

## Terminal Evaluation

### Enhancing Institutional and Community Resilience to Disaster and Climate Change

India

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Evaluation for: UNDP, India

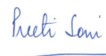
## Acknowledgements

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Programme  
Officer  
(Resilience)



Chief,  
Climate  
Change,  
Resilience  
and Energy

Project Information		
Project title	<i>Enhancing Institutional and Community Resilience to Disasters and Climate Change</i>	
Atlas ID	<i>00087556</i>	
Corporate outcome and output	<i>Outcome: Reduced disaster risk in urban areas by enhancing institutional capacities to integrate climate risk reduction measures in development programs as well as undertake mitigate activities based on scientific analysis</i> <i>Output: Enhanced risk sensitive planning through Disaster Risk Assessments and Structural Safety Audits</i>	
Country	<i>India</i>	
Region	<i>Asia and Pacific (RBAP)</i>	
Date project document signed	<i>June 2016</i>	
Project dates	Start	Planned end
	<i>June 2016</i>	<i>May 2020</i>
Project budget	<i>USD 2,500,000/-</i>	
Project expenditure at 31st December, 2020	<i>USD 2466,477/-</i>	
Funding Source	<i>USAID</i>	
Implementing Party <sup>1</sup>	<i>UNDP</i>	

Evaluation Information		
Evaluation type (project/outcome/thematic/country programme etc)	Project Evaluation	
Final/Mid Term/ Other	Terminal Evaluation	
Period under evaluation	Start	End
	June 2020	May/December 2020
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<sup>1</sup> The entity that has overall responsibility for implementation of the project (award), effective use of resources and delivery of outputs in the signed project document and workplan

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## Acronyms and Abbreviations

ADB	Asian Development Bank
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ASHA	Accredited Social Health Activist
CBMA	Combined Project Management Board
CCA	Climate Change Assessment
CDMP	City Disaster Management Plans
CDP	City Development Plans
CFCC	Cities Fit for Climate Change
COVID 19/ COVID	Corona Virus Disease – 19
CPC	City Project Coordinators
CSR	Corporate Social Responsibility
DAC	Development Assistance Committee
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plans
DEA	Department of Economic Affairs
DM	Disaster Management
DMP	Disaster Management Plan
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EWS	Early Warning System
FGD	Focused Group Discussions
GDP	Gross Domestic Product
GHG	Greenhouse gas
GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German aid agency)
GIS	Geographical Information System
GoI	Government of India
GVMC	Greater Visakhapatnam Municipal Area
HFA	Hyogo Framework for Action

HRVA	Hazard Risk and Vulnerability Analysis
IEC	Information, education and communication
IRS	Incident Response System
IT	Information Technology
JBIC	Japanese Bank for International Cooperation
Km	Kilometres
LGSAT	Local Government Self-Assessment Tool
MHA	Ministry of Home Affairs
MoHUA	Ministry of Housing and Urban Affairs
M&E	Monitoring and Evaluation
NAPCC	National Action Plan on Climate Change
NDC	Nationally Determined Contributions
NGO	Non-governmental organisations
NIMHANS	National Institute of Mental Health and Neurosciences
NIUA	National Institute of Urban Affairs
NSS	National Service Scheme
OECD	Organisation of Economic Co-operation
PPP	Public Private Partnership
PWD	Public Works Department
RF	Results Framework
SDG	Sustainable Development Goals
SMS	Short messaging service
SOP	Standard Operating Procedures
TA	Technical Assistance
ToR	Terms of Reference
ULB	Urban Local Bodies
UNDP	United Nations Development Program
USAID	United Nations Agency for International Development

## Executive Summary

This terminal evaluation took place between 16 November and 28 December 2020. The project, *Enhancing Institutional and Community Resilience to Disaster and Climate Change*, implemented in two phases, is being evaluated for Phase II, that was implemented between June 2016 and May 2020, though extended to December 2020. The evaluation objectives were,

1. To assess the achievements of project results,
2. Draw lessons that can both improve the sustainability of benefits from the project, and
3. Aid in overall enhancement of UNDP programme.

It includes, (i) an outcome analysis and progress made towards outcomes with factors attributed for the achievements, and (ii) output analysis on the relevance and progress made of both project and non-project activities. The evaluation is based upon the OECD DAC criteria of effectiveness, efficiency, relevance and sustainability, along with an understanding of the crosscutting gender actions. The evaluation includes the six project cities of Cuttack, Navi Mumbai, Shillong, Shimla, Vijayawada and Visakhapatnam. Of these Cuttack and Shillong are Phase II cities, while the others already had a number of activities started in Phase I itself.

This evaluation has also been set in the overall urban India planning and development scenario by reviewing some of the other key government and other initiatives and priorities, such as those of the Government of India, NIUA, GiZ and ADB. The primary audience and evaluation user is the UNDP project implementation team. Apart from improving understanding on the project implementation and lessons learnt, it has tried to provide direction for future work in the area of urban disaster and climate change resilience building.

### Evaluation Approach and Methodology

This evaluation has been conducted during the COVID 19 pandemic, hence remotely. Therefore, all meetings, including those with senior government bureaucrats, city government officials, implementing agencies and grassroots outreach teams was dependent upon the use and availability of digital platforms. Detailed discussions with the Delhi implementation team and the City Project Coordination (CPC) set the stage for the evaluation. In parallel the information provided by the UNDP officials was reviewed. Together this helped identify the stakeholder list for consultations, and with the support of the CPCs, the meetings were undertaken. Especially for grassroots outreach personnel and trainees in community outreach activities, modified focused group discussions (FGDs) were undertaken. Remote evaluations meant that it was not possible to review final impacts, appropriateness of activities or effectiveness in the community. This could have further added to the evaluation and to identify additional lessons for future project implementation.

### Brief Project Description

The project implementing partners were the Ministry of Home Affairs, USAID and UNDP. The project has five outputs that have been systematically created to provide a step-by-step progressive process from information creation to development of planning tools, to mainstreaming disaster resilience in urban planning in urban resilience, to capacity creation and outreach to the community, and finally inclusion of the private sector as partners in development. The overall goal of the project is to, 'reduce the vulnerability of urban population, infrastructure and lifeline facilities to natural hazard induced disasters through risk sensitive planning'. In order to do this its' objectives are to, (i) reduce disaster risk in urban areas by enhancing institutional capacities to integrate climate risk reduction measures in development programs as well as to undertake mitigation activities based on scientific analyses; and (ii) enhance capacities of local governments and urban communities, including private sector stakeholders, to manage disaster and climate risks. The outputs to achieve this are briefly described below.

**Output 1: Enhanced Risk Sensitive City Development Planning through preparation of City Disaster Management Plans, undertaking Disaster Risk Assessments and Structural Safety Audits.** This supports the development of a number of tools to identify risks and vulnerabilities and to support planning in the city. These include the development of the Hazard Risk Vulnerability Analysis in Phase II cities, making and updating City Disaster Management Plans, Preparedness Simulation Exercises, critical infrastructure (school) assessments and Business Continuity Plans.

**Output 2: Action plan to strengthen Early Warning Systems in project cities based on analytical studies.** This is mainly focused on reviewing and strengthening existing city Early Warning Systems and Action Plans.

**Output 3a: Enhancing Capacity of the government to respond to disasters and mitigate risk in 10 cities.** It aims at enhancing capacities of city department staff for risk sensitive planning, such as Integrated Development Planning, use of the LGSAT too Incident Response System (IRS). This also includes capacity building activities for relevant city and district officials to address integrated development planning, sectoral plans, and the IRS.

**Output 3b: Local Level Training for preparedness, response and mitigation in 10 cities,** provides the link from the city level planning to community outreach. It aims to cover vulnerable words through training of volunteers, engineers, architects, construction workers, as well as, conduct school safety programmes, and give psychosocial care training for post disaster response.

**Output 4: Knowledge Management,** is aimed at creating awareness among stakeholders, providing well documented tools both through reports and videos that may be used to support similar activities in the city and elsewhere. They include study reports, IEC material and baseline surveys.

**Output 5: Public Private Partnership for Disaster Risk Reduction and Recovery Facilitated and Enhancing Private Sector Investment for Risk Reduction through Innovative Pilots.** The output is to involve pilots with the private sector in 4 target cities as demonstrations of the role of business continuity planning for effectiveness urban disaster preparedness at a city level.

#### Evaluation Results

This section summaries the evaluation results. It looks at the four criteria of Effectiveness, Efficiency, Relevance and Sustainability and the crosscutting issue of gender. Finally, it summarises the conclusions of the evaluation, lessons learnt and recommendations. In terms of achievements to the Results Framework, nearly all activities have been completed as planned. Some activities, such as private sector participation and LGSAT application in the project cities have been limited. However, training and outreach to schools has been much higher than originally planned.

**Effectiveness:** Given the way it has been planned and work sequencing done it is able to identify vulnerabilities, and support the development of appropriate resilience and response mechanisms. While presently the project has improved planning and DRR response, city capacities, systems to absorb and take the initiatives forward, incident response and past experience have also played a role on how effective the work is. Hence, past disaster experience, as in Cuttack created higher response to planning on identified urban flooding vulnerabilities, or in Vijayawada landslide monitoring and management actions from the HRVA. Effectiveness has also been dependent on city capacities, apart from the key role of the City Project Coordinator (CPC), cities like Cuttack having better response due to capacities of senior level officials and use of other consultants, while Shimla and Shillong faced some challenges due to changes in both key officials and CPCs. Training activities have improved capacities to respond to and manage disaster among government staff, and in cases also made them aware of specialised equipment and tools for better disaster handling. Training uptake outside first responders seems limited, however. Community awareness through mock drills in schools and activities among the community to respond to disasters has been useful in improving their response capacities. The psychosocial care component has been particularly useful in this COVID 19 period, and



is well designed. However, activities among the community could be tailored better to suit local peculiarities of different wards. Capacity building also takes time, even at the government level, and therefore there will be a need for more such work and also reaching out to other city departments. Eliciting private sector participation (PPP) may require more innovative approaches to be effective. Ranking: 3.75/5

Efficiency: While in general Phase I cities seem to have done better and quicker in the uptake of project activities, it has also depended upon other factors such as the existing capacities of senior city officials and changes in the CPC. Nonetheless, the HRVA have been found useful, and in case of Navi Mumbai, Vijayawada, and Greater Visakhapatnam Municipal Corporation (GVMC) the Phase II was used as an opportunity to further update it. Also, cities have responded efficiently to prioritise projects such as the Cuttack urban flood management activities, GVMC seashore vegetation development and Vijayawada were identified and funds found for their implementation. In Shimla, ward level and structural strengthening activities were quick to translate into action like retrofitting and improved access to identified response centres in a ward. Although formal outside GVMC, the EWS system has so far been efficiently used to get information out into the cities, although some last mile connectivity concerns were identified. A frequent transfer of officials was also seen as a problem for the efficient uptake and implementation of project related activities. In terms of community outreach, the psychosociological care has been efficient in dealing with the pandemic, while in Shillong this project's work with the grassroots has helped improve last mile connectivity with the community. Some stakeholders were of the opinion that schools also as messengers to the community on disaster related response, may not create equally efficient community level response, due to vastly different situations. While the various products developed have been considered good, without adequate non-technical translations, it is likely that their use may be limited. Equally, dissemination of local language translations of material seems to be slow. Ranking 3.8/5

Relevance: India is a signatory to the Sendai Framework for Disaster Risk Reduction, indicating India's intent to address resilience creation to disaster as a nation. The country is also a part of the SDG and the Paris Agreement on Climate Change. India also addresses urban action through the national Sustainable Habitat Mission, and as a part of the Coalition for Disaster Resilient Infrastructure. GoI and UNDP common Country Programme includes institutional and system strengthening for service delivery, inclusive growth and discusses resilience creation. The Sustainable Development Framework for 2018-22 includes priorities on poverty and urbanisation, climate and disaster resilience, capacity building for urban legislative and planning bodies, upgrading infrastructure and community resilience. This project also aligns with UNDP's commitment towards SDG 11.

At the project cities level, the baselines studies and HRVA takes this forward through identification of vulnerabilities, which in some cases has also translated into actions such as landslide related interventions in Vijayawada and urban flood management in Cuttack. The EWS support has also been seen as very relevant, with GVMC having created a formal system through a control centre that receives information and converts it into relevant early warnings and disseminates it. Disaster Standard Operating Procedures (SOPs) have been found useful, and in some cases even used to replicate appropriate COVID related response SOPs. Simulation exercises have helped identify vulnerabilities and possible response needs, while structural strength assessment, and mason and barbender training improved understanding on the issues. However, some issues were identified with these two activities, as they only addressed RCC structures, and not all types of city building stock or heritage areas. Hospital and school training activities were also used to improve disaster response and, in some cases, structural strengthening too. School mock drills in schools have resulted in improved response of all students in the school, which was previously only limited to senior levels who had an academic lesson on the subject. In the pandemic times, perhaps the single most identified area of relevance is the psychosocial care training that has helped reach out to the community to reduce their anxieties. While documents and information created under the project are all relevant and available on the cities' official website, awareness creation may get limited if not widely dissimilated

continuously. A number of private sector initiatives were envisaged, and if had taken off would be highly relevant too. Ranking 4.5/5.

Sustainability: While technical documents like the HRVA and CDMPs have been developed through extensive community consultations, not all government officials find the technical subject accessible. In Shillong it was also suggested that there be a simplified GIS based planning tool be considered as a part of the HRVA to make it usable. The EWS system, while used, except for GVMC is to quite an extent informal in nature, especially at the community level and may not result in adequate outreach always. While the project has created a very useful platform for all departments to discuss and identify appropriate actions, plans and response for disasters, it is presently dependent upon the CPCs efforts. There has been extensive capacity building through this project, both for government officials and in the community. However, there is no institutionalisation of much of the efforts so far. The result may be that over time information may be lost, or as officials retire or get posted out, knowledge lost to the city. An exception perhaps may be the school mock drills, which seem to have got into the system where the project has reached. Also, hospitals' disaster management plans can be expected to stay in place. It is also understood that the psychosocial care activity may also be better incorporated into the system, as it has involved the health care system in the project cities. A system post project updating mechanisms of the tools and knowledge products with new data and science presently needs to be developed. Ranking 3.2/5.

Gender: The focus of gender actions has been mainly in the area of capacity building and outreach. The project regularly monitored women inclusion in training activities. Through this the project has also included government grassroot functionaries, the Anganwadi workers for psychosocial care training. This is specifically useful to reach out to women within communities. Overall, about 40% of all trainees were women.

Partnerships: The partners identified for the project at the various levels were appropriate given the urban, disaster and community outreach actions envisaged. At the national level this helped frame the overall project and guide it through implementation, while also providing an appropriate vision. In the city, the day-to-day functioning was through the city in-charge's office, the Commissioner and his representatives. While this was overall smooth, some delays in decision making were observed.

## Conclusions

The project has overall achieved the targets it had envisaged, though uptake has been variable with some project cities performing much better than others, suggesting capacity issues. Nonetheless, all cities have utilized resources and tools developed under the project and are very appreciative of the project being implemented in their cities. In fact, most senior city bureaucrats were interested in further activities and support of similar nature to strengthen their cities planning and response mechanisms for disaster response. It is also noted that the project has designed a good product, which has identified a step-by-step progressive process from information creation to development of tools, mainstreaming and capacity building to community outreach. Having said this, there are still a number of challenges left. The EWS system, outside GVMC, is still largely informal especially at the community level, while cities find the work useful, there is no formal platform yet in place for ensuring all departments work together on DRR, Business Continuity Plans have only started recently and are likely to need further strengthening, institutionalisation of capacity building in government officials or updating of planning tools is yet to be put in place, and the HRVA can be further strengthened in future updates, with an assessment of future climate change impacts in its analysis.

Nonetheless, the project also has a number of achievements. It has demonstrated the use of various tools for identification of urban disaster risks identification and response to support planning and to improve the resilience of vulnerable communities and areas to these vulnerabilities. This is especially evident with a demand from project cities to expand it to the rest of the state. Also, the psychosocial

care treatment has been highly appreciated as it has played an important role in outreach during the present COVID pandemic.

#### Recommendations

1. Further expand on the present knowledge and also within project states. The cities can be used as hubs, to support expansion to other cities within the state. This will result in more effective implementation of activities in present cities, while also creating capacities within the state for more urban resilience focus.
2. Work towards institutionalisation of the DRR capacity creation actions under the project, specifically for government officials and staff through identification of appropriate government training institutes and creating capacities and training systems within it.
3. Tailoring further community resilience activities. These may include (i) structural interventions and retrofitting for traditional and heritage buildings, (ii) work towards creating economic resilience among vulnerable communities and groups through appropriate skilling actions, (iii) further strengthen psychosocial care outreach for communities through institutionalisation of training of grassroot agencies and CBOs; and consider including socio-economic vulnerability in psychosocial care training.
4. Inclusion of future climate change impacts in planning and individual project design through the use, interpretation and downscaling of climate change data, as required.
5. Explore the possibility, at a pilot basis, dovetailing City Disaster Management Plans with those of the State/District for more robust planning, institutionalisation of financial support.
6. Identify a separate gender focused output that cuts across other outcomes, to support identification specific actions for vulnerable groups and women and their special needs.
7. Screening of all initiatives for gender, inclusion, environmental footprint and climate change mitigation and resilience impact actions through the development of a simple tool to minimise any unforeseen impacts.

#### Lessons Learnt

The project has provided some very relevant and useful tools for city level planning addressing disaster risk resilience. However, absorption and the process of change takes time. Therefore, for there to be sustainability there will be a need for further support, whether it be UNDP, other agencies or GoI.

Equally, in future training activities planned may while have similar structure and part of the content, tailoring for special needs may also need to be considered. Some areas which would have benefited from this in the present project were structural safety training and ward level response plans.

For more effective planning and project outputs, the Results Framework can consider identification of more detailed delivery timing of outputs, which will both make it easier to monitor and ensure that outputs follow a sequential manner for better impact.

## Introduction

This is a terminal evaluation for the second phase of the USAID funded project *Enhancing Institutional and Community Resilience to Disasters and Climate Change*. An end-of-project evaluation is a mandatory requirement for all UNDP projects at the time of closure.

This is the second phase of the project, started in June 2016 and was to end in May 2020, and is presently to be completed by December 2020 and includes the six project cities of Cuttack, Navi Mumbai, Shillong, Shimla, Vijayawada and Visakhapatnam. This end-of-project evaluation started on November, 16, 2020 to be completed in a 6 weeks period. Due to the COVID 19 pandemic it has been conducted remotely, and all discussions have been held online.

## Evaluation Scope and Objectives

This evaluation addresses the extent to which the project has been able to develop resilient cities through risk reduction in context to disaster and climate change. The objectives of the evaluation are,

1. To assess the achievements of project results,
2. Draw lessons that can both improve the sustainability of benefits from the project, and
3. Aid in overall enhancement of UNDP programme.

In order to do this, the evaluation is to undertake:

- Outcome analysis, progress made towards achieving to the overall outcomes, and factors either contributing or hindering progress towards this achievement
- Output analysis, the relevant of the and progress made for both project and non-project activities

The evaluation scope includes all six project cities, namely Cuttack, Navi Mumbai, Shillong, Shimla, Vijayawada and Visakhapatnam.

The evaluation has also attempted to understand the overall landscape in the urban disaster and climate change area in India and draw lessons from that for UNDP. Equally, the evaluation also looks at the project's contribution to urban resilience in context of other urban initiatives in India, such as Smart Cities, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) of the Government of India, as well as of other stakeholders such as NIUA, GiZ, the Rockefeller Foundation and ADB.

The primary audience and user of the evaluation is the UNDP team implementing the project. This will help them understand the project, its implementation and lessons from the implementation process. It will also help provide direction for future work in the area of urban disaster and climate change resilience building. The Terms of Reference (ToR) of this evaluation is in Annexure 1.

This report first provides a context to the overall project. This includes the national government perspective, policies and thinking in the project area. This section also discusses other relevant major projects and programmes underway in the country.

This is followed by an introduction of the project through the description of the outcomes and outputs to set the evaluation into context. The Results Framework (RF) is provided as an annexure to the report to provide further details. The next section provides the evaluation methodology and is followed by the evaluation findings. The findings are based on a combination of review of information and discussion with a large cross section of project stakeholders. This analysis is followed by sections of conclusions, recommendations and lessons learnt.

## Project Context

Acknowledging the challenges of climate change, the national government had, in 2008 drafted the National Action Plan on Climate Change (NAPCC). This has now been revised to be in line with the Nationally Determined Contributions (NDC) under the Paris Agreement. The Government of India (GoI) in its Economic Survey 2019-20 which provides an understanding to the way the country's Ministry of Finance focuses on its priorities; specifically, for budget allocations, also provides a separate focus on issues of sustainability and climate change. While focusing on its international commitments, the Survey also discusses the 2030 Agenda for Sustainable Development and the Paris Agreement, and mentions the need to both achieve the various goals under the Sustainable Development Goals (SDGs), and the country's commitment to its NDCs. The document specifically mentions the need for the country to address climate mitigation actions, such as reduction in emission intensity of Gross Domestic Product (GDP), or increase carbon sinks. While emphasizing the need for mitigation actions, it also suggests the need for increasing resilience, specifically discussing resilient urban infrastructure. One of the eight NAPCC missions identified for the implementation of the country's actions on the climate change agenda is the National Mission on Sustainable Habitat. This mission is presently implemented through the three programmes of AMRUT, Swachh Bharat Mission, and Smart Cities Mission, and under the national Ministry of Housing and Urban Affairs. The areas of focus identified under the Sustainable Habitat Mission are solid waste management, water and sanitation, storm water drainage, urban planning, energy efficiency and urban transport. India is also a part of the Coalition for Disaster Resilient Infrastructure (CDRI) that was launched in 2019, and is to promote resilience in new and existing infrastructure systems to climate and disaster risks. It has, in partnership with the National Institute of Urban Affairs (NIUA) launched the Climate Smart Cities Assessment Framework in 2020. This framework is to help cities develop a roadmap to combat climate change, identify areas for action for individual cities and help with adaptive management towards the identified areas covered under the framework. Focusing on a combination of mitigation and adaptation, this framework covers the five areas of (i) energy and green buildings, (ii) urban planning, green cover and biodiversity, (iii) mobility and air quality, (iv) water management, and (v) waste management. Each of these areas is further divided into a number of indicators, and is detailed in Annexure 3 of this report. In the first phase the assessment has established a baseline in 96 cities of the country.

India is also a signatory to the Sendai Framework for Disaster Risk Reduction, which builds further on the Hyogo Framework for Action (HFA), on resilience creation of both countries and communities. The Sendai Framework addressed both large- and small-scale disasters, that include frequent, infrequent, sudden, slow-onset, nature or human induced or environment related disasters. It also includes technological and biological hazards and risks. It has four priority areas, (i) understanding disaster risks; (ii) strengthening disaster risk governance to manage disaster risk; (iii) investing in disaster risk reduction for resilience; and (iv) enhancing disaster preparedness for effective response, and to build back better in recovery, rehabilitation and reconstruction.

While India in the 1980's was geared towards calamity response, in the 1990's a disaster management cell was set up in the Department of Agriculture. However, over time the Government of India's perspective towards disaster response and management has evolved, and in 2002 the Ministry of Home Affairs was made the nodal agency, and also included a recognition to address disaster more holistically through actions geared to disaster management. This has not only included changing from disaster as 'calamity response' to risk reduction, but also, inclusion of mental health and psychosocial care. Equally, there has been a shift in recognising disasters primarily as rural and agriculture responsive, to a cross cutting concern. Being the nodal agency for disaster management it works with various other ministries and agencies as required, thereby creating a space for inclusion of expertise as required.

India also has a National Disaster Management Plan, developed in 2019. . The plan clearly shows a shift from traditional disaster response to risk reduction and resilience creation, and is aligned with the Sendai Framework, the SDGs, as well as the Paris Agreement on Climate change. It also discusses the integration of Disaster Risk Reduction (DRR) and its mainstreaming. Discussing DRR, the plan mentions the need to build resilience through planning, preparedness, capacity building and the upgrading of the India Disaster Management systems and practices to global trends. It also discusses the need for social inclusion in Disaster Risk Management (DRM).

Some of the other programmes on urban climate change resilience include the work of ADB and GiZ. ADB has, through its Urban Climate Change Resilience Trust Fund under the Urban Financing Partnership Facility allocated USD 7 million for the activity. Focusing upon water and other urban infrastructure and services, aims to improve institutional capacities of the National Government to, identify, plan, invest and respond to climate change and disasters related risks in urban areas' vulnerable spaces. Its objectives include (i) mainstreaming urban climate change resilience in policies, strategies and plans at the national, state and city levels, (ii) strengthening structural and non-structural investments in selected cities, and (iii) building strong government institutions across central, state and local levels. The programme focuses upon vulnerable cities along coasts and in river basins. This project is in partnership with the Ministry of Housing and Urban Affairs (MoHUA), and is to converge with other national missions, such as the smart cities, new and renewable energy, make in India, clean India, housing for India and urban transport. The first subproject under this project has been focused on Urban Climate Change Resilience in Tamil Nadu, and has included a basin-wide study of water related disaster risks from climate change in Greater Chennai City Corporations and selected towns in Tamil Nadu; and has included various infrastructure projects such as wastewater treatment, drainage, as well as others like flood early warning systems and technical support to the State Government. This is a second subproject, is a cluster Technical Assistance (TA) supporting (i) climate risk and vulnerability assessments to integrate in climate change resilient urban plans and strategies and actionable recommendations for urban infrastructure like water, transport and energy efficiency, and (ii) provide technical support to selected state government agencies and cities for implementation of national urban flagship programmes, institutional and capacity strengthening measures, and facilitation of PPP. The cities included in this are Kakinada, Raipur, Thiruvananthapuram, Kochi, Jalandhar and Ranchi, with the focus being on climate resilient infrastructure investment plans. The third subproject is the strengthening of smart urban mass rapid transit and climate change resilience in the National Capital Region. The programme also proposes to support the Kerala Urban Water Services Improvement Project for the two cities of Kochi and Thiruvananthapuram for building resilient and sustainable infrastructure. This is to focus on improving water distribution network efficiency in Kochi, refurbishing and upgrading the water treatment plants and rehabilitating water pumping stations in both cities, and upgrading institutional capacity to support proposed interventions for sustainable benefits. The focus on ADBs' projects seem to be more on infrastructure and its related capacity enhancement to address climate and disaster vulnerability.

The German development aid agency GIZ has focused on both urban and rural areas in climate change, it is presently focusing action in three urban areas of Bhubaneswar, Coimbatore and Kochi, as a part of climate smart city activities. The work in these cities is to include planning and implementing smart, climate friendly infrastructure and area-based development, and measuring and monitoring Greenhouse Gas (GHG) emissions. Working in collaboration with MoHUA and NIUA, the two German institutes, Technical University of Berlin and Deutsches Institut fur Urbanistik are supporting implementation, information dissemination and upscaling of experiences to other partners cities. The work is to be undertaken in collaboration with NIUA, and is a part of the Climate Smart Cities Assessment Framework. The project has identified three thematic areas to work in, (i) green buildings, (ii) urban green spaces, (iii) storm water drains. The project is for the period of 2018 to 2022, and aims at creating capacities in additional 10 Urban Local Bodies. This GiZ project that started in 2018 aims to cover 10 cities overall. The German development aid agency GiZ, starting with its global project,

Cities Fit for Climate Change (CFCC), which had worked between 2015 and 2019 in the three cities of Santiago in Chili, Durban in South Africa and Chennai in India. The focus had been a combination of measures for climate proofing and strengthening global exchange on low-carbon and resilient urban development. The aim has been to create climate resilience in plans, programmes, strategies and investments in cities, and to support their efforts in the reduction of GHG emissions. In the Indian city of Chennai, the project first reviewed the existing climate related aspects of existing strategies and masterplans, while also focusing upon future CFCC activities in the Greater Chennai Corporation. The project also undertook a baseline study to understand climate change and urban development issues within government agencies, and identify capacity building needs, so as to create capacities to address identified issues within the city. The project included an open ideas competition around some of Chennai's existing infrastructure, the Buckingham Canal, to create awareness and focus, and elicit participation of individuals, civil society groups and enhance capacity of public and political stakeholders. The aim was to also result in public and community contribution in interventions and solutions in areas of urban, regional, ecosystem and water management actions. A result of this competition has been an increase in awareness on the impotence of the Canal for flood mitigation and ecosystem network among city stakeholders, while also creating public engagement in the planning process.

UNDPs Strategic Plan, 2018-2021 (draft) sets out UNDPs vision to support countries eradicate poverty in all forms, accelerate structural transformation for sustainable development and build resilience to crisis and shocks. It aims to support achieve the 2030 Agenda of the SDG. In order to achieve this, it is to work with trusted partners and to provide nimble, innovative and enterprising leadership in taking and managing risks, while also effectively and efficiently utilizing resources to deliver results. In order to do this, it works through Country Support Platforms for the SDGs, and a Global Development Advisory and Implementation Services Platform. UNDP also, though this Strategic document envisages deeping partnerships outside the UN system, which among others, include civil society and the private sector. Poverty eradication in all forms also addresses the possibility of sliding back to poverty due to economic or environmental disasters, health crisis or other crisis, and the need to provide integrated solutions and basic social protection and effective services and infrastructure. On structural transformation for sustainable development, it talks of challenges of urbanisation, demographic changes, unsustainable natural resource management practices, addressing infrastructure services and needs, and also discusses gender inequalities and the need for creating more resilient and inclusive communities. Resilience building includes which may be limited, short term to protracted shocks. This includes geophysical, climatic, health and impacts from climate change and extreme weather events.

The Draft Country Programme document for India, 2018-2022 has identified three Outcomes. These are, (i) institutional and systems strengthening for service delivery, (ii) inclusive growth, and (iii) and energy, environment and resilience. Outcome aligns with national priorities of e-governance, Digital India, citizen-centric service delivery, effective implementation, effective justice delivery and UNDP strategic plan, 2014-2017 of *strengthened institution to progressively deliver universal access to basic services*. It integrates with SDGs 16 and 9. Outcome 2 works in tandem with the national priority of accelerated growth with inclusion and equity, employment generation, and skill India, while also aligning with Outcome 1 of the UNDP strategic plan, 2014-2017. The SDGs it integrates with are, 8, 10, and also provide support to 1, 5, 6, 7, 10, 11 and 15. Outcome 3 is anchored in the national priority of 'energy conservation and efficiency, environmental sustainability, stronger natural resource management, and community resilience' and aligned to outcome 5 of the UNDP strategic plan, 2014-2017. Outcome 3 integrates with SDGs 1, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 17.

This strategic document also further expands to relate outcomes from the previous Strategic Plan of 2014-2017, and identifies a number outputs to address as a part of its RF. These are also divided into three Outcomes, for which the outputs are briefly mentioned here. Briefly outputs for outcome 1 are, (i) institutional strengthening for support to implement and monitor SDGs, (ii) system strengthening

to increase access to entitlements, services, justice and finance, (iii) improved efficiency and effectiveness of public health systems for services delivery benefiting women and poor, increased provision of digital government services to citizens, and (v) partnerships between government, private sector, multilateral and bilateral agencies, vertical funds, corporate social responsibilities (CSR) and foundations to provide innovative and effective new development solutions to harness South-South opportunities. Outcome 2 related outputs are, (i) models with large scale replicability, integrated employability skilling, employment and entrepreneurship targeting women and poor, (ii) poor and vulnerable capacities, options and opportunities to move out of deprivation, and (iii) partnerships for skill development and integrated housing solutions forged between government, private sector, multilateral and bilateral agencies, vertical funds, CSR and foundations. In terms of Output 3, conversion is with outputs on (i) effective institutional, legislative and policy in place to enhance implementation of climate change and disaster reduction at national and subnational levels, (ii) effective solutions developed at national and subnational levels for sustainable management of natural resources and ecosystems, ozone depleting substances, chemicals and waste, (iii) inclusive and sustainable solutions adoption to achieve increased energy efficiency and universal clean energy access, and (iv) blended financial mechanisms developed and strengthening for sustainable energy and environment solutions.

The GoI and UNDP also have developed a Sustainable Development Framework for 2018 - 2022. This includes six strategic priority areas, of which the most relevant ones are, Priority I - Poverty and Urbanisation, Priority V - Climate Change, Clean Energy and Disaster Resilience. In Priority I, strategies of relevance include practical, demand-driven and customised capacity building programmes for urban legislative and planning bodies, and upgrading infrastructure. In case of Priority V, relevant strategies included increased institutional and community resilience through integrated climate change adaptation and mitigation and disaster risk reduction in national policies, strategies, planning and programmes, as well as strengthening capacities to plan and implement local strategies and action plans to enhance urban and rural resilience.

## Project Description

This project, *Enhancing Institutional and Community Resilience to Disasters and Climate Change*, brings together the three partner agencies Ministry of Home Affairs (MHA), USAID and UNDP to address the concerns of increasing risk from disasters; some of which are climate change related, in rapid urbanisation in India. It also addresses the SDG I and 11: Make cities and human settlements inclusive, safe, resilient and sustainable. The project's target specifically is: 11.5 'by 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

The goal of the project is,

Reduce the vulnerability of urban population, infrastructure and lifeline facilities to natural hazard induced disasters through risk sensitive planning.

The project objectives are,

1. Reduce disaster risk in urban areas by enhancing institutional capacities to integrate climate risk reduction measures in development programs as well as to undertake mitigation activities based on scientific analyses.
2. Enhance capacities of local governments and urban communities, including private sector stakeholders, to manage disaster and climate risks.

The project, implemented in two phases, has been supported by USAID finance, with Phase 1 starting in 2012. The second phase, which is presently to be evaluated, started in June 2016, and was to end



in May 2020. Phase 1 cities were: Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Visakhapatnam<sup>2</sup> and Vijayawada. The second phase cities are, Cuttack, Navi Mumbai, Shimla, Shillong, Visakhapatnam and Vijayawada. The key expected results are,

- Facilitate enhanced risk-sensitive city development planning through disaster risk assessments and city disaster management plans in 6 cities;
- Conduct hazard risk and vulnerability analyses
- Strengthen critical buildings based on detailed structural assessments
- Strengthen early warning systems through implementation of pilots for specific hazards
- Enhance capacity of local government and communities, including private sector, to respond to disasters and mitigate risks
- Enhance private sector investment for risk reduction through innovative pilots
- Create a pool of master trainers on psycho-social care
- Improve knowledge management, especially through the development of online data management portals

The project outputs identified for Phase II are,

**Output 1: Enhanced Risk Sensitive City Development Planning through preparation of City Disaster Management Plans, undertaking Disaster Risk Assessments and Structural Safety Audits.**

Development of City Disaster Management Plans (CDMP) in 2 new cities, and update CDMP in remaining four to capture new developments and changes: The CDMPs are to consider issues of low institutional and professional capacities at various levels in urban local bodies (ULBs), to address effective implementation of disaster risk sensitive urban development programs and disaster management measures. The updating in the four cities is to include recent events that reflect the need to include Climate Change Assessment (CAA).

The CDMPs are to be linked to the City Development Plans (CDP). Also, planning and simulation exercises based on existing or potential hazards to be conducted in all the cities to test the level of preparedness and response mechanism.

Other activities to be conducted include Hazard Risk and Vulnerability Analysis (HRVA) in Cuttack, Navi Mumbai, Shimla, Vijayawada and Visakhapatnam; safety assessments in Navi Mumbai, Shimla, Vijayawada and Visakhapatnam; and structural audits in Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam. The vulnerability analysis also includes climate related hazards. The findings of the HRVAs are to be further referred to devise mitigation and preparedness plans as well as recovery strategies, both for reducing disaster risks and impact of climate variability by the city authorities. In cities with existing HRVAs from Phase I, they will be revised to include appropriate mitigation and preparedness plans for new programmes and schemes designed for different sectors. A safety audit for a school in each of the cities is to be undertaken, and technical partnerships to be developed between city authorities and private sector companies for structural assessment of critical buildings and their retrofitting, through a public-private partnership mode (PPP).

Business Continuity Plans: The HRVA is to also sensitise the private sector to ensure that their investment is risk sensitive to identified disasters. The project is to support preparation/strengthening of one organization in each city to develop their Business Continuity Plan, and would be linked to the CDMP/District Disaster Management Plan (DDMP) and the organization would participate in the simulation exercise in the city.

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<sup>2</sup> The city has now been expanded to include a number of areas that were previously classified as rural. Therefore, it is now known as Greater Visakhapatnam Municipal Area (GVMC). As the HRVA has also been updated to include these additional areas in Phase II, it is referred to GVMC in this document.

### **Output 2: Action plan to strengthen Early Warning Systems in project cities based on analytical studies:**

Analytical studies by competent technical agencies are to be carried out to identify existing gaps and challenges with reference to Early Warning Systems (EWS). The findings of the studies will be shared with a wide range of stakeholders through state level workshops. Based on the findings of the studies, action plans for strengthening the EWS and Emergency Communication Network is to be developed. While these studies will be undertaken for Cuttack and Shillong, in the case of the other six cities, the EWS is to be strengthened to meet the requirement for at least one hazard with involvement of the private sector. Existing IT platforms are to be used, or if required new developed to improve risk assessment, monitoring and decision making.

### **Output 3 a: Enhancing capacity of the government to respond to disasters and mitigate risks in 10 cities**

The aim of this output is to empower governments and the community stakeholders to reduce the impact of disasters, through capacity building, private sector participation in school safety programmes and skill building exercise. Sector plans were to be developed in the cities of Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada, and Visakhapatnam to mainstream DRR and CCA in development programs; infrastructure, public health, housing and environment, with DRR and CCA integrated in ongoing sectoral programs, through a consultative process, in Phase I. The sectoral plans are to provide policy inputs and demonstrate suitable local level pilots on integrating DRR and climate change adaptation into development programs. Appropriate training and capacity building programs are to be conducted for the various officials at the city level. In the case of Shillong and Cuttack municipal officers are to be trained on integrated development planning and asked to submit at least one sectoral plan in which they have used the integrated approach as follow-on to the training.

Training is to be given on Training on Local Government Self-Assessment Tool (LGSAT) to assess progress in DRR. In order to achieve a city's development objectives and sustain it, local government decision makers, various officials and departments, academia, business and citizens in the planning, implementation and monitoring are to be included.

There will also be training of identified officials of local bodies to build their capacity to review and self-assess risk, vulnerability, risk and exposure. This aims at supporting authorities design and undertake DRR measures as per the mitigation plans reflected in the CDMPs and City Development Plans (CDPs).

### **Output 3 b: Local Level Trainings for preparedness, response and mitigation in 10 cities.**

Community volunteers in selected wards will have their capacity built to respond to disasters in their area. The wards will be selected based on their vulnerability profile. Community Emergency Response Teams will be constituted in each ward. Special efforts will be made to mobilize volunteers from National Service Scheme (NSS), civil defence, members of resident welfare associations, welfare societies, schools and colleges, religious centres, sanitary workers, health workers, NGO staff etc.

In Navi Mumbai, Shimla, Vijayawada and Visakhapatnam simulation exercises to test the efficacy of the CDMPs for disaster response will be undertaken. In Cuttack and Shillong, stakeholders would be empowered to respond to disaster through skilled based training, and Community Emergency Response Teams will be constituted in identified wards, and will also participate in simulation exercises.

An Incident Response System (IRS) will also be developed, and municipal officers trained for it. To support effective response at the local level, primary responders from the community members are also to receive training.

Other training activities planned are, (a) construction fraternity (masons, bar-benders, plumbers, etc.) in promoting the safety of buildings; (b) enhancing school safety, through school management and student training, including the preparation of School Disaster Management Plans; and (c) psychosocial trainings, and will include volunteers and professionals from within the existing health and social service delivery systems. It shall also include the development of information, education and communication (IEC) material to increase psychosocial awareness and involve private sector engagement for key message dissemination.

#### **Output 4: Knowledge Management**

This is a crosscutting output, undertaken as part of other activities as well. Activities to be included (a) baseline survey to identify all initiatives in project cities, to be used to help improve resilience in the city; (b) post training self-assessment for DRR of relevant officers in project cities; (c) studies on issues such as water, waste etc. to help provide project advocacy tools to support investment in relevant sectors by the government and private sector; (d) awareness generation and sensitisation on DRR and CCA, impact from environmental change and degradation on urban disaster risk, and is to include participation of community and relevant stakeholders in planning, response and mitigation actions.

#### **Output 5: Public Private Partnerships for Disaster Risk Reduction and Recovery Facilitated and Enhancing Private Sector Investment for Risk Reduction through Innovative Pilots.**

Under this output the project is to (i) advocate for the need to invest in risk reduction to ensure that investments are sustainable; ii) plan ahead to protect the industry from disasters and economic disruptions while ensuring business continuity; and (iii) provide a menu of actionable ideas to strengthen resilience of the cities, thus supporting reduction of maintenance and operational losses to the private sector. Some of the key initiatives that could be facilitated with the private sector planned are, health care, water management, alternate energy solutions, and affordable housing. There will be a call for proposals from the private sector, to create a partnership with the private sector in the project.

Additionally, UNDP will work with networks such as the Asian Cities Climate Change Resilience Network, ICLEI Cities network, 100 Resilient Cities etc. to leverage the expertise to provide inputs to city administrations in the form of materials, systems and technological solutions.

The results and resource framework for this project is given in Annexure 4.

## **Evaluation Approach and Methodology**

This evaluation has included the following key actions,

1. Desk review. The desk review was an ongoing part of the evaluation. Starting with a review of all basic project documents at the inception stage to both understand the project and identify key stakeholders for consultations; as more information is made available it was also reviewed. This included IEC material, videos and other knowledge products. The desk review included,
  - a. Project documents, such as monitoring and project reports, project design and proposals, and that provided by the project stakeholders, such as brochures.
  - b. Videos and short documentation on the project
  - c. Other documents, such as information of other projects and government plans and web-based information.
2. Stakeholder mapping. The desk review process, while starting with identification of a basic list based upon an initial discussion with the UNDP Delhi project team, was further expanded after discussions with the City Project Coordinators (CPC) and a review of project documents.

3. Key Informant Interviews: Key informants include,
  - a. UNDP implementing staff: Delhi and at state level.
  - b. Donor: USAID
  - c. Key government officials: National Project Director (Joint Secretary, Disaster Management) at the Ministry of Home Affairs in Delhi and at city level government officials.
  - d. Project management in cities: In four of 6 cities the key officials involved in project implementation and its management.
4. Field visits and Focused Group Discussions (FGDs): Undertaking modified field visits was also planned, to the extent possible. This was to understand the project reach to various stakeholders involved. It was used for discussions with teams and individuals trained and involved in capacity building activities, including those who have had the opportunities to use them. It can also be used by departments within the cities who use the outcomes of the activities under the project.
5. Other stakeholder discussions: This included other actors who are working in the urban disaster management and climate change space in India, though not involved with the project. A discussion with NIUA has taken place. The evaluation team also reached out to GIZ. However, it has not been possible to have a discussion with them.
6. Data Analysis. All information that has been gathered through the desk review, key informant interviews and FGDs and other discussions has been analysed as a part of the final report. The analysis is based upon the key criteria and questions as identified in the ToR. Refer annexure 1 for the evaluation ToR.

This terminal evaluation has been conducted remotely. Therefore, all tools have been modified to include remote key stakeholder discussions and virtual field level discussions. There are some challenges, largely of getting different stakeholders together for discussions, and that of bandwidth to be able to effectively participate. FGDs too have had challenges, as some spontaneity in an in-person discussion seems to have been lost. Nonetheless, as there are no alternatives, remote and digital tools were used, and the evaluation team has been mindful of these concerns. Therefore, except for where bandwidth was an issue, video-based discussions were used to create a less remote and impersonal atmosphere for discussions. Interviews and FGDs were conducted through the Google Meet platform.

All cities had been contacted, and all CPCs were interviewed. However it was only possible to engage with four of the city stakeholders. This was mainly as the COVID pandemic has created some challenges in arranging meetings as a number of stakeholders were very busy and the project evaluation time was limited to 6 weeks. Of the 4 cities in the sample two, namely Vijayawada and Shimla were also a part of the Phase I cities, and Cuttack and Shillong have only been a part of the Phase 2 cities. Therefore, it was possible to get a good mix of both types of cities in the evaluation.

#### **Limitations of a remote evaluation**

As has been already discussed above, a remote evaluation cannot substitute face-to-face meetings always. While a few digital disruptions were encountered, this is perhaps something that went relatively smoothly.

However, there were some challenges in setting up meetings with the last mile workers, such as NGO and community workers, as well as the government community health workers known as ASHA or Anganwadi workers. Consequently, it had been possible to meet with a few government workers and only one NGO and community worker, and may only provide a partial view of the project. The one activity that was not possible to review was the actual response mechanism in place. Therefore, while discussions with the schools, community outreach groups and individuals and hospitals took place to

discuss actions of improved preparedness, actual ground actions and community understanding was not possible to evaluate. This is probably an area that would have required both more time and greater level of planning, which was not possible within the given time frame. Equally, it is likely that online review would largely be from the perspective of the outreach or trainer, and hence may have some limitations.

## Findings

### Project Contribution to Overall Development Outcome

#### Relevance

This project brings together three partners, MHA, USAID and UNDP each with different skills and approaches, to create a strong partnership to address issues of disaster response and resilience creation. MHA the nodal agency for the national government, with its experience in dealing with disaster management in India and its challenges, partners with other ministries and specialist agencies to provide appropriate disaster response. Therefore, while the project specifically works in urban areas, it is the MHA that is the specialised and experienced ministry for disaster management. It is also the nodal agency in India, hence coordinating efforts with other agencies, bringing greater specialisation from the government side together. USAID, apart from the role of the funder, also has experience in the disaster sector, as well as a very key component of psychosocial care through its personnel strengthening the technical aspects of the project. Furthermore, USAID also has experience in working with the private sector, an important partner in resilience creation. UNDP has been partnering with the GoI for disasters for a few decades, and therefore has both an established relationship with the government, and experience in disaster management in India.

India is a signatory to the Sendai Framework, which is also reflected in the focus of the 2019 National Disaster Management Policy. This clearly shows a shift away from a focus on purely disaster response to also creation of resilience. Furthermore, there is also an acknowledgement of challenges of climate change, as well as to honour the Paris Agreement in the 2019 Plan. While on its own, it does not focus specifically on urban areas, given the Prime Minister's NAPCC that was developed in 2008, which was translated into a further 8 missions, including the National Mission on Sustainable Habitat there is both a clear focus and intent to address climate and resilience in the urban space itself. While traditionally State disaster authorities show a rural bias, there is, partially through the 2019 Plan directives, and through various urban development missions, an increased focus to address urban disaster and climate change resilience. Prior to this, too, in the early 2000 's a recognition of the need for a more holistic approach to disasters, with the MHA being made the nodal ministry for disaster management, and the development of the Disaster Management Act in 2005

The increasing urban focus is also visible in the work of the NIUA, which has, through Climate Smart Cities Assessment Framework addresses urban climate change actions in five areas; with a number of indicators to review progress against in each of the enrolled cities. While covering the five areas of energy and green buildings, waste, urban planning, green cover and biodiversity, mobility and air quality and water resources, there are overlaps in the Frameworks indicators and actions in the project. For example, under water management issues discussed in the framework include that of flooding and risk assessments for the same. Similarly, it also discusses the need for improved urban green cover, as well as better waste management in cities. These are all issues that have been identified through various actions in the 6 project cities. The Project HRVA has taken a risk and vulnerability approach to identify risks to various elements to a city, and has identified the issue of flooding risks, and approached vulnerability through this risk lens. On the other hand, certain actions, such as waste management and an increase in green cover have been addressed through partnerships in the project actions, such as in Cuttack at a small scale in a residential complex where organic waste segregation and composting efforts are underway. Similarly, the National Mission on Sustainable

Habitats has among its focus urban drainage, which has been identified as a risk in city HRVAs, and actions to address are being considered, at times, as is the case in Cuttack, though other external funding sources such as JICA. This in itself, clearly shows that the HRVA can result in improved planning and identification of a city's infrastructure priorities, which in turn can also result in pooling of resources, or use of various financial and other resources available to address the different issues identified through a well-developed city programme.

Equally, the GoI has recognised the need to respond to psychological impacts of disasters, with post disaster response as relief towards preparedness and creation of resilience in communities impacted by disasters. Furthermore, the work with National Institute of Mental Health and Neurosciences (NIMHANS) has also resulted in revisiting existing post disaster psychosocial care guidelines.

This project has though its identified outcome and field actions addressed some of the UN priority areas as well as on GoI and UN strategic partnership actions. Apart from addressing SDG 1 and 11, it has also been heavily focused upon development of relevant city level planning tools and systems to address urban growth and issues of DRR, and to some extent climate change. In doing so, it has tried to improve the resilience of city governments in dealing with disasters by providing enabling tools and capacities. Further, it has also demonstrated various actions for improved adaptation to climate change, and disaster resilience through grassroots action among the cities' communities.

## Assessment of Project Performance

This section analyses the project performance against each evaluation criteria, while also reviewing the performance of individual components of the project.

### Effectiveness

#### **Output 1: Enhanced Risk Sensitive City Development Planning**

This project has a well laid out sequencing of actions if looked at from the perspective of outputs, from the identification of risks and the overlaying with vulnerabilities, including identification of social vulnerability, through the development of the HRVA. Of the 6 project cities, two; namely Cuttack and Shillong, have been taken up only in Phase II, and therefore their HRVAs were prepared in the second phase. In the case of the other cities, the HRVA documents were prepared in the previous phase, and were updated, if required in the second phase.

The HRVAs have been used in identification of vulnerability, as can be seen in the case of Cuttack, where risk sensitive planning in the form of an urban storm water drainage project is presently being executed with JICA funding. The identification of the need for such a project is attributed to the HRVA. Similarly, in Vijayawada, due to increased awareness on the issue of landslide vulnerability in part of the city, a landslide prediction project is under implementation.

Prior to the HVRA each city has had a baseline study undertaken. This baseline has systematically studied each city, where it analyses the geographical, economic and demographic profile, identifies the various hazards and vulnerabilities based upon individual city profiles. These then help provide a basis for the HRVA, creating a more robust assessment of vulnerabilities and risks right to the ward level.

Another area discussed by the project stakeholders in more than one city is the critical infrastructure assessment. This has included both hospitals and schools. These assessments have identified infrastructure strengthening activities. As in the case of Shimla the studies have also gone further too where a local hospital identified for emergency use, has had its access routes improved to ensure access to the area. A concern highlighted in discussions was inadequate availability equipment required for emergency needs. While, there are financial constraints to ensure all equipment is

available in each case identified, but a number of schools mentioned that they had not only demarcated areas for emergency assembly for both their children and the local community in the case it is needed, they had also tried to equip themselves with required equipment for emergency use. Discussions on simulation exercises and disaster planning in hospitals, has been appreciated immensely. The preparedness and response activities under the project have helped the hospitals be better prepared for the COVID pandemic. Given that this pandemic had no precedent, the process of planning a hospital for emergency actions and the development of SOPs was seen as useful to identify quick response actions and organising the hospital for a new and previously unknown situation.

Over time effectiveness may however get limited. The various evaluations and plans such as the HRVA and the CDMP would need to be updated, as new science, new development and other activities change the possible vulnerabilities of a city. For example, with Vijayawada as there is concentrated effort to address landslide vulnerability, this is likely to decrease, and the focus may need to be shifted and the focus shifted to perhaps other or newer risks that may emerge. Similarly, as cities expand, and has been noted in Visakhapatnam, where the HRVA was revised to include new areas now a part of the city, or Vijayawada, where landslide risks were not previously considered in the vulnerability assessment, but have subsequently included as the project has been ongoing and the documents have been possible to revise. A mechanism to ensure that the HRVA, CDMP and other documents continue to be relevant tools for city level planning will require them to be up-to-date and as required revised. Something that presently does not seem to be considered outside the project mechanism.

## **Output 2: Action Plan to Strengthen Early Warning System**

All cities, except Navi Mumbai, have some form of EWS systems in place. However, the systems are in different states of evolution and effectiveness. The result is some, like Greater Visakhapatnam Municipal Corporation (GVMC) have a relatively sophisticated system, while on the other hand Vijayawada is still dependent on a more informal and personal short messaging service (SMS) and WhatsApp messaging used to pass information on impending disasters or warnings. Shimla, on the other hand has dovetailed its existing system of sirens to create a city-wide generic warning system that can ensure it reaches its residents, along with using messaging mobile applications. In Shimla, all government officials are also a part of the government WhatsApp group that provides early warning to disasters or alerts to ongoing disasters. These officials also provide the information to other officers and elected representatives within their jurisdictions. It is expected that through the chain of such actions being replicated, required information will reach all members of the community also. The EWS system has also resulted in better response to disasters through the understanding of emergency response and the use of emergency operation centres, which are then used as nodes for the management of any disaster centrally.

In GVMC, seeing the relevance of an EWS through project initiatives, has developed its own Coordination Centre. The project facilitated the development of the Coordination Centre, which is a step above the previous disaster warning system that was driven from the District Disaster Management Authority (DDMA), and hence not always focused specifically to each city's issues. This Coordination Centre receives information on possible development and disaster related issues about the city, and as required, it is disseminated through a formal system that has been put in place as a part of the Coordination Centre. This Coordination Centre, an initiative of the State government, which presently is also being focused upon to identify and understand the role and value of the Centre in development and disaster actions. If successfully implemented, it is to be upscaled to create an urban observatory at the state level for all urban centres.

However, in the case of Vijayawada, given the informal nature of the present EWS system, and its operation, while presently it functions well, according to discussions with city stakeholders, it is still dependent upon individual commitment. This is also similar to some of the other cities' EWS actions. Therefore, overall effectiveness in cities could be variable in some of the project cities. These may

require greater formalisation to ensure that timely and off value information is available to all those at risk in the case of a disaster to be able to respond appropriately and in time. In Shimla, the schools were unaware of any EWS system in their area.

### **Output 3a: Capacity Enhancement of Government for Response**

All cities have conducted training programs for the capacity enhancement of the different institutions. As part of it, two categories of capacity building activities were conducted. These are (i) related to Incident Response System (IRS), and (ii) post-disaster operations mainly related to relief, and need assessments.

Awareness of disaster response, type of tools available, their use, and at times where to procure them from within the city departments was something highlighted by the city Fire Departments. Previously, the Department was both unaware of the different methods and tools that may be used in the case of different types of disasters and situations as first responders. This today has changed with greater awareness and better use of existing tools and equipment. In the case of Shimla, there has also been a request sent by the Fire Department to the city administration to sanction funds for improving their disaster response efforts, including availability of better and more appropriate equipment.

The result of IRS activities was found to be very effective in all cities. For instance, it was noticed in cities like Shimla and Shillong, prior to the IRS programs, a few departments were familiar and involved in disaster management (DM) activities, but after the IRS programmes, each of the concerned department has been provided with a clear direction and knowledge about the roles that department needs to play in case of a disaster. Correspondingly, in Cuttack, the IRS training has brought different stakeholder departments' together and has helped to streamline the flow of information about disasters. Similar IRS programs have been conducted in other cities. As was learnt during the interactions in Shillong and also in Vijayawada, innovative interdepartmental participatory mechanisms evolved from IRS training have helped to enhance the efficiency of local governance institutions in service delivery at the last mile. The use value of these programs had been clearly visible during COVID 19 Pandemic operations by city corporations. In Phase II cities like Cuttack and Shillong grassroot training programs were conducted for personnel from various departments.

In Cuttack city, the training program has helped to prepare Standard Operating Procedures (SOP) for flood management. In Vijayawada and GVMC, the project has helped the departments to prepare the respective department plans. Vijayawada has learnt from the existing SOPs to develop other required similar guidance, especially in the COVID situation, and came out in discussion with senior government officials. It was noted that the systems developed such as SOP guidelines had created a model that could be replicated further in other emergency/disaster systems. This, in conjunction with certain activities under community response, like the psychosocial care outreach, have been attributed by the government departments presently involved in the management of the COVID pandemic in the four cities where discussions were held, as being effective in responding to the pandemic, reducing risk of mortality and addressing various concerns of the public arising from the present challenges.

While the capacity building activities, including the development and training for the IRS system has resulted in improved Departmental Disaster Management Plans (DDMP), thereby to some extent mainstreaming this into everyday planning within city departments, some challenges remain and impacts overall effectiveness and sustainability of the project. While there have been a number of training activities given, participation has been often limited. This has been due to varying priorities and needs of the different departments at the time of the training, resulting in either limited or no participation in all training activities, reducing effective disaster responsive departmental level planning for disaster management. Another issue identified is the transfer of trained officials. While this results in project related learning being included in other parts of the state where the official may be transferred to, if the environment is conducive, it also results in capacity loss for this crucial initial planning state of these activities of the project. Given that these activities are in a relatively early stage



of urban planning, and there is still only a gradual shift from looking at DRM to also include an urban lens, such loss of capacities can result in reduced effectiveness in planning.

### **Output 3b: Local Level Training for Preparedness and Response**

As some of the cities were also a part of Phase I, such as GVMC, Vijayawada and Navi Mumbai cities, their HRVA and other activities had already been completed. In the second phase therefore, they started to use the information generated in the previous phase to develop their Ward Disaster Management Plans (WDMP) and formed Ward Level Committees. This was accompanied with training and awareness programs for vulnerable communities to increase the awareness of disasters. In others like Shillong, which were taken up in Phase II, all activities were undertaken only in Phase II. Nonetheless, there has been in both types of cities a value identified in activities undertaken with the communities. For instance, in Shillong, the communities that have received training programs were reported to show better responsiveness during the disasters than those communities that have not, as has been noted in the recent COVID situation. Similarly, the emergency mock drills conducted in health establishments have helped the hospital authorities to enhance their level of preparedness.

In Vijayawada, the project has, with the help of community-based organizations helped in gender empowerment particularly during the flood situations. Women have been made aware of risks, impacts and ways to reduce their vulnerability in case of flood related risks. There has been a special outreach to women in the city. The training programs for Anganwadi and ASHA workers in Vijayawada has also resulted in better outreach and greater efficiency of these frontline service providers in the COVID pandemic. In GVMC, the project has helped vulnerable fishing communities diversify their livelihood base by providing masonry training, helping create economic resilience. Similarly, in Shimla discussions with government stakeholders suggested that they would focus upon women in the community for resilience creation, as they can become first responders at the household level to avert or manage in case of a disaster.

Discussions with the Civil Defence personnel in Shillong, suggested that there had been improved response among communities in wards where the project had previously worked. Mentioning both post flood rescue and the COVID pandemic, the Civil Defence mentioned that the community were easier to work with, more aware and hence had lower levels of risk in times of disaster than had been previously observed in the same area.

In yet another discussion on community preparedness in schools in Shimla, school staff has created an increased awareness on disaster response among the staff and students who were affiliated with the project. The second important aspect highlighted has been the use of information received to create disaster plans and signage in the school, increase the availability of emergency equipment and organise various rescue and response teams within the schools. A few schools also mention increased attention given to retrofitting actions that had been previously ignored. There was also a mention of education in the schools reaching the community through students as they discussed what they learnt at home. Discussion with school teachers and college staff in Shimla, while showing both an appreciation for improved understanding on disaster response and community outreach, mentioned that they were still to be completely equipped to handle disasters. In order to do this, the challenges identified were those of having a sufficient stock of appropriate equipment to cater to the needs of both their school, and if required the neighbouring communities. The issue was largely that of insufficient funds to procure the required equipment, as the schools do not have access to any external source of funding for disaster preparedness. In fact, the schools in Shimla, all of which were private schools, mentioned that previously they were largely unaware of the type of equipment or its use, that was required to respond to emergencies. Where there was some awareness previously on equipment required for emergencies it was limited to a few basic types of equipment like torches and ropes, and usually in limited quantities. This is a major difference brought about in the schools' capacities for disaster response.

In contrast to this are the government schools of Odisha, where too the project has reached out to improve disaster response, teachers here mentioned that as the government has been using schools as shelters in post disaster situations. Therefore, they already have some disaster preparedness actions and basic needs and survival life skills in times of disasters. In Vijayawada the project outreach also focused on schools in areas vulnerable to floods and landslides. Here the children were provided information on actions to take to manage in case of a flood or landslide, as the case might be. This project, while strengthening the school's capacities to respond, was also able to create greater awareness among the students and teachers, and to some extent also the community to respond to disasters. However, while government schools, which are usually dependent on government funding are probably likely to have access to better equipment or other requirements in the case of a disaster if it is the focus of the local government, private schools, from these discussions will require to identify ways to further strengthen their preparedness from external sources.

#### **Output 4: Knowledge Management**

Knowledge management includes the IEC material developed, videos on the various project related activities, as well as the different tools of the project. Of these, some of the information, mainly pertaining to the IEC material and the use of outreach is related activities is based upon discussions with various city stakeholders, but not the community. Therefore, the opinion of the community on the actual effectiveness of the programme has not been possible to include.

The project has, though various city level websites provided all major tools and documents developed in each city. Overall quality is good and most of the information is easy to understand, although some stakeholders did mention challenges in understanding complex assessments. It is an effective system to ensure that information created under the project is available to the public and those who wish to use it. However, how effective will the system be to ensure that the information is used in future planning and decision-making is going to be dependent upon a number of factors, including its being updated, interest of city stakeholders, many of who may get transferred and new persons may not be equally interested or knowledgeable on the use of the tool.

As already discussed, a number of different activities were initiated under the project. These include, psychosocial care, school awareness programs and ward level activities. A diverse set of methods were used for these outreach activities. These include IEC material in the form of pamphlets, documentaries during movie intermissions in cinema halls, sand art in Cuttack, and community information sharing through NGOs. These programs have different levels of effectiveness. For instance, the ward level awareness programs in Vijayawada has helped the vulnerable communities to be better prepared against the floods. Here local NGOs have been used to summarise information from the HRVA, CDMP and simulation exercises to make aware communities living in possible impacted areas of the risk of floods in their area, and actions required.

In Shimla, the training on psychosocial care has been very useful in addressing concerns of and handling COVID patients. Similar feedback was also received from Shillong, Navi Mumbai and Cuttack. In fact, this is an under addressed area in disaster management, and is seen to be important. Therefore, this is an area where UNDPs help has been seen as very important in addressing post disaster actions, and helping communities recover faster. There has also been good quality and useful material made available on the issue, which can be used further in the future for reference too.

The IEC material developed under the project has been appreciated in all cities. The knowledge products created were used to make aware decisionmakers and the community and to provide basic information on disasters, disaster planning and disaster response, and support the government department in planning actions. Although they have been appreciated there is presently no strategy in place on how to further replicate the existing material or meet the high demand for it. Without that, the effectiveness of this project's actions may be limited to only a few years after the project. In the

case of Shillong, stakeholders asked for the publication of more literature as the amount printed so far was limited.

However, due to the time taken to develop some of this material, at least in the case of Shillong, local Khasi language literature has still not been made available, even though it has been developed. The early development and distribution of local language material is probably something to consider to ensure that there is greater outreach to the community and local level officials and political representatives, who may not necessarily be conversant with English.

### **Output 5: Public Private Partnership**

The Public Private Partnership (PPP) activities have been slow on take up; hence effectiveness has also been limited. In GVMC, the public sector units have come forward to restore local waterbodies for flood prevention, and in Cuttack a residential area has been involved in the scientific process of organic waste management at a ward level. Although limited to three cities only, there have been overall about 12 different initiatives identified, with a few already under implementation. Therefore, while there is some work on the private sector involvement, it is largely at an early stage presently.

### **Overall Summary on Project Effectiveness**

While having been a part of the project activities for longer has played a role in improving the planning and inclusion of disaster in the planning and response efforts in a city, it is not the only factor that plays a role in the way a city is able to absorb certain activities. It seems to be also related to its existing capacities and systems in place in the individual cities. Therefore, while Cuttack, which is a Phase II city has not only used the HRVA and CDMP to understand risks, it has also used other programmes and donors to address some activities such as the urban flood management response through improved drainage. This seems to be attributable to a few different factors namely, (i) the commissioner office having technical expertise already within some of their senior officers who are able to better understand and absorb ideas and plans, (ii) some issues like the urban flooding have been a pressing and urgent problem, which were already known, though perhaps not adequately articulated previously in terms of cause and vulnerability, making the HRVA and CDMPs useful planning documents, and (iii) the city has already been grappling with a number of disasters including the impacts of dam releases from upstream Hirakund Dam, the two rivers that flow through the city and cyclonic storms, making them more ready to take up actions in the area of DRR and DRM. Vijayawada a Phase I city, although it had an initial slower start, with the need to revise the HRVA to include landslides, has, through a dedicated CPC, who has been able to provide much needed linkages even though the senior level officials have changed frequently. In both Shillong and Shimla, the capacities in the government seem to have been so far limited, and the CPCs also changed, it seems to have had some impact in comparison to other project cities.

The project capacity building activities have also reached out to both government department officials and their ancillary staff. This is specifically visible in enhanced capacities to respond in staff of the health department during COVID, the Fire Department and Civil Defence. Response of other departments has been variable however. Nonetheless, there has been both increased capacities and greater awareness of response and management during disasters. As mentioned, in some cases such as Shimla, the Fire Department has also requested funds for better equipment. At the community level too, the project has been effective in the way it has created awareness on disaster response. While schools have had a mandate to provide senior school children with an understanding of disasters, the project has ensured all students are equipped to respond to disasters. Where the project has reached out to the communities, it is understood that there has been improved capacities to respond. However, in some areas, such as slums and very crowded parts of the city the translation of identified strategies into ground level response plans appears to be insufficient and specific tailor-made solutions and other initiatives may be needed.

The effectiveness could have been further improved if there had been better absorption capacities to the activities at the stakeholder level. Nonetheless, nearly all activities, other than those under PPP had a number of elements that were found to be useful and were effectively used in planning, response and capacity creating in the city and among the community.

### Ranking

Output	Ranking	Comment
Output 1	4	Well developed products, but could include a mechanism for updating
Output 2	3.5	EWS formalisation only in GVMC, IRS seems limited and response still largely based upon pre-project systems
Output 3a	3.5	Training and capacity building, specifically of ToTs and IRS, SOPs, including psychosocial care done in all cities. Uptake of Department Disaster Plans outside first responder and core departments limited in Vijayawada
Output 3b	4.5	Most activities, especially psychosocial care, well received and implemented. However, structural assessment training among engineers could improve with field training and inclusion of non-RCC structures
Output 4	4	Project documents, videos and tools well developed and, on the website, IEC and other material translations taken time and hence would reduce efficiency
Output 5	3	Challenging activity, due to private sector hesitation, and administrative issues, however some limited activities have started, indicating that can be further work in the area, will take time and more effort.

Ranking from 1 to 5. Maximum for performance is 5 which is excellent while 1 is poor performance

Colour Code

5	4	3	2	1
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### Efficiency

This section discusses the overall and component wise efficiency of actions and activities undertaken by the project, and ranks it on a scale of 1 to 5. The way the project design conceived the development of baseline studies, followed by the HRVA and then other actions, such as the CDMPs, structural assessments, and capacity building is well thought out and was a good way to improve execution and create efficiencies in project implementation. Details of individual components are discussed below, that analyse actual implementation actions and efficiencies achieved.

#### **Output 1: Enhanced Risk Sensitive City Development Planning**

There is some difference noted between the uptake and implementation of activities that have been a part of Phase I and II and those who were later included in Phase II only. In cities that were a part of Phase I, there was overall greater awareness on the use of exercises such as the HRVA, CDMPs and the incorporation of the information in city planning exercises. The result has been that some like Navi Mumbai and GVMC have revised their HRVA to incorporate new information, or as in the case of GVMC new areas included in the Municipal Corporation area. Equally, GVMC, has also used it to shift its thinking from purely response to resilience, and to identify other projects like beach vegetation redevelopment to reduce erosion and impact from storms and beach erosion, and to work with other donors, such as the World Bank on infrastructure development actions. Similarly, vulnerabilities of landslides, which previously were not such a well identified risk in Vijayawada, has not only been identified, but also resulted in a project being developed to monitor and create an early warning system for landslide prediction. In Visakhapatnam, studying the issues and causes of landslides has resulted in increased focus on use of ecosystem (vegetation) based interventions in landslide prone areas as a means to reduce this problem.

In a comparable vein, in Cuttack, a Phase II city, one of the risks identified was the problem of urban flooding. The intervention found to be most appropriate was the redevelopment of, and in some areas the development of, new urban stormwater drainage systems, for which funds have already been sought from the Japanese Bank for International Cooperation (JICA).

These examples show how the project has been able to leverage information for better decision making and planning in the project cities. However, in the case of Shillong, where there is clear demand for DRM related activities and an appreciation of activities under the project, the city administration felt that the HRVA document was in itself insufficient to help translate vulnerabilities to action. While part of this may be due to the difference of being relatively new to the use of such tools, as it is a Phase II city, a need for turning the HRVA and other documents on risk and vulnerability to Geographical Information System (GIS) based planning tools with spatial information was suggested so that it could be more useful for day-to-day use.

Structural Assessments undertaken in identified vulnerable areas, as illustrated in Shimla, this included a number of old, heritage or important structures, to identify (i) if there were weaknesses requiring retrofitting, (ii) issues of access either to get away from or to the identified structures, and (iii) in the case of hospitals/medical facilities and police and fire stations to strengthen and equip them for disasters. Specifically, in the case of the important response structures, this has helped make them more efficient to respond to a disaster. In the case of heritage and old structures, this is also finally dependent upon other factors, such as capacity building activities as identified in Output 3, and the response of building owners etc. to undertake required actions.

The project was designed to follow a very systematic approach of identification of risks and vulnerabilities, develop appropriate plans and simulate risks and identify ground-level concerns, starting with identification of ward level vulnerabilities with the help of baseline studies, that fed into almost all activities and was in a sense a backbone of the project in each city. However, during implementation some overlaps between these actions were found. While this may have technically resulted in improved efficiencies towards project delivery, it may impact effectiveness of the overall objectives of some of the outcomes, and perhaps final project efficiencies.

## **Output 2: Action Plan to Strengthen Early Warning Systems**

Among the project cities, the most advanced EWS system was found to be in GVMC. The city has developed a City Operation System that receives disaster warnings and translates them to risks for city stakeholders and disseminates the information. This is now a well-established system that does not seem to require any further hand holding, or is dependent on individuals in the system to ensure it is operational. On the other side is the Vijayawada SMS and WhatsApp based system that is capable of reaching all vulnerable populations, further substituted with the use of public announcement systems in vulnerable areas to warn residents. This can therefore reach even those who are illiterate and may not be linked to formal EWS systems. However, it is still largely dependent on individuals, and therefore may not always work efficiently. Similarly, Cuttack is still to evolve a formal EWS system, and is dependent on SMS and WhatsApp messages, which are partially dependent on individuals in the chain.

On the other side, in Shimla there is a generic EWS system, the government siren that is used to warn of disasters. It does not give any specific information on disaster type, intensity or the impacted areas. There is also, more recently, a SMS and WhatsApp system being developed. However, discussions with school city stakeholders suggest that they are unaware of the EWS system, and not sure how they will be informed, even though they have developed their disaster response systems. This suggests that there is still a need to develop further links to make it a robust system.

### **Output 3a: Capacity Enhancement of Government for Response**

Based upon the project design, the CPC is to initiate the planning process of various project activities with the Municipal Corporation, which in turn is forwarded to the State government for the release of funds to conduct the activity. However, to facilitate the functioning of the project activities, the CPC is posted/placed in District Disaster Management Authorities (DDMA) in cities where the DDMA is located, and in others, like Vijayawada with Municipal Corporation. Either way, the CPC has to work in tandem with Municipal Corporation and response varies with a direct impact on the efficiency of the project. Overall, this helps create a synergy with the functioning of the city activities and also provides an awareness to the DDMA of the activities that are being taken up in the CDMP, and the city priorities. Awareness in the DDMA is especially improved where the CPC is working with the DDMA team directly. Nonetheless, this has also resulted in differential functioning of the project in the different project cities. Part of this has also been dependent upon the CPCs exposure to city functioning, length they have been associated with the project, and previous association with similar activities. Hence, cities like Shillong, Cuttack, Navi Mumbai have CPC with relatively less exposure to the Municipal Corporation personnel while cities like GVMC, Vijayawada, Shimla have the advantage of continuity of CPC and/or involved with similar work previously, resulting in a higher influence on project implementing efficiencies.

Another factor on how well the project has been implemented is also dependent upon 'personalities' driven issues. While the role of the CPC is important in driving the activities, the level of interest, inclination or priority of higher-level officials associated with project decision making in the city has, also in the project cities, exerted an influence on how the project is implemented. Therefore, while in all project cities, the officials in-charge of or a part of the early response system were of the view that the project added value to their planning activities, in Cuttack, an issue identified was the lack of a common platform or system. The Cuttack concern came from a need to ensure all departments and agencies include disaster risk in their regular planning activities, as each department had its own agenda and interests, and often only limited understanding of disaster management.

Yet another challenge, hampering the efficient implementation and take up of project related activities is the frequent transfer of government officials at the decision-making levels in the city, such as the Commissioners and Deputy Commissioners. For instance, in Vijayawada, in a period of four years, the CPC has to work more than five different commissioners. The result has been not only the need for the CPC to once again present the project activities and regenerate the momentum to continue actions underway; not all officials have the same level of interest or understanding. Hence, much of the onus of keeping the project falls on the CPCs efforts. Consequently, capacities in the cities keep varying, impacting effective implementation of the activities identified under the project.

### **Output 3b: Local Level Training for Preparedness and Response**

Project has helped to raise the level of awareness to the disasters and also in preparation of management plans at ward level in vulnerable areas of project cities. The psychosocial training, which is presently being used extensively in the city to handle the COVID pandemic. It has, according to stakeholders from NGOs and the Health Department of Shimla, been extremely effective in reducing stress and psychological impacts in the management of COVID and post COVID anxiety among city residents. It was also highlighted as an important tool to deal with COVID anxiety in Shillong. In both cities the training has been expanded to other districts, essentially creating a large footprint of impact. While this may be argued as not sticking to the essential 'urban' focus, it also indicates the value seen in, and therefore the larger effectiveness of the activity, though may reduce efficiency in spread within the city. Another issue picked up in both cities was that a city and its hinterland cannot be separated, as the city also caters to the needs of the neighbouring areas, and hence those in the neighbouring areas are likely to also use the services of the city, and be dependent upon them.

Discussions with the Civil Defence representatives in Shillong also highlighted another important aspect of this project. They mentioned that apart from the Civil Defence and NGOs, usually there is no outreach to the people or at the grassroots. Therefore, the inclusion of these groups in project activities has resulted in the translation of activities directly to the communities in the project areas.

School level awareness on disaster response has resulted in a larger audience being reached out to for community actions to disasters. However, in Shimla, a discussion with a group of elected representatives suggested that this is not the best tool to address community preparedness or response, even if students are often considered a medium to reach out to the larger community and create awareness. The reasons identified included the alarm and mock drill is unlikely to be possible in a larger population as this is at best in a closed environment like a school. Also, the situation in a school is likely to be very different from a community requiring different actions. In schools there can be clear exits and actions, but communities, especially vulnerable communities in slums and crowded areas are likely to have other challenges. These might include no open space to move out into or no escape route due to the closely built houses, or high level of building collapse leading to trapping of residents. Therefore, community outreach will essentially require further more specific planning, and perhaps there might also be a need for development of laws/bylaws on planning and buildings to ensure safety of not just a building but the community from unplanned growth.

#### **Output 4: Knowledge Management**

The need for the translation of information from technical documents such as the HRVA and the CDMP for everyday use to non-technical specialists, while highlighted in Shillong, it was also noted that the different cities. In Vijayawada where this was not an issue, the city team is still dependent upon outside specialists and their knowledge, such as consultants hired in either this project or other projects, to translate the information for easy understanding. The true value and use of this information into planning is therefore dependent upon external support, and its translation into city plans hence could be limited without adequate non-technical translations and support to make Disaster Management plans operational.

In all project cities, the IEC related documents have been translated into vernacular languages and also all knowledge generated was made available in the public domain. Similar level of efficiency observed at group and individual level. However, distribution of vernacular translations in some cases have taken time as pointed out in Shillong, therefore reducing impact slightly.

Nonetheless, all cities have their information and documents available on the project's website, including project documents and tools. Some like Cuttack have got a step further by creating documentaries for public consumption and awareness creation that are shown in cinema halls regularly. This will help reach out to a larger audience, and could create a higher level of awareness and preparedness in the population in general on issues of disasters and disaster mitigation and response.

#### **Output 5: Public Private Partnership**

There are several instances of private agency participation but limited to delivery of agreed services or products with very little efficiency in PPP presently.

#### **Overall Summary of Project Efficiency**

The project was designed to provide a certain systematic and efficient delivery through the identification of vulnerabilities, development of appropriate plans and actions based upon them and creation of capacities and inclusion of various stakeholders from government, to the community and the private sector. However, given the large number of stakeholders, and very technical nature of some activities, or perhaps even the introduction of some very new concepts like structural safety and psychosocial care, the efficiencies have been variable. This is likely to always be a challenge in a project

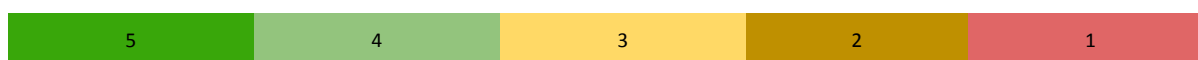
of this nature and can only be overcome with the absorption of tools developed under project as a part of overall city planning systems. This however, provides a good demonstration of tools developed under the project and their use.

### Ranking

Output	Ranking	Comment
Output 1	5	Delivered efficiently. Has, in some cases, been also been used to identify projects with other funding sources
Output 2	4	Systems improved in all cities with a clearer system of information flow identified. But, clarity of ensuring information reach in the community presently not noted.
Output 3a	3.5	Awareness for DRR planning exists, but capacities but capacities require further strengthening. ToT for some activities like psychosocial care has been effective.
Output 3b	4	Major achievement is psychosocial care and COVID outreach, masonry training well received, GVMC trained fisherfolk for alternate livelihood to strengthen resilience. Some delays, resulting in field training not completed for all structural assessment, and local language training for training was delayed.
Output 4	4	Most products are well developed and on time, therefore possible to use well. However, translations have taken time reducing efficiency.
Output 5	2	Low on effectiveness and has attracted limited private sector involvement

Ranking from 1 to 5. Maximum for performance is 5 which is excellent while 1 is poor performance

Colour Code



### Relevance

The project focuses on urban areas, which till recently was not the focus of disaster risk management actions. Hence, this project has added a much needed and an under addressed need. Furthermore, it is estimated that about 40% of India will be living in urban areas in 2031. Therefore, suggesting a large and vulnerable population in the country's urban spaces. This project therefore, is in this context itself extremely relevant to support the identification of ways to create greater urban resilience to both disaster and possible impacts from climate change.

#### **Output 1: Enhanced Risk Sensitive City Development Planning**

An activity that has been highlighted as useful and relevant by stakeholders in all cities has been the structural safety audits. Done in limited areas of the cities, with only selected vulnerable wards taken up for simulation exercise, it was noted to have created a better understanding of the risks in the study area of critical infrastructure, as well as other buildings. This was specifically highlighted in the three cities of Shimla, Shillong and Cuttack. In fact, some of these aspects have not previously been either understood or taken up in the city. Therefore, the project has been credited to improve understanding mitigation strategies and post disaster management for identified areas of action. The use of the simulation exercises in Cuttack has further enhanced the vulnerable wards capacity to respond to disasters in terms of institutions and to provide coordinated efforts post-disaster.

The HRVA; that follows the city baseline studies, is the backbone of the project activities and has undertaken extensive data analysis to identify climatological and other risks that impact project cities. In the case of a few cities like Vijayawada and GVMC, they have also been updated based upon newly identified risks or to include new areas under the city. However, the translation of climate change data, use of existing climate models and their downscaling to understand possible impacts that may



occur, may not be adequately addressed. Given that some of the vulnerabilities identified will result in structural interventions, such as the urban stormwater drainage project in JICA, there is a need to nuance the risks and vulnerability as the document can then inform better about future city needs and projects, improving city resilience and planning. The simulation exercises and the CDMPs have been found to be relevant to identify vulnerabilities and required actions. However, given that there is new science, and improved response systems, to ensure relevance of these tools, there is a need to identify appropriate updating mechanisms and their incorporation in city plans and actions also in the future.

Business Continuity Plans have only recently been taken up. This activity is relevant in cases where businesses are required to provide emergency support or shelter in case of a sudden disaster to their employees; to ensure the continuity of the business. However, being a relatively recently started activity, it is presently difficult to assess the activity.

## **Output 2: Action Plan to strengthen Early Warning Systems**

Overall, an EWS system is seen to be of high relevance in all cities, as it helps reduce the impact of disasters. In the case of Shimla, there already has been a generic siren system being used to warn the city's residents, as has already been discussed. This system predates the project, and clearly shows the need for such a system. To various levels other cities too have developed their EWS system, of which the most robust is the GVMC where the City Government has already put together a rather sophisticated system in place that provides useful and timely information to inform stakeholders of possible. GVMC's system has, it is understood, learnt from the previous experiences of this project to develop their own system as they find useful and appropriate for their situation.

## **Output 3a: Capacity Enhancement of Government for Response**

So far, it has been noted that Department level disaster preparedness and response plans have been made in Vijayawada. This translation of the vulnerabilities into a preparedness and response system however seems so far to be limited to Vijayawada. In the case of Shillong and Cuttack it presently is restricted to the IRS system for a limited number of actors in the city government.

Disaster response preparedness also comes from other actions, such as training actions and SOPs for response to various disasters. Of these, there has been an overwhelming positive response on the value off, and need for the psychosocial care training. This training activity that has been provided to various government, NGO and other volunteer groups has proved to be very relevant in the present pandemic situation.

At a higher city level, some of the activities have been geared towards structural strength assessment and training activities, mason and barbender training and ward level response and simulation exercises. While the ward level simulation exercises, which are a part of Output 1, and are therefore discussed more under the specific output, are also important in creating community awareness on specific disasters in an area. How well this has worked may be beyond the scope of this evaluation, mainly as a remote evaluation, it has been unable to visit communities and schools where the activity has been undertaken. The structural strength training activities has been imparted to a cross section of different stakeholders that include government departments in-charge, such as the Public Works Department (PWD), private agencies like architectural firms and academics and academic institutions. This training has been appreciated by those who the evaluation was able to speak with. While some of these issues may already be in academic courses, this was still seen as a way to improve understanding and to provide further insight to the everyday working and assessment in a city to ensure safer cities. However, as some of these activities have been conducted during the COVID pandemic period, practical and hands-on training has not been possible. Stakeholders who attended these programmes therefore recommended that the teams also receive an additional practical activity once it is possible to ensure that they are able to do group-based activities. Similarly, the project's

mason's and barbender training was also considered to be useful by the trainees in Shimla. They mentioned learning a variety of techniques and methods to strengthen buildings for specific disasters, with both new and for existing buildings requiring retrofitting. Both the structural strengthening and the mason trainees also mentioned that there was a need to cover old, traditional and different types of structures, and that the syllabus only included RCC structures too. In the case of both Shimla and Shillong there are local type houses and also at times heritage buildings. These buildings are often a part of the older building stock of the city, therefore requiring specific attention. The present courses were not considered to be able to adequately address this issue.

The project has also supported the development of various disaster response SOPs. In Vijayawada, these links were not only appreciated as being extremely useful, especially as they helped introduce concepts and actions of disaster response and management in departments other than those designated as first responders; the Fire Department, but also others that are involved during disasters. In fact, discussions in Vijayawada mentioned that the SOPs were used as a basis to develop COVID related SOPs, as they needed something that was practical and useful, and found the structure of those developed under the project to be useful.

Another point that got highlighted on the enhanced government response was the spread of the activities outside the project cities. In both Shimla and Shillong some of the activities related to the training, such as the mason training and district disaster response have now been further spread into other districts. This has definitely diluted attention to the project cities, but also points to the value of the activity for the states involved.

### **Output 3b: Local Level Training for Preparedness and Response**

All project cities have undertaken a number of outreach programmes with communities. These include mock drills, use of IEC activities for community awareness, simulation exercises, amongst other ways to make aware and prepare vulnerable communities and to empower communities towards resilience and disaster response. In some cases, such as was mentioned in discussions in Shimla and Cuttack, school related actions were used to work with both school children and local communities. These were used to address specific disasters and vulnerability impacting the local populations. Identified actions for community outreach are based upon specific vulnerabilities, for example, in Vijayawada the landslide vulnerable areas were specifically targeted for response to landslides. Similarly, in Shimla response and preparedness was geared towards earthquakes.

Although, as mandated by the government there was at the senior level, in the school syllabus, a chapter on disaster response, it only included theoretical knowledge to a limited number of children; the seniors. The present intervention has been able to expand it to include all children, and is more focused upon (i) immediate actions of response to a specific disaster that is relevant for students in the school, for example in an earthquake area they are focused upon earthquake related response, as compared to responding to a flood or landslide related disaster; and (ii) preparedness though identifying equipment that may need to be available for response, such as ropes, firefighting equipment etc., and specific school/hospital plans with signages. Therefore, disaster response has been brought down from general to specific, even if in a limited area, to start a discussion and identify an appropriate way to respond.

A well developed and very relevant activity in capacity building have been the project psychosocial care actions. They were developed by NIMHANS, who not only are well experienced with the activity, but have experience of disaster related psychosocial concerns. The result has been experiences and learnings of the project's psychosocial care implementation are now to be used to inform revision of the present national government guidelines on the issue.

#### Output 4: Knowledge Management

IEC and other information generated under the project has seen to be relevant by all stakeholders spoken with. In many cases there is a demand for more information and IEC material and if possible future continued knowledge available based upon newer risks and possible vulnerabilities that may come up.

Most information has also been made available online through the city official websites, and is expected to thereby be available to the general public as well as to other government departments. However, it may be questioned on how appropriate this mode for creating awareness is, as compared to use of public outreach programmes.

#### Output 5: Public Private Partnership

With the support of a private sector agency that was working on heat management related equipment, Vijayawada has provided, on a small scale, heat vests to the city traffic police personnel manning roads. Similarly, other initiatives have been planned, though many of these may not have been possible to implement so far. These include waterbody restoration for flood management and green walls and rooftops for new buildings in Vijayawada, organic manure from waste in Cuttack, and waste to energy near Visakhapatnam. While these are likely to be relevant for improving the management of city in terms of waste management, creation of resilience to floods and storm surges through improved waterbody management, actions of green walls may be more appropriate for aesthetic value than to reduce environmental and climate footprint.

#### Overall Summary for Project Relevance

The overall project concept and actions identified are very relevant in the sphere of urban development in India. While cities have been getting into more systematic planning and management to improve city functioning, they have traditionally not been a focus of disaster resilience creation. This project therefore has identified tools to support planning for natural and other disasters. However, new and emergent disasters are still weakly identified in the tools and need to be addressed better in future actions. On the other hand, tools like the IRS and EWS are very relevant, though the EWS may require further strengthening to create long term sustainability.

Under the project there have been a number of training and capacity building activities, from school and college mock drills, to hospital preparedness plans to psychosocial care. All these have been found to be very relevant by stakeholders involved. In fact, the COVID pandemic response efforts by the government have used the psychosocial care training to reach out to both patients and others under stress from the pandemic, which seems to be very relevant in present times. However, the structural assessment training, while relevant for RCC buildings, probably has been inadequate to address traditional buildings, heritage structures and those that may have been built with alternate materials. Given that many cities in India are either old or mixed building types, this activity could have been further tailored to city needs.

#### Ranking

Output	Ranking	Comment
Output 1	5	Planning tools etc. developed very relevant for the project cities to identify disaster resilient response. The a few cases, the tools have been used to identify city priorities for some vulnerable areas
Output 2	5	Cities found activities relevant and included the IRS and EWS actions into their existing system and management actions
Output 3a	4.5	Activities very relevant and well taken up, but reach has been limited as participation principally of some departments and the uptake of DRR in their functioning, reducing project activity relevance creation on DRR

Output 3b	4	Psychosocial care been very relevant and eclipses other activities, but relevant others too and needed more tailoring to local needs - e.g., structural training and mason training to include more than just RCC, community preparedness outreach activities is variable
Output 4	4.5	All products relevant, but due to delayed translations use may not have been reduced
Output 5	4	Private sector a relevant stakeholder and must for DRR and resilience in city, but as uptake was limited it has not taken off as planned.

Ranking from 1 to 5. Maximum for performance is 5 which is excellent while 1 is poor performance

Colour Code



Sustainability

City stakeholders consulted have found most of the activities undertaken as being useful. The city CPCs have been also noted to have become resources in the project cities. However, it has been noted that much of the efforts undertaken in these cities is dependent upon the CPC and project funding. This section discusses these issues in greater detail.

Output 1: Enhanced Risk Sensitive City Development Planning

City level assessments, plans and other documents developed under the project have largely been undertaken by specialised technical groups and agencies. While discussions suggest that the agencies undertook extensive consultation with various stakeholders and included opinions and concerns of government officials in the development of these products, essentially it was done by a specialised agency. It is highly understandable to use such specialised agencies as they have the techniques, specialists and knowledge to develop these documents and plans. However, there is also an issue of little translation of this understanding and future updating of the plans and documents within the government departments. In fact, discussions with a few government officials in the cities also mentioned the need to include government officials and departments in the development of these technical plans to create a better understanding and build their capacities to undertake the job in the future.

In the case of Shillong, it was also mentioned that the translation of the HRVA into a simplified GIS based planning tool was missing, without which it is likely that the document will have only limited use. Some of these issues are directly related to the existing capacities of those who are often involved in day-to-day management of the city and may not be technical specialists. Therefore, they may be unfamiliar with risk and vulnerability related assessments. However, they are in-charge of planning and prioritisation and execution of city related actions.

Another risk to sustainability identified was that, as many of the documents were only used in a limited way so far, and was largely dependent upon the CPC creating awareness, and pushing the agenda, it was possible after the ends the documents may become relics of past planning exercises on city websites. Discussions suggest that the use of the tools developed under the project are presently not sufficiently entrenched in the day-to-day planning or longer planning cycles of the city.

Output 2: Action Plan to strengthen Early Warning Systems

Presently, the GVMC City Coordination Centre that houses the early warning system and Shimla that has a well-established government siren warning system, all other EWS systems are presently informal in nature. It is unknown if these systems will be taken up further and established post project exit.

### **Output 3a: Capacity Enhancement of Government for Response**

Detailed discussions with various stakeholders indicated that there may be some serious issues of sustainability for gains made towards resilience and reduced vulnerabilities under the project. CPCs are still the focal points for activities related to project activities, and also seen as excellent assets to address other similar issues in the city. However, this also suggests that there is no alternate system or capacities yet in place to address future actions and needs in areas of disaster and climate vulnerability and resilience as has been undertaken under the project.

Equally important is the regular updating of knowledge products with new information or perhaps also publication of the same information for further dissemination. This requires continuous updating/up gradation and presently no plans are in place, and are likely to negate gains made by the project.

Another concern identified has been the lack of institutionalisation of training activities within the government system. While the training activities have been appreciated by all government officials who received them, and there was continuing demand for more training and for newer knowledge, there is presently no government system in place to provide future training on the subject. Discussions with government agencies also suggest that there is also presently no thinking on how to institutionalise training and skill development activities on DRR, vulnerability, response or related planning activities. It was also mentioned that Corporators, who are finally involved with Ward level planning are often uninterested, and unless absolutely necessary prefer not being involved in any planning or resilience creating exercise. However, given the funds and day-to-day planning activities they are involved in, there is an important element that is still a weakness in the chain.

### **Output 3b: Local Level Training for Preparedness and Response**

Some of the activities such as the school level training and mock drills are likely to continue, as this seems to have become a part of the school regular activities. This is, though the process of educating students on disaster response, the larger community is also likely to be reached on the same issues. However, outside this activity, it is difficult to evaluate if long term capacity building, training or awareness creation towards DRR may continue. A discussion with some of the stakeholders in Shimla suggest that they are both interested in continuing and are thinking of ways to continue with community level outreach. However, presently there was no specific system identified in any of the project cities that might have been put in place to undertake local level community response and preparedness regularly.

Discussions in Shimla with the Health Department also brought out how there is presently increased ownership of the psychosocial care training. The training provided by the NIMHANS team to the Trainers, was in the Health Department, further modified to make it better tailored to their use prior to delivering it to the frontline health workers. This definitely indicates an increasing interest in absorption of the training activity within the Health Department system. Discussions with NIMHANS and project cities suggest that activities centred around psychosocial care may to some extent get incorporated in the cities mental health system, due to developed IEC material and linkage with the mental health system.

### **Output 4: Knowledge Management**

A number of products have been developed, with focus given to more relevant disasters as identified in each of the cities. Information is also available freely on the city website. In the case of Cuttack there is regular screening of documentaries in the intermission in cinema halls. SOPs have been put in place, and have been replicated for other response related activities too, according to discussion in the cities. Nonetheless, there is presently no system in place for updating the existing documents with new data or science, or incorporate other planning actions. Equally, budget allocations for development of IEC material and distribution in the community does not seem to be in place.

## Output 5: Public Private Partnership

Presently, there is very limited PPP initiative under the project. While the private sector, if not undertaking activities under a 'donation' mode are likely to consider sustainability of funds spent, as private sector interest has been slow to come, it is difficult to evaluate if this will finally take off and also be sustainable.

## Overall Summary of Project Sustainability

The planning and evaluation tools developed under the project, such as the HRVA and CDMs are seen to be useful, but still external to the regular planning process in the city. Without this internalisation it is likely that the updating or further use of the tools will be limited. On the other hand, the EWS activity has shown some absorption, even if variable. While in GVMC the EWS system has been well developed and now funded by government sources, in other cities it is still largely informal in nature, and therefore sustainability may be dependent on continuing functioning of this informal system.

There have been a number of training and capacity building activities undertaken by this project. While some like the school and hospital drills and systems seem to have been internalised, presently others may still need to be absorbed into existing government systems, specifically those that cater to government capacity building. There are also other activities, such as the structural strengthening and community response actions where there is still further on-the-ground activity still will need to be carried out prior to identifying actions to be internalised and mainstreamed.

None of the cities seem to have been able to suggest any clear exit strategy in place at the end of the project. A large number of stakeholders in fact consider it important that the project continues for another phase so as to help strengthen the various aspects undertaken by the project. Nonetheless, it is understood that some of the cities such as Shimla, have started to explore the possibility of continuing the skilled manpower created under the project for a while longer. Given the nature of this project, the availability of specialised skills within the city planning system will be required to ensure risks and vulnerabilities and responses to them are a part of regular planning processes.

Another issue identified has been that DRR is still seen in a traditional first responder problem in cities. Therefore, other departments still seem to be slightly divorced from understanding and incorporating DRR actions in their day-to-day actions and plans. This project has, though the use of the specialised position in the Commissioner's office, provided this platform. However, as the attitude of equating DRR to the first responder is yet to be sufficiently changed, to work without the need for a special external supported platform.

## Ranking

Output	Ranking	Comment
Output 1	3.5	Tools in place, and in some cases used to identify projects, tool inclusion in the planning system and updating of the tools with new science is not noted.
Output 2	3.5	System there, and to the extent that it is a part of the formal government system it is likely to be sustainable, but at community level yet to be formalised and so last mile sustainability is questionable
Output 3a	3.5	Capacity built of those involved, but training yet to be institutionalised can result in future officials in the posts being less aware of the planning system, as well as over the long run loss of knowledge.
Output 3b	3.5	ASHA workers and schools likely to take forth psychosocial training activities. Disaster and evacuation signage will stay in hospitals. However, the mechanism for continuing other activities in cities is not clear.
Output 4	3	The institutionalisation of the updating process not noted. There is also still an expectation that the project will provide further financing for more products in the city.

Output 5

2

The activity is implemented in a limited way, and there are a large number of uncertainties, hence this cannot be graded further.

Ranking from 1 to 5. Maximum for performance is 5 which is excellent while 1 is poor performance

Colour Code

5

4

3

2

1

Cross Cutting

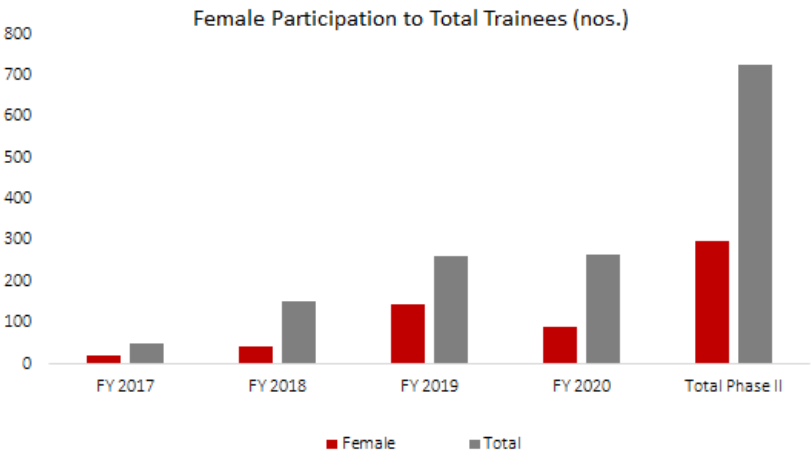
Gender

This project includes both technical and soft capacity creation actions. The technical component was focused upon identification of risks, vulnerabilities and other required higher-level actions, which in action address how various communities are impacted. However, due to its nature of being largely focused upon technical aspects, it was not specifically focused upon gender but on vulnerabilities, which may also include women and other vulnerable groups.

Gender as a focus has therefore been mainly in capacity building and outreach activities. Of these, the most notable is the regular training activities undertaken by the project. There is a focused attention in the project to ensure inclusion of women in training and capacity building activities, including the Training of Training activities. This is also monitored regularly under the project.

Of the training activities, such as psychosocial care has been very successful in targeting women outreach in communities. It has been used to train frontline workers in the health department, the Accredited Social Health Activist (ASHA) or Anganwadi workers. These workers are the outreach in the community for provision of prenatal and postnatal care, and support children to the age to 5 years though the government system. They have in the present pandemic, also successfully reached out to women in the community.

Overall, about 40% of those trained under the project were women, as can be seen from the graph alongside. However, as it was not possible to get a breakup in terms of training activities, it has not been possible to identify where there was higher women participation among the different training activities under the project.



Evaluation of Project Design

Implementation of Results Framework Actions

The actions identified in the RF have been nearly all achieved. The few areas where actions are still to be completed include the implementation the advocacy tools for more investment in project cities which have not taken off, private sector involvement where there has been very limited traction and the use of the LGSAT tool. The LGSAT tools have only been used in three of the six project cities,

namely Cuttack, GVMC and Vijayawada. While there has been effort put in the involvement of the private sector in the project, only very limited actions in terms of projects were noted so far. Equally, the Business Continuity Plans discussions have started just as the project is ending, which is highly delayed, and it is not known if they are presently at a level to continue without follow-on from the UNDP team. There were also some concerns of delays noted during discussions on the availability of local language translation of some of the data.

On the other hand, some activities, such as the involvement of schools in disaster response and Safety Assessment of Critical Infrastructure, additional activities were conducted than designed, such as 5 additional assessments of critical infrastructure in Shimla, while this phase's focus was only Shillong and Cuttack. Similarly, the Phase I cities too used this opportunity to update their HRVAs, which was not planned. Phase II was focusing on the creation of HRVA documents for Cuttack and Shillong, but was also used as an opportunity to update the assessments in Vijayawada and Visakhapatnam. Shimla too presently is updating its HRVA.

A weakness in the Results Framework and its use for monitoring noted is the lack of identification of time-based action implementation. Therefore, project implementation is focused more on reaching targets over the process and systems to ensure uptake, absorption and on-ground sequencing. The result is, that while the project is well designed, there is a weakness in implementation. This was also evident in discussions where the flow of activities did not necessarily flow from the development of the CDMP to the simulation exercises, but at times went parallel to one another, reducing impact. Annexure 5 summarizes the achievements to target in the RF. Achievements against planned actions in the RF is given in Annexure 5.

## Monitoring and Evaluation System

The project has a multi-layered reporting system. This includes the donor (USAID), the UNDP annual and semi-annual reporting and the city level quarterly reporting to the Delhi office. In addition, there is also reporting on projects with the DEA that are through the Government of India Combined Project Management Board (CPMB), and includes representatives of ministries involved. In addition, there is a mid-term review of project outcomes by UNDP.

In the case of the USAID reporting, they have a predefined template in excel that assesses progress based upon the agreed results framework and an output-based table. This is also accompanied with a narrative report of activities carried out. The UNDP system is largely online, and a unit team member is assigned to oversee all monitoring activities. The project therefore works with the identified unit team member to update and ensure all monitoring actions are fulfilled in a timely way. The DEA CPMB meeting is a formal face-to-face meeting with each project provided a brief slot to discuss progress and key issues. This is a well-defined and implemented system, where actual actions undertaken and recorded and detailed through the various Monitoring and Evaluation (M&E) layers involved.

The Delhi UNDP office team provides overall guidance to monitor project outcomes and for the development of any monitoring reports and actions at the city level. They, as required, are helped by the unit M&E nodal officer. The CPCs, while with varying capacities, though initial support and guidance of the Delhi office have been able to respond to the M&E requirements of the project.

While this is an efficient system and activities are defined under the project Results Framework, the demand for certain activities, such as training is generated by the city government. Therefore, actual actions, timing and sequencing is also dependent upon the senior city officials. The result is that at times some activities overlap, rather than following in a sequence. Equally, as was observed in Shillong, some of the training activities went beyond the city to include other district teams.



## Partnerships

Higher level partnerships: The project vision and design has largely been driven by the partnerships at the national level. These included the MHA, USAID and UNDP. The result has been the identification of a well-defined need based upon experiences from all three partners, and the existing demand for increased focus on urban DRR. The project has also, though its experiences been able to capture the overall planning process to implementation, capacity creation in specific areas like psychosocial care, and community actions through this partnership. The partnership also works together for the overall monitoring and guidance to the project. Overall, it seems to have provided an appropriate vision and a responsive management to project implementation.

City level partnerships: The city level partnerships are headed by the head administrative of a city, the Commissioner, however it is the day-to-day functioning of the project is either through the Deputy Commissioner or Additional Deputy Commissioner. This has created a smooth flow of information and project implementation. This helps provide a vision and for project implementation, although that is also dependent upon the Commissioner and his/her team's interests, priorities and understanding at the time. This has also resulted in a varied quality of the project's implementation in the different cities. On the other hand, this was attributed to have resulted in some delays in decision making and transfer of funds, as the process of identification of required actions to final action execution is to pass through a number of government processes.

The project also provides for a common platform for all departments to meet, discuss and identify actions for DRR both commonly as well as for individual departments. The project has also, through its design supported capacity building in the city departments. However, the departments who have been most associated with this project seem to be Revenue, Fire, Civil Defence, Family and Child Welfare, Health and Education. This limited interaction has, to some extent, resulted in a missed opportunity for other departments to create more disaster responsive and resilient plans for city level actions from their perspectives.

Other city stakeholder partners: The project has also reached out to grass root level government personnel, CBOs, academic institutes and the community. This has been mainly in the form of training and capacity building activities. These have been well identified partners for disaster preparedness and response, and the project has done well in working with them.

## Conclusions

This project has been developed in two phases, with some of the projects having been selected in Phase 1, with Cuttack and Shillong only included in Phase II. However, this does not seem to be the only factor driving progress in implementation of the Phase I and Phase II cities. This is largely, as there are a number of different factors that play in uptake and implementation of the project. This may include the existing capacities in a city, both its administration and other support; the changes in the CPC position in a city, past recent history a disaster, and the individual interest of senior city bureaucrats. Therefore, while the Phase I cities of GVMC and Vijayawada seem to have done well and have better utilised project related tools and activities, Shimla has not kept to the same pace. Of the new cities, Cuttack has also absorbed and taken forward a number of initiatives, while Shillong seems to be much slower in uptake. This suggests that future projects may need to pay greater attention to city capacity building to improve uptake and sustainability. Nonetheless, all cities have utilized resources and tools developed under the project, and are very appreciative of the project being implemented in their cities. In fact, most senior city bureaucrats were interested in further activities and support of similar nature to strengthen their cities planning and response mechanisms for disaster response.

The project's five outputs have a systematic designed, step-by-step progressive process from information creation to development of planning tools, to mainstreaming disaster resilience in urban

planning in urban resilience, to capacity creation and outreach to the community, and finally inclusion of the private sector as partners in development. However, this does not seem to be reflected in the RF, and therefore implementation the way it is designed. Reviewing from RF related achievements, it is evident that most actions identified under the project have been completed. Since the RF did not provide timelines for achievement of outputs, but only overall achievements, timeliness is difficult to assess. Therefore, while there is a robust monitoring system in the project, it only monitors actions achieved over process and flow of actions. These two factors are important too for any project to ensure absorption of project ideas and actions within stakeholders, and for sustainability. In terms of actions that did not meet targets what stands out is the LGSAT tool, that was only taken up in 3 of the 6 project cities, the Business Continuity Plans that are only being taken up now, and limited PPP actions. On the other hand, school mock drills, actions on structural assessments and updating HRVAs for Phase I cities, have been beyond originally planned.

The first project output which was largely the development of various planning tools and their incorporation into the city's planning and response system for DRR, viewed as useful, have been used to identify vulnerable areas, plan actions and also undertake microlevel planning. The cities have also undertaken structural safety assessments and critical infrastructure assessments and identified ways to improve resilience as well as response in specific areas of locations of cities. There have, nonetheless, been a number of challenges or issues identified. The work on the Business Continuity Plans has only now started to take off, and is likely that it will be a while before the private sector are able to understand issues of disaster and response for their own employees and in their premises. There were also a number of challenges identified in the use of these tools. Major issues include (i) the highly technical nature of planning tools limiting its use for city administrators why might not be familiar with many of the technical aspects of planning, (ii) inadequately addressed updating and absorption of the tools and planning systems of the project to ensure they stay current and provide support for planning in the cities, and (iii) structural safety training in some cases was only undertaken online, and therefore inadequate field understanding to implement actions.

There has been traction in absorbing and using developed EWS systems in all cities. In some cases, the cities already have a system in place, such as sirens in Shimla, these were seen as useful to support an improved response in times of disaster. In terms of formalisation of a system, the best practice is in GVMC, where there is a government funded coordination centre in place to receive warnings from various agencies and provide appropriate early warning to different city stakeholders. In other cities, while there is an EWS at the senior bureaucrat and administration level, at the city-wide level it seems to be dependent upon individual outreach, which may limit effectiveness to disaster response.

City level capacity creation for disaster response in general has worked very well. There have been a number of training activities undertaken, some like the psychosocial care developed by NIMHANS, have also been used successfully to respond in the COVID pandemic. Equally, some of the other training, like that on disaster response actions and the IRS, have been greatly appreciated, as mentioned by a fire official in Shimla, information included use of new and better tools and systems to respond faster, more efficiently and better to disasters, thereby reducing risk of damage. The risk sensitive planning on the other hand, has been mainly focused upon in a few departments, those that are first responders and a few others like the health, child and family welfare and revenue departments. It is yet to be adequately absorbed in most of the other city departments. IRS has been strengthened under the project, however, there was no mention of the LGSAT in any of the stakeholder discussions except in Vijayawada. The LGSAT, if adequately implemented, could have been a useful tool in increasing awareness and absorption of various DRR tools developed under the project.

Nonetheless, the project has been successful in the development of a discussion and planning around disasters. In some cases, other than the first responders and those in-charge, other departments have also started to develop SOPs and planning actions for disasters within their department activities.

Equally, the SOPs have in some cases been used to provide a framework for more recent SOPs required in the COVID pandemic. This shows a clear start of discussions on planning and response to disasters in the city, though long-term sustainability would be dependent on the provision of a platform such as that provided by this project, which is yet to be institutionalised.

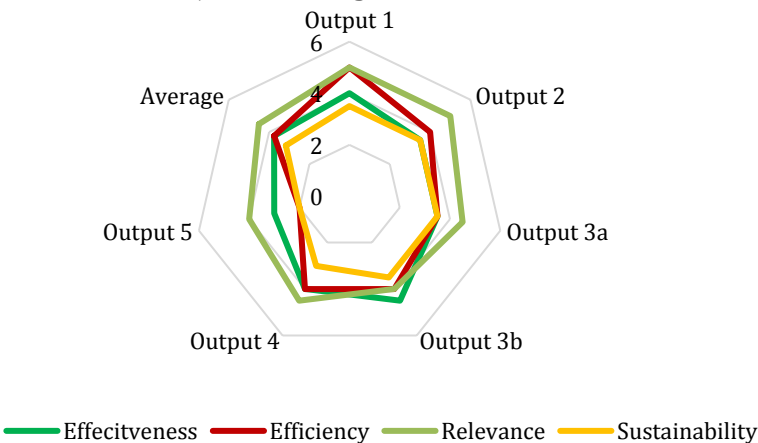
Cities have developed ward level plans, reached out to local CBOs, elected political representatives, schools, and the community for various activities. While schools have been a part of the critical infrastructure activities, they too are involved in support at the time of disasters in the area where they are located, making this outreach serve a dual purpose. There has also been training of local outreach officials for psychosocial care activities who in turn have been involved with COVID outreach activities, with in some cases specific targeting to women and children. Training for retrofitting, structural assessments and local building bylaws were also given to contractors, architects and others in cities. Mason and barbender training was also undertaken. Training overall was found to be of value and is likely, according to discussions, be used. However, as some of it happened online, as in the case of structural assessment training, field experience is still lacking. In the case of mason training, the final use will be dependent upon the person who is hiring the workers to decide upon the quality of the work. Equally, discussion with the masons and architects suggest that the training is only for RCC structures, although cities also have other, traditional and heritage structures, to which this does not cater. Therefore, while some activities have been successfully used, others may be dependent upon external factors for application, or may be inadequate to address some of the city needs.

In terms of showcasing how DRR can become a part of day-to-day planning, decision-making, and identification of city priorities, this project has been successful. This is specifically noted in demand in Vijayawada, Shillong and Shimla requesting for an expansion of their three respective states of Andhra Pradesh, Meghalaya and Himachal Pradesh. In fact, in the latter two, some of the training activities under the project have also been provided to other districts. Nonetheless, there are challenges of sustainability due to inadequate institutionalisation of the project related activities in planning or capacity building.

Another concern perhaps is that while discussions on DRR and climate related risks have started to occur, going beyond to also consider future climate, the core of climate change vulnerability and risks, does not seem to be adequately discussed. Therefore, presently resilience may only be addressed partially.

Overall, as can be seen from the graph alongside, the project has been very relevant, through implementation of different components has varied.

Overall Project Ranking on Evaluation Criteria



### Recommendations

Given below are a number of recommendations that may further strengthen disaster response and resilience and address climate change in future urban projects.

1. Discussions suggest that the present project activities and tools developed under them have attracted attention of other cities of the project states. This has resulted in a demand for the project to be expanded to other cities of the state. The states showing interest in expansion

to other cities include Andhra Pradesh, Himachal Pradesh, Maharashtra and Meghalaya. Therefore, it could be considered if a hub and spoke model can be explored with the project city becoming a hub to be developed as a guiding city for other cities who might want to follow a similar model within a state. This may not only help improve the effective implementation of the project activities in the project cities, it can create capacities in the state for expansion while also creating a development model for urban areas to include DRR in their city plans.

2. In order to take forward any initiative on disaster responsive planning, apart from showcasing a set of tools, there is also a need to create capacities. This has been a part of the project activities as seen in Output 3 a and b. However, in order to ensure the long-term impact, this needs to be institutionalised. Specifically, for the city government departments, the training of their officers and staff will result in a change in the way they will plan, respond and include new information and data in their everyday work, as well longer-term department and city plans. In order to do this, modules of selected actions, such as disaster resilient planning and EWS and IRS implementation. There already are some good institutes in some of the project states that have been imparting training to city officials, and possible collaborations can be considered to take such an initiative forward with these or other relevant agencies.
3. The project has undertaken some good work in the community to build capacities. However, this presently is insufficient to create long term impact in the community outside the limited reach of schools and colleges. Therefore, greater tailored response, based upon specific vulnerabilities of areas within the ward will be required. Future projects may consider selecting a few vulnerable wards to work in, where depending upon the local challenges identify appropriate tailored disaster response actions and create plans and response systems accordingly. Some of the other resilience building activities that may also be considered under the project are,
  - a. provide training on retrofitting of safe and resilient traditional and heritage buildings;
  - b. identify interventions to create economic resilience in vulnerable communities and groups through appropriate skilling actions and linkages to utilize the newly acquired skills.
  - c. address further training activities for psychosocial vulnerabilities among communities. Given the success of the psychosocial training activities, it is worth expanding and institutionalizing this to a larger number of grassroot agencies and CBOs to reach out to communities; and
  - d. consider including socio-economic vulnerability in psychosocial care training; which presently is more focused on psycho-trauma in a post-disaster scenario, to create greater resilience within vulnerable communities.
4. While presently tools have been developed for creation of systems for response and resilience to known climate and other disasters, there is still a need to consider future climate change impact. The next level of interventions must therefore now consider how to include climate change resilience in future planning through the use of existing climate models after being downscaled. Further adding to this may be the use of climate change data for infrastructure development within cities and their infrastructure, such as ensuring appropriate data to reflect impacts of future climate in infrastructure design through their Detailed Project Reports.
5. In order to have a more effective implementation of DRR response in a city there should be greater synergies between the city and the district disaster response and management plans. This shall help provide a more robust technical plan as it will include more complex city and its neighbourhood issues better, institutionalisation of systems and support identification of fund allocations for city activities. The present system, while through the 74th Constitutional Amendment provides cities autonomy plan and implement actions, finances are largely

constrained. Therefore, inclusion of relevant city level actions in the overall district allocations may be possible to support through the DDMPs. It is therefore recommended to explore on a pilot basis if it is possible to create a system for the State/District and City DMP dovetailing.

6. To include gender as a focus, there should be an output that specifically monitors gender parameters and cuts across the different outcomes. Some actions such as disaster response and preparedness may also have specific actions for various vulnerable groups and women, to identify their special needs and therefore add identified needs into their planning and simulation exercise. Nonetheless, it should be very clear that there is an additional burden put on women as compared to other members of a community for any response or mitigation actions. While women are important actors in city resilience creation and response, they are neither the only actors, nor should be expected to be made solely or mainly responsible for all additional activities in development projects, hence design must consider appropriate actions and the burden of responsibility.
7. All action projects identified under similar initiatives may be screening for their gender and inclusion actions, environmental footprint and climate change mitigation and resilience impact. A simple screening tool may be developed that identifies all projects to minimise impacts on the above-mentioned criteria.

## Lessons Learned

The project has made some very relevant and important planning tools for city level planning and development. However, change from a previous system of planning and decision-making takes time, as people learn, understand and adjust to new systems. Therefore, while the project may not have been able to show success in all areas, and may still be a long way from sustainability, it has been able to demonstrate DRR in city level planning. In order to create sustainability, it may be important for UNDP, other donors and the government to continue to work in this area of planning and response to mainstream it into city level planning nationally.

Although training and capacity building activities were appreciated, an issue that came out in some of the discussions was that of a need for better tailored training or response activities. This was specifically mentioned in terms of ward level response plans and for structural safety training. While, in the latter the training was only about RCC structures, all cities have other systems also, and therefore each training activity would need to be appropriately modified to include local needs, within cities or for a cluster of similar cities. It was also mentioned that in different areas in the wards, the way they are planned can differ, and may even include unplanned and difficult to access areas. This was not adequately addressed in the present ward level work. Future micro-planning exercises will need to understand the need for differential approaches, and provide adequate time to address these issues that require specific responses for different areas to ensure appropriate actions. This is also likely to have an impact on resources. All this will need to be considered carefully and planned in advance.

While the use value of project outputs, activities and products has been appreciated by all the stakeholders, timing of delivery has been a concern. This includes various outputs like psychosocial care training, CDMP, ward level plans or structural safety training. A well identified and developed chronological, output based system should be developed, with greater detailing of delivery timing of different actions in the Results Framework. This can then be monitored to ensure it is both possible to be adequately understood, absorbed and taken up in the future.

## Annexures

### Annexure 1: Terms of Reference for the Evaluation

#### Background

The second phase of the USAID funded project on “Enhancing Institutional and Community resilience to disasters and climate change” will be ending in December 2020. As per the UNDP evaluation guidance, conducting a “Terminal Evaluation” during project closure is mandatory. The evaluation must aim to address the extent to which the project has been able to develop resilient cities through risk reduction in the context of disaster and climate change. The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts. The results of the terminal evaluation will be presented to the Implementing partner (Ministry of Home Affairs, Government of India) and will be used to highlight success stories and lesson learning for future endeavours.

**Objectives:** The objectives of the terminal evaluation is to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. Accordingly, proposed evaluation of the project will undertake:

1. Outcome analysis - what and how much progress has been made towards the achievement of the outcome (including contributing factors and constraints);
2. Output analysis - the relevance of and progress made in terms of the UNDP outputs (including analysis of both project and non-project activities);
3. The evaluation report must include a chapter providing a set of conclusions, recommendations and lessons

**Scope:** Project intervention areas include six cities- Cuttack, Navi Mumbai, Shimla, Shillong, Visakhapatnam and Vijayawada.

#### Review Criteria and key guiding questions

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework, which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will cover the criteria of: relevance, effectiveness, efficiency, sustainability and impact. Ratings must be provided on the following performance criteria.

#### Methodology

As of 11 March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic as the new coronavirus rapidly spread to all regions of the world. If it is not possible to travel to or within the country for the evaluation then the evaluation team is expected to develop a methodology that takes this into account the conduct of the evaluation virtually and remotely, including the use of remote interview methods and extended desk reviews, data analysis, surveys and evaluation questionnaires. This should be detailed in the Inception report and agreed with the Evaluation Manager. If all or part of the evaluation is to be carried out virtually then consideration should be taken for stakeholder availability, ability or willingness to be interviewed remotely. In addition, their accessibility to the internet/ computer may be an issue as many government and national counterparts may be working from home. These limitations must be reflected in the evaluation report. If a data collection/field mission is not possible then remote interviews may be undertaken through telephone or online (skype, zoom etc.)

The evaluation should employ a combination of both qualitative and quantitative evaluation methods and instruments.

4. Document review of all relevant documentation. This would include a review of inter alia (will be provided to selected candidate on Day 1 of assignment)
  - a. Project document (contribution agreement).
  - b. Programme and project quality assurance reports.
  - c. Consolidated quarterly and annual reports. (APRs/PIRs)
  - d. Project budget
  - e. Mid-term review / progress reports
  - f. Results-oriented monitoring report.
  - g. Highlights of project board meetings.
5. Semi-structured interviews with key stakeholders including key government counterparts, donor community members, representatives of key civil society organizations and implementing partners:
  - a. Development of evaluation questions around relevance, effectiveness, efficiency and sustainability and designed for different stakeholders to be interviewed.
  - b. Key informant and focus group discussions with men and women, beneficiaries and stakeholders.
  - c. All interviews should be undertaken in full confidence and anonymity. The final evaluation report should not assign specific comments to individuals.
6. Surveys and questionnaires including participants in development programmes, and/or surveys and questionnaires involving other stakeholders at strategic and programmatic levels.
7. The evaluator is expected to follow a participatory and consultative approach that ensures close engagement with the evaluation managers, implementing partners and direct beneficiaries.
8. Other methods such as outcome mapping, observational visits, group discussions, etc may be used.
9. Data review and analysis of monitoring and other data sources and methods.
  - a. Ensure maximum validity, reliability of data (quality) and promote use; the evaluation team will ensure triangulation of the various data sources.

It is preferable that the interviews/questionnaires with the Ministry of Home Affairs will need to take place on a face to face basis in Delhi. Interviews will also be held with the following organizations and individuals at a minimum:

1. Joint Secretary, Disaster Management, Ministry of Home Affairs (face to face meeting)
  - b. Programme Management specialist – Disaster management, USAID
  - c. Chief, Climate Change, Resilience and Energy, UNDP
  - d. Municipal Commissioners/representatives of Shimla, Navi Mumbai, Visakhapatnam, Vijayawada, Cuttack and Shillong.

**Evaluation products (deliverables)- refer to Annex for templates.**

- Evaluation inception report: The inception report should be carried out following and based on preliminary discussions with UNDP after the desk review, and should be produced before the evaluation starts (before any formal evaluation interviews, survey distribution or field visits)
- Evaluation debriefings. Immediately following an evaluation, UNDP may ask for a preliminary debriefing and findings.
- Draft evaluation report: The programme unit and key stakeholders in the evaluation should review the draft evaluation report and provide an amalgamated set of comments to the

evaluator within an agreed period of time, addressing the content required and quality criteria as outlined in these guidelines.

- Evaluation report audit trail. Comments and changes by the evaluator in response to the draft report should be retained by the evaluator to show how they have addressed comments.
- Final evaluation report.
- Presentations to the Ministry of Home Affairs and/or the evaluation reference group.

<b>Deliverable / Outputs</b>	<b>Estimated days to complete</b>
Meeting briefing with UNDP (programme managers and project staff as needed)	7 days
Sharing of the relevant documentation with the evaluation team	
Desk review, Evaluation design, methodology and updated workplan including the list of stakeholders to be interviewed	
Submission of the inception report	
Consultations and field visits (virtual), in-depth interviews (face to face with Govt) and focus groups	7 days
Debriefing to UNDP and key stakeholders	1 day
Draft evaluation report submission	7 days
Consolidated UNDP and stakeholder comments to the draft report	
Finalization of the evaluation report incorporating additions and comments provided by project staff and UNDP country office	3 days
Submission of the final evaluation report to UNDP country office	
Presentation of evaluation to Ministry of Home Affairs	1 day
<b>Total</b>	<b>26 days</b>

ACTIVITY	ESTIMATE D# OF DAYS	DATE OF COMPLETION	PLACE	RESPONSIBLE PARTY
Meeting briefing with UNDP (programme managers and project staff as needed)	7 days	At the time of contract signing	Virtual	Evaluation Team and UNDP CO
Sharing of the relevant documentation with the evaluation team		At the time of contract signing	Virtual	Evaluation Team



Desk review, Evaluation design, methodology and updated workplan including the list of stakeholders to be interviewed		Within 5 days of contract signing	Virtual	Evaluation Team
Submission of the inception report		Within 5 days of contract signing		Evaluation team
Comments and approval of inception report		Within 2 days of submission of the inception report	Virtual	UNDP CO
Phase Two: Data-collection mission				
Consultations and field visits (virtual), in-depth interviews (face to face with Govt) and focus groups	7 days	Within two weeks of contract signing.	Virtual. May include visits to MHA.	UNDP to organize with local project partners, project staff, local authorities, NGOs, etc.
Debriefing to UNDP and key stakeholders	1 day		Virtual	Evaluation team
Phase Three: Evaluation report writing				
Draft evaluation report submission	7 days	Within three weeks of the completion of the field mission	Virtual	Evaluation team
Consolidated UNDP and stakeholder comments to the draft report		Within 2 days weeks of submission of the draft evaluation report	Virtual	UNDP CO
Finalization of the evaluation report incorporating additions and comments provided by project staff and UNDP CO	3 days	Within 3 days of final receiving comments from UNDP	Virtual	Evaluation team
Submission of the final evaluation report to UNDP country office	-	Within 3 days of final receiving comments from UNDP	Virtual	Evaluation team
Presentation of evaluation to Ministry of Home Affairs	1 day			
Estimated total days for the evaluation	26 days			

## Outcome evaluation sample questions

### Relevance

- To what extent is the initiative in line with the UNDP mandate, national priorities of Disaster Management and the requirements of the Urban Local bodies.?
- To what extent is UNDP support relevant to the achievement of the SDGs in the country?
  - To what extent is UNDP engagement a reflection of strategic considerations, including the role of UNDP in a particular development context and its comparative advantage?
  - To what extent was the method of delivery selected by UNDP appropriate to the development context?
  - To what extent was the theory of change presented in the outcome model a relevant and appropriate vision on which to base the initiatives?

### Effectiveness

- To what extent has progress been made towards outcome achievement? What has been the UNDP contribution to the observed change?
- What have been the key results and changes attained? How has delivery of country programme outputs led to outcome-level progress?
- Have there been any unexpected outcome-level results achieved beyond the planned outcome?
  - To what extent has UNDP improved the capacities of national implementing partners to advocate on environmental issues, including climate change issues and disaster risk reduction?
  - To what extent has UNDP partnered with civil society and local communities to promote environmental and disaster risk awareness in the country?
  - To what extent have the results at the outcome and output levels generated results for gender equality and the empowerment of women?
  - To what extent have marginalized groups benefited?
  - To what extent have triangular and South-South cooperation and knowledge management contributed to the results attained?
- Which programme areas are the most relevant and strategic for UNDP to scale up or consider going forward?

### Efficiency

- To what extent have the programme or project outputs resulted from economic use of resources?
- To what extent were quality country programme outputs delivered on time?
  - To what extent were partnership modalities conducive to the delivery of country programme outputs?
  - To what extent did monitoring systems provide management with a stream of data that allowed it to learn and adjust implementation accordingly?
  - To what extent did UNDP promote gender equality, the empowerment of women, human rights and human development in the delivery of country programme outputs?
  - To what extent have UNDP practices, policies, processes and decision-making capabilities affected the achievement of the country programme's outcomes?
  - To what extent did UNDP engage or coordinate with beneficiaries, implementing partners, other United Nations agencies and national counterparts to achieve outcome-level results?

### **Sustainability**

- To what extent did UNDP establish mechanisms to ensure the sustainability of the country programme outcomes?
- To what extent do national partners have the institutional capacities, including sustainability strategies, in place to sustain the outcome-level results?
- To what extent are policy and regulatory frameworks in place that will support the continuation of benefits?
- To what extent have partners committed to providing continuing support (financial, staff, aspirational, etc.)?
- To what extent do mechanisms, procedures and policies exist to carry forward the results attained on gender equality, empowerment of women, human rights and human development by primary stakeholders?
- To what extent do partnerships exist with other national institutions, NGOs, United Nations agencies, the private sector and development partners to sustain the attained results?

### **Evaluation cross-cutting issues sample questions**

#### **Gender equality**

- To what extent have gender equality and the empowerment of women been addressed in the design, implementation and monitoring of the project?
- Is the gender marker data assigned to this project representative of reality?
- To what extent has the project promoted positive changes in gender equality and the empowerment of women? Were there any unintended effects?

## Annexure 2: Stakeholders Interactions

### Stakeholder Interaction Schedule

<b>Date (2020)</b>	<b>City</b>	<b>Activities</b>
18 <sup>th</sup> Nov and 22 <sup>nd</sup> Dec	UNDP	Discussions with Project Team at Delhi UNDP Office
24 <sup>th</sup> Nov to 27 <sup>th</sup> Nov	Five Project Cities	Interactions with City Project Coordinators
1 <sup>st</sup> and 2 <sup>nd</sup> Dec	Vijayawada	Interaction with different stakeholders
3 <sup>rd</sup> and 10 <sup>th</sup> Dec	Cuttack	Interaction with different stakeholders
4 <sup>th</sup> Dec	Vishakhapatnam	CPC
7 <sup>th</sup> and 8 <sup>th</sup> Dec	External agencies	RMSI, NIUA
11 <sup>th</sup> , 14 <sup>th</sup> and 15 <sup>th</sup> Dec	Shillong	Different Stakeholders
17 <sup>th</sup> Dec	Delhi	USAID
17 <sup>th</sup> and 18 <sup>th</sup> Dec	Shimla	Different Stakeholders
18 <sup>th</sup> Dec	Delhi	MHA

### Persons Interacted with

<b>S. No.</b>	<b>Name</b>	<b>Post, Organisation and City</b>
1.	Mr. Manish Mohandas	UNDP Programme Officer, Resilience, New Delhi
2.	Mr. Shubham Tandon	UNDP Project Officer, Resilience, New Delhi
3.	Mr. Sanjeev Jindal	National Project Director, Joint Secretary, Disaster Management, Ministry of Home Affairs, New Delhi
4.	Ms. Balaka Dey	USAID, New Delhi
5.	Mr. Yash Kadam	City Project Coordinator (CPC), Navi Mumbai
6.	Ms. Sharon Kharshiing	City Project Coordinator, Shillong
7.	Dr. Harkanchan Singh	City Project Coordinator, Shimla
8.	Mr. Abdul Sattar	City Project Coordinator, Vijayawada
9.	Mr. Pradipta Mohanty	City Project Coordinator, Cuttack
10.	Mr. Nelli Rajamani	City Project Coordinator, Vishakhapatnam
11.	Mr. Imran Bazha	Consultant, UN Habitat Sustainable Centre Project, Municipal Corporation, Vijayawada
12.	Dr. Srinivasulu	Director, VVN Technologies, Vijayawada
13.	Mr. Uday Kumar	District Fire Officer, Vijayawada
14.	Mr. Prasad	Project Manager, Andhra Pradesh State Disaster Management Authority, Vijayawada
15.	Mr. Nagendra Biyani	Director, Municipal Corporation, Vijayawada
16.	Ms. Sarada Devi	Additional Director, Municipal Corporation, Vijayawada
17.	Mr. Radhakrishna	ARHEDS, NGO, Vijayawada
18.	Ms. Shabana Begam	Community Organizer, Cuttack
19.	Mr. Jyothi Ranjan Mahapatra	Civil Defence, Cuttack
20.	Ms. Sarda Devi	Additional Commissioner, Municipal Corporation, Cuttack
21.	Dr. Murali Krishna	Consultant, RMSI, New Delhi
22.	Dr. Sushil Gupta	Consultant, RMSI, New Delhi
23.	Snehalata Dei	Teacher, Primary and High School, Cuttack
24.	Dr. Umamaheshwaran Rajasekar	Chair, Urban Resilience, NIUA, New Delhi

25.	Dr. Kamal Mishra	Executive Director, Odisha State Disaster Management Authority, Bhubaneshwar
26.	Ms. M. Langstieh	Assistant Professor, MATI, Shillong
27.	Dr. Jasmine Lyngdoh	Clinical Psychologist, Shillong
28.	Ms. Bariphylla Lyttan	Representative of Impulse (NGO), Shillong
29.	Ms. Silma Suting	Department of Social Welfare, Shillong
30.	Dr. N. P. Laloo,	Civil Hospital, Shillong
31.	Ms. I Mawlong,	Executive Director, State Disaster Management Authority, Shillong
32.	Mr. P. Shylla	Deputy Controller Civil Defence, Shillong
33.	Mr. P.H. Khongsngi	Commandant, Civil Defence, Shillong
34.	Anand	HelpAge India, Shimla
35.	Nidhi	Doers, NGO, Shimla
36.	Anuradha	Doers, NGO, Shimla
37.	Mr. N Yadav	Doers, NGO, Shimla
38.	Mohsin Anwar	Project Associate, Administration and Finance (Resilience) UNDP
39.	Mr. Sudhakar	Station Fire Officer, Shimla
40.	Mr. Jagadeesh	Mason, Shimla
41.	Mr. Kanshiram	Mason, Shimla
42.	Ms. Neeta Thakur	ASHA worker, Shimla
43.	Ms. Dimple Sharma	ASHA worker, Shimla
44.	Ms. Promila	ASHA worker, Shimla
45.	Ms. Santosh	ASHA worker, Shimla
46.	Ms. Rakhi Sharma	ASHA worker, Shimla
47.	Ms. Shyama Loni	ASHA worker, Shimla
48.	Dr. Yashpal	In-charge, Disaster Management Unit, Indira Gandhi Medical College and Hospital, Shimla
49.	Mr. Mohit Jangaon	Faculty, Professor Psychology, St. Bedes, College, Shimla
50.	Ms. Tani Sharma	Student, St. Bedes, College, Shimla
51.	Ms. Aditi Sharma	Student, St. Bedes, College, Shimla
52.	Ms. Vibhuthi	Ward Councillor, Municipal Corporation, Shimla
53.	Mr. Veerendar	Ward Councillor, Municipal Corporation, Shimla
54.	Ms. Neha	Ward Councillor, Municipal Corporation, Shimla
55.	Mr. Ajit Bhardwaj	Additional District Commissioner, Shimla
56.	Dr. Rohit Chauhan	Consultant, Micro Mapping
57.	Dr. K Sekar	Professor, NIMHANS
58.	Dr. Jayakumar	Associate Professor, NIMHANS
60.	Lithin Zacharias	Researcher, NIMHANS

## Annexure 3: Documents Reviewed

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## Annexure 3: Climate Smart Cities Assessment Framework Indicators

<b>Energy &amp; Green Buildings</b>	<b>Urban Planning, Green Cover, &amp; Biodiversity</b>	<b>Mobility and Air Quality</b>	<b>Water Management</b>	<b>Waste Management</b>
1. Electricity Consumption in the City	1. Rejuvenation & Conservation of Water Bodies & Open Areas	1. Clean Technologies Shared Vehicles	1. Water Resources Management	1. Waste minimization initiatives undertaken by the City
2. Total Electrical Energy in the City Derived from Renewable Sources	2. Proportion of Green Cover	2. Availability of Public Transport	2. Extent of Non-Revenue Water	2. Extent of dry waste recovered & recycled
3. Fossil Fuel Consumption in the City	3. Urban Biodiversity	3. Percentage of coverage of Non Motorized Transport network (pedestrian and bicycle) in the city	3. Wastewater Recycle and Reuse	3. Construction & Demolition (C&D) waste management
4. Energy efficient street lighting in the city	4. Disaster Resilience	4. Level of Air Pollution	4. Flood/ water stagnation risk management	4. Extent of Wet Waste Processed
5. Promotion of green buildings	5. City Climate Action Plan	5. Clean Air Action Plan (Planning and Implementation )	5. Energy efficient water supply system	5. Scientific Landfill availability & operations
6. Green Building Adoption			6. Energy efficient wastewater management system	6. Landfill/ dumpsite Scientific Remediation

## Annexure 4: Project Results and Resource Framework

Intended Project Outcome	Project Output and Targets	Indicative Activities	Responsible parties
Reduced disaster risks in urban areas by enhancing institutional capacities to integrate climate risk reduction measures in development programs as well as undertake mitigation activities based on scientific analyses.	<p><b>Project Output 1:</b> Enhanced risk sensitive planning through Disaster Risk Assessments and Structural Safety Audit</p> <p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>• 8 City Disaster Management Plans prepared</li> <li>• 8 Hazard Risk Vulnerability Assessment/ structural safety assessment developed</li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>• City Disaster Management Plans of two cities (Cuttack &amp; Shillong) prepared</li> <li>• Preparedness simulation exercises in 6 cities</li> <li>• Hazard Risk Vulnerability Assessment reports prepared for two cities (Cuttack &amp; Shillong)</li> <li>• At least one critical infrastructure (school) assessed in 6 cities</li> <li>• 6 Business Continuity Plans developed that demonstrate how the risks of economic losses from disasters can be reduced</li> </ul>	<ul style="list-style-type: none"> <li>• City Disaster Management Plans preparation for two cities, which will be based on the risk assessment.</li> <li>• CDMP of four cities to be updated and linked to City Disaster Development Plan to facilitate risk resilient development</li> <li>• City level consultation meeting organized to discuss CDMP, HRVA, Business Continuity Plan of private sector</li> <li>• Preparedness simulation planning and exercises based on the CDMP and preparedness training (IRS &amp; community level) conducted in six cities</li> <li>• TOR prepared for conducting HRVA in two cities and critical building assessment in six cities</li> <li>• Methodology for conducting HRVA and critical building assessment determined</li> <li>• Expert agency appointed for technical assistance for undertaking HRVA and critical building assessments</li> <li>• Relevant data collected, collated and analyzed</li> <li>• Peer review meetings organized</li> <li>• HRVA and critical building assessment reports finalized</li> <li>• City level sensitization meetings held for wider dissemination of assessment findings</li> <li>• Strengthening measures or retrofitting of the selected critical building initiated</li> <li>• Business Continuity Planning facilitated in the Government and private sector in six cities</li> </ul>	Urban Local Bodies/District Administration/ UNDP/ Private Sector
	<p><b>Project Output 2:</b> Strengthened Early Warning Systems through implementation of pilots at city/district level</p>	<ul style="list-style-type: none"> <li>• National/State level resource institution(s)/experts identified for conducting city level feasibility studies</li> <li>• Assessment of the existing Early Warning System at the district/city level and gaps identified</li> </ul>	Urban Local Bodies/District Administration/ UNDP/ Other relevant agencies

	<p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>Review of the existing EWS and Action Plans in seven cities</li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>Review of the existing EWS and Action Plans in two cities, i.e. Cuttack and Shillong</li> <li>Pilot initiatives undertaken to strengthen the city level EWS in six cities</li> </ul>	<ul style="list-style-type: none"> <li>Consultation meetings with various stakeholders at state and national level organized to develop a holistic perspective</li> <li>Collection of data and analysis</li> <li>Completion of feasibility studies</li> <li>City /District Specific Action Plans developed based on the feasibility studies with identification of the relevant potential roles for private sector actors</li> <li>Sensitization programs organized for various stakeholders on action plans</li> <li>Pilots implemented with support of the private sector, if possible</li> </ul>	including Private Sector
Urban communities better prepared with increased capacities to manage climate risks	<p><b>Project Output 3a:</b> Enhanced capacities of the Department staff especially for risk sensitive planning (Integrated Development Planning (IDP); LGSAT) and response Incident Response System (IRS)</p> <p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>Sectoral (4) plans developed in each of the 8 cities to mainstream DRR and CCA in development programs</li> <li>Training programs in 8 cities, covering 200 Municipal Officers <ul style="list-style-type: none"> <li>200 Municipal and relevant district officers trained on Incident Response System (2 Basic and 3 Advanced): 6 cities to include IRS system in their CDMPs</li> <li>20 project staff and municipal officers trained on integrated development planning covering 8 cities. 10 Sectoral integrated plans prepared</li> </ul> </li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><b>Target:</b> 6 cities covering about 200 government functionaries:</p>	<ul style="list-style-type: none"> <li>Consultation meetings organized at city/state level to understand the scope of mainstreaming DRR and CCA in development programs and identifying 4 key sectors</li> <li>Identification of Technical institutes/ experts</li> <li>Training programs organized</li> <li>Selection of Municipal Officers for training on IDP, LGSAT &amp; IRS in 10 cities</li> <li>Names of trained officials uploaded on Municipal Corporation's website and also included in the CDMPs</li> <li>Preparation of Local Government Self- Assessment on DRR reports</li> <li>Preparation of sectoral integrated development plans</li> <li>Sectoral plans developed involving a wide range of stakeholders</li> <li></li> </ul>	Urban Local Bodies/District Administration/ UNDP/ Experts or training consultants

	<ul style="list-style-type: none"> <li>i) 120 govt officials trained in six trainings on Local Government Self-Assessment on DRR Training</li> <li>ii) 60 Municipal and relevant district officers trained on IRS (2 Basic and 3 Advanced): 6 cities to notify their IRTs</li> <li>iii) 20 project staff and municipal officers trained on integrated development planning covering all cities; 6 sectoral integrated plans prepared</li> </ul>		
	<p><b>Project Output 3b:</b> Community capacities to respond to disasters and support mitigation activities strengthened in most vulnerable wards.</p> <p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>• 8 cities covering 520 wards</li> <li>• 500 Volunteers in 100 wards trained</li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>• 6 cities covering 100 vulnerable wards</li> <li>• 1000 Volunteers in 100 wards trained</li> <li>• Engineers/architects / construction artisans trained (150 engineers/architects, contractors, builders in 6 training and 150 Masons/ barbenders in training; total 12)</li> <li>• School safety programmes conducted (12 training covering approx. 180 schools; 180 School Disaster Management Plan prepared and 180 School Mock drills conducted; 120 teachers Trained)</li> <li>• Training of volunteers/ professionals on psychosocial issues and their skill tested through simulation exercises (150 Volunteers Trained &amp; 6 simulation exercises)</li> </ul>	<ul style="list-style-type: none"> <li>• Vulnerable wards selected</li> <li>• Volunteers and organized volunteer groups identified</li> <li>• Other stakeholders like engineers, architects, , construction artisans, and school teachers identified</li> <li>• Vulnerable schools identified</li> <li>• Private sector agencies involved in these activities identified</li> <li>• Development/ translation of training modules</li> <li>• Training programs organized for volunteers and other stakeholders</li> <li>• Names of trained volunteers and other stakeholders uploaded on Municipal Corporation website</li> <li>• System facilitated to track and help mobilization of volunteer and other stakeholders</li> <li>• Trained volunteers (Ward level, IRS) used in the simulation exercises and support to conduct mock drills at the city level and in schools</li> <li>• Interactions held with trained engineers, architects, contractor, builders and masons to understand how they are utilizing acquired skills</li> </ul>	<p>Urban Local Bodies/ District Administration/ UNDP/ Technical institutions like IHS NIMHANS/ Private Sector</p>

	<p><b>Project Output 4:</b> Knowledge Management</p> <p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><u>Target:</u></p> <ul style="list-style-type: none"> <li>Relevant Knowledge Products developed and Knowledge Sharing mechanisms established</li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><u>Target:</u></p> <ul style="list-style-type: none"> <li>6 city level baseline studies</li> <li>Development of LGSAT report</li> <li>5 knowledge products</li> </ul>	<ul style="list-style-type: none"> <li>National/State level resource institution(s)/experts identified for conducting baseline studies</li> <li>An app developed to support data collection</li> <li>Consultation meetings with various stakeholders organized at the city level</li> <li>Baseline survey conducted to identify city initiatives</li> <li>Study undertaken using local Self-Assessment tool for DRR in the city</li> <li>Knowledge Sharing Workshops organized</li> <li>Knowledge products developed, e.g., IEC material and study reports</li> </ul>	<p>Urban Local Bodies/District Administration/ NIC/ UNDP/ Private Sector</p>
	<p><b>Project Output 5:</b> Private sector pilots in 4 of the target cities to demonstrate the role of business continuity planning in concretely strengthening the effectiveness of urban disaster preparedness at the city level</p> <p><b>Phase I- Cities:</b> Bhubaneswar, Gangtok, Madurai, Navi Mumbai, Shimla, Thiruvananthapuram, Vijayawada and Visakhapatnam</p> <p><u>Target:</u></p> <ul style="list-style-type: none"> <li>National level workshop convened to enhance private sector partnership for DRR</li> </ul> <p><b>Phase II- Cities:</b> Cuttack, Navi Mumbai, Shimla, Shillong, Vijayawada and Visakhapatnam</p> <p><u>Target:</u></p> <ul style="list-style-type: none"> <li>6 city level workshops to facilitate dialogue on private sector partnership initiative</li> <li>4 pilots to demonstrate private sector partnership (health, water supply, alternative energy sources, and housing)</li> </ul>	<ul style="list-style-type: none"> <li>Concept Note with agenda developed and workshop conducted to enhance private sector partnership for DRR</li> <li>Baseline survey conducted to identify private sector partners and their key roles in six Phase II cities</li> <li>Action Plans developed and a pilot DRR activity partially supported in cities on any one of the sectors like health, water supply, alternative energy sources, and housing</li> <li>Innovation challenge fund constituted and private sector invited to participate as well as encouraged to contribute double of the challenge fund</li> <li>Staff of private sector protected by enhancing their levels of preparedness</li> <li>Risks reduced to ensure continuity of operations (raw materials, HR, dispatch of finished products, etc.)</li> <li>Specific DRR activities supported in collaboration with the private sector</li> </ul>	<p>Urban Local Bodies/ State &amp; District Administration/ Private Sector – Tata Trust, Aditya Birla Group, BBR Pvt. Ltd. Crain India; Associations-FICCI; ASSOCHAM/ ADB/ UNDP</p>

## Annexure 5: Summary Tables of Achievement to Results Framework

This document is based information available till September 30, 2020, as shared by the UNDP India Office.

Output	Planned	Achievement towards Goal	Comments
Output 1	Enhanced Risk Sensitive City Development Planning		
	HVRA 2 (for Cuttack & Shillong)	2 HVRA conducted. In addition, HVRA in two cities, viz. Vijayawada and Vishakhapatnam were revised and In Shimla, it is in progress	Achieved, Addition action in Phase 1 Cities.
	Safety Assessment of Critical infrastructure- For Cuttack and Shillong	Delivered.  In Shimla, five additional Critical buildings were covered	Larger number than planned undertake, as Shimla also undertook a number of assessments
	Safety Audit of Schools - Six (One in each city)	Yes.	Discussions suggest large number of schools reached out to, though number not available
	Business Continuity Plans - Six (for One organization in each city)	None	
Output 2	Action plan to strengthen Early Warning Systems		
	Strengthened EWS in six cities	Yes	
	Simulation Exercises in all six cities	Yes	
Output 3	Capacity Building at govt and Community Level		
	N= 750	724	As designed (97%)
	Output 3a	Enhancing capacity of the government to respond	

	Two (Cuttack and Shillong)	Yes	
	LGSAT -In all six cities	Only 3 of 6 cities work completed. 50% achievement	LGSAT in GVMC, Shimla and Vijayawada
	IRS to Municipal officers Six (One in each city for CMC personnel)	Yes	
	Output 3b	Local Level Trainings for preparedness, response and mitigation	
	3 Training programs to construction fraternity	3	
	School DMP - 30 schools in each city	Yes	
	Psychosocial care Create a cadre of Professionals/volunteers in each city	Yes	
	Developing and Testing PSC tools	Yes	
	IEC Materials in increase awareness	Yes	Discussions in Shillong suggest local language translations may be delayed.
	6 DM Plans for Hospitals	Yes	
Output 4	Knowledge Management		
	Identify ongoing efforts In six cities	Yes	
	Advocacy tools for more investment, in six cities.	No	
	Availability of Knowledge Modules in public domain	Yes	
Output 5	Public Private Partnerships for Disaster Risk Reduction and Recovery		
	Private sector engagement in all six cities	Only in three cities, Cuttack, GVMC and Vijayawada	