travel, transport, translation, insurance, bank fee and etc.)	44,128.97	8,345.34
Total spent in Component 2 to date	382,223.92	64,623.04

Source: Green Cities PIU

Component 3: Development of pilots on energy efficiency in Novogrudok (USD)

Aggregated activity or activity	Expenditures to date (as of 10/04/2019)	Commitments (as of 10/04/2019)
1. Feasibility study for EE lighting	9,223.05	-
2. EE lighting demo (incl. Procurement Specialist and Engineer on Construction, “Sviasinvest”)	10,116.00	300,130.30

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3. Feasibility study for smart meter demo (<i>Mavitek</i>)	6,187.22	-
4. Workshops and seminars	-	-
5. PMU staff salaries	33,045.03	-
6. Other (travel, transport, translation, insurance, bank fee and etc.)	27,330.46	-
Total spent in Component 3 to date	85,901.76	300,130.30

Source: *Green Cities* PIU

Exhibit 4: Replication mechanisms for green urban development in Belarus (USD)

Aggregated activity or activity	Expenditures to date (as of 10/04/2019)	Commitments (as of 10/04/2019)
1. Sustainable Energy and Climate Action Plans (Novogrudok, Polotsk, Novopolotsk, Liozno, Pryzhany, Slavgorod, Mstislavl, Baranavichy)	7,800.00	7,139.50
2. Green Urban Plan	28,560.00	
3. Green Finance	-	7,950.00
4. Green Procurement	2,200.00	3,000.00
5. European Mobility Week	13,468.00	-
6. Workshops and seminars	39,080.75	-
7. Publications	17,520.02	4,950.00
8. PMU staff salaries	106,486.44	-
9. Other (travel, transport, translation, insurance, bank fee and etc.)	32,674.64	-
Total spent in Component 4 to date	247,789.85	23,039.50

Source: *Green Cities* PIU

Exhibit 5: Project Management (USD)

Aggregated category	Expenditures to date (10/04/2019)	Commitments (as of 10/04/2019)
1. PMU staff expenses	187.07	-
2. Office utility, cleaner, communication expenses, maintenance of office equipment, transport, MTR	13,598.19	8,408.50
3. Office equipment, stationery	21,040.19	-
4. DPC	27,373.51	-
Total spent in Project Management to date 25/02/2019	62,198.96	8408.50

Source: *Green Cities* PIU

Exhibit 6: Totals Spent to Date by Component (USD) – based on totals in each table above

Aggregated category	Expenditures to date 25/02/2019
Component 1: Development and Adoption of Green Urban Development Plans	196,187.38
Component 2: Development of pilots on SUT in Novopolotsk and Polotsk	382,223.92
Component 3: Development of pilots on energy efficiency in Novogrudok	85,901.76
Component 4: Replication mechanisms for green urban development in Belarus	247,789.85
Project Management	62,198.96

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Total expenditures	974,301.87
Commitments	432,247.34
Grand total	1,406,549.21

Source: *Green Cities* PIU

2. Main Expected upcoming Areas of Expenditure (USD)

Main Activity Area for Anticipated Expenditure	Amount expected to be spent – close in 1.5 years*	Amount expected to be spent – close in 3 years**
1. Lighting demo (Novogrudok) - grand opening and replication of activities concerning the installation of LED lighting in other cities of Belarus	15,000	15,000
2. Green urban development (development of designs for a typical residential area that meets the principles and norms of green urban development)	30,000	30,000
2. Smart meter demo (Novogrudok), including development and approval of the design documentation; purchase of equipment for the installation of a smart metering system	98,110	79,469
3. Bicycle trail (Polotsk/ Novopolotsk), including development of design documentation for the expansion of the bicycle network; purchase of equipment for the expanding the bicycle network; construction and installation work	418,110	338,669
4. Improve quality and efficiency of public transport in Polotsk and Novopolotsk, including: bus and tram stop improvements; dedicated bus lanes; bus lane priority and traffic light synchronization; other infrastructure projects	652,505	524,487
5. PIU – full time team	167,500	335,000
6. PIU experts (GUD, SUT, EE)	58,600	117,200
7. Local and international consultants	65,000	65,000
8. Publications	25,000	25,000
9. Workshops and seminars	50,000	50,000
10. Monitoring	42,500	42,500
11. DPC	7,126	7,126
12. Project Management (project office, transportation, communication, terminal evaluation, translation)	55,000	55,000
Total	1,684,451	

*The expected expenditure for 1.5 years was calculated by the PIU according to the current budget revision and annual work plan for 2019.

** Amount expected to be spent in case of prolongation up to 3 years has not been planned yet. The project plan and budget will be revised by the PIU based on decision made regarding project extension.

Sources: *Green Cities* PIU projected the amounts expected to be spent if project lasts 1.5 more years. Building on their projection, the MTR team made a simple extrapolation of the amounts expected to be spent if project lasts 3.0 more years. This extrapolation simply reduces the demo investments in proportional amounts as needed to extend the PIU full time team and part-time PIU experts another 1.5 years on the assumption that the amount in each of these two categories for the first 1.5 years is the correct baseline level of expenditure. These “baseline levels” should be looked into further to be confirmed. Other projected expenditure amounts in the “three year plan” are kept at the same level as in the projections for the case that the project lasts only 1.5 more years.

Note: The Grand Total of expenditures and commitments (\$1,406,549.21) added to the anticipated projected expenditures over the next 1.5 years or 3.0 years until project close (if no extension) (\$1,684,451.00) comes to about \$3.091 million, which is the full GEF budget for the project.