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Increased Resilience to Respond to Emergency Situations Project



Final Evaluation Report

June 2016

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Dr. Yegor S. Volovik,

Final Evaluation Consultant

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Acronyms

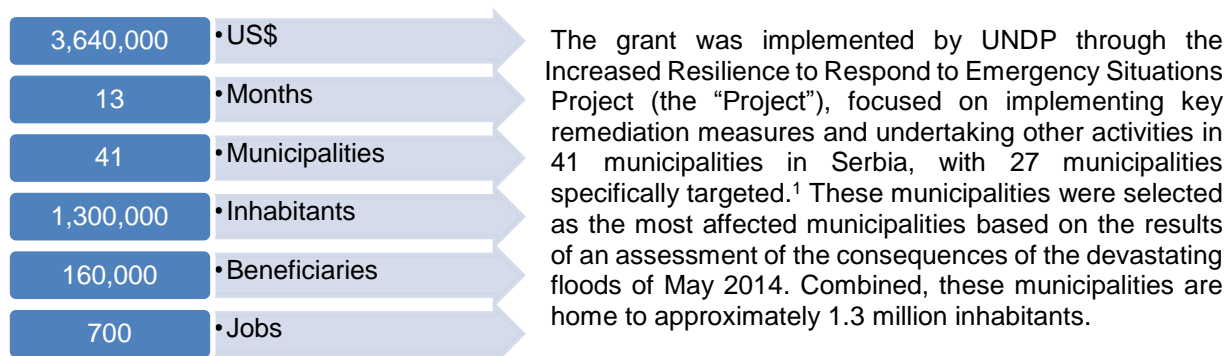
Acronym	Definition
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APR	Annual Progress Report
AWP	Annual Work Plan
BCPR	Bureau for Crisis Prevention and Recovery
BEWARE	Beyond Landslide Awareness
CBA	Cost Benefit Analysis
CDRs	Combined Delivery Reports
CERF	United Nations Central Emergency Response Fund
CO	Country Office
CPD	Country Programme Document
DIM	Direct Implementation Modality
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DepRR	Deputy Resident Representative
EU	European Union
FE Report	Final Evaluation Report
GoS	Government of Serbia
GoJ	Government of Japan
GPS	Global Positioning System
GZ	Geological Survey of Serbia
HS	Highly Satisfactory
HU	Highly Unsatisfactory
IT	Information Technologies
JICA	Japan International Cooperation Agency
LIDAR	Light Detection And Ranging
LTA	Long-Term Agreement
M&E	Monitoring and Evaluation
MS	Marginally Satisfactory
MU	Marginally Unsatisfactory
NGO(s)	Non-Governmental Organisation(s)
OCHA	UN Office for the Coordination of Humanitarian Affairs
PB	Project Board
PIMO	Public Investment Management Office
POPP	UNDP's Programme, Operations Policies and Procedures
ProDoc	Project Document
PPRs	Programme Performance Reports
PWC	Public Water Company
PWMA	Public Water Management Authority
QA/QC	Quality Assurance and Quality Control
RGF	Faculty for Geology and Mining
RR	Resident Representative
ToR	Terms of Reference
UNDP	United Nations Development Programme

1. EXECUTIVE SUMMARY

1.1. THE PROJECT

The Government of Japan (the “GoJ”) has supported municipalities in Serbia with the grant of US\$ 3.64M dedicated to increasing local-level resilience and preparedness to respond to disasters.



The Project supported recovery efforts and directly reduced communities’ vulnerability to future disasters; by doing so, the Project increased resilience in flood-affected municipalities through a series of targeted area-based, multi-dimensional and integrated interventions.

The initiative as proposed envisaged support to the Serbian municipalities most severely affected by the recent floods. The Project addressed infrastructure shortcomings that were identified in the aftermath of the floods while at the same time building resilience in communities and improving disaster risk management (“DRM”) and ensuring women’s inclusion in emergency response.

Activities of the Project were grouped within the following components:

- Small scale infrastructure works, which included reparation and improvement of the water supply system (including replacements of water pumps and the cleaning and reparation of water supply systems), wastewater treatment, improving sanitation at the municipal level (including unclogging drainage systems and conducting reconstruction work on sewage and collection systems), improving public utility infrastructure damaged during the floods, and supporting municipalities in developing technical project documentation for larger scale infrastructure investments (thus allowing municipalities better access to EU, multilateral and bilateral funding);
- Enhancing municipal capacities for disaster preparedness in line with the EU Civil Protection Mechanism;
- Supporting women NGOs in advocating for women’s participation in DRM and planning and in strengthening women’ security in crisis; and
- Landslide area rehabilitation.

The original Project duration was intended to be for 12 months, from March 2015 – February 2016. However, a one-month no-cost extension was requested by the Project and granted by the donor. The adjusted lifespan of the Project then was 13 months, with a date of completion of April 17, 2016.

1.2. KEY EVALUATION POINTS

- Overall, the Project is evaluated as **Highly Satisfactory**.
- Evaluation of individual aspects of the Project (as per FE Report ToR) was based on an evaluation of whether targets set forth in the Project Document (“ProDoc”) were achieved, an assessment of the quality of technical products produced, results of the survey and opinions of stakeholders, an analysis of the financial planning and delivery of the Project, as well as the personal assessment by the Final Evaluation Consultant, and is presented in the table below:

Issues Evaluated ¹	Rating					
	Targets Met	Technical Products Produced	Stakeholder Interviews Results	Analysis of Financial Planning & Delivery	Assessment by Final Evaluation Consultant	OVERALL RATING
Relevance	HS	HS	HS	HS	HS	HS
Efficiency	HS		HS		S	HS
Effectiveness	S		S		HS	HS
Sustainability	S		S		S	S
Impact	HS		HS		S	HS
Additional Project Outcomes and Cross-Cutting Issues	S		S		S	S
Contribution to Gender Equality	S	S	S	HS	S	S
Addressing Equity Issues (Social Inclusion)	HS		S		S	S
Lessons Learned and Best Practices	S		HS		HS	HS

1.3. KEY SUCCESSES

Despite the Project's relatively short timeframe for implementation, a number of successes were achieved:

- The Project team was quickly mobilised by UNDP and supported by UNDP at the level of senior management, which proved to be very effective in launching the Project and in setting up pathways for cooperation with partners, establishing proper management, and initiating monitoring and evaluation ("M&E") frameworks and quality assurance and quality control ("QA/QC") procedures.
- Despite the fact that the Project contained a variety of "hard" and "soft" activities, sufficient time was given by the Project team during the Project inception phase for all kinds of tasks, which required a parallel engagement with governmental agencies, engineering companies, scientists and researchers and wider engagement with the public and relevant NGOs.
- The Project management structure was effective in working with both agencies and stakeholders at the both the national level and municipal level, including working with respective departments within municipalities and at the local level (such as municipal and water supply departments, civil protection services units, etc.).
- UNDP was very efficient and inventive in developing a series of "short-cuts", which allowed significantly shortening the time required for procurement, contracting, and execution of specific administrative tasks. This was one of the key ways in which the Project team was able to ensure smooth implementation and beneficial financial delivery.
- Due to the absence of sufficient time to develop new designs and project activities, the Project was effective in engaging with and fine-tuning the already existing designs of infrastructure projects in the 27 municipalities that were focused on. One can see this as an opportunistic approach of building off existing design plans; however, the Final Evaluation Consultant believes that this was an efficient way to get hold of the existing knowledge at the local level and also to kick off the development and implementation of protection measures as quickly as possible. The effective protection of people and assets during the spring flood in 2016 due to the Project's interventions (both infrastructure activities and training and capacity-building drills conducted) was a testimony that both the actions and measures (or designs) undertaken by the Project were right decisions.

¹ The Evaluation Issues are based on the evaluation matrix developed by the Final Evaluation Consultant, based on his ToR for this assignment and agreed upon by the UNDP Country Office ("CO") and Project team prior to the FE Report mission (ANNEX 1).

- Particular mention should be made of the technical studies realised by the Project: (a) the Kolubara Basin Study, (b) the Stolice Mine Tailing Site, and (c) the Beyond Landslide Awareness (“BEWARE”) Projects. All the results obtained from the studies have been taken over by relevant stakeholder groups and are being followed up on, coordinated by the Public Investment Management Office (“PIMO”).
- The infrastructure projects implemented by the municipalities and supported by the Project are some of the most successful activities that were undertaken. In addition to the significant investments made, the infrastructure projects contained a number of implementation aspects, which can be considered as good practices. For instance, the infrastructure projects utilized a triple-stage QA/QC procedure in order to assure the technical quality of the activities, the building activities contained significant capacity-building aspects due to the involvement of young and unexperienced engineers who received hands-on training, and the infrastructure and building activities included comparisons from the individual infrastructure projects against overall schemes for reconstruction and improvements made by the municipalities themselves, which helped ensure integration of the Project’s infrastructure activities into the medium and long-term plans set by local actors.
- Another example of successful activities of the Project are the preventive activities undertaken, including district-level simulation exercises and capacity-building services provided to local groups on how to respond to emergency situations. Stakeholders recognise that in addition to the training provided for 31 local self-governments in municipalities directly affected by the 2014 flood, the Project also provided a limited set of equipment that was much-needed by these locales in order to significantly increase the capacity of local rescue services (as well as the sector for emergency situations) and which contributed to the sustainability of the Project’s interventions by allowing the impact to survive beyond the Project’s lifespan.
- It was important for Serbia to develop a mechanism for coordinated decision making, particularly at the local level, which is why the case studies of emergency preparedness, simulations with the media, group discussions, establishment of a training centre for volunteers, roundtables with representatives of relevant institutions, workshops for women and children, and production of Project visibility materials and media presentations were effective ways of engagement with all relevant players.
- Mainstreaming gender aspects into disaster risk reduction (“DRR”) and providing corresponding support to NGOs working with women and focused on women’s issues was also in great demand in Serbia. In this area of work, the following activities of the Project are worth highlighting: work on connecting women from civil society organisations with women in municipal government structures, workshops organized with the aim of increasing the capacity of women in prevention and emergency response, and the development of manuals for how to better engage with women on decision making and in efforts to set up prevention mechanisms and response mechanisms during emergency situations, all of which can serve as a model for other local governments in Serbia.

1.4. KEY CHALLENGES

There were also a number of challenges which UNDP, the Project team and national partners had to overcome:

- An obvious disconnect was identified related to decision making for the rivers defined in the 1st Category (which are the responsibility of national-level authorities) and the rivers defined in the 2nd Category (which are the responsibilities of the municipalities). For rivers and waterways in the 1st Category, the basin approach is taken as the main method for water resource management and DRR, however, in the case of smaller rivers and waterways in the 2nd Category, management decisions are often made by individual municipalities without taking into account of needs and situations of those upstream or downstream. Some municipalities expressed their concern about measures taken by those upstream which might be causing additional risks and problems downstream. In a limited number of cases, some signs of the formation of informal “basin councils” were identified, however, it was more an exception than the rule, and the existence of such councils was completely based on personal relationships between decision makers in neighbouring municipalities.

- The sporadic involvement of women NGOs in the Project was also mentioned during stakeholder interviews. Since gender mainstreaming still needs development and introduction into DRR and other sectors in Serbia, engagement with women NGOs seems to have not been adequately thought through in advance. For instance, it is not entirely clear why women NGOs should be targeted as being specifically engaged in activities such as shooting hail clouds, one strategy for disaster reduction. At the same time, the Project's support to the Mountain Rescue Service has significantly improved the Service's ability to undertake rescue operations, and included the training of female rescuers who have already become a part of the rescuer network, which was recognised as an important factor in increasing the efficiency of rescue operations and provision of psychological support in the aftermath of disaster. Some respondents interviewed mentioned an unstructured approach towards integrating gender mainstreaming to the Project, and also a lack of effort at integrating individual NGO-implemented projects that were previously supported. A number of stakeholders were complimentary, however, noting that prior to the Project there were no or few links established between such NGOs. Another issue identified in this area is the high risk that some of these activities may not be supported after the Project's completion due to the lacking funding and support from local self-governments for these kinds of gender mainstreaming activities. Therefore, there is a recognised need in Serbia need to create an NGO network (or networks) to strengthen the role of women in DRR, and particularly in emergency situations, but the future is uncertain.
- Some of the government agencies still do not fully support a cross-sectoral approach and the establishment of mechanisms of cooperation among entities as well as various information-sharing procedures related to aspects of DRR. There is still a tendency to charge for information and data. It is hoped that this issue will be resolved with the introduction of a new law on DRR and the EU accession process; however, at the moment this lack of full support for coordination mechanisms and data sharing is considered a limiting factor for furthering inter-ministerial cooperation.

1.5. EVALUATION OF ACHIEVEMENTS AND OUTCOMES BASED ON TARGETS MET

A detailed review of the progress in achieving Project targets with identified impacts on the ground is presented in [Table 5](#).

Evaluation Issue	Indicators (Table 5)	Meeting Targets	Rating
Relevance	O.2, 1, 11	Exceeded.	HS
Efficiency	O.1, 3, 12, 13	Exceeded.	HS
Effectiveness	O.3, 14	Achieved.	S
Sustainability	O.4, 4, 5, 6, 15	Achieved.	S
Impact	O.6, 2,	Exceeded.	HS
Additional Project Outcomes and Cross-Cutting Issues	O.5	Achieved.	S
Contribution to Gender Equality	9, 10, 11	Achieved.	S
Addressing Equity Issues (Social Inclusion)	7, 8	Exceeded.	HS
Lessons Learned and Best Practices	O.2, O.5	Achieved.	S

1.6. EVALUATION OF QUALITY OF TECHNICAL PRODUCTS

A detailed overview and evaluation of technical products delivered by the Project is included in Section 5.

Technical Product	Project Output	Rating
The Kolubara Basin Study	Output 1	HS
Water Design for Rehabilitation of Tailing Landfill at Stolice Mine	Output 1	HS
Individual Infrastructure Improvements	Output 1	HS
Trainings on Emergency Response and Evacuation	Output 2	S
Provision of Equipment for Rescuers	Output 2	S
Trainings on Community Preparedness	Output 2	S

Technical Product	Project Output	Rating
Women NGOs Advocate For Women's Participation in DRM	Output 3	HS
Landslide Rehabilitation	Output 4	HS
The BEWARE Project	Output 4	HS
OVERALL RATING		HS

1.7. EVALUATION BY STAKEHOLDERS

#	Issue Evaluated	Question	# of Responses			Summary Rating
			HS	S	MS	
1	Project Design	Is the Project concept and design clear, logical and commensurate with the time and resources available?	6	2		HS
2	Cooperation Mechanisms between National and Local Levels	How good are cooperation mechanisms established by governmental agencies, municipalities, donor, partner organisations, other related projects (particularly within the area of climate change activities in Serbia)?	4	3	1	HS
3	UNDP Support	How effective was UNDP/the Project in providing technical guidance and other support?	5	2	1	HS
4	Effectiveness	In your opinion, were measures implemented by the Project in 2015 effective during the 2016 flood?	2	6		S
5	Behavioural Change	Has the Project supported behavioural change in the field of DRR?	3	4	1	S
6	Sustainability	Are the results of the Project sustainable?	7	1		HS
7	Technical Quality	Could the technical solutions proposed by the Project be replicated elsewhere in Serbia and beyond?	6	2		HS
8	Sustainability	Are the Project interventions consistent with the needs and priorities of the intended beneficiaries (at the national, municipal, and local levels)?	4	4		HS
9	Efficiency	Did the chosen implementation mechanisms (e.g. choice of ways of doing things and/ or contractual arrangements, etc.) contribute to achieving the expected results?	5	3		HS
10	Replication	To what extent was local expertise utilised in the Project? Did the Project leave behind enough knowledge so that participants and stakeholders can carry out similar work in other regions of Serbia or in other countries?		8		S
11	Sustainability	Have the concerned municipalities been closely involved in all stages of the Project? Do they feel ownership of the Project results?	1	5	2	S
12	Resilience	Has the Project had any clear effect on the resilience of communities impacted by or concerned with floods and other relevant extreme events and natural disasters?	3	5		HS
13	Effectiveness	To what extent did measures implemented in 2015 help targeted municipalities to overcome excessive flooding in 2016?	1	6	1	S
14	Gender Mainstreaming	What are mechanisms for further involvement of women in DRR-related activities? Which activities (such as assessments, rescue trainings, preparedness, etc.) should be the focus of such efforts?	2	5	1	S

#	Issue Evaluated	Question	# of Responses			Summary Rating
			HS	S	MS	
15	Replication	Are there any unintended consequences or additional by-products worth replicating?	2	4	2	S
Final Rating						HS

1.8. FINANCIAL PLANNING & DELIVERY

As of June 2016 almost 100% of the budget was disbursed (with only USD \$9,477 not yet disbursed, but committed). This is considered by the Final Evaluation Consultant as a good achievement and indicates very effective financial planning which supported the solid results of the Project's implementation (see Section 6.8 for details).

Rating: Highly Satisfactory.

1.9. RECOMMENDATIONS AND LESSONS LEARNED

1.9.1. RECOMMENDATIONS

Despite a concerted focus on gender mainstreaming within many of the Project's activities, there is still a lot to do in this regards in Serbia. Mainstreaming gender aspects into DRR and providing corresponding support to women-focused NGOs remains a great demand. The following activities are worth further supporting and developing: connecting women from civil society organisations with women in municipal government structures; organising workshops with the aim to increase the capacity of women; and developing mechanisms for engaging with women in decision making, including during emergency situations, with such mechanisms serving as a model for other local governments in Serbia.

The current system of cross-sectoral coordination in Serbia is insufficiently developed. It continues to be important for Serbia to develop a mechanism or a platform for coordinated decision making in the field of DRR, particularly at the local level. This is why the case studies, simulations and drills, group discussions, establishment of a Training Centre for volunteers, roundtables with representatives of relevant institutions, psychological workshops for women and children, as well as numerous visibility materials and media presentations were an effective way of engaging with relevant players throughout the period of the Project and from different sectors. However, more efforts are needed by all relevant stakeholders to order to improve coordination mechanisms and increase the country's ability to provide a coordinated response in emergency situations. The Final Evaluation Consultant is optimistic that the new DRR law, so widely discussed in Serbia at the moment, will help to move this agenda of increased coordination forward.

An obvious disconnect identified during the course of the Project related to in decision making on the rivers defined in the 1st Category (which are the responsibility of national-level authorities) and the rivers and waterways defined in the 2nd Category (which are the responsibility of the municipalities). For rivers and waterways in the 1st Category, the basin approach is taken as the main method for water resource management and DRR, however, in the case of smaller rivers and waterways in the 2nd Category, management decisions are often made by individual municipalities without taking into account the needs and situations of those neighbouring municipalities upstream or downstream. Representatives from some municipalities expressed their concern about measures taken upstream but causing additional risks and problems downstream. In a limited number of cases, some signs of the formation of informal "basin councils" were identified, however, these were more an exception than the rule, and completely based on personal relationships between decision makers in neighbouring municipalities. It is therefore recommended that stakeholders conduct further work on the implementation of a true basin approach to managing Serbian water and land resources, which will contribute to the establishment of an effective DRR system.

The involvement of women activists and NGOs working with women into various aspects of the current work in the DRR sector is strongly needed. Since gender mainstreaming still needs further developing and introducing into the DRR and other sectors in Serbia, a more close engagement with women NGOs

sought after in this Project seems not to be adequately thought through in advance. Currently the sporadic actions of these types of NGOs are quite typical, and are often caused by requirements of various donors and projects. The activities and interests of a number of NGOs in this space are currently complimentary to each other, however, there appeared to be no formalized or established links between the organizations and activists active in this area. Therefore, there is a recognised need in Serbia, confirmed by a number of stakeholders, to create an NGO network (or networks) to strengthen the role of women in DRR, and particularly during emergency situations and rescue operations.

At the local level, a low level of training and knowledge and understanding has been reported and is seen as an impediment to integrating the gender component not only into the DRM decision making process but also into other complimentary spheres of public life. For this reason, it is recommended to further engage with existing women activists and continue building the capacity of women's civil society organisations more generally in order to enable them to actively participate in decisions which affect them at the level of municipalities and local communities.

Significant efforts were undertaken by the Project towards various aspects of capacity building and provision of trainings and drills. However, participants in these trainings and drills expressed various views on how best to continue this important type of activity in future. The Final Evaluation Consultant recommends that the Project implementers and stakeholders take stock of what the key achievements of the Project were and assess how best to move forward from this point in the future in terms of providing trainings and ensuring sustainability of efforts. One of the opportunities to do so will be at the Final Project Conference currently being organised by UNDP and the Project team. A joint analysis of the experiences of all 30 local governments and institutions, which participated in the trainings, would certainly have a value-add in terms of further developments in this field.

1.9.2. LESSONS LEARNED

As with any project, this intervention has a number of important lessons learned, which could be used in other districts of Serbia or in other countries and regions undertaking similar efforts:

- Establishing good cooperation links and partnerships during the early stages of projects is the key to further successful implementation and ownership of future results by local stakeholders at various levels, and also serves as a good means by which to strengthen the cooperation between various government agencies (both during the term of the project, but also after these projects are complete).
- Due to its comparative advantages, UNDP is very strong at linking together donors (for example, various bilateral donors) and national stakeholders. This is true for UNDP's in many countries. However, in this particular case, the UNDP CO was very innovative and creative in developing a series of mechanisms for how to implement more effectively and a set of tools for how to increase the efficiency of the usual business flow, speeding some steps up. This FE Report includes a number of such examples undertaken by the UNDP CO. The Final Evaluation Consultant believes that such an attitude and a true result-orientated way of working should be further promoted and showcased within the UNDP system.
- The decision making process for the rivers and waterways in the 2nd Category is fully positioned in the hands of local authorities in Serbia. In the event that there are no effective mechanisms for establishing informed decision making beyond the geographical scope of each one individual municipality, the effectiveness of decisions around such 2nd Category rivers and waterways could be doubtful. There is a need for the establishment of bodies or platforms (like a basin council) for each of such rivers which includes information sharing and decision making at a more regional level, rather than just in the hands of each municipality as standalone entities. Such a body or platform could be a semi-formal establishment or a completely informal body; however, a platform for discussions among municipalities all affected by the same 2nd Category river or waterway would be seen as a good way forward in increasing the coordination and efficiency of efforts.
- The roles and responsibilities for strengthening local level civil protection units needs to be harmonised country-wide. Currently, there are significant differences in efficiency of operation and support to local communities across local level civil protection units, where some units are fully developed and some are insufficiently developed. The level of preparedness of some civil protection units must be raised drastically in many municipalities throughout Serbia.

2. EVALUATION PROCESS OVERVIEW

This FE Report contains findings from the final evaluation of the Increased Resilience to Respond to Emergency Situations Project.

2.1. METHODOLOGY OF THE EVALUATION

The UNDP Monitoring and Evaluation Policy for the Project has two overarching objectives, namely: (1) to promote accountability for the achievement of Project objectives through the assessment of results, effectiveness, processes and performance of the partners involved in the set of included activities; and (2) to promote learning, feedback and knowledge sharing of the results and lessons learned among UNDP and its partners, to be used as basis for decision making on policies, strategies, programme management, and projects and to improve knowledge and performance. With this in mind, this FE Report was initiated by the UNDP CO in Serbia to measure the achievements of the Project against the stated objectives and goals, to produce recommendations, and reflect on the lessons learned.

The approach used for this FE Report was developed in accordance with standard international practices in project evaluation, as well as practices used in the evaluation of UNDP projects. The steps undertaken during final evaluation included:

- Review of project documentation, monitoring records and progress and well as other relevant reports provided by the UNDP CO and Project team;
- Assessing the concept and design of the Project, its implementation in terms of quality and timeliness of inputs, the efficiency and effectiveness of the activities carried out, and how likely it is that the project results will be sustainable after completion of the Project.
- An initial meeting with the Project team to agree on the specific design and methods to be used for the evaluation, determining what would be both appropriate and feasible to meet the evaluation purposes and objectives (including the development of an agreement with the UNDP CO on an evaluation matrix to be used for the FE Report, attached as [ANNEX 1](#));
- Organisation of interviews with key staff involved in the Project implementation;
- Discussions with members of the Project team, the donor (the GoJ), and Project beneficiaries to assess Project's relevance and the effectiveness of the Project implementation (with a list of interviews conducted presented in [ANNEX 3](#));
- Development and circulation of a detailed questionnaire, and solicitation and review of feedback from all categories of stakeholders, including aggregating data and processing of the feedback;
- Detailed analysis of feedback received during interviews, as well as a review of key Project results as presented in Project reports and other media-related and visibility materials; and
- Incorporation of findings of the comprehensive analysis into a draft FE Report and a final FE Report.

The final evaluation was conducted in April 2016, per the Project's Annual Work Plan ("AWP"), with the assessment started slightly in advance of the Project's due date of completion (on account of the one-month no-cost extension, which was granted).

The following criteria were used during the final evaluation assessment (as noted on [ANNEX 1](#)):

- **Relevance:** whether the results, purpose and overall objectives of the Project are in line with the needs and aspirations of the beneficiaries, and with the policy environment in Serbia. Is the Project consistent with the needs and priorities of its target group and the policies of the Government of Serbia and donor (the GoJ)? Has the situation in the country changed since the approval of the ProDoc?
- **Efficiency:** how well have the various activities transformed the available resources into the intended Outputs 1-4, in terms of quantity, quality and time? Can the costs of the Project be justified by the results?

- Effectiveness: how well have the results, which were achieved, furthered the attainment of the purpose of the Project? Has the Project achieved its objectives? Is a spin-off or other project continuation possible?
- Sustainability: the degree to which the benefits produced by the Project continue after the external support has come to an end. Will the benefits produced by the Project be maintained after the termination of external support?
- Impact: whether there has been a change towards the achievement of the overall objective(s) as a consequence of the attainment of the purpose of the Project. Both the intended and unintended impacts are reviewed. What are the overall effects of the Project, intended and unintended, long term and short term, positive and negative?
- In addition to the above, additional project outcomes and cross-cutting issues were assessed, including: supporting a policy dialogue on DRR issues in Serbia in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 (“the Sendai Framework”), contribution to gender equality, addressing of equity issues (social inclusion), the value-add by-products and additional benefits of the Project (if any beyond the ProDoc), as well as lessons learned and recommendations.

2.2. STRUCTURE OF THE EVALUATION

The Final Evaluation Consultant evaluated the Project’s performance according to the following six-point evaluation criteria developed by the Final Evaluation Consultant and based on those currently used by UNDP. These criteria are presented in [Table 1](#) below for reference.

Table 1: Criteria Used in the Final Evaluation

Rating	Description
Highly Satisfactory (HS)	The Project has achieved or exceeded all its outcomes, major goals and objectives, and yields substantial benefits in terms of strengthening resilience at national, municipal and local level in Serbia to climate-related extreme events and natural disasters, without major shortcomings. The project can be presented as “good practice.”
Satisfactory (S)	The Project has achieved most of its outcomes, major goals and objectives, and yields substantial benefits in terms of strengthening resilience at national, municipal and local level in Serbia to climate-related extreme events and natural disasters, with only minor shortcomings.
Marginally Satisfactory (MS)	The Project has achieved most of its major relevant objectives but with either significant shortcomings or modest overall relevance. The Project is expected not to achieve some of its major objectives or yield some of the expected benefits.
Marginally Unsatisfactory (MU)	The Project has achieved some of its major objectives with major shortcomings or is expected to achieve only some of its major objectives.
Unsatisfactory (U)	The Project is expected not to achieve most of its major objectives or to yield any satisfactory benefits.
Highly Unsatisfactory (HU)	The Project has failed to achieve, and is not expected to achieve, any of its major objectives with no worthwhile benefits.

In order to get feedback from Project’s stakeholder, the evaluation process included the following steps:

- Interviews with representatives of various stakeholders (both in person and remotely by phone or video chat);
- Circulation of a series of questionnaires with structured feedback requested on key aspects of the Project’s implementation and results achieved;
- Desk review of major Project management and progress reports, thematic reports on various activities, and the technical designs of the infrastructure projects which were implemented;
- Field visits to site in various regions of Serbia where individual protective measures were completed, including discussions with stakeholders at the local level on their views and

assessments of the importance of the work done by the Project and real impact the Project achieved, if any, on the ground;

- Visits with key partner institutions of the Project, where the Final Evaluation Consultant had the chance to see the products developed within the Project and to talk with a wide spectrum of experts, specialists, and practitioners who participated in various capacities in the activities of the Project; and
- Review and research of all websites created and developed within the scope of the Project, as well as desk review of other relevant electronic resources and websites.

The high degree of feedback solicited, and received, during this evaluation process, as well as the specific and personal independent judgement of stakeholders with years of experience in related fields, helped allow the Final Evaluation Consultant to carry out this evaluation in the most objective manner possible. A detailed schedule of the Final Evaluation Consultant's mission to Serbia is included in ANNEX 2.

Despite the fact that no further extensions are anticipated for the current Project, the Final Evaluation Consultant also included some recommendations not only for UNDP interventions in the future in Serbia, but also some insights for the possible direction of governmental agencies in the country.

3. PROJECT BACKGROUND

During the week of May 12-16, 2014, heavy rains hit Serbia and neighbouring Bosnia and Herzegovina and Croatia, causing large scale flooding. The devastating floods resulted in 51 fatalities, while 31,879 people were evacuated and relocated to 140 collective shelter centres. The floods had instantaneous and direct effects resulting in the total destruction of houses, bridges and sections of roads (in Krupanj and Šabac); widespread flooding of both urban areas (in Obrenovac) and rural areas (in Šabac); and widespread landslides (in Krupanj and in Bajina Bašta). Floods also caused significant economic hardship for much of the population and disproportionately affected poor and vulnerable people. Approximately 51,800 people temporarily lost their jobs due to the interruption in businesses.

The Recovery Needs Assessment, launched by the Government of Serbia and supported by the United Nations, European Union and the World Bank, put the value of damages and economic losses at around €2 billion in Bosnia and Herzegovina and €1.5 billion in Serbia. It is noteworthy that this figure in Serbia relates only to the 24 assessed municipalities, while the total damage in all of the affected municipalities is assessed at closer to €1.7 billion. Following the disaster, both Serbia and Bosnia and Herzegovina asked the international community for assistance. The international community contributed by providing immediate assistance and first necessity products.

The UNDP mobilised immediate response (through experts and funds) in the aftermath of the floods in 2014 and continued to stay engaged throughout the recovery phase, supporting house rebuilding, debris removal, and cleaning of sewage systems and cleaning water sources and ensuring access to safe water, but also supporting government's capacity for coordination of disaster response and better preparedness for future disasters.

Since the onset of the crisis, UNDP played a significant role in efforts to support the Government and people of Serbia in combating the consequences of the floods. In particular UNDP:

- Allocated \$100,000 for emergency coordination with the UN system and with the Government of Serbia counterparts. These funds facilitated the effective deployment of a team of experts from the UN Office for the Coordination of Humanitarian Affairs (OCHA) that handed over to the Government of Serbia on June 4, 2014 its report on priorities for recovery measures in flooded areas.
- Streamlined its support to both assist in the international coordination efforts to assess damages and to then to provide practical assistance.
- Together with other UN agencies, seconded staff and mobilised experts² to participate in the Government of Serbia-led Recovery Needs Assessment, which was the "light" version of the Post Disaster Needs Assessment (the "PDNA"), developed jointly by the World Bank and the European Union.
- Initiated concrete assistance to the affected population by dispersing a large portion (\$388,000) of the United Nations Central Emergency Response Fund (CERF) to support relief efforts.
- Implementing a \$1.5M the Post Floods Early Recovery Programme in Serbia Project, Which prioritised debris removal, waste management, and clearing of small streams in priority local municipalities as well as the construction of dams to stop the further clogging of waterways in more than 20 municipalities in Serbia³.

On March 5, 2015, the Republic of Serbia officially launched the National Disaster Risk Management Programme (the "NDRMP"), which it had previously passed on December 19, 2014.

The prevention-oriented focus of the new NDRMP was in line with the four components of the Sendai Framework, which focuses on four "Sendai" priorities: (1) understanding the disaster risk, (2) strengthening disaster risk governance to manage disaster risk, (3) investing in DRR for resilience, and

² Through UNDP's SURGE scheme, with a total cost of \$275,000.

³ Bajina Bašta, Topola, Valjevo, Svilajnac, Smederevska Palanka, Šid, Požega, Paraćin, Osečina, Mionica, Malo Crniće, Loznica, Ljubovija, Ljig, Lajkovac, Krupanj, Gornji Milanovac, Ub, Vranjačka banja, Mali Zvornik, and Kosjerić.

(4) enhancing disaster preparedness for effective response and to “build back better” in recovery, rehabilitation, and reconstruction.

Responding to the new approach by the Government of Serbia, from January 2015, UNDP supported UN efforts in Serbia to create an implementation plan for 2015-2019. This implementation plan makes all efforts in the area of DRR and resilient recovery and is coordinated by a single Government body (at the moment, the Government Office for Reconstruction and Flood Relief).

The Government is also embarking on legislative improvements; the Ministry of Interior–Sector for Emergency Management is proposing amendments to the principal “Law on Emergency Situations” in order to strengthen responsibility and accountability on the local level and to improve the financing and capacities of the local level, as the local level will be bearing increasing responsibility for emergency response in the future. In parallel, the Government Office for Reconstruction and Flood Relief is drafting an umbrella law on DRR and coordination of actors which will streamline efforts of all government sectors and introduce best practice into DRR efforts as well as reference contemporary international agreements and principles, in particular the Sendai Framework.

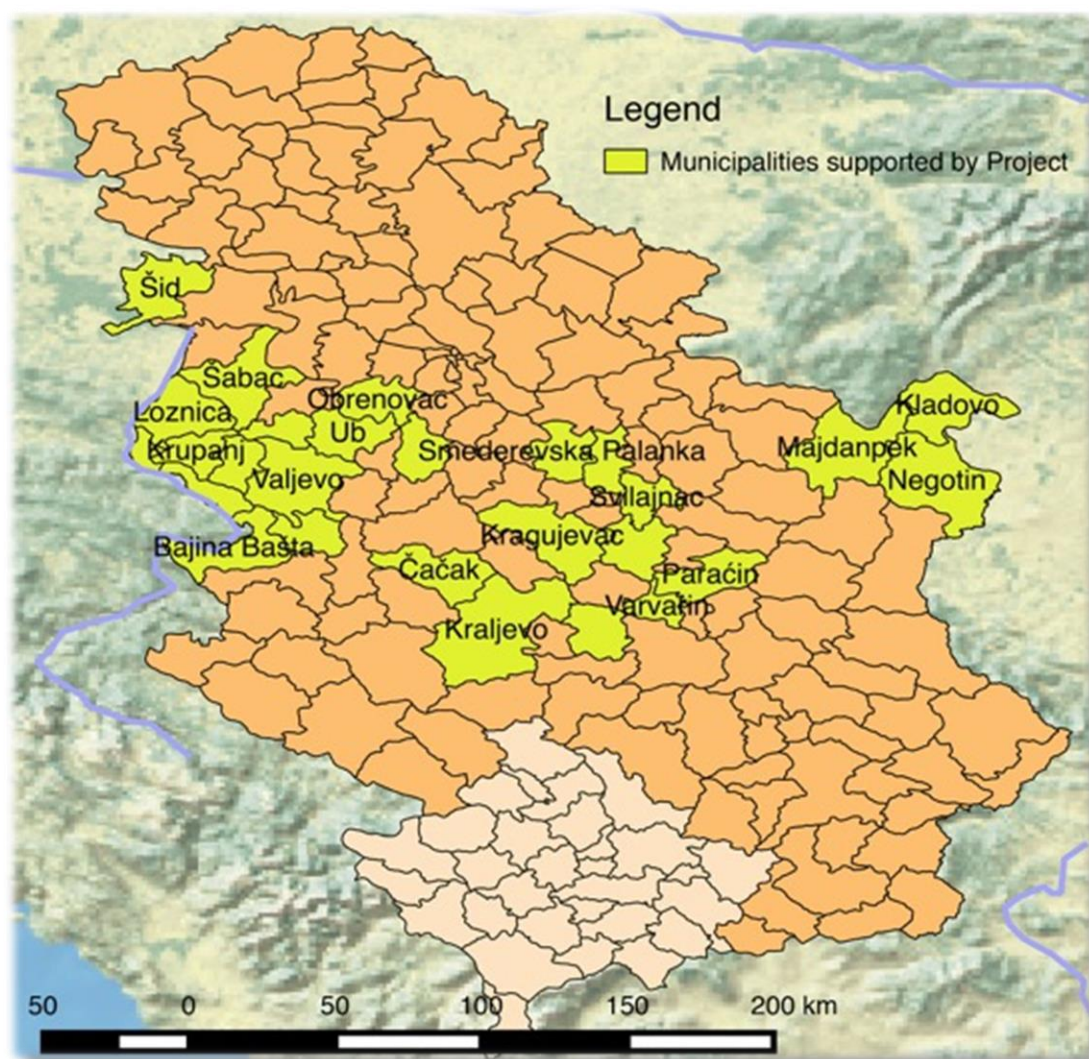
4. THE PROJECT AND ITS DEVELOPMENT CONTEXT

4.1. BRIEF INFORMATION ON THE PROJECT

The GoJ supported municipalities in Serbia with the grant of US \$3.64M dedicated to increasing local-level resilience and preparedness to respond to disasters.

3.640.000	•US\$	The grant was implemented by UNDP through a project entitled Increased Resilience to Respond to Emergency Situations focusing its key remediation and other activities in 41 municipalities of Serbia. These municipalities were selected as being the affected areas of the country based on results of an assessment of the devastating floods of May 2014. These municipalities are home to approximately 1.3 million inhabitants combined. A map of municipalities supported by the Project is presented in Figure 1 .
14	•Months	
41	•Municipalities	
1.300.000	•Inhabitants	
160.000	•Beneficiaries	
700	•Jobs	

Figure 1: Municipalities Supported by the Project



Activities of the Project were grouped within the following components:

- Small scale infrastructure works which include reparation and improvement of the water supply system (including replacements of water pumps and the cleaning and reparation of water supply system), wastewater treatment, improving sanitation at the municipal level (including unclogging drainage systems and conducting reconstruction works on sewage and collection systems), improving public utility infrastructure damaged during the floods, and supporting to municipalities in developing technical project documentation for larger scale infrastructure investments (thus allowing municipalities better access to EU, multilateral and bilateral funding);
- Enhancing municipal capacities for disaster preparedness in line with the EU Civil Protection Mechanism;
- Supporting women's NGOs in advocating for women participation in DRM and planning and in strengthening women's security in crisis; and
- Landslide area rehabilitation.

A detailed description of results achieved by the Project within each of the above components is presented in Section 5 below.

4.2. THE PROJECT'S START AND ITS DURATION

The original Project duration was intended to be 12 months from March 2015 – February 2016. However, a one month no-cost extension was requested by the Project and granted by the donor. The adjusted life-span of the Project was a total of 13 months, with the Project's date of completion as April 17, 2016.

4.3. STATUS OF IMPLEMENTATION

By the time of final evaluation, the Project had reached its completion date and was being operationally closed.

4.4. PROBLEMS ADDRESSED BY THE PROJECT

The overall objective of the Project was to contribute to the recovery actions taken by the Government of Serbia through the provision of direct assistance to municipalities affected by floods. In light of the NDRMP, this approach was complemented by leveraging the central-level coordination role of PIMO.⁴

In particular, the following existing challenges were addressed by the Project:

- An inadequate state of flood protection infrastructure and water supply and wastewater treatment systems, including a poor state of sanitation infrastructure at the municipal level;
- Severe damage to public utility infrastructure caused by the devastating flood in 2014;
- Insufficient capacity of municipalities to develop technical project documentation for larger scale infrastructure investments that were needed;
- Significant differences in the classification systems, legislation, and regulations surrounding DRR, including Serbia's incompatibility with the EU Civil Protection Mechanism;
- A low level of involvement of women NGOs in advocating for women's participation in DRM and planning, and a lack of involvement of women in ensuring security in crisis;
- Insufficient knowledge on the current state of key geophysical hazards, and particularly the current state of active and potential landslides, both on a long-term basis and as a result of reacting to damage caused by floods in 2014 and 2016;
- The need to rehabilitate priority areas from in order to prevent landslides resulting from the floods;

⁴ The Public Investment Management Office, or "PIMO," was formerly known as the Government Office for Reconstruction and Flood Relief.

- The absence of integrated assessments for key river catchments and a lack of flood protection structures and flood protection systems, particularly in the Kolubara river basin, which suffered a great deal during the 2014 flood;
- A lack of technical documentation and design for the rehabilitation of major mining enterprises, such as the antimony mine and Tailing Landfill at Stolice, which were severely damaged during 2014 flood; and
- Other issues related to key aspects of mainstreaming DRR into social inclusion development in Serbia.

4.5. IMMEDIATE OBJECTIVES AND DEVELOPMENT OBJECTIVES OF THE PROJECT

The Project objectives were achieved through implementation of activities within following 4 project output components:

4.5.1. OUTPUT 1: WATER MANAGEMENT AND DAMAGED INFRASTRUCTURE AT MUNICIPAL LEVEL IMPROVED

Legislation in the field of water and resource management in Serbia is currently being harmonised with the “*Acquis Communautaire*” at the EU level. Concordance of national level legislation with EU practices improved greatly with the introduction of the new Water Law (enacted in 2010). However Serbia is not yet compliant with the main pollution control requirements specified in the Urban Waste Water Treatment Directive (UWWTD, (91/271/EEC), the Industrial Emissions Directive (IED) (2010/75/EU), and the Nitrates Directive (91/676/EEC). As a consequence of non-compliance, the environmental objectives of the EU’s Water Framework Directive (2000/60/EC) can hardly be achieved.

An analysis of the current state of affairs of the water supply, wastewater treatment and public utility infrastructure at the municipal level was conducted in the aftermath of the 2014 floods. Based on findings of that assessment, and in consultation with national partners (namely PIMO), UNDP identified a number of interventions, which required immediate action yet were realistic for implementation within the 1-year lifespan of the Project.

The Project results were realised through the implementation of a set of activities that included preliminary damage assessment of water systems and infrastructure in flood-affected municipalities’ infrastructure, preparation of the workplan for the Project, and implementation of the main priorities that were identified. In addition, the Project supported 27 municipalities in the preparation of technical documentation for water supply, wastewater treatment and other infrastructure investments. In that sense, the proposed intervention included the following activities:

- Analytical work related to assessments and technical designs;
- Pre-feasibility and feasibility studies for selected areas;
- Cost/benefit analyses (where required);⁷ and
- Preparation of other relevant project documentation for large and small scale infrastructure works (with particular focus on alternative water supplies), wastewater treatment, and improving sanitation at municipal levels.

More details on the implementation of this Output and the results achieved are presented in Sections 5.1-5.3.

4.5.2. OUTPUT 2: MUNICIPAL CAPACITIES FOR DISASTER PREPAREDNESS ENHANCED

Flooding, landslide and fire related disasters happen frequently in different regions of Serbia. It is therefore imperative that the capacities of the municipal authorities for disaster preparedness are increased, so that they can be enabled to respond to relatively smaller localised events on their own.

In this regard, the Project identified 27 high risk municipalities through stakeholder consultations with relevant national partners and analysis of available data. The project closely worked with these municipalities to increase the capacities of local self-governments and authorities in the areas of

community early warning and to strengthen the rescue and evacuation capacities of these groups (so that they could better respond to floods, landslides, and fires, for example). In this respect, the project: (i) supported municipal emergency operations centres, (ii) provided limited sets of equipment and carried out a series of training events for communities on early warning in case of disasters, and, (iii) in cooperation with the Sector for Emergency Management of the Ministry of Interior and other relevant government agencies of Serbia, provided a number of trainings to the Municipal Civil Protection in rescue and evacuation.

The project supported the work of corresponding municipal authorities in conducting drills on emergency response, with the aim to improve sectorial coordination and collaboration for real-time situations. Drills included key relevant local actors such as municipality officials, schools, health facilities, the Red Cross, and others.

More details on implementation of this Output and results achieved are presented in Sections 5.4-5.6.

4.5.3. OUTPUT 3: WOMEN NGOS ADVOCATE FOR WOMEN'S PARTICIPATION IN DRM

Gender mainstreaming is a key strategy to reduce inequalities in a number of fields and activity areas. Mainstreaming gender into disaster management strengthens the resilience of entire communities, cuts recovery time, and leads to more efficient recovery and reconstruction. It can be achieved by taking into account the needs, concerns and capacities of women and men in planning and implementing disaster reduction and risk management activities.

The Project focused on strengthening partnerships and capacities of NGOs run by and working with women in order to ensure equal representation and leadership of women in disaster planning and management forums and activities, with adequate monitoring and reporting on this aspect. This was vital in ensuring that communities' future preparedness, risk reduction, and mitigation plans and actions could be appropriate and meet the needs of all social groups.

More details on implementation of this Output and results achieved are presented in Section 5.7.

4.5.4. OUTPUT 4: LANDSLIDE REHABILITATION

The large number of landslides (reportedly over 1,000) that occurred following the recent floods developed primarily because of the reliefs existing on the south side of the Sava River catchment and existing geological conditions. However, inappropriate land use and modifications to the surrounding landscape in certain places has been proven to be a significant contributing factor to the dearth of landslides. To the South of the Sava catchment the terrain is smoother and prone to a more rapid runoff that is capable of mobilising soil and soft (weathered) geological deposits, causing the debris slides and flows.

In Serbia, the techniques used for landslide assessments follow a traditional approach. The main agency involved at the national level is the Serbian Geological Survey, where years of under investment in training and a lack of improved technology (especially in IT hardware and software and in surveying equipment) contributed to the slower development and advancement of an integrated national approach to landslide mapping (geo-morphologically, geologically & geo-technically based), assessment, development and population of databases as well as production of a digital national landslide inventory and the development of a national landslide hazard susceptibility assessment. As a result, a number of areas within the scientific and engineering community have benefited from investment by the Project in training and improved technology within the specific fields of:

- Surveying (as the project supported GPS, Terrestrial LIDAR, and digital field capture of geomorphological geological data and observations);
- Remote sensing;
- Landslide monitoring (especially utilizing remote monitoring techniques); and
- Landslide remediation (for a limited number of priority landslides).

A BEWARE (Beyond Landslide Awareness) sub-project of the Project incorporated activities of this Output. See Section 5.9 for more details.

4.6. MAIN STAKEHOLDERS

During its implementation, the Project worked with a wide range of stakeholders. These stakeholders included the following groups:

- Direct project beneficiaries, representing government agencies and municipalities in Serbia;
- Direct project beneficiaries, representing non-governmental sectors, NGOs, the wider public, local communities, and individual activists;
- The Donor (the GoJ), UN Agencies, other relevant international organisations, as well as international NGOs involved in project implementation (if any) and representatives of sister projects or programmes in Serbia and the region;
- International and local consultants and experts (both corporate and individual) involved in the project implementation; and
- The Project management team and representatives of UNDP who were directly involved in the Project.

Representatives of all of the aforementioned groups were interviewed or contacted during final evaluation to objectively reflect on the achievements of the Project in dealing with such a multi-stakeholder environment. The full list of stakeholders contacted is presented in [ANNEX 2](#).

4.7. RESULTS EXPECTED

According to the ProDoc the following results were expected:

- At least 27 municipalities, identified by the Government as the most affected areas, are supported;
- At least 15 municipalities have improved water supply systems, sanitation, and public utilities;
- The capacity of at least 20 municipalities in Serbia are enhanced through community early warning, rescue and evacuation trainings;
- 10 women NGOs are trained to take part in the disaster preparedness and response efforts;
- The probability of spatial landslides (or debris flow mudslides) are defined for certain flood-prone areas;
- 400 current landslides are reviewed under satellite or air imagery methods in order to better assess the state of such landslides;
- 100 smaller landslides are directly assessed during field visits;
- 5 zones for early warning systems are proposed to the national disaster management body; and
- 70% of data on landslide (or debris flow mudslide) activation available after the May 2014 floods becomes available.

A detailed overview of achievement of these results, as well as a number of by-products or additional outcomes, is presented in Section 5 below.

5. ACHIEVEMENTS OF OUTCOMES, OUTPUTS AND THE PARTNERSHIP STRATEGY

Despite the very short life-span of the Project of 13 months, a series of important results were achieved. These results include both planned impacts from the Project on the ground but also a number of additional outcomes, which will have positive effect in future.

Working in close partnership with the national and local authorities, the Project implemented all of the envisaged activities, including:

- Small scale infrastructure works, including repair and improvement of water supply systems, wastewater treatment facilities, and improvements to sanitation at the municipal level;
- Improvement to public utility infrastructure which was damaged during the floods, and support to municipalities in developing technical project documentation for larger scale infrastructure investments which may be funded by other donor agencies;
- Enhancement of municipal capacities for disaster preparedness in line with the EU Civil Protection Mechanism;
- Support to NGOs led by and working with women in advocating for increased women's participation in DRM and planning, and in strengthening women's security in crisis;
- Landslide mapping and rehabilitation of selected key landslides;
- Engagement of partners for the conclusion of the Kolubara Basin Study analysing flood risks in the region, which produced hydrological and hydraulic models, analysis of the existing flood protection structures and the overall flood protection systems, information on the system's performance and parameters relevant for flood hazard, risk assessment, and design of flood protection structures which would allow for an informed upgrade to the flood protection system in the Kolubara river basin area, based on the assessment of flood damage and proposals for better protection mechanisms;
- Design of the rehabilitation of the antimony mine and Landfill Tailing at Stolice, the abandoned antimony mine near the town of Krupanj, which was damaged by the 2014 floods causing a substantial volume of flotation sludge to spill into local water flows;
- Comprehensive design of landfill rehabilitation, which will allow for informed and long-term rehabilitation works to be planned and implemented by government partners and which will contribute to addressing decades of neglect and underinvestment in the people and environment in and around the Stolice mine, the Krupanj municipality, and Western Serbia more generally;
- Promotion of DRR-informed decision making institutional reform, whereby the Project capitalised on an opportunity presented by the growing demand for sustainable and informed solutions to the identification and management of disaster risks in Serbia, especially given institutional reforms anticipated for later this year; and
- An effective translation of relevant global policy frameworks, such as the Sendai Framework, into successful applications of value-propositions for local-level development in Serbia.

A detailed description of the results achieved in each of the technical task areas, as well as the feedback of stakeholders collected during the evaluation process and corresponding comments Final Evaluation Consultant are presented in this section, below.

In order to better reflect on individual achievements rather than Project components and outputs, the following activities have been separated out for the sake of this evaluation:

- The Kolubara Basin Study (Output 1)
- Water Design for Rehabilitation of Tailing Landfill at Stolice Mine (Output 1)
- Individual Infrastructure Improvements (Output 1)
- Trainings on Emergency Response and Evacuation (Output 2)
- Provision of Equipment for Rescuers (Output 2)

- Trainings on Community Preparedness (Output 2)
- Women NGOs Advocate for Women's Participation in DRM (Output 3)
- Landslide Rehabilitation (Output 4)
- The BEWARE Project (Output 4)

5.1. THE KOLUBARA BASIN STUDY (OUTPUT 1)

This activity was organised by UNDP with the involvement of the Public Water Management Authority (the "PWMA") as a supervising body, a subordinate of the Water Directorate of the Ministry of Agriculture. The PWMA was responsible for conducting similar technical project designs.

The Jaroslav Černi Water Institute, a joint stock company in Serbia, was selected based on results of an open public and international competitive tender seeking bidders to carry out the Flood Risk Management Study in the Kolubara River Basin (the "Kolubara Basin Study"). The Kolubara river catchment was selected at the primary site of the study because it had been severely impacted during the flood in 2014. The hydrographic landscape of the basin requires significant efforts to be undertaken in order to better protect the economic, social and transport infrastructure, as well as the population, from the impact of major natural disasters and extreme weather events.

Despite the existence of integrated water management schemes for major river catchments in the past, a study of this scope and depth aimed at the development of integrated measures to reduce risks of flooding in the Kolubara river basin has not been conducted in Serbia for several decades.



In order to ensure high quality results for the study, a steering committee (the "Study Council") for this study was set up.

The Study Council was comprised of UNDP representatives, the public water companies of Srbijavode and Beogradvode, the Electric Power Company of Serbia ("EPS"), the Ministry of Agriculture and Environmental Protection, the Ministry of Construction, Traffic and Infrastructure, the Republic Hydro-meteorological Service, and the contractor The Jaroslav Černi Water Institute, as the contractor conducting the study. Cross-departmental cooperation was facilitated by the Public Water Company Srbijavode, UNDP, and the PIMO. The Study Council met on a monthly basis for a total of 9 times. Further, representatives of the Study Council met with all self-governments in the Kolubara river basin a total of 6 times with a view of presenting the study to important local actors and needing municipalities to engage actively in the progress so that the study would take the municipalities' local urban and spatial plans into account when proposing basin-wide solutions.

The overall coordination of the Study Council was carried out by the public water company Srbijavode, whose responsibilities include most of the Kolubara Basin.

At the same time, UNDP contracted two professors from the University of Belgrade for independent supervision and to track the progress of the study who advised UNDP throughout the process.

A web portal was set up for the study and is available online at <http://studijakolubara.srbijavode.rs/home/>. At the time of finalisation of the FE Report, the portal was operational only in Serbian language, which limited the possibility for the Final Evaluation Consultant to be acquainted with the information presented on the site.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory.**

Direct Feedback on the Kolubara Basin Study

Comments by Stakeholders:

- Satisfied with the results obtained.
- Such studies have not been carried out for decades.
- Support from the Project allowed for completion of Phase I of the Study, while the results allowed stakeholders to move into Phase II of the Study (completion of design and preparation) and Phase III of the Study (implementation).
- Appreciated a coordinating role, which UNDP and the Project team played at every stage from start through implementation, including post-project arrangements.
- Currently, the Study will be finalised (through July 2016) by the experts and will be submitted to the Government of Serbia for proposed implementation.
- Implementation of the design developed is subject to further availability of funds (from external sources). There are no funds expected to be available in the state budget for such activities, but since the Study will be technically completed and up to date, there is hope that there may be support from international community and other funds based on loans.

Comments by the Final Evaluation Consultant: This study had been anticipated for over 10 years and is critically important for the remediation of consequences of 2014 floods and for increasing resilience to future events of this kind. However, there was no funding available in the national or local budget for this type of study. This is why the funding provided by the Project allowed stakeholders to bring this work to a more advanced stage. All stakeholders interviewed expressed a high level of satisfaction in the results that were achieved. However, further implementation of activities proposed by the Study will not be possible without additional support, including from external sources. The Government of Serbia is well aware of this and tries to engage closer with potential donors. All relevant government agencies support this study. It is important to note that the technical quality of the study was assured by the involvement of and technical supervision by very experienced experts from the University of Belgrade. Representatives from Srbijavode have also expressed their satisfaction with the quality of the Study and are planning further follow up activities.

5.2. WATER DESIGN FOR REHABILITATION OF TAILING LANDFILL AT STOLICE MINE (OUTPUT 1)

Similar to the activity above, the need to rehabilitate the Stolice Mine site was highly supported by the government and municipalities concerned.



UNDP also contracted The Jaroslav Černi Water Institute to design rehabilitation measures and secure the tailing landfill next to the antimony mine at Stolice in the Krupanj Municipality, which would work to avoid further pollution of rivers, which have been polluted since the floods in May 2014.

The design for rerouting surface waters was completed in 2015, while other project designs (including for the construction of a protective dam, the cleaning up downstream areas, and for the establishment of a modern monitoring system) are expected to be complete in 2016.

This activity was implemented in close contact and partnership with the public water company Srbijavode and PIMO. At the time of the FE Report UNDP has transferred ownership over the Study to PIMO.

Addressing the continued pollution of the rivers at this site has an important social aspect as well, as the local population is very much concerned about potential damage to their health from exposure to heavy metals, which the discharging waters contain. Traces of heavy metals are reported to have been detected as far away as over 40 km downstream from the site.

One of the challenges of the current situation is the uncertainty of securing further maintenance to infrastructure and continued cleaning of river beds without disturbing water flow waste. Maintenance of the torrential barriers, within the scope of funds from UNDP Bureau of Crisis Prevention and Recovery ("BCPR"), will be carried out by the municipalities. However, it is also important to keep the river beds clean from cluttering objects, which block water flows (such fallen trees). For these tasks, responsibility should be shared between two entities: the government agencies and the self-government units, namely either the National Water Directorate (for 1st Category watercourses) or the self-government units (for 2nd Category watercourses) and the National Forest Directorate. Since timber production is one of the key activities in the region of Krunanj, cleaning of the river beds from trees is expected to be done by the National Forest Directorate. This does not appear to be done on a regular basis. The Final Evaluation Consultant witnessed a number trees and big branches in the river beds during his site visits. It is expected that this issue be addressed with support from the national level institutions.

Overall Rating by Final Evaluation Consultant: **Highly Satisfactory.**

Direct Feedback on the Rehabilitation of Stolice Mine Area

Comments by Stakeholders:

- Satisfied with the results obtained.
- The need for this structural assessment of the consequences of floods and the design of protective measures is not only apparent from the remediation efforts, but also will contribute to protecting the population and environment in future incidents.
- PIMO representatives at both the political and technical level confirmed that the results of the Study will be utilised already this year to inform their work.
- Future activities related to this Study will be funded by the Government of Serbia through the EU Solidarity Fund, as well as other available funding sources.

Comments by the Final Evaluation Consultant: This study was another example of good partnerships at various levels (including from political, technical, and institutional and administrative levels) among many partners, whether corporate or individual or government. Because of support provided by the Project, key development activities took place, which could hardly have been funded otherwise. The completion of technical designs and other related work allowed stakeholders to move to the next level of addressing key issues and allowed them to implement concrete projects. It is important to emphasise that the sustainability of the results in this area has been ensured due to the close involvement of a diverse group of stakeholders at every stage of this activity, who feel a sense of ownership over this activity, including a high level of a sense of ownership by the Government of Serbia.

5.3. INDIVIDUAL INFRASTRUCTURE IMPROVEMENTS (OUTPUT 1)

Construction of water-related infrastructure represents one of the most important prerequisites for strengthening municipal resilience to such natural disasters. Some estimates show that investments in the water sector (mainly into wastewater treatment, water supply, and flood protection) will require spending of more than 10 billion EUR in the period up to 2030.⁵

The Project, in cooperation with relevant government agencies, conducted an analysis of the current state of the water supply, wastewater treatment, and public utility infrastructure at the municipal level (including construction, replacement, and repairs to water supply systems, construction and reconstruction works on sewage and water drainage systems, and improvements to related electricity communications infrastructure). Working in cooperation with the National Water Directorate of the Ministry of Agriculture and Environmental Protection along with local self-governments, the results of the infrastructure assessments and studies resulted in a number of concrete projects for consideration.

⁵ Data from the National Water Directorate of Serbia (2013).

Based on the findings of the assessment, and in consultation with relevant national partners (including PIMO), UNDP selected over 40 potential projects (or the “long-list”) to consider implementing based on the identified needs. Later, based on 27 additionally conducted assessments, this list was reduced down to 26 infrastructure projects targeted for further consideration. Finally, after a critical evaluation and assessment process, 16 projects⁶ in 13 municipalities were selected for implementation.

There have been several adjustments to the infrastructure activity during the implementation of the Project, since the advanced stage of the existing technical designs revealed some significant conceptual flaws. As a result of the changes to this section of the Project, UNDP did not engage in certain projects in the areas of Čačak, Jagodina, Kosjerić, Bajina Bašta, and Mali Zvornik.

An overview of these projects and a detailed description of each are presented in [ANNEX 3](#). Altogether, 21 projects were implemented:⁷

- 3 torrential barriers build in Ljubovija, Negotin, and Trstenik;
- 5 technical designs for torrential barriers in Koceljeva (2), Kladovo (2), and Ub (1);
- 7 water supply projects in Osečina (2), Varvarin (1), Smederevska Palanka (2), and Svilajnac (2);⁸
- 3 surface runoff sewage lines in Valjevo, Paraćin, and Kladovo;⁹
- 3 bridges in Krupanj (the bridge over the Likodra river), Lazarevac (the bridge over the channel in Sopic), and Valjevo (the bridge over the Gola Glava river).¹⁰

It should be noted that the above projects were quite effective in protecting populations and the local economy during the spring flood in 2016. After the floods, the project deployed a qualified consultant (Mr. Zeljko Zugic) to assess the state of the infrastructure projects and their efficiency in providing protection, including a review of the torrential dams, which were implemented by the Project. A summary of this assessment is presented in [ANNEX 4](#).

At the time of the evaluation, all infrastructure projects were complete. During the field visits, the Final Evaluation Consultant visited a number of infrastructure projects to make an assessment ([ANNEX 2](#)).



Svilajnac - A comparison of the old (to be demolished) and new drinking water chlorination stations.



Osečina - a gabion funded by the Project to

⁶ Some of these projects included more than one built object and were larger in scale.

⁷ Those projects underlined were visited by the Final Evaluation Consultant during the field visit organised by UNDP.

⁸ Of these water supply projects, about 60,000 people directly benefited from the improvements.

⁹ Of these surface level runoff sewage line projects, over 40,000 people directly benefited from the improvements.

¹⁰ Of the bridges constructed, over 6,000 people have been provided with improved access to their property in remote locations.

protect a public water supply pipe from erosion and other harms.



Lazarevac - a local iron bridge connecting to agricultural land was rebuilt after the 2014 flood.

Valjevo – a sewage system siphon protects against pollution of the river by helping separate and redirect sewage during floods.



Valjevo – a concrete bridge, which was funded by the Project.

Krupanj – a torrential rain barrier protecting an old church.



Krupanj – a landslide rehabilitation site protecting a primary school.

Krupanj – a local concrete bridge, which was rebuilt after the 2014 floods.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

Direct Feedback on the Infrastructure Projects Undertaken

Comments by Stakeholders:

- Satisfied with the results obtained, as well as the cooperation established between municipalities, contractors, and UNDP.
- UNDP's role was very important to support the highest priority projects deemed the most suitable.
- Without the efforts of the Project, the infrastructure builds could have hardly been funded otherwise - however, the entire system of protection of population of the population depends on joint efforts aimed at improving water supplies and water treatment installations as well as important infrastructure building and repair of the protections surrounding historical structures, such as churches. Without attention to all of these, the efforts would be incomplete.
- The infrastructure projects implemented are not stand alone interventions but rather an important part of a more general reconstruction and rehabilitation at the municipal level.

Comments by the Final Evaluation Consultant:

- This component is seen by the Final Evaluation Consultant as one of the most successful activities within the Project.
- The effectiveness of the measures taken in 2015 was proved during the aftermath of the spring 2016 floods.
- By implementing these projects, UNDP has significantly supported the local self-governments in local prevention and protection efforts.
- Despite the fact that the scope of these projects was limited to individual objects (like the building and repair of torrential barrages, bridges, gabions, etc.), representatives of the municipalities and other responsible authorities all assured the Final Evaluation Consultant that the required improvements to the areas around these objects would be a primary focus of the municipalities themselves. For instance, the municipal sewage siphon built in Valjevo still needs work to complete, and requires protection builds around a mound of sand. Unless this is done, the protective mound will be destroyed by rain and runoff water. The surface of the mound requires either a grass lawn or concrete cover in order to finalize the build. This goes beyond the project funded by UNDP but will be included in a bigger project funded by PIMO for the area between the two local bridges, where the siphon is located. There are more examples of this kind where national and local level authorities will be working together after the Project to ensure the continued success and sustainability of these important infrastructure builds, and where municipalities will be taking a lead role.
- It should be mentioned that at the time of field visits by the Final Evaluation Consultant, not all projects contained a board or a plaque indicating that these infrastructure builds had been funded by the GoJ and implemented by UNDP. However, municipality representatives assured the Final Evaluation Consultant that such placards and information boards had been put into place, but had then disappeared. It is recommended that for these sites, the Project team and stakeholders utilize more permanent boards or plaques to ensure that they do not disappear again.

5.4. TRAININGS ON EMERGENCY RESPONSE AND EVACUATION (OUTPUT 2)

The Project supported Serbia's EU accession process by strengthening the country's capacity to respond to emergency situations through direct trainings for local emergency units, in line with the EU Civil Protection Mechanism.

The National Training Centre of the Ministry of Interior through the Sector for Emergency Management carried out a number of training events with support from the Project, with the Project providing equipment such as a projector, computer, and printers. Representatives of local emergency headquarters from 30 municipalities were trained on important procedures and principles related to emergency preparedness, rescue, and communication in evacuation situations. The total number of participants included in these trainings was 363 individuals, 300 - men, and 63 - women). Altogether 10 training events were organised. A detailed list of trainings provided is included in [Table 7](#) [4].



Participants attend a training in **Jagodina**.



Participants after attending a training in **Ruma**.

Overall Rating by the Final Evaluation Consultant: **Satisfactory**

Direct Feedback on the Trainings

<p>Comments by Stakeholders:</p> <ul style="list-style-type: none"> - Trainings provided a necessary baseline of those actions that would be required during emergency situations . - The network of experts and practitioners that was established will help local leaders to overcome future challenges and will allow increased cooperation directly among municipalities if needed in the event of emergencies. - There is a need to further strengthen capacity in this area.
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The training events provided were considered an important activity that would contribute to reducing risks associated with future disasters. - Since the trainings were implemented by a department within the Ministry of Interior, a government agency, it will be easier to ensure sustainability of such trainings in future as the department now has experience and knowledge in organizing such trainings. - The trainings were beneficial in that the capacity of both the trainers and trainees was strengthened through the structure of how this activity was implemented across partners and stakeholders.

5.5. PROVISION OF EQUIPMENT FOR RESCUERS (OUTPUT 2)

UNDP procured basic rescue kits for those municipalities, which successfully underwent the emergency rescue trainings, procured in cooperation with the Sector for Emergency Management of the Ministry of Interior. Details on this procurement are presented in [Table 2](#) below.

Table 2: Procurement of Key Goods for Rescuers

Item	Quantity
Boat Trailers	3
Fisherman One-Piece Suits for Water-Related Rescues	40
Diving Boots for Water-Related Rescues	253
Wet Diving Suits for Water-Related Rescues	123
Safety Floatation Ropes	148
Water Helmets	188
Life Vests	188
Rescuing Tubes	40
TOTAL COST, USD:	\$85,000

The Sector for Emergency Management of the Ministry of Interior distributed the above-listed equipment to 12 fire departments and 4 civil protections units operating in the 27 municipalities covered under the scope of this Project.

The National Training Centre, an umbrella national training organisation for emergencies, also received basic teaching equipment used for current and future trainings, which will be a benefit that extends beyond the duration of the Project.

Overall Rating by the Final Evaluation Consultant: **Satisfactory.**

Direct Feedback on the Equipment Procurement

Comments by Stakeholders: <ul style="list-style-type: none"> - The sets of equipment, despite not covering municipalities' complete equipment needs, provide a solid base of essentials and met the expectations of stakeholders. -
Comments by the Final Evaluation Consultant: <ul style="list-style-type: none"> - The Final Evaluation Consultant believes that covering the need for emergency equipment for the whole country lays beyond the Project focus, however, the provision of key equipment to priority municipalities and organisations (including NGOs) would be a step forward in boosting capacity at the local level.

5.6. TRAININGS ON COMMUNITY PREPAREDNESS (OUTPUT 2)

Most municipalities, as evidenced during the May 2014 floods, rely completely on the Sector for Emergency Management of the Ministry of Interior for support during emergency events. However, in some municipalities the local civil protection teams are quite strong and well-trained (for example, especially in the city of Kraljevo). In Kraljevo such efforts to become highly-trained and prepared for emergency situations were as a result of the devastating earthquake in 2010.

During the field visit, the Final Evaluation Consultant met with Mr. Zdravko Maksimović, the Chief of the Civil Protection Unit of Kraljevo, and his team. The entire team was very active and enthusiastic and not only take part in earthquake-related preparation and rescue activities, but also try to develop a modern integrated system of civil protection that includes risk assessments, capacity building,¹¹ rescue operations, and other relevant topics. The team is also active in producing public information and educational materials.



In addition to its other activities, the Civil Protection Unit of Kraljevo established a well-functioning system of coordination with relevant stakeholders at the local level, including local NGOs, civil protection units, and other key decision makers. Through these coordination and partnership efforts, the Civil Protection Unit of Kraljevo was able to establish the training centre for community preparedness. More details on the Civil Protection Unit of Kraljevo can be found on their web site <http://www.kraljevo.org/>.

Under the Project, UNDP assisted local self-governments in building their community preparedness capacities, strengthening their resilience and fostering networking among municipal civil protection units. UNDP provided support specifically to the community preparedness trainings in Rudno and Kraljevo. In cooperation with the municipality of Kraljevo and the training centre established there, 14 municipalities were trained on various aspects of community preparedness, including the basics of rescue operations, evacuation, first aid assistance, and communication during emergencies – all key

¹¹ The Civil Protection Unit of Kraljevo equipped a training centre in the vicinity of the town, which is used for community training events such as drills for schools, kindergartens, and other community groups.

skills to help improve the resilience of these 14 municipalities during times of emergency. For more details, see Table 8 in [ANNEX 4](#).

Overall Rating by the Final Evaluation Consultant: **Satisfactory**

Direct Feedback on the Trainings on Community Preparedness

<p>Comments by Stakeholders:</p> <ul style="list-style-type: none"> - There is generally a lack of support by municipalities for the local civil protection units. - Despite understanding the need to develop early warning systems and procedures, few municipalities have committed the time and resources to do so.
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The excellent and highly functioning Civil Protection Unit of Kraljevo is more an exception than a rule. However, during discussions with representatives of local self-governments as well as local authorities, it was apparent that these stakeholders are very aware of and do understand the need to develop a comprehensive system of civil protection at all local levels which would include early warning elements. This is why the civil protection units, such as the one in Kraljevo, could be better leveraged and used to further promote the ability of local level actors to adopt the required approaches and tools for emergency management and response, and could become an example and model for other municipalities in Serbia to strive for. - Overall the Final Evaluation Consultant during the field visits did not witness any sign of comprehensive plans of actions for the event of emergencies at the local level. For example, local authorities had not identified safe locations for the event of a disaster, did not have a list assembled with a sufficient number of volunteer local rescue teams, and had not taken into account other key planning issues. The one exception to this, as noted above, was in Kraljevo, where the local civil protection unit appeared very prepared, though some additional steps of planning would of course be beneficial. Such successful local level teams, such as an Kraljevo, should be further supported and developed so that they can be used as examples of how other regions can adopt similar emergency approaches.

5.7. WOMEN NGOS ADVOCATE FOR WOMEN'S PARTICIPATION IN DRM (OUTPUT 3)

Gender mainstreaming is a key strategy to reduce inequalities. Mainstreaming gender into DRM, including into the fields of crisis management and rescue operations, helps to strengthen the resilience of entire communities, cuts recovery time, and leads to more efficient recovery and reconstruction. It can be achieved by taking into account the needs, concerns and capacities of both women and men in planning and implementing disaster reduction and risk management activities.

In 2007, UNDP launched an Eight Point Agenda for Women's Empowerment and Gender Equality in Crisis Prevention and Recovery. The action plan offers a comprehensive approach to address the needs of women and girls in crisis and gives them a voice in the recovery process. Five of the eight points are relevant to DRR and recovery contexts:



- (i) Strengthen women's security in crisis: Stop violence against women;
- (ii) Expand women's citizenship, participation and leadership: Advance women as decision-makers;
- (iii) Promote gender equality in DRR: Help women and men build back better;
- (iv) Ensure gender-responsive recovery: promote women as leaders of recovery; and
- (v) Develop capacities for social change: work together to transform society.

The Project focused on various aspects of strengthening the capacities of women's NGOs in order to effectively support DRM at each stage of design and implementation, including adequate representation and leadership of women in disaster planning and management forums and activities, with adequate monitoring and reporting to assess results of gender mainstreaming efforts. This is considered by the

Final Evaluation Consultant as vital in ensuring that future preparedness, risk reduction, and mitigation plans and actions are appropriate and meet the needs of all social groups.

During the field visit the Final Evaluation Consultant was provided with an opportunity to meet or contact a number of women's NGOs and gender equality practitioners in Serbia at the national and also local levels. Despite the different focuses of those NGOs that were contacted, as well as the differing geographical areas, these organisations proved to be powerful gender equality advocates and unique specialists as service providers for safety and security of women in crisis. This is particularly true of the groups the Rescue Mountain Services (based in Belgrade) and FENOMENA (based in Kraljevo). Both organisations operate on a voluntary basis and provide support during rescue operations (in the case of the Rescue Mountain Services) and to provide support for various aspects of day-to-day life at the local level, including aspects related to domestic violence (in the case of FENOMENA).



As reported to the Final Evaluation Consultant, currently, there are 24 local level helpline service providers which need systemic support in order to become fully functional, 24/7 referral mechanisms which all women in need of protection and support can access easily and free of charge.

Through awarding 11 gender-related grants, the Project supported 20 municipalities in Serbia on gender-related aspects of emergency preparedness and response, which included support for training 69 women in shooting hail clouds (a weather management techniques), 22 women in rescue operations, and providing 38 workshops in areas such as volunteering in emergencies, civic engagement, psycho-social support in emergencies, and other topics to 316 women, 52 children, and 120 students. A detailed overview of activities implemented with support of women's NGOs is presented in [ANNEX 6](#).

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

Direct Feedback on Gender Mainstreaming Activities

Comments by the Final Evaluation Consultant:

- Expectedly, this component raised a lot of interest among stakeholders, who recognize gender mainstreaming as an important component in Serbia's overall development. The comments presented in Section 6.14 provided by various participants from women NGOs contain a number of recommendations, which can provide a roadmap for future work and which should be considered by both national-level and local-level authorities.

5.8. LANDSLIDE REHABILITATION (OUTPUT 4)

A large number of landslides (reportedly over 1,000) occurred following the 2014 floods and were caused primarily by the poor geological conditions in the southern part of the Sava river catchment.



Inappropriate land use and landscape modifications in some areas along the river were recognised as contributing the development of a high number of landslides. To the south of the Sava river catchment the terrain is smoother and more prone to intensive runoff, which mobilises soil and soft, or weathered, geological deposits causing debris slides and mudflows.

The most dangerous landslides are currently in the municipalities of Mali Zvornik, Krupanj, Umka, and Grocka.

The Project's landslide susceptibility map was produced based on data from the May 2014 floods. Using satellite imagery 1175 landslides were mapped through satellite and

1885 landslides were tracked using in situ verification at the location of landslides. The equipment for mapping the landslides was procured and distributed to the 25 targeted municipalities, and specialised trainings were conducted for those using the equipment for geological mapping of disasters.

Additionally, 5 projects in the area of landslide rehabilitation were identified by the Faculty for Geology and Mining ("RGF") and the Geological Survey of Serbia ("GZ") as being prime activities that could be undertaken by the Project and which would greatly contribute to essential landslide rehabilitation needs. UNDP funded the project designs and development of technical documents for the remediation efforts for the following landslides:

Table 3: Designs for Landslide Remediation (Krupanj & Loznica Rehabilitations)

No.	Project Description	Project Target	Price (Including Design, Investigation, and Technical Control)	Beneficiaries
1	KRUPANJ, Rehabilitation of landslide near elementary school in Likodra	Reopening of the elementary school	\$17,550.00 (\$94,849,47)	Direct benefit 107 inhabitants, indirect 735
2	KOCELJEVA, Rehabilitation of landslide, wells in Đukovine	Houses protection, water supply for 3 houses (including family farm+ bakery)	\$15,100.00	Directly 25 inhabitants, indirect 318
3	LOZNICA Rehabilitation of landslide in Banja Koviljača	Protection of 10 private houses and Ive Lole Ribara Street	\$16,410.00 (\$104,997,00)	Direct benefit for 80 inhabitants, indirect 600 Inhabitants
4	LJUBOVIJA Rehabilitation of landslide in Brcic	Protection of 2 private houses and local road	\$14,600.00	Direct benefit 30 inhabitants, indirect 130
5	OBRENOVAC Rehabilitation of landslide and road in Barič	Normalized traffic in the Ace Spasića Street in Barič	\$16,000.00	Direct benefit for more than 500 inhabitants

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**

Direct Feedback on the Landslide Rehabilitation Projects

Comments by Stakeholders:
<ul style="list-style-type: none"> - Rehabilitation of priority-designated landslides was supported by stakeholders, and included essential repair sites such as a landslide near a primary school in Krupanj (shown in the photo above).
Comments by the Final Evaluation Consultant:
<ul style="list-style-type: none"> - Problems raised by landslides are recognised in Serbia as a top priority for repair in order to increase resilience to possible future natural disasters, which is why support to projects like the BEWARE project is seen integrated at all levels across the country. - As assessed by the Final Evaluation Consultant, such landslides are often caused not only by the geological relief and soil type, but also by extensive use of land at very steep hill slopes. Removing forests from these hills and developing fields nearby (including developing farming fields without using terraces, which are usually used in other countries in order to prevent such landslides) increase the risk of future landslides exponentially, especially given the increased development of agricultural industries on this land. For instance, in Krupanj, after a number of mines were closed, additional efforts were put into the timber industry and agricultural production. The combination of support to these two local industries, which require the removing of trees from hillsides and the development of nearby field lands, are negatively affecting the situation with landslides in the region.

5.9. THE BEWARE PROJECT (OUTPUT 4)

The “flagship” initiative under this component of the Project is the BEWARE project (the Harmonization of Landslide Data and Training of Municipalities for its Monitoring: “BEWARE (Beyond Landslide Awareness)”) accessible at the following website: <http://geoliss.mre.gov.rs/beware/>.



Beware is a complex endeavour facilitated by the Ministry of Energy and Mining and implemented by GZ and RGF, coordinated by PIMO. The main objective of this project was to create a comprehensive inventory of landslides in target municipalities, develop structured information for the categorization of landslides, draft hazard and vulnerability maps in target municipalities, and assess and designate those critical landslides, which emergency systems and rehabilitation efforts should focus on.

UNDP assisted with the creation of an interactive web categorization of landslides. RGF and GZ received separate grants for the implementation of BEWARE project, which allowed the BEWARE project to leverage the substantial skill and experience of both RGF and GZ in this area.

After completion of the Project, the BEWARE project will be entering its sustainability stage wherein several municipalities will stay active in landslide reporting, which is a key project objective (the municipalities will include Valjevo, Koceljeva, and Obrenovac, with the possibility of adding Ub, Šabac, Krupanj, and Kosjerić, which are pending due to technical difficulties). The BEWARE project was also given official recognition by the Belgrade Chamber of Commerce for the technical improvements it has made, and received a positive evaluation from the Ministry of Mining and Energy for its efforts. The outputs of the BEWARE project have been widely shared in a transparent manner, and accessible to the public and available for viewing at the official web portal. The portal provides the necessary technical platform for sustaining or even expanding the project in future years as more municipalities are trained in, and continue to implement, landslide reporting as part of its emergency preparedness and resilience programs.

A summary of a proposal for the further development of the BEWARE project, and prepared by RGF, is included in ANNEX 9.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

Direct Feedback on the BEWARE Project

<p>Comments by Stakeholders:</p> <ul style="list-style-type: none"> - The BEWARE project is highly regarded by all relevant stakeholders. - The BEWARE project was a good examples how academia and government agencies can work together for the best interest of end users, including those at the local level.
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The BEWARE project was one of the highlight of the entire Project, due to its success, its ability to fill an important and identified need, and its ability to bring together a variety of stakeholder for a common goal. - The demand for the products developed (including demand for a tablet application, which includes the landslide tracking data) is very high. - The technical tools and platforms used for the web application (including databases and Web GIS modules), as well as a tablet application, are open for further development and upgrades. - It will be important to move this tracking and categorization system to a cross-sectoral one, with integration of data on additional hazards beyond landslides and layers of other information important for geological and environmental disasters and emergencies. Technically such integration is possible, however, a number of administrative and institutional decisions would be required of government agencies in order to bring important government and state-gathered data and information together into an integrated decision-support system, which the current system has a potential of but is not developed for yet.

- Despite the fact that the system that was developed belongs to the Ministry of Mining and Energy, it is believed that the system will be further developed into a multi-sector one where multiple government agencies can share joint responsibility.

6. KEY FINDINGS OF THE FINAL EVALUATION

6.1. PROJECT FORMULATION

As presented in Section 4, this Project was a reaction to the March 2014 floods in Serbia. The Government identified priority 27 municipalities, which were directly affected by the devastating floods. Following key recommendations on rehabilitation efforts, the Project included the most urgent activities in order to rehabilitate these areas post-floods, as well as prepare them for the possibility of future environmental catastrophes:

- Small scale infrastructure works were undertaken, which included repair and improvements to the water supply systems, including the replacement and repair of water pumps and the cleaning and repair of water supply systems, wastewater treatment renovations, improvements to sanitation at the municipal levels, including unclogging and reconstruction works on the sewage and collection systems, improvements to public utility infrastructure which was damaged during the floods, and support to municipalities in developing technical project documents required to fund much larger scale infrastructure investments (thus allowing municipalities to access EU, multilateral and other bilateral funding mechanisms in its reconstruction efforts);
- Enhancing municipal capacities for disaster preparedness in line with the EU Civil Protection Mechanism;
- Supporting women NGOs in advocating for women's participation in DRM and planning and in strengthening women's security in crisis; and
- Landslide rehabilitation work.

It should be noted that in relation to the above tasks, the Project was intended to ensure quick support to the government and municipalities in Serbia in its rehabilitation efforts after disaster. The GoJ had been preparing operational and implementation modalities for their work in Serbia directly with national counterparts in the country, however, by the time of the Project's inception not all conditions and plans were set for such work. For this reason the GoJ engaged with UNDP for the implementation of this Project. At the time of the FE Report, the structure for UNDP's involvement in the Project and any follow-up activities will be changed. From this time on, GoJ will be implementing technical assistance projects directly via the Japan International Cooperation Agency ("JICA"). This was confirmed by interviews with the representative of the Embassy of Japan in Belgrade. At the same time, cooperation between the GoJ and UNDP will continue on other projects, such as activities related to the refugee crisis.

The main document for the Project was the UNDP ProDoc. The ProDoc was reviewed and critically assessed by the Final Evaluation Consultant. A few comments related to the ProDoc are noted below:

- The ProDoc contained all key sections required by the UNDP templates and the guidance it presented was a good background for the Project's inception.
- The objectives and tasks set out by ProDoc were realistic and highly relevant.
- The budget and other resources allocated for the Project were sufficient for achieving the targets set, however, delivery of the Project results within such a short period time of one year was a challenge for both UNDP and the national counterparts UNDP worked with. For this reason, UNDP had to be quite inventive and innovative to successfully complete the Project within 13 months (accounting for the one month no-cost extension. These innovative approaches included a number of "short cuts," including a process of pre-tendering with potential contractors, the early establishment of expert rosters, and other administrative approaches. The Final Evaluation Consultant considered these as one of ways to shorten the time required to set up the Project while still acting in accordance with existing UNDP procedures. The Final Evaluation Consultant recommends replicating this successful experience in other UNDP-implemented projects.
- One of shortfalls of the ProDoc is that it did not sufficiently develop a matrix of indicators and targets. For instance, there were hardly any outcome indicators included in the Logical Framework for the Project. Similarly, the targets set for those indicators that were developed did not adequately show the impact of the Project on the ground. For the sake of evaluation purposes,

the Final Evaluation Consultant developed a number of other indicators in order to more properly to assess the impacts the Project achieved on the ground.

- The indicators selected for the Project and included in the ProDoc, despite the fact that they were quantifiable, represented more process rather than impact. This is why the Final Evaluation Consultant reviewed all indicators that were original developed and then developed additional indicators and targets in order to conduct a more informed evaluation. A review of the existing ProDoc indicators and an analysis of their informative qualities are presented in [Table 4 below](#).
- The ProDoc presented only a limited number of risks, which were identified at the Project's formulation stage. However, the risks identified were not further worked on or updated throughout the course of the Project. However implementing such a challenging Project within such a limited time frame requires intensive analysis at each stage and timely mitigation of various risks. While this was done on a daily basis by the Project team and the UNDP CO, it would have been beneficial for others to engage in a more formal process of review of these risks, as well as the indicators, and update the risk log accordingly. More information on managing risk can be found in Section 6.10.
- A detailed analysis of Project achievements against the updated set of indicators is presented in Section 6.2.

Table 4: Review and Analysis of the Project Document Indicators

Indicator	ProDoc or AWP Target	Recommendations on Indicators	Remarks by the Final Evaluation Consultant
Outcome Level			
O.1	At least 27 municipalities, which were identified by the GoS as the most affected ones.	Number of municipalities supported by the Project - this is a valid indicator.	This is the only outcome level indicator included in ProDoc.
O.2.	None.	Effective protection was provided during the 2016 floods.	In spring 2016, again, intensive floods were registered in districts in Serbia. The floods, while unfortunate, provided an opportunity to assess the effectiveness of protective measures taken up until that point by the Project.
O.3.	None.	Behavioural change is supported by Project activities.	DRR is very much about changing of existing practices and behaviour. Including an outcome-level indicator on this issue was quite informative.
O.4.	None.	Sustainability of results is ensured.	Sustainability of results is one of the key criteria of success for any project.
O.5.	None.	Measures and tools developed by the Project have high replication potential.	Replication potential is instrumental to solving similar challenges in Serbia and beyond.
O.6.	None.	Number of people directly benefiting from Project interventions.	Since the Project was selecting projects from a long list of potential ones in this space, the number of people who would be protected or supported by individual activities is considered a good impact indicator.

Indicator	ProDoc or AWP Target	Recommendations on Indicators	Remarks by the Final Evaluation Consultant
Output 1: Water management and damaged infrastructure at the municipal level is improved.			
Indicator 1: # of assessments specifying infrastructure works needed in relation to water supply and wastewater treatment.	No target.	This is a valid indicator, however, the absolute number of assessments is not so much informative. A more impact-based indicator, for example the % of potential works assessed, would be more relevant.	There was no target set for this indicator in either in the ProDoc or the AWP from 2015 and 2016.
Indicator 2: # of municipalities with improved water supply systems, sanitation and public utility infrastructure.	At least 15 municipalities have improved their water supply systems, sanitation and public utility infrastructure.	A more impact-based indicator, such as the % of the local population protected by such interventions, would be considered a better option. However, this indicator is a good progress indicator.	It is not clear why 15 municipalities were mentioned in the target. Was there any assessment or analysis carried out to set this number as a beneficial target? There are over 150 projects being implemented by PIMO currently, and the 15 municipalities target seemed to be arbitrary.
Indicator 3: # of technical documentations available which allow municipalities to better perform large scale infrastructure works.	No target.	All projects were implemented based on the required technical documentation.	There was no target set for this indicator in either the ProDoc or the AWP for 2015 or 2016. It should be mentioned that the Project developed a very good system of QA/QC for infrastructure projects, in addition to the documentation referenced. This was required as there is not enough technical capacity for both project implementation and design development at the local level, despite the fact that responsibility for such developments lies with the municipalities and special technical departments.
Indicator 4: # of municipalities in which emergency response drills were organised.	At least 20 municipalities in Serbia increased their capacities in community early warning, rescue and evacuation area through different training programs.	Again, the # of drills set here acts as a process indicator rather than an indication of impact. Using a number that relates to the % of coverage would be a stronger indicator of impact on the ground..	One target was set in ProDoc as a cumulative estimate of the number of all trainings carried out at various levels. This target covers indicators 4-9.
Indicator 5: # of municipalities in which municipal emergency response and early warning trainings were organised.	<i>See indicator #4.</i>	<i>See indicator #4.</i>	<i>See indicator #4.</i>
Indicator 6: # of municipalities equipped with basic rescue kits.	<i>I. See indicator #4.</i>	<i>See indicator #4.</i>	<i>See indicator #4.</i>
Indicator 7: # of municipalities in which community preparedness trainings were organised.	<i>See indicator #4.</i>	<i>See indicator #4.</i>	<i>See indicator #4.</i>

Indicator	ProDoc or AWP Target	Recommendations on Indicators	Remarks by the Final Evaluation Consultant
Indicator 8: # of municipalities in which community evacuation drills took place.	See indicator #4.	See indicator #4.	See indicator #4.
Indicator 9: # of men and women that participated in disaster preparedness trainings.	No target.	These absolute numbers are weak indicators for gender mainstreaming.	The roles of both men and women are very important during adverse events. Supporting gender equality in training, particularly, for drills related to disaster preparedness, is critical the as risks and possible impacts on women can be different in times of crisis.
Output #3: Women NGOs advocate for women participation in DRM and planning and women's security in crisis strengthened.			
Indicator 10: # of women NGOs which strengthened their networks with other specialist service providers.	10 women NGOs increased capacity to take part in disaster preparedness and response.	This is an insufficient indicator and does not tell anything about the strength of the increased capacity. For instance, how big was each of the NGOs? What about networks of NGOs among themselves, rather than with specialist service providers? The indicator included is more about the process than about strengthening the actual capacities of women in various aspects of DRR.	Engagement with women NGOs is considered a priority for Serbia, since their involvement in important aspects of public life is still insufficient in the country.
Indicator 11: # of women whose capacity was increased in the area of providing hazard analysis and conducting participatory risk assessments from a gendered perspective.	No target.	This is a valid indicator.	No comments.
Output #4: Landslide Rehabilitation			
Indicator 11: A susceptibility map for the aftermath of the May 2014 floods is created.	The probability of spatial landslides (related to debris flow and mudslides) is defined for certain flood-prone areas.	This is a valid indicator.	
Indicator 12: # of landslides reviewed under satellite or air imagery techniques.	400 landslides reviewed under satellite or air imagery techniques.	This indicator is insufficient and does little to assess the strength of the review that was conducted. It is not clear how the target was set to 400. Was there a baseline study prior to choosing this number?	Having this type of analysis and information at the ready allows emergency preparedness stakeholders to be much more ready to carry out resource mobilisation activities.
Indicator 13: # of smaller landslides	100 smaller landslides directly	The indicator is insufficient to tell the strength of the assessment conducted.	

Indicator	ProDoc or AWP Target	Recommendations on Indicators	Remarks by the Final Evaluation Consultant
directly assessed through field visits.	assessed through field visits.		
Indicator 14: # of zones for early warning systems ("EWS") identified	5 zones for EWS proposed to the national disaster management body.	This is a valid indicator.	
Indicator 15: % of completed updates to data on landslides (including debris flow and mudslides) which are at risk of activation following the May 2014 floods.	70% of the data on landslides (including debris flow and mudslides) were identified as at risk of activation following the May 2014 floods.	This is a valid indicator.	

6.2. OVERVIEW OF ACHIEVING PROJECT TARGETS AND IMPACTS

Table 5: Review of Project Indicators and Achievement of Targets

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
Outcome Level					
O.1	At least 27 municipalities identified by the GoS as the most affected ones, are supported.	Number of municipalities supported by the Project – this indicator was Exceeded .	30 municipalities increased their resilience to floods and other extreme weather events and natural disasters due to direct Project interventions and assistance.	During the field visit, the Final Evaluation Consultant interviewed a number of representatives of municipalities and departments. They <i>all</i> confirmed a high level of satisfaction and emphasized the usefulness of Project interventions on a longer term basis.	HS
O.2	None.	Effective protection during floods.	Measures taken were effective during the unfortunate 2016 floods, even for projects not yet finalised at the time.	A number of stakeholders specifically mentioned the fact that projects which had been completed or were close to completion were effective in reducing negative impact during the spring 2016 floods. ¹²	S
O.3	None.	Behavioural change is supported by Project activities.	The Project through a number of interventions (the Kolubara Study, the Stolice mine designs, and the BEWARE project, for instance) introduced a culture of understanding the importance of prevention measures. This was recognised by PIMO in its annual meeting, and shows a clear sign of behaviour change at least at the policy-making level of the GoS. However, it will take longer time and more effort to see this type of behavioural change at a bigger scale in the country.	There were no outcome-level targets set in the ProDoc or AWP's beyond the number of supported municipalities.	S

¹² Despite the fact that the geographical scale of the flooding in spring 2016 was smaller, in some areas of the country, (for example, in Kraljevo), the impact was registered at the same level of severity as in the aftermath of the March 2016 floods.

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
O.4	None.	Sustainability of results is ensured.	Both "hard" and "soft" aspects of the activities will likely remain beyond the lifespan of the Project. For instance, the trainings provided by the National Training Centre and supported by the Project build a culture of resilience and improve knowledge of response in the case of emergency. In addition, there is a clear commitment by the municipalities and by PIMO to expand and support the measures taken by the Project; infrastructure upgrades have been done with highest professional standards, and torrential barriers, and bridges provide requisite protection and will survive in case of future disasters of the same or even higher severity. The BEWARE project and the Kolubara Basin Study provided additional important information that can be used in future planning for not only DRR and DRM fields but also in other fields, such as land use and agriculture planning.	There were no outcome-level targets set in the ProDoc or AWP beyond the number of supported municipalities.	S
O.5	None.	Measures and tools developed by the Project have high replication potential.	A number of technical solutions proposed by the Project could be replicated in other districts of Serbia and/or in other countries. For instance, the Project manager led a presentation on torrential barriers in Tajikistan in 2015, which raised a lot of interest among local stakeholders. Also, tools developed for mapping landslides for the purpose of better urban and spatial planning, as well as the Kolubara Basin Study, were also been recognised by stakeholders as something worth replicating or expanding in Serbia. For instance, a representative of the Water Directorate confirmed that studies similar to the Kolubara Basin Study will begin soon for the regions		HS

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
			around the Western and South Morava rivers.		
O.6	None.	Exceeded.	Approximately 3% of the population of Serbia benefited from Project interventions (with 160,000 individual direct beneficiaries).		HS
Output 1: Water management and damaged infrastructure at the municipal level is improved.					
Indicator 1: # of assessments specifying infrastructure works needed in relation to water supply and wastewater treatment areas.	No target.	Exceeded. - 27 assessments were conducted and from that stakeholders identified a short list of 26 priority infrastructure projects and long list of over 40+ projects for implementation across 16 municipalities. - Rehabilitation of the tailing landfill next to the Stolice mine was completed. - A study on flood risk management in the Kolubara river basin was completed.	Assessments in all 27 municipalities provided sufficient knowledge on prioritised measures that could be implemented by the Project.	There was no target set for this indicator in either the ProDoc or the AWP for 2015 or 2016.	HS
Indicator 2: # of municipalities with improved water supply systems, sanitation and public utility infrastructure.	At least 15 municipalities have improved water supply systems, sanitation and public utility infrastructure.	Exceeded. -16 municipalities benefited, 7 from improved water supply systems and 9 from public utility infrastructure. - 3 additional municipalities beyond those identified in the ProDoc were involved in training activities and drills.	- 16 of the municipalities resulted in improved water supply systems, sanitation, or public utility infrastructure due to measures developed and implemented by the Project. - The Project involved more municipalities than anticipated, helping to further strengthen the resilience of more affected communities. -The rehabilitation of the tailing landfill next to Stolice mine ensured prevention of	A number of activities implemented by the Project fit very well within the larger scale improvement efforts in Serbia.	HS

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
			pollution which can lead to disastrous effects. -The Kolubara river basin study on flood risk management provided the requisite tools to combat future extreme events and natural disasters.		
Indicator 3: # of technical documentation developed which allow municipalities to perform large scale infrastructure works.	No target.	Achieved. All projects were implemented based on the required technical documentation.	-The technical documentation developed for projects provided effective and timely implementation of DRR measures in accordance with modern standards. -16 municipalities engaged in the Kolubara river basin study on flood risk. ¹³ - 3 municipalities received designs for future builds of torrential barriers.	There was no target set for this indicator in either the ProDoc or in the AWP for 2015 or 2016.	S
Indicator 4: # of municipalities in which emergency response drills were organised.	The capacity of at least 20 municipalities in Serbia were improved in the areas of community early warning, rescue, and evacuation through the implementation of different trainings.	Achieved (as adjusted). 1 – City of Kraljevo	According to the feedback provided by the municipalities involved, more priority was given to theoretical preparedness at first and then, on a secondary basis, to practical drills. Despite the fact that the number of drills carried out was less than expected, the value-add of the knowledge imparted cannot be underestimated. However, these trainings should be included in further interventions in Serbia on DRR in order to bring the knowledge to more municipalities. The Project is considered by the Final Evaluation Consultant to have shown strong adaptive management and was responsive to the request of key stakeholders.	One target was set in ProDoc as a cumulative estimate of the number of all trainings carried out at various levels. This target covers Indicators 4-9.	S
Indicator 5: # of municipalities in which municipal emergency response and early warning trainings were organised.	<i>See indicator #4.</i>	Exceeded. 10 trainings were held for 30 municipalities.	30 municipalities strengthened their capacity in municipal emergency response and early warning through 10 targeted training events.	3 additional municipalities were involved. This is a positive fact, which helps to reach out to a wider audience of stakeholders.	HS

¹³ A more detailed overview of the implemented projects are presented in [ANNEX 2](#) [3].

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
Indicator 6: # of municipalities equipped with basic rescue kits.	<i>See indicator #4.</i>	Exceeded. 27 municipalities were impacted..	Municipalities were equipped through the sector for emergency management.	No comments.	HS
Indicator 7: # of municipalities where community preparedness trainings were organised.	<i>See indicator #5.</i>	Exceeded. 14 municipalities, 11 as identified from the initial list with an additional three interested municipalities which joined.	This activity helped to support the most vulnerable part of the population in preparing them to react to extreme events and natural disasters – communities, families, and individuals at the local level. Local level buy-in was ensured by the involvement of local activists and NGOs.	3 additional municipalities were involved than the number originally expected. This is a positive fact, as indicates that the trainings reached a wider audience of stakeholders.	HS
Indicator 8: # of municipalities in which community evacuation drills took place.	<i>See indicator #5.</i>	Achieved (as adjusted). 1 – City of Kraljevo	<i>See indicator #4.</i>	<i>See indicator #4.</i>	S
Indicator 9: # of men and women who participated in disaster preparedness trainings.	No target.	Achieved. 555 individuals participated overall, 100 female and 455 male, per the training logs.	Support was provided to both men and women through these capacity building activities. More on gender mainstreaming results from this Project are provided under Output 3, Indicators 10-11, below.	The role of both men and women is very important during adverse events. Supporting gender equality in emergency and disaster response training is critical, as risks and impacts to each group in the aftermath of an emergency can be different.	S
Output #3: Women NGOs advocate for women's participation in DRM and planning and women's security in crisis is strengthened.					
Indicator 10: # of women NGOs which strengthened their networks with other specialist service providers.	10 women NGOs increased their capacity to take part in disaster preparedness and response.	Achieved. Grants are awarded to 11 NGOs that will implement DRR projects in 20 municipalities.	Strengthened capacity for women NGOs in the field of DRR was achieved through the small grants and training programs. A full list of NGOs which were supported is presented in <u>ANNEX 6</u> .	No comments.	S
Indicator 11: # of women who increased their capacity to provide hazard analysis and conduct participatory risk assessments from	No target.	Achieved. A structured training workshop on "Gender in DRR" was organised by Project in Oct 2015. The workshop gathered 45	Participants at the workshop were introduced to the gender aspects of DRR, including a focus on prevention, preparedness, response, and reconstruction.	No comments.	S

Indicator	ProDoc (AWP) Target	Achievement	Impact	Remarks by Evaluator	Rating
a gendered perspective.		participants from NGOs, other civil society groups, civil protection units, emergency headquarters from local and regional levels, social welfare centres, and other entities.			
Output #4: Landslide Rehabilitation					
Indicator 11: A susceptibility map analysing the aftermath of the May 2014 floods is created.	The probability of spatial landslides, including debris flow mudslides, is defined in specified flood-prone areas.	Exceeded. The maps are available to the public, as well as available online.	Tools were provided for the allowance of optimised decision making during development and land use planning phases.	This activity is still under development and will be further supported by RGF.	HS
Indicator 12: # of landslides reviewed under satellite or air imagery techniques.	400 landslides were reviewed under satellite or air imagery techniques.	Exceeded. 1175 landslides were reviewed under a combination of such techniques.	The efforts of the Project allowed stakeholders and government entities to generate a significant amount of information which can be used both within the Project and also beyond the scope of current interventions in order to better plan for future interventions and make critical resource management decisions.	Having this information ready will make it much easier to carry out resource mobilisation activities in the future.	HS
Indicator 13: # of smaller landslides directly assessed through field visits.	100 smaller landslides are directly assessed through field visits.	Exceeded. 1884 landslides total were assessed through field visits.			HS
Indicator 14: # of zones for early warning systems ("EWS") identified.	5 zones for EWS were proposed to the national disaster management body.	Exceeded. 11 zones were identified.			HS
Indicator 15: % of completed updates to the data on landslides, including debris flow mudslides, which are at risk for activation in the aftermath of the May 2014 floods.	70% of the data on landslides is updated (including debris flow mudslides) at risk for activation in the aftermath of the May 2014 floods.	Exceeded. 90% of data has been updated and is available.			HS

6.3. COUNTRY OWNERSHIP AND STAKEHOLDER PARTICIPATION

Cooperation with various government agencies was reported to be good and efficient. The lead coordinating role for the Project was played by the former Government Office for Reconstruction and Flood Relief (currently PIMO), which had been legally mandated to coordinate relevant Project activities in this area. In addition, other key government agencies were involved, notably the Ministry of Energy and Mining, the State Geological Survey, the Water Directorate and the PWC Srbijavode, as well as the Ministry of Interior through its Sector for Emergencies. On the other hand, agencies with mandates in the field of climate change or environmental protection (for instance, PWC Srbijavode) also played significantly less important roles, and were limited in their involvement to only certain Project activities (such as the Kolubara Basin Study). Similarly, during the implementation of some of the activities, stakeholders report having experienced difficulties in contacting other agencies from different sectors (for example, the transport sector, where agency representatives were especially difficult to contact during the early stages of the Project).

The Project coordinated the involvement of local municipalities and government agencies at all levels, especially with regards to obtaining local permits and consents required in order to take certain protective measures on the ground. According to the Project management team, most of the Project's activities had a joint national and local level coordination aspect, which was closely monitored by the Project team and ensured by the Project partners. For instance, the BEWARE project team secured its own coordination at the local level through the authority of GZ, the PWC Srbijavode (through its authority for maintenance and supervision over 1st Category waterways), and with the Sector for Emergency Management (through its mandate to train emergency headquarters nationwide). Assistance and support from the Project team and UNDP was provided to these partners whenever necessary.

Respondents to the stakeholder surveys and interviews which were carried out during the course of the evaluation for the FE Report referred to certain tensions with the Forest Directorate on the issues of cleaning water beds in Krupanj and related to the Serbian Railways infrastructure.¹⁴

It is well understood by the Final Evaluation Consultant that it is hardly possible to engage with all relevant stakeholders during the course of any project, however, establishing a proper inter-ministry mechanism of engagement across national level actors is a key to the future ownership of the Project's results. Particularly in the field of DRM, which is truly cross-sectoral, the activities within each sector are important to track, communicate, share, and solicit feedback on, in order to strengthen the overall resilience of people and the economy to withstand future natural disasters and extreme events. It would be fair to mention that majority of respondents were quite happy with the system of engagement with various agencies and with local governments at the municipal level, so the critical comments referred to above are more an exception than the rule.

However, having said that, the Final Evaluation Consultant would like to emphasize the disconnect between the national and local level, on the one hand, and also among the various municipalities themselves. This is partly caused by the division of responsibilities being bifurcated because of the current river classification system.¹⁵ In a number of cases, the catchment of rivers in the 2nd Category still cover a few municipalities, however, there are no mechanisms or platforms identified for a coordinated response among these municipalities for basin-related decision making process. Moreover, some of the respondents mentioned that due to measures taken upstream, risks increased in their downstream zones of responsibility (for example, in Kraljevo). During the field visit a number of municipalities expressed the need for stronger horizontal links among leaders across municipalities, particularly on issues such as monitoring and information sharing, training and capacity building, risk assessment, and the development of protective measures and systems. There were only a very few cases where the prototypes of "basin councils" were reported by respondents to be functional be

¹⁴ One of the respondents replied to the question regarding the cooperation of various government agencies and municipalities with the following: "During the Project we found a big problem because of the weak cooperation that exists with the Serbian Railways infrastructure."

¹⁵ All rivers in Serbia belong to one of the two categories of classification. Rivers of the 1st Category are the responsibility of the national level ministries and agencies, whereas those of the 2nd Category are dealt with at the local level by municipalities and other responsible bodies within municipalities.

functional and effective, and even in these instances it was primarily due to the informal personal links of those involved rather than institutionalized requirements.

One of the survey respondents wrote the following: “It was of great importance that the Project was able to bring together in the same place representatives from emergency institutions of the neighbouring municipalities. This allowed stakeholders to exchange experiences and establish contacts which could help them jointly act and cooperate in emergency situations moving forward.” The Final Evaluation Consultant believes that this statement resonates with and is representative of the work of the Project overall. The Project was able to begin this process of dialogue, linkages, and knowledge share across municipalities, which will certainly need to continue in Serbia.

Some of the stakeholders contacted expressed a concern that not all NGOs utilized the chances provided by the Project to develop partnerships with local governments. If true, such situations could have negative effects on the sustainability of the Project’s achievements. On the other hand, other NGOs specifically mentioned that one of the Project’s primary objectives was to increase the knowledge of self-governments and other organisations at the local level (rather than target NGOs). As for concrete project activities, a number of the activities were directed at a greater interaction between the local governments and NGOs, so that local government officials could better recognise local NGOs as partners in responding to future emergencies. The Project supported the establishment of close cooperation with community-based organisations and NGOs at the national level, as well as cooperation with other NGOs dealing with relevant issue areas.

Overall Rating by the Final Evaluation Consultant: **Satisfactory.**

Direct Feedback on Country Ownership and Stakeholder Participation

Comments from Stakeholders:

- The Project worked with the majority of relevant stakeholders at both the national and local levels.
- The need for enhanced inter-ministry cooperation mechanisms is well understood, and there is hope that the new law on DRR will directly address this issue of intergovernmental communication.
- The Project helped establish mechanisms for cooperation with relevant government institutions and local governments.
- Despite the sufficient involvement of municipalities, some stakeholders felt that the Project could have been better at involving certain key people and mayors.
- There is a concern that the new DRR law will not pay sufficient attention to the local level.
- Local governments as well as local experts were adequately supported (in some instances even beyond expectations), which has helped to raise the level of knowledge of DRR.

Comments by the Final Evaluation Consultant:

- The system of cross-sectoral coordination established by UNDP and the Project team allowed the Project Team to achieve the main goals of this intervention, however UNDP needs to continue their efforts at strengthening intergovernmental mechanisms of cooperation among ministries, especially, in the fields of DRR and water resource management.
- Key stakeholders expressed a high level of satisfaction with the Project’s results at both the national and local level.

6.4. REPLICATION OF APPROACH

The Technical solutions proposed and the measures implemented were reported as fully applicable to all municipalities in Serbia at risk for the effects of flooding and other natural disasters.

During feedback discussions, stakeholders emphasised that the measures and tools developed by the Project had high potential for replication. Projects similar to those undertaken as part of Output 2 (those related to strengthening municipal capacities) were welcomed for replication in the same municipalities (and others) in the future. Moreover, PIMO was very active in resource mobilisation, for the Project but also for similar projects, in helping to providing funding for over 150 projects in the country.

According to PIMO, two potential sources of funding have currently been identified for these projects. One is the European Solidarity Fund, and the other is an anonymous source that still cannot be announced due to ongoing negotiations. Though currently anonymous, representatives of this agency

emphasised a very high chance of securing the necessary approvals to enter into an official agreement in the near future.

The Final Evaluation Consultant would like to specifically mention the high potential for replication of the Kolubara Basin Study. During the meeting with Srbijavode, their representative announced the start to two similar studies which will be carried out for the Western and South Morava river areas. The main approach of these studies will be consistent with the approach taken under the Kolubara Basin Study and the results are expected to be comparable with those of the Kolubara Basin Study.

Another example of the high potential for replicating Project activities is the work of the Ministry of Mining and Energy and the RGF on mapping landslides as a follow up to the BEWARE project. As representatives of the Ministry of Mining and Energy mentioned, such mapping efforts were not as prevalent over the last year as they could have been (due to lacking of funding), however the entities will continue to undertake such studies in the future.

Overall Rating by the Final Evaluation Consultant: **Satisfactory.**

Direct Feedback on Replication of Approach

<p>Comments from Stakeholders:</p> <ul style="list-style-type: none"> - The ability to replicate the results of the Project are highly likely due to the underlying strong need to undertake many of the activities and also due to anticipated funding for some of these measures from the GoS.
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The significant number of technical solutions or products developed by the Project have a high replication potential and continued work in the Project areas is welcomed by stakeholders at both the national and local level. - The development and implementation of these measures is dependent on funding being mobilised and provided to the relevant actors. - Some municipalities are concerned about whether sufficient funding will be available for 2nd Category rivers and watercourses, however at the national level considerable funding is likely to be allocated for projects on the 1st Category rivers.

6.5. COST EFFECTIVENESS

The funds, expertise and time allocated to the Project were converted into tangible, visible, and mostly sustainable results. Project activities helped to create a significant number of new jobs, both permanent and seasonal. Women's involvement in the DRR process was also noticeable. In terms of its financing, the Project contributed to raising the level of resilience in local municipalities and communities despite its limited budget.

Therefore, cost efficiency for the Project is ranked as **Highly Satisfactory.**

6.6. UNDP'S INVOLVEMENT AND COMPARATIVE ADVANTAGE

The implementation of the Project was generally in line with the work plan supported by the UNDP CO and Country Programme Document (the "CPD"). The links established between the Project and other project interventions in this space (undertaken by UNDP and other organisations) positioned the Project in a way that allowed a high level support and leverage for the implementation of individual activities effectively.

The Project quickly progressed over the last few months, despite a sufficiently long learning curve in the beginning. This learning curve, and subsequent quick progression, was mentioned by some respondents. Significant efforts were made by the UNDP CO and Project team and which resulted in a clear vision for how to bring the Project to a successful completion by April 2016. The current senior management of the UNDP CO (both in RR and DRR fields) are highly motivated and worked tirelessly towards successful completion of the Project to ensure positive impact.

As already mentioned in this FE Report, the Project duration was limited to one year, which represented a high risk for the possibility that certain targets would not be achieved on time. For this reason, UNDP had to be very efficient to not only complete the Project successfully but also to meet such a challenging

schedule for deadlines. It should be mentioned that the entire the UNDP CO mechanism needed to be like clockwork in order to do just that. The Final Evaluation Consultant saw a number of beneficial shortcuts developed by the team for speeding regular processes and procedures that exist within the UNDP system. Such beneficial shortcuts included pre-tendering of potential contractors and establishing long-term agreements with such contractors, setting up rosters of consultants in advance, engaging with the regional UNDP hub in Istanbul for deployment of consultants from their rosters, and other administrative methods that worked to ease the time pressures of the Project while still maintaining compliance with UN policies and procedures and project best practices.

In addition UNDP proved its comparative advantage of its close connection to and good working relationship with the GoS at its highest political and technical levels, all of which allowed the Project to receive a high level of support and promotion in the country. Similarly, UNDP was very effective in keeping close links with the donor, the GoJ, through the GoJ's Embassy in Belgrade. Representatives of the donor took part in major public events (such as the regional conference on gender mainstreaming in DRR, held in February 2016).

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

Direct Feedback on UNDP's Involvement and Comparative Advantage

<p>Comments from Stakeholders:</p> <ul style="list-style-type: none"> - UNDP was ready to provide every kind of support for the establishment of cooperation mechanisms with other institutions, and also provided the necessary logistical support for the implementation of individual activities. - UNDP provided Project implementers with all of the required guidelines and manuals, which were clear, precise and helpful and helped contribute to successful execution of the Project. - Project staff was very effective in addressing issues raised by stakeholders at the national and local levels.
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The innovative tools and modalities applied by the UNDP CO should be further promoted and utilized with other projects in the region and other regions, as oftentimes the slowness of administrative tasks for projects, including the extended processing time required for the UNDP COs to prepare for procurement and recruitment of consultants, negatively influences the reputation of the organisation and the work that it undertakes. - The well-functioning current working relationships, which were established with the GoS, need to be further used to promote the UNDP's DRR efforts and other relevant agendas in the country, and also provide reference points for other countries and regions seeking examples of successful experiences of the UNDP working with the national government.

6.7. MANAGEMENT ARRANGEMENTS

The Project was implemented under the Direct Implementation Modality (the "DIM"). The management arrangements conformed to the stipulations in the new Results Management Guide, produced by UNDP. The overall responsibility for Project implementation was borne by the UNDP CO in Serbia.

In accordance with the business models existing within UNDP, the Project organisation structure included the following components:

- the Project Board (the "PB");
- Project assurance;
- the Executive role;
- the Project manager; and
- the Project support.

The PB was created from the assigned representatives of relevant institutions at the national level whose competencies and experiences were relevant for the implementation of specific project activities, as well as one representative of the donor, the GoJ. Throughout the Project, the PB was the main body responsible for making management decisions for the Project (taken by consensus) and providing guidance to the Project manager, including recommendations for the approvals of project plans and

revisions. The PB considered various progress and technical reports on the implementation of Project activities and provided recommendations on steps forward when required. The PB met twice in 2015 and approved the AWP and certain other project activities. The PB ensured overall guidance as well as participation of its members in high-profile decisions and events.

The Project assurance role was carried out by the corresponding UNDP CO programme officer.

The Executive role was taken on by the UNDP Resident Representative (the “UNDP RR”) and the UN Resident Coordinator (the “UNRC”), as joint responsible parties for the Project, and the senior supplier was a representative of the GoJ and the UNDP DepRR team. The UNDP RR was personally involved with the Project and heavily promoted it. The primary beneficiaries included over 27 municipalities across Serbia, while the key coordination role at the national level was played by PIMO. Coordination of key governmental agencies involved proved to be instrumental to the successful implementation of various activities during first three months of the Project.

Mr. Zarko Petrovic acted as a dedicated project manager, supported by a team which included one project coordinator and two associates (one each for procurement and finance). Other support staff, including consultants and about 10 interns, participated in day to day implementation of activities. The team worked in an effective and efficient manner. The overall daily supervision was carried out by UNDP DepRR Ms. Steliana Nedera.

Project support was provided by both Project staff and relevant officers of the UNDP CO.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory.**

Direct Feedback on Management Arrangements

<p>Comments from Stakeholders:</p> <ul style="list-style-type: none"> - Since the Project staff was also responsible for other activities (for example, a GoJ-funded project on refugees), the administrative costs were lowered accordingly, which allowed UNDP to play a strong leveraging role. - The capacity of the Project team was strengthened by the involvement of a significant number of interns, which also added an additional educational function to the Project as it ensured hand-on training. - The UNDP CO senior management expressed their satisfaction with the Project especially with regards to managerial efficiency, as well as the key stakeholders at local level who had similar comments..
<p>Comments by the Final Evaluation Consultant:</p> <ul style="list-style-type: none"> - The management structure of this Project proved its effectiveness and cost-efficiency. - A special mention should be made to the involvement of young specialists (especially young engineers) and to the interns active in various Project activities. The Final Evaluation Consultant spoke with a few of them, and each mentioned that they were not only satisfied with their roles and contributions, but also expressed their high appreciation of the Project’s approach at including them and valuing their contributions.. The practical tasks that the interns were involved in throughout the Project helped to increase their knowledge and skills. - The senior management of the UNDP CO (including both the RR and DepRR) provided due support and helped develop and maintain interest in the Project at highest levels of national stakeholders in the country. - Key decisions about the Project were made with the involvement of the PB, which helped to ensure proper ownership over the Project achievements by key government agencies and relevant municipalities. The importance and extent of stakeholder buy-in became apparent to the Final Evaluation Consultant after meetings and interviews with various actors which were organised as part of the field visit..

6.8. FINANCIAL PLANNING

Financial planning aspects were a vital consideration for this Project, since time was one of the limiting factors to successful implementation and achievement of Project results. As already mentioned above, the Project team, supported by the UNDP CO were very creative in developing new methods to enhance Project implementation and in applying specific tools to speed along the usually time consuming process of tendering, procurement, and other relevant administrative procedures. This is one of the reasons why delivery of the Project was very efficient throughout its lifespan.

Delivery of Project activities in 2015 was based on PBB and Combined Delivery Reports (“CDRs”) (provided to the Final Evaluation Consultant)) and was at a spending level of USD \$2,588,302 (97% of funds originally allocated for the year), leaving over USD \$1M funds for less than 4 months of implementation left in 2016. Even accounting for the completion of all ongoing works, final payments made to vendors, and late invoices due to be paid, this was still a challenging amount to disburse for the remaining 4 months’ time.

However, up through June 2016 almost 100% of the budget was disbursed (with USD \$9,477 remaining and not disbursed but committed). The Final Evaluation Consultant considers this a good achievement and very effective financial planning which was key in supporting the resulting solid outcomes that came from Project activities.

More details on financial delivery of the Project can be seen in the table below.

Table 6: Financial Delivery of the Project from 2015-2016.

Outputs	2015			2016			TOTAL FOR PROJECT		
	Budget, USD \$	Expenses, USD \$	Delivery, %	Budget, USD \$	Expenses, USD \$	Delivery, %	Budget, USD \$	Expenses., USD \$	Delivery, %
Output 1	1,617,235	1,638,920	101%	685,953	738,828	108%	2,324,873	2,377,748	102.3%
Output 2	204,393	151,533	74%	52,872	53,773	102%	204,405	205,306	100.4%
Output 3	180,768	193,471	107%	38,023	33,964	89%	231,494	227,435	98.2%
Output 4	663,130	604,378	91%	274,839	220,588	80%	879,217	824,966	938%
TOTAL	\$2,665,526	\$2,588,302	97%	\$1,051,687	\$1,047,153	100%	\$3,639,989	\$3,635,455	99.9%

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

6.9. MONITORING AND EVALUATION

In accordance with the programming policies and procedures outlined in the UNDP’s Programme, Operations Policies and Procedures (“POPP”) document, the Project carried out the following M&E activities listed below.

- The Project team reported on progress regularly, including reports on qualitative assessment aspects. An issues log was activated in the Atlas reporting system at the beginning of the Project and was updated by the Project manager on a regular basis.
- Despite the fact that the initial risk analysis included in the ProDoc was insufficient in the scope of its examination, a corresponding risk identification list was activated in the Atlas reporting system and supported with updates and review throughout the Project’s lifetime.
- A monitoring schedule plan was also activated in the Atlas reporting system and updated after relevant events took place.
- In addition to the above information recorded in the Atlas reporting system, the AWP’s for 2015 and 2016 were duly prepared by the Project team and approved by UNDP and the PB.
- An annual progress report dated as of 2015 (the “APR”) was developed by the Project team. During the FE Report evaluation the APR was thoroughly reviewed by the Final Evaluation Consultant. The level of detail was appropriate throughout the document, and the APR for 2015 was approved at the meeting of PB.
- At the time of the FE Report evaluation, the Project team was developing a Project completion report. A draft of this report was provided to the Final Evaluation Consultant for review.
- The ProDoc also contained an extended section on “Quality Management for Project Activity Results” (Section IX of the ProDoc). However, the Final Evaluation Consultant did not see any

evidence that this framework was used within the Project or reported on in any of the intermediary Project reports that were provided.

- The FE Report for the Project was organised on time, and UNDP, the Project team, and all stakeholders that were contacted showed a sufficient level of openness and support for the evaluation exercise by providing their time, seemingly unbiased opinions, and recommendations, which, when relevant, were included in this FE Report.

Overall Rating by the Final Evaluation: **Satisfactory**.

6.10. IDENTIFICATION AND MANAGEMENT OF RISKS (ADAPTIVE MANAGEMENT)

As mentioned above, risk management was mainly implemented through tracking and to the Atlas reporting system.

The Final Evaluation Consultant asked all stakeholders during interviews whether the way in which risk management was integrated into the Project had been adequate and whether the level of support and flexibility offered by Project leaders had been sufficient. In all opinion exchanges, the stakeholders contacted expressed their satisfaction with UNDP in general, and the Project team in particular.

In event that any issues did arise related to the implementation of various activities within the Project, the Project team was responsive and efficient in addressing them.

Overall Rating by the Final Evaluation Consultant: **Satisfactory**.

6.11. ATTAINMENT OF OBJECTIVES

The main objective of the Project was to provide support to 27 municipalities identified during the assessment as particularly impacted by the devastating floods in 2014. This objective was obtained through the implementation of a series of technical assistance and infrastructure projects.

In order to evaluate the attainment of the objective and the individual targets which contributed to the objective, the Final Evaluation Consultant developed a number of impact indicators and, together with the original indicators included in PrDoc, these comprehensive set of indicators represented a framework with which to evaluate the overall performance and outcomes of the Project. A detailed overview of these indicators is presented in Section 6.2.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

6.12. PROSPECTS OF SUSTAINABILITY

Local expertise was predominantly relied on for a majority of the Project's activities, with international expertise being used for a limited number of tasks, (for example, the development of a methodology for the flagship BEWARE project, which was completed by Prof. Kyoji Sassa, the Chairman of the International Consortium on Landslides, and Koh Myiaoi, from the Bangkok regional centre of UNDP). The utilisation of mostly local expertise within the Project's sufficiently complex system of QA/QC also contributed to the sustainability of results.

One respondent expressed the following opinion: "The Project addressed a number of issues of great importance and ensured participation of institutions at all levels of government, as well as the non-governmental sector, and has greatly contributed to sustainability."

It was particularly important that the Emergency Sector of the Ministry of Interior and PIMO showed understanding of the changes needed in order to strengthen the DRR sector in terms of the introduction of the concept of risk assessment and management, and idea that these institutions could further strengthen the resilience of the community through increased involvement of citizens (including women).

An important step towards sustainability was the involvement of young engineers in every infrastructure-related project. This was a requirement put forward by UNDP and the Project. The list of these individuals is active in Project activities are presented in ANNEX 7.

As for the studies implemented by the Project, notably the Kolubara Basin Study and the studies under the BEWARE project have already been taken over by relevant organisations which are further developing the studies. This indicates that this portion of the project is highly sustainable.

Overall Rating by the Final Evaluation Consultant: **Satisfactory**

Comments by the Final Evaluation Consultant:

- The majority of products developed and infrastructure projects implemented by the Project were taken over by relevant local stakeholders. More detailed views from the Final Evaluation Consultant on the sustainability of the individual activities are presented in the corresponding sections of this FE Report.
- The Final Evaluation Consultant's overall assessment of the sustainability of the Project is that it is satisfactory.

6.13. VISIBILITY

The Project directly contributed to the resilience of local municipalities and adhered to the ethos of build-back-better through direct support to post-flood rehabilitation efforts and DRR measures, in line with the fourth priority of the Sendai Framework.

During interviews conducted by the Final Evaluation Consultant, all stakeholders positively responded about Project visibility efforts and the Project's representation in media:

The following websites were established during the course of the Project:

- Project web page through the UNDP CO website, "Increased Resilience to Respond to Emergency Situations":
http://www.rs.undp.org/content/serbia/en/home/operations/projects/crisis_prevention_and_recovery/aaaaa.html
- BEWARE project web page through the Ministry of Mining and Energy website, "Beyond Landslide Awareness: Unifying Landslide Data Standards, Building Capacities and Involving Local Communities":
<http://geoliss.mre.gov.rs/beware/>
- Kolubara Basin Study web GIS portal through the company Srbijavode:
<http://studijakolubara.srbijavode.rs/home/>

The following written materials were produced during the course of the Project:

- The BEWARE project brochure, accessible at: <http://geoliss.mre.gov.rs/beware/wp-content/upload/brosura%20BEWARE-low%20res.pdf>

Other media and visibility channels:

- The Facebook page for the BEWARE project, accessible at:
<https://www.facebook.com/bewareproject/>

During the course of the Project, Project activities were highlighted in 50 media appearances (see ANNEX 8).

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory**.

Direct Feedback on Media and Visibility:

Comments by Stakeholders:

- The amount of Project visibility was high and the media visibility met (and even exceeded) requirements set by the donor and UNDP.
- Media involvement in key Project activities and events was adequate

Comments by the Final Evaluation Consultant:

- Project visibility in Serbia and beyond was good.

- A significant amount of visibility materials (brochures, video and photo materials, educational materials, and others) were produced by the Project and circulated.
- However, during the course of the field visit the Final Evaluation Consultant would like to note that two of the infrastructure projects that were visited were lacking boards or placards indicating the name of the donor and the Project. As reported to the Final Evaluation Consultant, the boards had been installed originally, prior to official opening of the infrastructure sites, however they were later found to have disappeared. The Final Evaluation Consultant proposed installing more permanent boards so that they would not go missing. The relevant parties and municipality representatives promised to fix this situation, which the Final Evaluation Consultant recommends having UNDP check on shortly.

6.14. GENDER MAINSTREAMING

The entire Output 3 of the Project was focused on addressing the issue of gender mainstreaming in the field of DRR in Serbia. A detailed description of the activities implemented in this area is presented in Section 5.7 of this FE Report.

However, it should be noted that the Project integrated a number of gender mainstreaming aspects into many activities of the Project. A number of the Project's visibility materials addressed methods to increase the involvement of women in DRR activities and aimed to increase support for their participation in rescue operations and other activities during emergencies.

In October a workshop on Gender in the field of DRR was held which covered women's participation in DRR processes. In addition to this workshop, in February 2016 a regional conference was organised with the purpose of exchanging global and regional experiences on gender mainstreaming and practices, organised by UNDP and the Project. This event was widely recognised within Serbia and beyond and received a high level of visibility.

Overall Rating by the Final Evaluation Consultant: **Highly Satisfactory.**

Direct Feedback from Stakeholders on Gender Mainstreaming

Comments by Stakeholders:

- For adequate representation of women in DRR certain changes to the legal framework will be required (for example requirements regarding women's participation in specialised civil protection units), as well as a set of incentives to motivate women to be part of the protection and rescue system.
- More participation of women in media and seminars would be very much welcomed.
- It is necessary to include a larger number of women in the headquarters of emergency centres at the local level.
- It is necessary to collect and present gender-sensitive statistics at the local level in communities and in local self-governments.
- It is vital to create a women's NGO network in order to strengthen the role of women in emergency situations.
- Close involvement of self-government units in the activities of women NGOs would help to raise additional interest in the problem of how to involve more women in governance and decision-making in emergency situations.
- Women should participate in the risk assessment stage and in the early stages of preparation and design for prevention activities.

Comments by the Final Evaluation Consultant:

- There is obvious interest in Serbia in strengthening gender equality and integrating various gender-sensitive activities into DRR. The comments from stakeholders above include a number of comments which note interest in activities beyond the scope of the activities and Project evaluated but are worth considering by national-level agencies (for instance, reforming the legal basis for gender mainstreaming), local self-governments (such as establishing stronger links between municipalities and women's NGOs), and NGOs and activists themselves (like setting up NGO networks). It is believed that all parties could be further supported by the GoS and UNDP in the area of strengthening women's participation in various aspects of DRR.

7. CONCLUSIONS, RECOMMENDATIONS AND LESSONS LEARNED

7.1. KEY CONCLUSIONS

The Project evaluated was highly relevant and provided the requisite level of support to the GoS and other stakeholders in strengthening resilience to future natural and other disasters and extreme events.

The Project was quite challenging in terms of the amount of funds that needed to be utilised and the amount of work to complete considering the very short lifespan. Without the application of new methods and management practices by UNDP and the Project team, successful implementation of the Project would not have been possible. The Project team was quickly mobilised by UNDP and supported by UNDP at all levels, from senior management on down, and proved to be very effective in launching the Project and organising methods of cooperation with partners and establishing proper management, M&E, and QA/QC procedures. UNDP was very efficient and inventive in developing a series of beneficial short-cuts, which allowed the Project team to significantly shorten the time required for procurement, contracting, and execution of specific administrative tasks.

Due to the absence of sufficient time allocated to develop new designs and projects, the Project also ended up being effective in engaging with and fine-tuning already existing designs of infrastructure projects in the 27 concerned municipalities. One can see this as an opportunistic approach, however, the Final Evaluation Consultant believes that this was an efficient way to get hold of the existing knowledge among the implementers and kick off the development of protection measures as quickly as possible. Effective protection of people and assets during the spring floods in 2016 was in part due to those Project interventions which had been completed at the time (both infrastructural projects and those training and capacity building drills which had taken place) was a testament to the fact that both the designs and actions were correct and beneficial.

Despite the fact that the Project contained various activities the Project team still devoted sufficient time in inception to all kinds of tasks which required parallel engagement with governmental agencies, engineering companies, scientists and researchers, and a wider audience of the public and relevant NGOs.

The Project management structure established by UNDP was effective in working with both stakeholders at the national level and municipalities and respective departments at the local levels (such as the municipal and water supply departments, civil protection services).

Particular mention should be made to the technical studies undertaken by the Project, primarily the Kolubara Basin Study, the studies related to the Tailing Site at Stolice Mine, and activities under the BEWARE projects. All results were taken over by relevant stakeholders and are being followed up on and coordinated by PIMO.

A series of infrastructure projects implemented by the municipalities and supported by the Project are some of the most successful activities of the Project. In addition to the significant investments in infrastructure that were made, the projects contained a number of aspects which could be considered good practice. For instance, a triple-stage QA/QC procedure was applied in order to assure the technical quality of the projects, the capacity building aspects (due to the involvement of young and unexperienced engineers receiving hands-on training) and the comparability of individual infrastructure projects against overall schemes of reconstruction and improvements made by municipalities themselves.

Another example of successful activities under the Project are the set of preventative activities, the district simulation exercises at the local level, and the capacity building services provided on how to respond to emergency situations. Stakeholders recognised that in addition to the trainings provided for 31 local self-governments in municipalities affected by the 2014 floods, the Project's provision of a limited set of equipment essential for emergency situations significantly increased the capacity of local rescue services (and also the sector for emergency situations) and contributed to the sustainability of Project interventions.

Overall, the Project is seen by the Final Evaluation Consultant as a success Despite an ambitious set of objectives and a number of temporal, institutional, technical, and other challenges, the joint team of

UNDP staff, experts and practitioners in various fields, civil engineers, NGOs, and public activists all succeeded in finalising the Project with the result being obvious value-add. In the opinion of the Final Evaluation Consultant, the level of trust established between various players, including donors, will help strengthen the resilience of the economy and population of Serbia in the future.

7.2. MAJOR RECOMMENDATIONS

Despite the fact that the focus on gender mainstreaming within many activities is quite clear, there is still a lot to do with respect to gender mainstreaming in Serbia generally. Mainstreaming gender aspects into DRR and support to the corresponding women's-focused NGOs remain a need that is in great demand. The following potential activities and goals are worth further consideration and further work: connecting women from civil society organisations with women in municipal government structures; organising workshops with the aim of increasing the capacity of women; and developing mechanisms for engagement of women in decision making processes, including during emergency situations, which can serve as models for other local governments in Serbia.

The current mechanisms of cross-sectoral coordination in Serbia are not sufficiently developed. Strong coordination among entities and experts continues to be important for Serbia so that it can develop platforms for coordinated decision making in the field of DRR, particularly at the local level. It is for this reason that some of the Project's core activities were such an effective way of engaging with relevant players, such as simulations and drills, group discussions, the establishment of a training centre for volunteers, roundtables with representatives of relevant institutions, psychological workshops for women and children, as well as numerous media presentations and public information campaigns. However, more efforts are needed by all relevant stakeholders in order to improve cross-sectoral coordination and continue with the communication gains that were realised by the Project. The Final Evaluation Consultant is optimistic that the new DRR law, so widely talked about in Serbia at the time of the FE Report, will help to move this agenda forward.

An obvious disconnect in decision making was identified in how responsibility is separated for rivers of the 1st Category (which are the responsibility of national-level authorities) and those in the 2nd Category (which are the responsibility of municipalities). In the case of the rivers and watercourses of the 1st Category, the basin approach is taken as the main organising principle for water resource management and DRR, however in the case of smaller rivers of the 2nd Category, management decisions are often made by individual municipalities without taking into account the needs of neighbouring municipalities upstream or downstream. Representatives from some municipalities expressed their concern about measures taken upstream which caused additional risks and problems downstream. In a limited number of cases, some signs of the development of informal "basin councils" were identified, however the use of basin councils was more an exception than a rule and use of them was completely based on the personal relationships between decision makers in neighbouring municipalities. It would be recommended that future efforts focus on implementing a true basin approach to management of Serbian water and land resources, which will contribute to the establishment of an effective DRR system.

Women activists and women's NGOs involvement in various aspects of DRR work currently undertaken is strongly needed. Since gender mainstreaming still needs increased development and introduction into the field of DRR (and other sectors in Serbia more generally), closer engagement with women's NGOs seems to be an activity that was not adequately thought through in advance, especially considering the fact that sporadic actions are quite typical, which is often caused by requirements of various one-off donor activities. The activities and interests of a number of NGOs are currently complimentary to each other, however, there are no obvious links established between them. Therefore, although there is a recognised need for increased communication among women's NGOs in Serbia, confirmed by a number of stakeholders, there is still much work to be done in order to create a strong role for women in the DRR field.

At the local level, the low level of training and knowledge about emergency response and the need to integrate women into DRM decision making processes has been noted as a reason preventing full gender mainstreaming in this area and in other important spheres of public life. The Final Evaluation Consultant recommends that leaders work to further engage with existing women activists and build the capacity of women's civil society organisations to enable them to actively participate in decisions at the municipality and community level.

The Project put significant efforts into organising various aspects of capacity building trainings and drills. Participants in these trainings expressed their views, sometimes different, on how to continue these important activities in the future. The Final Evaluation Consultant recommends taking stock of what the key achievements were, and what activities will be most needed moving forward. One opportunity to do so will be at the final Project conference currently being organised by UNDP and the Project team. A joint analysis of the experiences of all 30 local governments and institutions which participated in the training would certainly have value-add for further developments in this field.

7.3. LESSONS LEARNED

As with any project, this Project resulted in a number of important lessons learned which can be used in other districts of Serbia and in other countries and regions.

- Good cooperation links and partnerships were established during the early stages of the Project, and this was key to further successful implementation of Project activities, increased ownership of future results by local stakeholders at various levels, and strengthened cooperation between various government agencies during and after the projects.
- Due to its comparative advantages, UNDP maintained very strong linkages with donors (such as bilateral donors) and national stakeholders. This is true for UNDP in many countries. However, in this case the UNDP CO was very inventive and creative in developing a series of mechanisms and tools which allowed for a speeding up of usual business flow. This FE Report includes a number of such examples where the UNDP CO developed new methods for speeding up the Project's implementation. The Final Evaluation Consultant believes that such an approach by the UNDP and its true results-orientated way of working should be further promoted and showcased throughout the UNDP system.
- The decision making process for how to handle management of 2nd Category rivers is fully decentralised and the responsibility of local authorities. However when there are no effective mechanisms for communication and decision making beyond the geographical scope of one municipality, the effectiveness management for 2nd Category waterways can be doubtful, since the decisions taken by one municipality with regards to a river or waterway can impact municipalities who had no involvement in the decision making. There is a need to establish bodies such as basin councils for each rivers, so that there is coordination among all impact municipalities. Such a coordinated council could be semi-formal or completely informal, however a platform for discussions among municipalities would be a good way forward.
- The roles and responsibilities for strengthening local level civil protection units needs to be harmonised country-wide. Currently, there are significant differences in the degree of efficiency of operation and support to local communities, where some civil protection units are developed and others are insufficiently developed. The level of preparedness still needs to be drastically increased in many municipalities throughout Serbia.

REFERENCES

1. UNDP's Monitoring and Evaluation Policy for project-level evaluation and Guidance For Conducting Terminal Evaluations Of UNDP-Supported, GEF-Financed Projects.
2. Project Document ("ProDoc"): "Increased Resilience to Respond to Emergency Situations."
3. Annual Progress Report ("APR") of the Project for 2015.
4. Draft Completion Report of the Project, dated April 2016.
5. Report on the State of Torrential Dams After the 2016 Floods, dated as of March 2016.
6. Preventions Brochure for the Project, Government of Serbia, located at <http://www.obnova.gov.rs/uploads/useruploads/Documents/PREVENCIJA---Infograf---eng.pdf>

ANNEX 1. EVALUATION MATRIX

Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
Relevance	This section relates to concerns whether results, purpose and overall objectives of the Project are in line with the needs and aspirations of the beneficiaries, and with the policy environment in Serbia. Is the Project consistent with the needs and priorities of its target group and the policies of the GoS and donors (the GoJ)? Has the situation changed since the approval of the ProDoc?			
	Are the Project objectives, purpose, and expected results consistent with the needs and priorities of the intended beneficiaries (at the national, municipal, and local level) and with the policy environment?	Whether the Project design was relevant and supported the key needs of stakeholders and was directed at strengthening the resilience of the economy and society at various governance levels.	ProDoc, AWP, the results of interviews with key stakeholders and direct beneficiaries, Project reports, and PB meeting documents and decisions.	Desk review, interviews (in person and via skype), field visits, and social surveys (where possible).
	Are the Project focus areas (floods, landslides, and other weather-related extreme events) and activities consistent with its achieved effects?	Whether key climate-related risks are addressed by Project interventions. Whether solutions proposed and measures implemented were adequate.	Reports on floods in the spring of 2016, the results of field visits, findings from interviews and discussions at various levels in Serbia, including piloted municipalities.	Desk review, interviews (in person and via skype), field visits during the field visit mission to Serbia, and social surveys (where possible).
	Are Project interventions consistent with the needs and priorities of the intended beneficiaries (at the national, municipal, and local levels)?	Whether measures implemented by the Project meet expectations of beneficiaries at various governance levels.	The results of interviews with key stakeholders and other direct beneficiaries, Project reports, and PB meeting documents and decisions.	Desk review, interviews (in person and via skype), and field visits during the field visit mission to Serbia.
	Were the targets set for the activities realistic?	Whether the Project succeeded to achieve key targets set in ProDoc and AWP.	The results from interviews with key stakeholders and direct beneficiaries, Project reports, ProDoc, and AWP.	Desk review, interviews (in person and via skype), and field visits during the field visit mission to Serbia.
Efficiency	This section relates to concerns around how well the various activities transformed the available resources into the intended outputs for Outputs 1-4 in terms of quantity, quality, and time. Can the costs of the Project be justified by the results?			
	To what extent did the Project interventions transform the available resources into the intended outputs and results, in terms of quantity, quality, and time?	Whether interventions of the Project addressed key aspects of strengthening community resilience to extreme events and natural disasters. Were the expectations of local partners met?	Interviews with governmental partners and local administrations, reports, decisions of the PB, and mass media coverage and involvement.	Personal meetings, skype and phone call discussions with relevant stakeholders, desk review of applicable websites and web resources, and review mass media coverage.

Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
Efficiency (continued)	Can the costs of the Project be justified by the achievements of the Project (were the activities cost-efficient)?	Whether the costs of the measures were reasonable and necessary in order to achieve solid results. Whether the resources mobilised were enough to deliver the intended outcomes. Was this Project competitive on the market? How was balance ensured between international and local expertise?	Financial reports, CDRs, and Programme Performance Reports ("PPRs").	Market research, comparison of similar activities in other projects.
	Were the chosen implementation mechanisms (the choice of modalities or contractual arrangements, etc.) conducive to achieving the expected results?	The degree to which resources (inputs) were available on time from partners and to stakeholders. Whether any significant delays occurred which were caused by a deficiency in those modalities or mechanisms selected.	Progress reports (particularly about the risks and delays registered), timeliness of deliverables per contracts concluded.	Personal meetings, skype/phone discussions, financial reports, delivery dynamics (from CDR reports).
	Has the Project management team networked effectively with other project stakeholders (including governmental focal points, municipalities, communities, contractors, and relevant NGOs)?	Whether the networking efforts of the Project were supported by the UNDP CO and successfully contributed to achieving Project goals.	The results of interviews, study visibility materials produced as part of the Project, and a review of mass media articles and coverage.	Personal meetings, skype and phone discussions with relevant stakeholders, review of relevant websites and web portals, and review of mass media coverage.
	Were adequate M&E procedures built into the Project design (including indicators, criteria for measuring performance, results tracking, impact targets, etc.)?	Whether the Project design was relevant and the indicators included (as well as the targets) were a good supporting tool?	The ProDoc, the AWP, the PPRs, and M&E tracking and results.	Analysis of the ProDoc, review of indicators and targets against the results achieved.
	Have all stakeholders been transparently engaged in the M&E process during the Project implementation period (including at the level of PB meetings, work with national agencies, and field visits)?	Whether a feedback mechanism with national counterparts was properly established and operational.	PB meeting documents (such as the minutes) and M&E reports.	Interviews with PB members, desk review of other relevant materials.

Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
	What were the reasons for any implementation delays and was UNDP's response satisfactory in mitigating these?	Whether effective management mechanisms and structures for the Project were put in place, and whether support to local partners was at the appropriate level to provide effective risk mitigation.	Progress reports (particularly around any registered risks and delays registered), the timeliness of deliverables per contracts that concluded under the Project.	An analysis of the reports available and interviews with various stakeholder groups.
Effectiveness	This section describes how well the results which were achieved furthered the purpose of the Project. Did the Project achieve its objectives? Is a spin-off possible to continue certain Project objectives?			
	Are the adjustments that were made to the Project logframe, budget, and workplans feasible and did they help to streamline implementation of the Project?	Whether there was a need to adjust project design and undertake adaptive management.	The ProDoc, the AWP, the PPRs, and the results of M&E tracking.	Analysis of the ProDoc, a review of Project indicators and targets against the results achieved.
	Do UNDP CO staff and national-level project staff perceive the workflow between them and UNDP as effective?	Whether resource deployment was made in a timely manner and whether support to the Project by the CO was provided for administration and financial matters and procurement.	Progress reports (particularly around any registered risks and delays), the timeliness of deliverables per contracts that concluded under the Project.	An analysis of reports available and interviews conducted with various stakeholder groups.
	Was the quality of the outputs delivered satisfactory and were the trainers or visiting experts good?	Whether a high quality of technical expertise was involved and led to results which addressed key challenges.	The results of interviews with representatives and technical experts, visibility materials, and mass media articles.	Personal meetings with stakeholders, skype and phone call discussions, a review of websites and web portals, and analysis of mass media coverage.
	Have Project activities contributed to institutional, policy, or behavioural change in the DRR sector?	Whether Project efforts were successful in mainstreaming DRR into development or supporting required reforms in the areas of policy, law, communication, and practice.	The results of interviews with representatives and policy experts, the PPRs, visibility materials, and mass media articles.	Personal meetings with stakeholders, skype and phone call discussions, a review of websites and web portals, and analysis of mass media coverage.
Sustainability	This section relates to the degree to which the benefits produced by the Project will continue after the external support has come to an end. Will the benefits produced by the Project be maintained after the termination of external support?			
	To what extent was local expertise utilised in the Project? Did the Project leave behind enough knowledge to carry out	Whether local capacity was successfully enhanced by the Project through trainings, including hand-on training.	The results of interviews, feedback from questionnaires, the PPRs, M&E reports, visibility materials	Review of personal meetings held, analysis of various reports produced by the Project, processing of feedback on and

Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
	similar work in other regions of Serbia or in other countries?		produced during the Project, and mass media articles.	review of questionnaires, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
	Does a plan exist to develop similar measures in other areas of Serbia? Did other municipalities (beyond those noted in the ProDoc) become involved in Project activities, such as trainings?	Whether implementation of Project measures have replication potential in Serbia and beyond. If so, the extent to which various aspects of the Project, including technical solutions, institutional developments, and public involvement, can be replicated.		
	Were the affected municipalities closely involved in all stages of the Project? Do they feel a sense of ownership over Project results?	Whether the level of engagement with national and local partners was adequate.	The results of interviews, feedback from questionnaires, the PPRs, M&E reports, visibility materials produced during the Project, and mass media articles.	Review of personal meetings held, analysis of various reports produced by the Project, processing of feedback on and review of questionnaires, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
	Were sustainability mechanisms developed for DRR-related measures (especially related to public sector work and state budgets)?	Whether the positive impacts achieved can be sustainable in the future based on local funding sources.		
	Did the role of the UNDP in the management and monitoring of the Project enhance partners' capacities?	Whether the Project built the capacity of national partners?	The results of interviews, review of feedback from questionnaires, the PPRs, M&E reports, visibility materials produced during the course of the Project, and mass media articles.	Review of personal meetings, analysis reports, the processing of feedback on and review of questionnaires, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
	Have the necessary measures been taken to address the environmental sustainability?	Whether measures taken by the Project did not affect environment and key ecosystems?		
Impact	This section concerns whether there was a change in the achievement of the overall objectives as a consequence of the Project. What are the overall effects of the Project, both intended and unintended, long term and short term, and positive and negative?			

Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
	Are there any discernible features which indicate possible longer-term impacts (positive or negative, intentional alternatively, unintentional)?	Whether there were mainly positive or negative impacts (both short-term and long-term) as a result of the Project.	The results of interviews, the PPRs, M&E reports, visibility materials, and mass media articles.	Review of personal meetings, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
	To what extent did the Project prioritise inclusive growth and support DRR in Serbia?	Whether DRR measures taken did not pose additional risks for overall development.		
	Are there any discernible effects of the Project on the resilience of the communities affected by floods and other relevant extreme events and natural disasters?	Whether the impact of the Project on the ground strengthened community resilience to current and future risks, including impacts to families and individuals?		
	Have Project activities resulted in any changes to development-informed DRR?	Whether measures taken mainstreamed DRR into future development efforts.	The results of interviews, the PPRs, M&E reports, visibility materials, and mass media articles.	Review of personal meetings, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
	How have measures implemented in 2015 helped target municipalities overcome excessive flooding in 2016?	Whether measures taken in 2015 were effective during spring 2016 spring floods.		

ADDITIONAL PROJECT OUTCOMES AND CROSS-CUTTING ISSUES				
Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
Support for policy dialogues on DRR issues in Serbia in line with the Sendai Framework	Did Project interventions support policy dialogues in Serbia supporting the EU <i>Acquis Communautaire</i> and EU civil protection mechanisms?	Whether the Project directly contributed to policy dialogues in relevant areas.	The results of interviews with stakeholders, feedback from questionnaires, the PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of various reports produced by the Project, processing and review of feedback on questionnaires, skype and phone call

				discussions, review of websites and web portals, and analysis of mass media coverage.
Contribution to gender equality	What are the mechanisms developed to further involve women in DRR-related activities? Which activities (the assessments, rescue, preparedness trainings, etc.) contributed towards this goal?	Whether gender was duly considered during the planning and implementation of all activities.	The PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Analysis of various reports produced by the Project, processing and review of feedback from questionnaires.
	What is the proportion of women versus on the newly-created volunteer and rescue teams?	Whether women's participation in DRR activities is supported by the local population at a grassroots level.	PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Personal meetings, analysis of reports, review of discussions held, review of websites and web portals, and analysis of mass media coverage.
Addressing equity issues (social inclusion)	Were other vulnerable social groups addressed by the Project measures and activities (for example, children, the disabled, and the elderly)?	In addition to gender, whether other vulnerable groups were also addressed through Project activities, and the extent to which they were.	The results of interviews, review of feedback from questionnaires, the PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of various reports produced by the Project, processing and review of feedback from questionnaires, skype and phone call discussions, review of websites and web portals, and analysis of mass media coverage.
Criteria/Subcriteria	Questions To Be Addressed by Evaluation	What To Look For	Data Sources	Data Collection Methods
Value-adds, by-products and additional benefits (beyond those anticipated in the ProDoc)	Are there any other impacts of the Project available which stakeholders would like to share? Which of these additional impacts have replication potential?	Whether there are additional by-products of the Project worth replicating.	The PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of reports and discussions held, review of websites and web portals, and analysis of mass media coverage.
	To what extent did cross-cutting issues	Whether the Project considered the current risks in an integrated manner.	The PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of reports and discussions held, review of websites and web portals, and

	get integrated into Project activities?			analysis of mass media coverage.
Lessons learned and recommendations	What are the best practices from the Project, which could be replicated elsewhere?	Whether the Project generated and properly registered any best practices which can be shared with DRR community.	The PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of reports and discussions, review of websites and web portals, and analysis of mass media coverage.
	What are the major lessons learned and any failures of the Project in reaching its objectives?	Whether there are lessons learned from the Project which can be shared with DRR community.	The PPRs, M&E reports, visibility materials produced under the Project, and mass media articles.	Review of personal meetings, analysis of reports and discussions, review of websites and web portals, and analysis of mass media coverage.

ANNEX 2. ITINERARY OF THE FINAL EVALUATION CONSULTANT'S FIELD VISIT MISSION TO SERBIA

Dates: April 12 - 20, 2016

Date	Time	Activity	Location
Tuesday, April 12 th	08:20	Arrival to Belgrade from Istanbul	Nikola Tesla Airport
	09:20	Meeting with UNDP office staff	Janka Veselinovića 13, Belgrade
	11:00	Meeting with Ms. Steliana Nedera, DepRR of UNDP	UN House, Belgrade
	14:00	Meeting with Mr. Marko Blagojević, PIMO	Janka Veselinovića 13, Belgrade
Wednesday, April 13 th	10:30	Meeting with Mr. Yamasaki Hisashi, the Embassy of Japan in Serbia	Janka Veselinovića 13, Belgrade
	13:00	Meeting with Mr. Velizar Nikolić and Mr. Siniša Tanacković, Ministry of Mining and Energy of the Republic of Serbia	Omladinskih Brigada 1, Novi Beograd
	15:00	Break	Lunch
Thursday, April 14 th	10:00	Meeting with Ms. Biljana Abolmasov, the Faculty of Mining and Geology ("RGF")	Djusina 7, Belgrade
	13:00	Meeting with Mr. Dragoman Rabrenović, the State Geological Survey of the Republic of Serbia ("GZ")	Rovinska 12, Belgrade
	18:00	Meeting with Ms. Sandra Stankov Mijatovic, the Mountain Rescue Services of Serbia	Bulevar Vojvode Mišića 12, Belgrade
Friday, April 15 th	08:30	Meeting with Ms. Sandra Nedeljkić, PIMO	Janka Veselinovića 13, Belgrade
	11:00	Meeting with Ms. Svetlana Bačević, Srbijavode Company	Bulevar Umetnosti 2a, 11070 Novi Beograd
	15:00	Meeting with Ms. Višnja Baćanović, Consultant for Gender and DRR	Skype call with Višnja
Sunday, April 17 th	07:45	Departure to Svilajnac Municipality	1:20 hr. trip
	09:00	Meeting with Mr. Goran Bojović, Director of the PUC Morava, and site visits to the renovated chlorination house and 12 wells which were renovated	Svetog Save br. 84, Svilajnac
	13:30	Departure to Kraljevo	Approximately 2:00 hr. roadtrip to Kraljevo
	15:00	Meeting with representatives from NGO "Fenomena"	
	17:00	Meeting with Mr. Zdravko Maksimović, chief of the local civil defender unit, and his volunteer civil protection unit	Trg Jovana Šarića 1, Kraljevo
Monday, April 18 th	08:00	Departure to Trstenik Municipality	
	09:00	Meeting with Mr. Dejan Savić, manager of waterworks for the municipality, and Ms. Danica Batočanin, representative from the municipality, and site visits to certain reconstructed areas	Živadina Apostolovića 4, Trstenik
	11:00	Departure to Lazarevac	Approximately 2:30 hr. trip
	14:00	Meeting with Mr. Milan Platinić, representative from the municipality office, and Mr. Radomir Petković, representative of the PUC unit, and site visits to the bridge in Šopići	Karađorđeva 42, Lazarevac
	16:00	Departure to Valjevo	
	17:00	Meeting with Mr. Milan Trifunović, from the urban public company, and site visits to the reconstructed siphon and the bridge over Gola Glava	Karađorđeva 64, Valjevo
Tuesday, April 19 th	08:00	Departure from Valjevo	
	09:00	Meeting with Mr. Željko Andrić, chief of the department of inspections, and site visits to water pipes and the torrential barriers constructed as part of the BCPR project	Karađorđeva 78, Osečina
	11:30	Departure to Krupanj Municipality	1:00 hr. trip
	12:00	Site visits to the landslide site in Likodra and the bridge in Likodra	Likodra

Date	Time	Activity	Location
	12:30	Meeting with Mr. Miroslav Milutinović, the deputy mayor of Krupanj municipality	M.Tita br.2., Krupanj
	13:00	Site visit to the Tailing Site at Stolice Mine	
	13:30	Departure to Belgrade	Krupanj
	17:30	Meeting with UNDP CO senior management, de-briefing	UNDP Office, Belgrade
Wednesday, April 20 th	09:15	Departure to Istanbul	

ANNEX 3.
LIST OF INFRASTRUCTURE PROJECTS IMPLEMENTED

	Municipality Location and Project Description	Project Target	TOTAL Project Amount (USD)¹⁶	Deadline for Completion	# of Beneficiaries
1	OSEČINA Main water supply line on Karadjordjeva street (700m)	For the establishment of appropriate water supply systems for the town of Osečina, through Karadjordjeva street, it was necessary to construct 700m of a main water line with connections.	\$65,816.88	January 31, 2016	2,300
2	OSEČINA Main water supply line from KIK reservoir to Osečina (685m)	For the provision of appropriate water supplies to Osečina town, it was necessary to construct 685m of main water lines with connections from KIK sewage facilities to the town.	\$60,529.75	January 19, 2016	1,200
3	SVILAJNAC Main water supply distribution line to the Sedlari community (2563m)	For the establishment of appropriate water supply systems in the Sedlari community it was necessary to construct 2563m of main water line. The municipality of Svilajnac will provide a connection to this line.	\$144,460.05	December 31, 2015	1,000
4	SVILAJNAC Renovation of the water source at Perkićevo	<u>Regeneration of 12 water wells:</u> During the floods in May 2014, the Perkićevo water source was flooded and all of its water wells were contaminated. By the renovation of the 12 wells, the wells' capacity to provide clean water was increased by 78.31% (which is an enormous increase from what was expected, given that the tender requested that the renovations improve capacity by only 30%). <u>Equipment purchases: an electrical generator, a water flow meter and a water leakage detector:</u> during the floods the Perkićevo water source was flooded and most of the equipment necessary for it to function was damaged, meaning that the above-listed equipment was a necessary purchase in order to get the water source functioning again. <u>Construction of a new chlorination facility:</u> The existing chlorination facility is no longer functional, meaning that complete reconstruction would be necessary.	\$125,747.27	January 15, 2016	15,400
5	VARVARIN Main water supply distribution line in Varvarin (2150m)	The municipality of Varvarin started construction on a water supply system in Varvarin village, but did not have enough resources to complete all systems. The project target was to connect the rest of the inhabitants to the water supply system.	\$63,751.77	August 12, 2016	2,000
6	PARAĆIN Rain water collection in Zmić (770m)	After the construction of the rain water collection line, rain water had direct flow into the river and was separated from the sewage matter.	\$142,562.90	October 1, 2016	10,000

¹⁶ The total project amount includes the costs for project design and preparation, design verification, construction, and supervision and monitoring.

	Municipality Location and Project Description	Project Target	TOTAL Project Amount (USD) ¹⁶	Deadline for Completion	# of Beneficiaries
7	KLADOVO Rain water collection line in Brza Palanka sewage facility (110m)	The municipality of Kladovo completed a rain water collection area on 9 Brigade Street but did not have the resources to complete the rest of 110m. After each bigger rainfall there was sewage effusion due to floods, but with the extension to the rain water collection this will be prevented.	\$23,231.69	May 12, 2015	980
8	LAZAREVAC Reconstruction of the bridge over the Lukavica river in the Šopići community	During the floods in May 2014 the existing bridge was seriously damaged. The municipality of Lazarevac provided a detailed design for its reconstruction. A large number of residents will now be able to access their fields and crops over the bridge.	\$72,769.96	January 10, 2016	2,619
9	VALJEVO Construction of bridge over the river Ub in the Gola Glava community	During the floods in May 2014 the existing bridge was totally destroyed. The new bridge will enable safe passage for remote community residents and will provide essential connection to the main road.	\$95,589.03	December 30, 2015	564
10	VALJEVO Reconstruction of Foul water sewerage system in Valjevo	During the floods of May 2014 the Kolubara river floods destroyed the syphoning element which helped drain livestock sewage. The project target was to repair the damaged syphoning elements and to enable proper drainage of the sewage water nearby.	\$29,415.12	January 10, 2016	30,000
11	LJUBOVIJA Construction of the torrential dam on the Ljuboviđa river	The project target was to construct one torrential dam which would reduce the risk of significant damage caused by future floods in Ljubovija town.	\$160,179.56	April 21, 2016	3,000
12	NEGOTIN Construction of the torrential dam and cleaning of the river area through Mala Kamenica village (350m)	Construction of the torrential dam and cleaning of 350m of river bed through Mala Kamenica will reduce the risk of damage from future floods.	\$87,507.40	January 12, 2016	604
13	TRSTENIK River bank protection in the area near the water source Prnjavor, including construction of a gabion wall and reconstruction of a torrential barrier.	Construction of a gabion wall which would provide river bank protection (approximately 110m) and repair to the torrential barrier next to the water source in Prnjavor as well as stabilization of the river channel next to the pedestrian bridge will provide appropriate protection mechanisms for the main water supply line from the Prnjavor water source to the area of Trstenik.	\$74,846.23	January 18, 2016	13,800
14	SMEDEREVSKA PALANKA Renovation of the water source at Buline vode	Regeneration of 9 water wells: During the floods the Buline vode water source was flooded and all of its water wells were contaminated. Through the regeneration of each of the wells, the wells' capacity was increased by 59% (significantly over the original request in the tender that the wells' capacity be increased by 25% each), bringing the total water supply yield to an increase in 20%.	\$39,398.20	August 6, 2015	23,600

	Municipality Location and Project Description	Project Target	TOTAL Project Amount (USD) ¹⁶	Deadline for Completion	# of Beneficiaries
		The direct benefits of these efforts have already impacted the inhabitants of Smederevska Palanka. <u>Purchase and installation of 5 water well pumps:</u> During the floods the water sources were flooded and water well pumps were damaged to the point that they could not be repaired. Therefore it was necessary to purchase 5 new well pumps so that the area could protect itself in the event of future floods.			
15	SMEDEREVSKA PALANKA Construction of a new water well (30m in depth) at the Buline vode water source	The regeneration of 9 wells increased the area's water yield capacity in Smederevska Palanka by approximately 20%, though it was also necessary to construct a new well to provide the necessary quantity of water for those in Smederevska Palanka.	\$31,847.01	December 18, 2015	10,000
16	KRUPANJ Construction of the new bridge over the Likodra river on road to Stojkovići village	The existing bridge was totally destroyed in the previous floods, without the possibility for reconstruction or repair. The new bridge facilitates access for residents of the village to their homes and fields.	\$102,910.32	March 6, 2016	3,000
17	ŠID Regeneration of two wells, increasing water yields in the city's pipeline	The pressure in the city's pipeline varied. With regeneration of these wells, city water will be dispursed at a more stable pressure. The results from this regeneration was a 50% increase in the water yields from the regenerated wells.	\$10,700.00	February 4, 2016	10,000
18	Preparation of the project designs for rehabilitation of the tailing pond next to the Stolice Mine in the Krupanj municipality		\$204,300.00	January 30, 2016	15,000
19	Preparation of the Study on Flood Risk Management in the Kolubara River Basin (the "Kolubara Basin Study")		\$464,250.00	February 28, 2016	N/A
20	Preparation of project designs for torrential dam construction and rived bad cleaning and regulations for various areas: KOCELJEVA – on Kozarica \$8,000.00 KOCELJEVA – on Zmajevac \$8,000.00 UB – on the Ub river \$18,500.00 KLADOVO – on Šajna Matka \$8,000.00; KLADOVO – on Grobljanski potok \$11,000.00 All designs were prepared and submitted to the municipality representatives during the meeting held October 26, 2015, at the company Srbijavode. Based on the above-mentioned project designs, the company Srbijavode will implement a number of those projects, funded by the GoS office for reconstruction and flood relief.		\$53,500.00	October 26, 2015	50,000
21	KRAGUJEVAC Preparation of the design for construction of a partial regulation barrier for the Lepenica river	Design for regulation of 1000 m of the Lepenica river biggest and most important river in Kragujevac, nearby the confluence of Uglješnica river	\$16,800.00	April 28, 2016	30,000

ANNEX 4. DETAILED INFORMATION ON TRAININGS PROVIDED

Table 7: Trainings For Members of Local Headquarters For Emergency Situations

No.	Date	Location of Training	Locations Where Trainees Were From	# of People Trained		Total #
				Men	Women	
1	August 5-6, 2015	Ruma	Belgrade, Obrenovac, Lazarevac, Sid	32	5	37
2	September 23-24, 2015	Zlatibor	Užice, Kosjerić, Bajina Bašta	23	3	26
3	October 7-8, 2015	Smederevo	Smederevo, Smederevska Palanka, Velika Plana	26	10	36
4	October 21-22, 2015	Banja Koviljača	Loznica, Mali Zvornik, Krupanj	31	5	36
5	November 4-5, 2015	Kruševac	Kruševac, Trstenik, Varvarin	28	7	35
6	November 18-19, 2015	Šabac	Šabac, Koceljeva, Ljubovija	29	6	35
7	November 25-26, 2015	Valjevo	Valjevo, Ub, Osečina	27	5	32
8	December 2-3, 2015	Jagodina	Jagodina, Paraćin, Svilajnac	39	5	44
9	December 9-10, 2015	Borsko Jezero	Kladovo, Majdanpek, Negotin	34	8	42
10	December 22-23, 2015	Vrnjačka Banja	Čačak, Kraljevo, Kragujevac	31	9	40
11,12	January 22-25, 2016	Belgrade	Belgrade	38	11	47
13,14	January 26-28, 2016	Belgrade	17 municipalities throughout Belgrade	40	22	62
Total				378	96	472

Table 8: Trainings For Local Municipalities On Community Preparedness and Response

No	Date	Locations Where Trainees Were From	# of People Trained		Total #
			Men	Women	
1	July 4-5, 2015	Negotin	8	0	8
2	July 11-2, 2015	Smederevo	16	4	20
3	August 8-9, 2015	Vrnjačka Banja	3	2	5
4	September 5-6, 2015	Koceljeva	9	6	15
5	September 25-26, 2015	Kragujevac	10	7	17
6	October 3-4, 2015	Kosjerić	14	3	17
7	October 10-11, 2015	Kladovo	16	1	17
8	October 17-18, 2015	Majdanpek	10	2	12
9	October 24-25, 2015	Jagodina	16	2	18

10	November 7-8, 2015	Ivanjica & Paraćin	22	0	22
11	November 21-22, 2015	Valjevo & Kragujevac	18	7	25
12	November 28-29, 2015	Obrenovac	16	0	16
TOTAL			155	37	192

ANNEX 5. PERFORMANCE OF THE TORRENTIAL DAMS DURING THE 2016 FLOODS

#	Municipality	River or Creek	Length of River Bed, Area Protected (meters / hectares)	The State of the Dams After Floods, March 2016	Direct (or Indirect) Benefits and Beneficiaries	Comments
1	Mali Zvornik	Velika Reka	150m / 5ha	Good	Several houses, a local road and arable land is nearby (2 villages > 2,000 people were indirectly impacted)	The area of the Velika Reka was saved and its tourist potential preserved after the construction of the dam.
2	Mali Zvornik	Boranjka Reka	150m / 17ha	Excellent, tree removal is needed	3 villages with >800 people, local enterprises, regional road (>3,000 people including several farms and arable land indirectly impacted)	This dam was constructed together with a barrier on the Mala Reka.
3	Mali Zvornik	Mala Reka	150m	Excellent no cleaning needed	1 village with approximately 300 people (and >3,000 people indirectly impacted including several farms and arable land)	The Mala Reka is a tributary of the Boranjka Reka, therefore both dams are parts of one system for torrential protection in this area.
4	Kosjerić	Stojička Reka	179m / 20ha	Excellent, not affected	One bridge and > 5 ha of agriculture land directly saved (with the Drenovci village of approximately 400 people indirectly impacted)	The Stojička Reka is 7.76 km long and the area that was protected by the torrential dam is quite widespread.
5	Kosjerić	Tmuša	80m / 20 ha	Good, cleaning of river bed and weep holes is needed	332 families with 1,100 people were impacted directly (the saving of the touristic and cultural potential of Seča Reka, such as the Cottage Church from the XV century, as well as hunting and fishing were indirect benefits of this)	The barrier played a very important protective role during the heavy rainfall in March 2016.
6	Kosjerić	Sečica	85m / 1ha	Good, lower part of wall is under the water	The nearby public road, including a nearby bridge, is directly saved by the gabion structure, therefore, people have connection to the centre of the municipality through this road (the complete area between Seča Reka to Kosjerić impacts 5000 people indirectly)	The municipality itself carried out some additional works on the river bed which strengthened upstream and downstream effects of the gabion wall that was built.
7	Krupanj	Durisavac	100m / 1ha	Excellent, river bed in good condition	50 people (300 people impacted indirectly)	This dam was easily accessible, and there was no problem with maintenance.
8	Krupanj	Mala Reka	200m / 2 ha	Good, river bed clean	100 people (1,000 people impacted indirectly)	All weep holes were functioning, and the area is very well maintained.

#	Municipality	River or Creek	Length of River Bed, Area Protected (meters / hectares)	The State of the Dams After Floods, March 2016	Direct (or Indirect) Benefits and Beneficiaries	Comments
9	Krupanj	Brštica-Kržava	150m / 2ha	Excellent, complete area is clean	>200 people were directly impacted (>800 people impacted indirectly)	The site was visited late in the evening, and the access road was in good condition.
10	Bajna Bašta	Kolarski Potok	50m / 30ha	Good, cleaning and tree removal is necessary	100 people directly impacted (with 1,000 people were indirectly impacted)	Bajna Bašta suffered during the significant rainfall in March 2016, but the barrier played an important role in protecting people and properties during this rainfall.
11	Bajna Bašta	Ovčinska Reka-Rača	170m / 20ha	Good, cleaning of river bed required	This dam solved flooding issues along the Ovčinska Reka towards the Drina river (>20 houses, a sawmill, and 15 ha of agricultural land were all indirectly affected)	The barrier will help transform the river bed in the next couple of years through the erosion process that will occur.
12	Loznica	Štira	150m / 5ha	Excellent, good maintenance by municipality	A local road and nearby houses were saved from damage during heavy rainfalls (the complete area around the Štira River has over 5,000 people who were indirectly impacted)	The access road constructed by the contractor still functions, so the infrastructure builds are easily accessible for inspection and maintenance .
13	Ljubovija	Mališin Potok	150m / 2ha	Good, small cleaning is necessary	2,000 people directly impacted (with 5,000 people indirectly benefiting)	The dam contributed significantly during the intensive rainfall, the flow of the Mališin creek has been reduced
14	Ljubovija	Ljuboviđa River	100m / 10ha	80% of the construction works here were completed	3,000 people directly impacted (8,000 people indirectly impacted)	Although the dam construction was not completed, it played very important role in controlling the water flow of the Luboviđa River

The Project awarded eleven grants to gender-focused NGOs for specific initiatives that would enhance gender mainstreaming in DRR and would work directly with certain target groups. Details on the organisations supported through these grants is provided below.

1. The Women's Roma Centre of Veliki Crljeni ("ZRC") established volunteer centres for emergency response teams inclusive of women and developed volunteering mechanisms for women's involvement in DRR in 5 local communities in Lazarevac. ZRC conducted 4 workshops for 24 women volunteers with a focus on the following topics: hazard analysis in the Lazarevac municipality, the lines of responsibilities in emergency situations, rescue and first aid basics, and fire drills and protection. One round table was held at Lazarevac city hall with all relevant stakeholders (including municipal representatives, social welfare centres, the Red Cross, and others) and an outcome of that roundtable is that the civil protection unit now considers including local NGOs in the civil protection mechanism process. An additional 2 workshops on peer education and overcoming trauma from disasters were held and attended by 24 children. Two psychosocial workshops on the topic of psychosocial support and care for children and families in the aftermath of disasters were attended by 22 women. ZRC established good cooperation with the local fire department, social welfare centres, local headquarters for emergency situations, and other NGOs operating in and around Lazarevac.
2. The Women's Association of the Kolubara District from Veliki Crljeni ("ZUKO") coordinated and brought together volunteering services from Lazarevac and Valjevo districts, conducted awareness raising campaigns for local communities, and established an educational website with general information on current hazards but also with instructions on how to act during emergencies and updates on the progress of various reconstruction works. The website is accessible at: <http://www.zenskoudruzenje.org/>. ZUKO established a volunteering centre in Valjevo, conducted 4 workshops for 15 women volunteers and 1 workshop for 28 children on actions to take during emergencies. A public debate on the role of civil society organisations and other bodies responsible in emergencies was held in Valjevo and was attended by over 60 participants. Prior to the debate, a street campaign was organised in Valjevo with the purpose of informing citizens about the Project and disseminating information that had been collected and materials produced.
3. Roma Women's and Children's Centre ("DAJE") from Belgrade supported women, especially Roma women from informal settlements, in overcoming trauma caused by the floods in Lazarevac, Obrenovac, and Smederevska Palanka. DAJE collected information and real life stories on women victims with the purpose of developing and issuing a publication on human life stories of women affected by the 2014 floods which could provide advice on how to react to emergency situations. DAJE conducted 6 psychosocial support workshops in Lazarevac, Obrenovac, and Smederevska Palanka for 44 women victims of the recent floods in spring 2016. At these workshops women were trained through a number of drills that were organised on topics such as first aid, rescue, and evacuation. The DAJE organisation established good cooperation with another grantee, the Mountain Rescue Service of Serbia (see item 11 below), which conducted a series of trainings on rescue and first aid. DAJE was acknowledged by the League of Roma Decade, an umbrella organisation working on Roma issues, which intends to support this organisation so that it can continue with activities that were begun under this Project after it is complete.
4. The Association of Business Women, Novi Sad ("PAZ") empowered women to proactively participate in the decision-making processes in local communities in Šid, Žitište, and Bački Petrovac so that they could better identify natural hazards, prepare preventative measures and properly react to emergency situations, with gender aspects of DRR mainstreamed into local communities' preparation and response mechanisms. PAZ conducted a situation analysis in all 3 targeted municipalities, a needs assessment, and an evaluation of the capacities of local mechanisms which could help integrate a gender perspective into DRR work. PAZ also conducted a mapping of CSOs interested in networking and participating in the Project's implementation. Three seminars were prepared and organised by PAZ on the topics of human rights, security, and gender equality in DRR. Six local CSOs participated in this project initiative, led by PAZ.

5. The Sexual and Reproductive Health and Rights Association of Serbia ("SRH"), Belgrade worked on increasing women's participation in decision-making processes specifically in developing local action plans for responding to emergency situations in Obrenovac. In order to achieve the objectives set, SRH established a working group consisting of 8 women working in local self-governments and women from 3 local CSOs which conducted 3 workshops with the aim of including gender-related provisions in local DRR plans and developing a local-level mechanism for the active participation of women in planning for, and responding to, emergencies.
6. The Association "DEA DIA" in Kovačica mapped women-specific needs in emergency situations and empowered women to take proactive role in decision-making processes in 17 districts of the city of Belgrade through trainings, workshops, and the establishment of women's networks to respond to emergency situations. DEA DIA conducted 3 focus group meetings with 28 women from Obrenovac, Umka, Lazarevac, and Rakovica, mapping specific women's needs in emergencies and working to prepare a brochure presenting the results of focus groups analysis, explaining instructions to women for self-organising in the event of emergencies, and showcasing the legal framework for acting in emergencies.
7. Citizens Association "Together" in Belgrade, empowered women to take a proactive role in responding to emergency situations in Vračar and Obrenovac through trainings on gender-balanced assistance, early warning systems for citizens, and the need for quick response in emergency situations. 10 workshops for 50 women on how to provide psychosocial support and how to build capacities in activism were conducted, and materials were disseminated. The group established good cooperation with a number of CSOs in Obrenovac and Vračar who expressed their support of the Project.
8. Association "Fenomena" in Kraljevo supported the increased participation of women in DRR management policies and procedures, specifically through the development of gender sensitive local action plans to respond to emergency situations in Kraljevo. The group also worked to expand the portfolio of the current SOS help provision hotline for women victims of domestic violence by providing additional assistance to the hotline and information on how to act during emergency situations. Six facilitators were trained to conduct self-help assistance for women and the SOS helpline was widely promoted, with a methodology adopted to provide support to women in crisis situations. Fenomena established good cooperation with the Kraljevo city civil protection unit (UNDP's partner on community preparedness trainings) and conducted a series of trainings for women on community preparedness. The trained women will be appointed as civil protection officers in Kraljevo's local communities.
9. The Association "Viktorija" in Kragujevac established a women's network to assist in the revitalisation, prevention and reconstruction efforts in areas affected by the floods in Kragujevac, Svilajnac, Paraćin, Kraljevo, and Čačak. Additionally, specialised trainings for women were carried out to provide anti-hail protection skills, with involvement of 69 women from Kragujevac and Knić. Additionally, a women's activism network in 5 municipalities was established with the purpose of increasing women's participation in decision-making processes related to prevention and reconstruction after disasters. Workshops in Kragujevac, Kraljevo, and Paraćin with interested stakeholders were held covering local security measures.
10. Women's Association "Femina" in Smederevska Palanka expanded a portfolio of SOS helplines for women victims of domestic violence by providing assistance and psycho-social support and information about emergency situations in Smederevska Palanka. Women volunteers at the SOS helpline and operators of the helpline were trained in volunteer management and coordination of volunteers during emergency situations. The organisation established a partnership with local stakeholders in order to establish a relevant body responsible for providing first-line assistance in emergency situations. Four workshops involving 64 women were held covering the topics of coordinating volunteers in emergencies, prevention of domestic violence during emergencies, and psychosocial support in emergency situations.
11. The Mountain Rescue Service of Serbia (GSSS) in Belgrade trained women rescuers from Lazarevac, Obrenovac, Mladenovac, Beograd, Valjevo, Požega, Užice, Čačak, Niš, Kladovo, Majdanpek, and Požarevac to provide rescue services during emergency situations. The specialized training and drill included the topics of first aid assistance, evacuation of victims, and communication and coordination in the field during emergencies. 22 women were trained to

provide rescuing services. Additionally, 4 educational and promotional events in high schools were organized on the topic how of respond to emergencies, gathering around 120 students. An informative flyer with basic information as well as a brochure including instructions on first aid, evacuation and rescue was developed and disseminated.

ANNEX 7. YOUNG ENGINEERS TRAINED BY THE PROJECT

#	Company, Location	First Name, Surname	Title
1	Bauwesen, Lazarevac	Srđan Ranisavljević	Msc. Civ. Eng.
2	Bauwesen, Lazarevac	Lidija Mićanović	Bsc. Forestry Eng.
3	Komgrad, Valjevo	Nikola Vidić	Msc. Civ. Eng.
4	Komgrad, Valjevo	Ana Stojković	Msc. Civ. Eng.
5	Geoinženjering, Beograd	Milica Đurđević	Msc. Geotechnical Eng.
6	Geoinženjering, Beograd	Marijana Petrović	Msc. Geotechnical Eng.
7	Wetricom, Beograd	Marko Obradović	Bsc. Civ. Eng.
8	Wetricom, Beograd	Maja Spasić	Bsc. Civ. Eng.
9	Autotransport, Valjevo	Svetlana Mitović	Bsc. Civ. Eng.
10	Autotransport, Valjevo	Marija Mandić	Bsc. Civ. Eng.
11	Autotransport, Valjevo	Marko Simić	Msc. Civ. Eng.
12	VP Čuprija, Čuprija	Jasmina Bahtović	Bsc. Civ. Eng.
13	VP Čuprija, Čuprija	Marko Milošević	Msc. Civ. Eng.
14	AD Vodoprivreda, Požarevac	Ivana Gvozdevović	Bsc. Forestry Eng.
15	AD Vodoprivreda, Požarevac	Milica Panić	Bsc. Civ. Eng.
16	Jedinstvo, Sevojno	Jovana Josipović	Phd. Civ. Eng.
17	Jedinstvo, Sevojno	Ranka Erić	Msc. Civ. Eng.

February 2015

1. RTV "Japan - podrška Srbiji od 3, 64 miliona dolara," 18, Februar 2015.
http://www.rtv.rs/sr_lat/drustvo/japan-podrska-srbiji-od-3-64-miliona-dolara_569722.html
2. Novi Magazin "Japan - podrška Srbiji od 3,64 miliona dolara," 18.02.2015.
<http://www.novimagazin.rs/vesti/japan---podrska-srbiji-od-364-miliona-dolara>
3. Press "Japan - podrška Srbiji od 3,64 miliona dolara," 18. 02. 2015.
<http://www.pressonline.rs/info/srbija/352526/japan---podrska-srbiji-od-364-miliona-dolara.html>
4. Beta "United Nations : 3.64 miliona dolara podrške Japana za lokalni oporavak i unapređenje kapaciteta za odbranu od nepogoda kroz projekat UNDP-a," 18.02.2015. <http://www.betaoms.com/drutvo/10054-364-miliona-dolara-podcke-japana-za-lokalni-oporavak-i-unapreenje-kapaciteta-za-odbranu-od-nepogoda-kroz-projekat-undp-a>
5. B92 "Japan: Podrška Srbiji 3,64 miliona \$," 19. 2. 2015.
<http://www.b92.net/mobilni/info/959630>

May 2015

6. Poslovno Jutro "Konkurs UNDP-a za ženske organizacije civilnog društva," 05.05.2015
<http://www.poslovnojutro.com/details&id=74677>
7. Vesti.rs "Početak projekta praćenja klizišta," 14.5.2015. <http://www.vesti.rs/Drustvo/Pocetak-projekta-pracenja-klizista.html>
8. Tanjug "Za sanaciju klizišta u Srbiji potrebno 11 milijardi evra," 14.5. 2015.
<http://tanjug.rs/full-view.aspx?izb=178888>
9. N1 "Za sanaciju klizišta u Srbiji potrebno 11 milijardi evra," 14.05.2015.
<http://rs.n1info.com/a60349/Vesti/Sanacija-klizista-u-Srbiji.html>
10. Danas "U Beogradu 1.100 klizišta," 15/05/2015. http://www.danas.rs/danasrs/srbija/beograd/_u_beogradu_1100_klizista.39.html?news_id=301739
11. Večernje Novosti "Beogradu preti 2.000 klizišta," 17. 05. 2015.
<http://www.novosti.rs/vesti/beograd.74.html:548524-Beogradu-preti-2000-klizista>
12. Energetski Portal, "U planu izrada katastra klizišta u Srbiji," 18.05.2015.
<http://www.energetskiportal.rs/u-planu-izrada-katastra-klizista-u-srbiji/>

June 2015

13. Vamedia, "Pregled klizišta," 2.6.2015. <http://www.vamedia.info/index.php/home/grad/1095-pregled-klizista>
14. N1 "Reke i dalje pune teških metala, čeka se pomoć UN," 24.6.2015.
<http://rs.n1info.com/a71763/Vesti/Reke-i-dalje-pune-teskih-metala-ceka-se-pomoc-UN.html>
and <http://rs.n1info.com/a71807/Video/Jalovina-bez-pauze-truje-srpske-reke.html>

July 2015

15. <http://www.happytv.rs/Ekonomija/link/japanska-vlada-finansira-studiju-za-sprecavanje-poplava>
16. <http://www.tanjug.rs/full-view.aspx?izb=191562>

17. http://www.newbalkan.com/index.php?sr_vesti/clanak/&page%255Bid_article%255D=20372&page%5Bid_category%5D=17&page%5Bpaging%5D%5Bid_page%5D=1&page%5Bpaging%5D%5Blimit%5D=9&page%5Bid_article%5D=23427
18. <http://balkanekspresrb.rs/ugovor-za-studiju-unapredenja-zastite-od-voda-u-slivu-reke-kolubare/>
19. <http://www.rts.rs/page/stories/sr/story/125/Dru%C5%A1tvo/1990585/Blagojevi%C4%87%3A+Ponovo+sistemska+borba+protiv+poplava.html>
20. <http://www.reporter.rs/2015-07-28/akter/za-sisteme-potrebno-110-miliona-evra-1309273.html>

August 2015

21. <http://vesti.krstarica.com/drustvo/dron-za-humane-svrhe/>
22. http://www.danas.rs/danasrs/ukratko/dron_za_humane_svrhe.83.html?news_id=96857
23. <http://www.kurir.rs/vesti/drustvo/dron-u-humane-svrhe-clanak-1888997>

September 2015

24. Šumadijske Vesti "Projekat Udruženja žena "Femina": „JAČANJE LOKALNIH KAPACITETA DA ODGOVORI NA POTREBE ŽENA U VANREDNIM SITUACIJAMA," 9. Septembar 2015. <http://sumadijskevesti.com/smederevska-palanka/projekat-udruzenja-zena-femina-jacanje-lokalnih-kapaciteta-da-odgovori-na-potrebe-zena-u-vanrednim-situacijama/>
25. Alo "PRVO PROJEKAT PA SVE OSTALO Sprema se rekonstrukcija jalovišta rudnika "Stolice," 16. Septembar 2015. <http://www.alo.rs/sprema-se-rekonstrukcija-jalovista-rudnika-stolice/8359>
26. Kolubarske.rs "Unapređenje zaštita od voda u slivu Kolubare," 21. Decembar 2015. <http://www.kolubarske.rs/sr/vesti/okrug/3458/Unapre%C4%91enje-za%C5%A1tita-od-voda-u-slivu-Kolubare.htm>
27. Gorska Služba Spašavanja "Obuka žena u oblastima spasavanja i pružanja pomoći za odgovor na vanredne situacije," 21. Septembar 2015. <http://gss.rs/2015/09/Obuka-zena-u-oblastima-spasavanja-i-pruzanja-pomoci-za-odgovor-na-vanredne-situacije/>

October 2015

28. Danas "Obuka štabova za vanredne situacije," 9. Oktobar 2015. http://www.danas.rs/danasrs/ukratko/obuka_stabova_za_vanredne_situacije.83.html?news_id=99406
29. Vesti Online "Preti nova katastrofa," 13. Oktobar 2015. <http://www.vesti-online.com/Vesti/Srbija/525011/Preti-nova-katastrofa>

November 2015

30. Top Novosti "Obuka komandanata štabova za vanredne situacije," 3. Novembar 2015. <http://www.novostitop.com/obuka-komandanata-stabova-za-vanredne-situacije-2/>
31. Radio Televizija Kruševac "Obuka komandanta štabova za vanredne situacije MUP-a Srbije," 4. Novembar 2015. <http://www.rtk.rs/?p=71812>
32. Mali Zvornik Info "Одржана друга обука представника општина за Пројекат Beware," 19. Novembar 2015. <http://www.malizvornik.info/?p=1753>
33. Glas Podrinja "Obuka štabova za vanredne situacije za što bolje reagovanje," 19. Novembar 2015. <http://www.glaspodrinja.rs/vest.php?rubrika=Dogadjaji&id=6659>

December 2015

34. Kolubarske.rs "Most u Goljoj Glavi u završnoj fazi," 2. Decembar 2015.
<http://www.kolubarske.rs/sr/vesti/valjevo/3846/Most-u-Goljoj-Glavi-u-zavr%C5%A1noj-fazi.htm>
35. B92 "Obezbeđena sredstva za vodovod u selu Sedlare," 3. Decembar 2015.
http://www.b92.net/info/vesti/index.php?yyyy=2015&mm=12&dd=03&nav_category=12&nav_id=1070361
36. Drina.info "ЉУБОВИЈА: Гради се бујична брана на Љубовиђи," 4. Decembar 2015.
<http://drina.info/?p=4046>
37. Info Centrala "Japanci prijatelji Svilajнца - dali preko 300 000 evra, rendgen i ultrazvuk," 4. Decembar 2015. <http://www.infocentrala.rs/japanci-prijatelji-svilajнца-dali-preko-300-000-evra-rendgen-i-ultrazvuk/>
38. VA Media "Japanski donatori obišli radove," 4. Decembar 2015.
<http://www.vamedia.info/index.php/home/grad/2058-japanski-donatori-obisli-radove>
39. Novosti "Grade prvu od šest kaskada," 7. Decembar 2015.
<http://www.novosti.rs/vesti/srbija.73.html:580177-Grade-prvu-od-sest-kaskada>
40. Bor030 "Obuka Štabova za vanredne situacije MUP-a Republike Srbije," 8. Decembar 2015.
<http://www.bor030.net/obuka-stabova-za-vanredne-situacije-mup-a-republike-srbije>
41. Radio Televizija Bor "Obuka štabova za vanredne situacije MUP-a RS," 9. Decembar 2015.
<http://rtvbor.rs/tvbor-uzivo/2036-obuka-%C5%A1tabova-za-vanredne-situacije-mup-a-rs>
42. RTS "Uređenje Ljubostinjske reke," 23. Decembar 2015.
<http://www.rts.rs/page/stories/sr/story/57/Srbija+dan/2150114/Ure%C4%91enje+Ljubostinjske+reke+.html>
43. Danas "Donacija za preventivu," 24. Decembar 2015.
http://www.danas.rs/danasrs/srbija/donacija_za_preventivu.58.html?news_id=313383ž
44. Sindikat Vatrogasaca Srbije "Obuka štabova za vanredne situacije," 24. Decembar 2015.
<http://sindikativatrogasaca.org.rs/11249-obuka-stabova-za-vanredne-situacije/>
45. Vrnjačke Novine "Obuka štabova za vanredne situacije," 24. Decembar 2015.
<http://www.vrnjackenovine.net/obuka-stabova-za-vanredne-situacije/>
46. Kruševac Press "Japanci pomažu sređivanje korita Ljubostinjske reke," 24. Decembar 2015.
<http://krusevacpress.com/japanci-pomazu-sredivanje-korita-ljubostinjske-reke/>
47. Press Centar UNS "Jačanje kapaciteta žena u oblastima spasavanja i pružanja pomoći za odgovor na vanredne situacije," 29. Decembar 2015.
<https://www.youtube.com/watch?v=17ut46QDZNE>
48. Politika "Obuka žena za vanredne situacije," 29. Decembar 2015.
<http://www.politika.rs/sr/clanak/346269/Obuka-zena-za-vanredne-situacije>

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There are some concerns remaining in the aftermath of the Project, and some identified needs that would warrant continued work and attention (including expanding the number municipalities involved in Project activities, which were affected by landslides in 2014-2015 but not included in the list of priority municipalities under the Project, concerns related to increasing sustainability in respect to the age, gender and type of contract of the trainees, and furthering continuing the work undertaken as part of the BEWARE project). This rationale addresses several follow-up scenarios that might be interesting to investors and coordinators, especially the UNDP office. These scenarios which are included are noted with emphasis on how to achieve optimal results under the lowest cost and with minimal follow-up.

1. Apart from the minimal sustainability of the BEWARE project currently (see item 4 below), an optimal scenario would include an extension of the project to the following municipalities: Mionica, Gornji Milanovac, Ljig, Užice, Požega, Lučani, Kruševac, Čičevac, Rekovac, and the remaining Belgrade municipalities. It would require replication of certain project activities across other affected areas, but would also be a true continuation of the project as it would further develop and enhance the inroads made during the original project. Further development would be focused on the activities under WP1, WP3, WP5, WP6, and WP7, and would be focused on field work and subsequent analyses, as well as equipping and training for the local authorities' staff. Re-training should be repeated once every 3-5 years given the abovementioned concerns of age of some of the trainees under this project (many of retirement age) and the type of engagement with these emergency response personnel (only some are permanent, while others are on trial or voluntary engagements within the local authority). The entire infrastructure of training has already been developed, so only financial support would be required for training maintenance and also for field work expenses and the equipping and training expenses. The teams (including the number and profile of team members) would remain the same, and the same partners could be utilised, including GZ and RGF. The estimated cost of this scenario would be at a level EUR 150,000-200,000 per year.

2. Apart from the minimal sustainability described in item 4 below, a scenario for extension of the BEWARE project activities would include extending the project over the remaining Belgrade municipalities, as these require the least field work and expenses, but also focusing on conceptual improvements that can be made to the design of the system. The latter would include seeking automation for WP7, (automation of landslide hazards and risk assessments, which could be implemented using a machine learning concept). Potentially this type of automation could be developed as a service provided through the BEWARE portal for any third party in possession of appropriate landslide data. Further improvements would be needed to fix certain bugs and optimize of the android application for the BEWARE data, as well as solving for how the temporal changes of the existing landslide inventory will be considered (such as in a spatial-temporal context) given that landslides are a dynamic phenomenon which change over time and the data must be tracked as such. This component of a follow on project would also include bilingual contents on all levels of the data portal, as currently the English version does not exist for the BEWARE application, the Web GIS mode, or the landslide inventory forms. The estimated cost of this scenario would be at a level of EUR 100,000 per year.

See <http://geoliss.mre.gov.rs/beware/> for examples of the improvements suggested above.

3. A low-cost scenario would include only conceptual improvements mentioned in section 2 above, and would also minimal sustainability adds as described in section 4 below. It would also include the addition of basic research on rainfall thresholds for landslide triggering, based on public data from the hydro-meteorological survey of Serbia and existing (live) landslide databases from the BEWARE project. It would then be possible to develop a self-financed service whereby the BEWARE data could be used to offer SMS notifications to interested parties (in the local community) on the levels of risk for given rainfalls. A symbolic SMS fee would be charged (for example RSD 10-50) with the fee used for maintaining the system. However, funding from investors or donors would still be required in the initial stage for completing the conceptual improvements listed in section 2 above. The total cost is estimated for this level of continuation would be EUR 50,000 per year.

4. The minimum add-ons for increased sustainability of the project would include verification of new landslides as they occur and as they are reported by local authorities (such authorities are already

involved in the project). This could occur after the termination of the BEWARE project (from Feb 2016 onward). Such verification is necessary in order to include new and up to date reports in the database and to make them publically available and operable. The financial support from the investor's side would only be partial, since local communities could provide some services and cut down on some of the field work expenses (such as the rental of terrain vehicles). The estimated cost of this scenario would be at a level of EUR 10,000 per year.

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