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**Project proposal**

**Support to flood recovery and risk mitigation in Bosnia and Herzegovina**

***January, 2015***

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| Title of the project: | Support to Flood Recovery and Risk Mitigation in Bosnia and Herzegovina |
| Location(s): | Bosnia and Herzegovina, specifically 10 local governments most affected by the flooding and landslides. |

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| Total project cost (£): | 1,000,000.94 |
| Project duration: | 12 months (February 2015 – February 2016) |

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| Problem description: | The natural disaster that struck Bosnia and Herzegovina in May 2014 affected a quarter of its territory and approximately one million people, representing some 27% of the country’s population of 3.8 million. Over 50% of local governments were in some form affected by the floods and landslides with damages recorded to housing stock, infrastructure, public institutions, the local economy and agriculture. The destruction impact of the floods in terms of damages is estimated at approximately $1.67 billion, while the economic losses exceed $1.04 billion. Among the main challenges in the aftermath of the flooding remain the de-silting of public wastewater systems, as well as the cleaning and dyke strengthening of river basins and their tributaries. |
| Project summary | The project objective is to provide early recovery and flood risk mitigation support to flood-affected local communities in Bosnia and Herzegovina.  Specifically, the project will address floods- and landslides caused damages by assisting the restoration of public sanitation services in 10 most affected localities and supporting technical flood defence measures along the flood-causing rivers and their tributaries. |

1. **Project Rationale**

***Brief description of the natural disaster***

The natural disaster that struck Bosnia and Herzegovina in May 2014 affected a quarter of its territory and approximately one million people, representing some 27% of the country’s population of 3.8 million. Over 50% of local governments were in some form affected by the floods and landslides with damages recorded to housing stock, infrastructure, public institutions, the local economy and agriculture. The Recovery Needs Assessment[[1]](#footnote-1) conducted by national authorities with the support of the European Union, the United Nations, and the World Bank estimates the destruction impact of the floods in terms of damages in the amount of approximately $1.73 billion, while the economic losses exceed $1.04 billion.

As high flood waters receded, a number of immediate threats and challenges emerged, such as landslides, debris, deteriorated public services and infrastructure, numerous houses destroyed, mines moved by the floodwaters, contaminated water and soil. More than 43,000 homes have been damaged or flooded, leading to evacuation of more than 40,000 persons. Nearly 50 % of local governments were hit by the floods, among them 46 suffered severe damage and destruction, where urban, industrial and rural areas were completely flooded. Consequently, houses, infrastructure, schools, hospitals, private facilities, farms and crops were wiped out, causing deterioration of public services, local economy and agriculture activities.

Local businesses suffered extreme devastation of equipment and stock with more than 70,000 jobs assessed as at risk. The agriculture sector has witnessed extreme devastation of more than 70,000 hectares of arable and planted land with 25,000 households now suffering substantial reductions in income as a result. Effects on productive capacity vary, with a large impact particularly in the enterprise and agriculture sector, affecting livelihoods and future food supply. Many crops have been completely destroyed and livestock has been greatly affected, thus threatening the livelihood of farmers in the short and medium term.

Mines and UXOs, which due to floods and landslides have migrated, contaminate more than 70 % of the flood-affected zone (800 km2), while mine-awareness signs have been washed away.

***Response to the recovery needs***

The UN/UNDP, together with other international organizations - the European Union, the World Bank, the USAID, the SDC, the Government of Norway, Sida, the Government of Sweden, and in close cooperation with governments at state, entity, cantonal and local levels – is taking an important role in the post-flood recovery efforts in the most affected localities.

After the first, life-saving and humanitarian phase, which took place during and immediately after the floods, in June 2014 the UN/UNDP initiated the design of an early recovery intervention, which aims to help normalization and stabilization of basic public services (reconstruction of public facilities and infrastructure), support rehabilitation of homes, mitigate post-crisis hazards and restore livelihoods (job retention and creation, rehabilitation of business and agriculture facilities, restoration of economic activity). Within this framework, a €43 million EU Recovery Programme funded by the European Union and implemented by UNDP, IOM and UNICEF has been formally launched in August, 2014.

Designed in a closely complementary manner to other on-going recovery interventions, this project proposal comes to address some of the remaining early recovery and immediate prevention needs, specifically related to restoration of water and sanitation public services in most affected localities, as well as in river dredging and dyke strengthening of river basins and their tributaries.

***Situation analysis and specific needs***

Water and sanitation systems

Post-flood restoration of basic water supply and sanitation services in the affected areas was relatively fast: in the majority of affected communities, it took less than one week to bring water supply systems back into function and around two weeks to restore drinking water quality standard supply. Exceptions, however, remain in localities where there was physical damage to the water supply structures resulting from landslides.

Waste management specialists reported that the situation with regard to wastewater services, however, is different. The existing sewage systems in the affected areas are mostly mixed flow gravity systems and therefore, in addition to direct damage, silt deposition inside the pipes hinders service delivery. Functionality of sewage system has been additionally challenged by the “second wave” of foods which occurred in August 2014. Silted wastewater infrastructure causes sewage back-up into homes and public facilities (some of which newly-reconstructed after the floods) and creates hazards for contamination of drinking water. Such challenges were reported by some of the most affected local governments, such as Doboj, Maglaj, Brčko, Šamac Bijeljina, Olovo, Odžak, Orašje, Domaljevac-Šamac and Šekovići. Estimates come to show that approximately £ 200,000 will be needed to clean, de-silt and conduct small repairs on the wastewater pipelines in these priority localities and resume service delivery at an improved standard and quality for more than 100,000 people.

Flood protection and watershed management

During floods, water flowing down the rivers overwhelmed the capacity of their channels causing serious flooding to the Sava River and its tributaries, Vrbas with Vrbanja, Bosna with Spreča, and Krivaja and Drina.

The heavy rainfall precipitated thousands of landslips, which caused temporary dams along riverbeds and streams. Water built up behind these dams eventually breached, releasing a rapid wave of water and soil. Erosion from such release has initiated further landslips into rivers and their tributaries. The mixture of soil, debris and water flowed down rivers causing deposition of sediment, distortion and erosion of riverbed and banks, destruction of watershed assets and town and village houses and infrastructure. The flooding and landslides also dislodged landmines and UXO, and removed warning signs and marking.

The largest damage and consequences are in the local governments of Brčko, Orašje (Sava River), Doboj, Zenica, Zavidovici, Maglaj, Žepče (Bosna River), Šamac (Sava/Bosnia confluence) followed by Bijeljina, Zvornik (Drina River), Lukavac (Spreča River), Tešanj (Usora River), Čelinac and Kotor Varos (Vrbanja River). The priority short-term flood protection needs, as indicated by the affected local governments, include river dredging and cleaning (combined with mine action measures), fortification of riverbeds and banks and rehabilitation of watershed infrastructure (dykes, dams, bridges). Estimates show that approximately £ 700,000 will be necessary to address some of the identified priority flood protection needs in most affected localities, as a transition measure towards long-term comprehensive flood prevention and disaster risk reduction interventions.

1. **Project description**

The project objective is to provide early recovery and prevention support to flood-affected local communities in Bosnia and Herzegovina.

Specifically, the project aims to:

* assist the 10 most affected local governments restore public sanitation services; and
* support technical flood defence measures along the flood-causing rivers and their tributaries within approximately 5 priority localities.

To achieve these objectives, the project will work in two main components, described below.

Component 1: Support to restoration of functionality of public wastewater systems

Within this component, the project will provide support to the local governments of **Bijeljina (RS), Doboj (RS), Domaljevac-Šamac (FBiH), Maglaj (FBiH), Olovo (FBiH), Odžak (FBiH), Orašje (FBiH), Sanski Most (FBiH), Šamac (RS) and Šekovići (RS) to restore quality wastewater services.**

Main activities in this regard will include: i) de-silting and cleaning of wastewater pipelines within public wastewater systems in 10 affected localities, so to enable wastewater flow and prevent sewage back-up into homes and public facilities; ii) small-scale reconstruction, necessary repairs and upgrades of the wastewater infrastructure in priority localities. It is important to note that these activities can be done while the system is in operation, since the level of deposits only limits, but does not prevent the functioning of wastewater systems. Through this component, the project will indirectly improve access to and quality of water and sanitation services for more than 250,000 citizens in target localities.

Activities will be implemented in partnership with local governments, where daily interaction with the UNDP team is already in place. Necessary technical documentation and specifications will be developed by local governments and their relevant technical departments, with the assistance and quality assurance of the UNDP project team. UNDP will be in charge of carrying out all procurement for services/works, as well as for awarding, signing, monitoring and executing the activities under this objective.

Close synergy with other on-going recovery interventions will be ensured, with added value being in the integrated and concentrated assistance in affected localities. Specifically, activities under this objective will not only contribute to improvement of public service delivery, but will also directly reinforce sustainability of outcomes and investment in public facilities and housing within the 10 localities by reducing the risk of sewage back-up and strengthening the resilience of the water and sanitation systems to flooding.

Component 2: Technical support to flood protection

Activities under this component will assist some of the most affected local governments to apply technical flood defence measures along priority segments of the flood-causing rivers and their tributaries. Activities will be implemented within selected localities of some of the most flood-prone river basins and their tributaries, such as: **Zenica (FBiH), Doboj (FBiH), Šamac (RS)** – alongside Bosna River; **Domaljevac (FBiH) and Brčko** – alongside Sava River.

One or a combination of the following main activities will be implemented within selected localities: i) earth works; ii) river dredging and cleaning (closely synergised with mine action measures, as necessary); iii) fortification of riverbeds and banks and iv) rehabilitation of watershed assets and infrastructure (dykes, dams, bridges). Prioritisation of localities will be done in partnership with local governments and relevant institutions at state/entity levels, so as to protect development and recovery investments. Additional quality assurance will be done through environmental impact assessments that will be carried out for the selected localities.

Necessary full technical documentation and specifications will be developed by local governments through their relevant technical departments and by relevant entity agencies, assisted by the UNDP project team. Local governments will also take close part in the technical monitoring and quality assurance of services delivered. UNDP will be in charge of carrying out all procurement for services/works/goods, as well as for the overall quality assurance of the project actions.

The envisaged project duration is 12 months (February 2015 – February 2016).

1. **Project implementation approach and partnerships**

In order to maximise project effect, close complementarity and territorial synergies will be established with both UNDP-implemented recovery and resilience interventions – including those supporting disaster risk reduction and flood risk mitigation, as well as with initiatives of other stakeholders (international community and government-led Coordination Bodies related to flood recovery in the country).

The UN Recovery Programme is a USD 75 million intervention, including, among other donors the EU as the major donor contributing with USD 56 million. The programme focuses on restoring public services covering almost all recovery needs in this sector. Focus is also placed on reconstruction of 4,000 dwellings for approximately 14,000 most vulnerable people, support to agricultural producers and support to SMEs. Other activities relate to rehabilitation of communal infrastructure and disaster risk reduction, including landslides mitigation and Floods and Landslides Housing Risk Assessment. This Assessment is a comprehensive study that will highlight major hazard prone areas throughout Bosnia and Herzegovina including concrete mitigation recommendations.

As its crosscutting principles, the project will apply the concepts of “build back better” and “build back together” within each locality, working jointly with local governments, local public institutions and communities to design and implement recovery activities rapidly but inclusively.

Key project partners will be: the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina; the public institution “Vode Srpske” of the entity of Republika Srpska; the Water Management Inspectorate of Republika Srpska; the Agency for Water Area of Sava River Basin of the Federation of Bosnia and Herzegovina, as well as beneficiary local governments. The project will seek, where possible, financial contributions from local governments, so as to ensure better ownership and sustainability of investments.

1. **Management arrangements**

*Project organisational set-up*

UNDP in Bosnia and Herzegovina will be responsible for project management and for carrying out all activities under the project. This entails ensuring that results and targets are reached within agreed deadlines. UNDP will also be in charge of carrying out all procurement for services/works and managing grant award procedures; as well as awarding, signing and executing the resulting procurement.

The Project organisational structure is the following:

The **Executive Oversight Board**, based in the UK comprises of the Senior Responsible Officer for the project, the main DFID Project Lead, and the Operational Oversight lead. Its purpose is primarily to provide quality assurance oversight on behalf of the Secretary of State for International Development and will also have specific interests in fraud and corruption management, use of contributions and risk. Main Functions of the Executive Oversight Board include: i) reviews financial and summary reporting, monitoring data and project status; ii) in extremis, provides advice and direction to the Project Leadership Board; iii) represents any stakeholder views to the Project Leadership Board; iv) reviews risk and retains an active interest in Fraud and Corruption; v) in extremis, retains a veto on two MoUs; vi) reports to the Head of DFIDs EU Department. In addition the Executive Oversight Board has responsibility for: timely disbursal of funding; carries the DFID Senior Responsible Officer role; quality Assurance Statement of the project; assesses Outcome to Impact.

The **Project Board** is the **project leadership group** comprising designated representatives of the Foreign Commonwealth Office (FCO) and the UNDP, as the implementing agency. The Project Board is responsible for making (by consensus) management decisions for the project and guidance to the Project Manager, including recommendation for approval of project plans and revisions. The Project Board considers progress and final reports on the project implementation and directs its course. The Project Board will meet quarterly, or as necessary when raised by the Project Manager. The DFID Senior Responsible Officer can choose (or be invited) to join these meetings as an observer or in an advisory capacity. The main responsibilities of the Project Board are: i) broad assessment of trajectory against outcome milestones, both in terms of delivery and plans for financial forecasts; ii) responsible for ensuring quarterly reports (with financial, monitoring and progress data) are made available; iii) comments on the quarterly reporting relative to outcomes; iv) makes assessments on output to outcome; v) an interface for stakeholders as required (UK Ambassador in Bosnia and Herzegovina, relevant authorities in Bosnia and Herzegovina, project Executive Oversight Board); vi) where appropriate, can make recommendations to Project Team on matters regarding delivery and finance; vii) Can make judgements and report on risk or fraud (fiduciary or otherwise).

The **Project Assurance** role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance is independent of the Project Manager. The role of Project Assurance will be performed by the UNDP Recovery Team Leader.

*Project management and project team (Project Delivery Group)*

The main objective of the Project Delivery Group is to assure:-i) delivery of the project to agreed output milestones; ii) quarterly financial reporting and forecasting to the Project Board; iii) quarterly Technical reporting inputs to the Project Board; iv) agreed Monitoring data to the Project Board; v) report on any other project matter including current downstream risks to the Project Board; vi) makes decisions on the priority of work, and would report the same to the Project Board. The **Project Manager** has the authority to run the project on a day-to-day basis on behalf of UNDP. The Project Manager will have the responsibility to ensure that the project produces the required results as defined in this document. S/he will be responsible for day-to-day management and will ensure that the project produces the results specified, to the required corporate standards and within the constraints of time and cost. The project will also employ one **Project Procurement Associate** and **2 full-time engineers** to support and supervise field engineer works. In addition, considering the extensive work at the local level, the project team will be supported by/located in the relevant UNDP Regional offices (Doboj and Tuzla), which ensure direct access to all flood-affected areas and local governments in the country.

*Organigram*

**Executive Oversight Board (DFID)**

**Project Board**

**FCO**

**UNDP**

**Project assurance**

**UNDP Recovery Team Leader**

**Project Support:**

**Project Associate (1)**

**UNDP Regional Offices**

**Governance Adviser**

**Recovery Deputy Programme Manager**

**Project Manager**

**Engineers (2)**

1. **Project work plan**

The project work plan presenting time-flow of activities is presented below:

| **Activity** | **Month** | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| Component 1: |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Final identification of priority wastewater systems and partnerships with relevant local governments |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Preparation of detailed technical specifications/bills of quantities for selected municipal infrastructure projects |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Procurement process for selection of service providers, contracting and launch of realisation of actions |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Implementation of actions, monitoring and supervision |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Finalisation, media events, ceremony |  |  |  |  |  |  |  |  |  |  |  |  |
| Component 2: |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Final identification of priority flood protection localities to deliver assistance and partnerships with relevant local governments (potentially joint localities with component 1) |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Preparation of detailed technical specifications/bills of quantities for selected municipal projects |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Procurement process for selection of service providers, contracting and launch of realisation of actions |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Implementation of actions, monitoring and supervision |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Finalisation, media events, ceremony |  |  |  |  |  |  |  |  |  |  |  |  |
| Reporting: |  |  |  |  |  |  |  |  |  |  |  |  |

1. **Project monitoring and reporting**

Technical monitoring and supervision of implementation of project activities will be conducted regularly. Substantive monitoring of the project realisation against the outcome and output indicators set within the project logframe (*Annex A*) will be conducted bi-monthly by the Project Manager.

In the inception phase, based on the detailed technical documentation and specifications for all selected localities, the project team will develop more detailed output-specific indicators, such as: km of cleaned and de-silted wastewater pipelines within public wastewater systems; km of repaired and functional wastewater pipelines; m of flood-prone river basins dredged and cleaned, and flood defence sites (dykes, dams and bridges) reconstructed, number of households with improved access to and quality of water and sanitation services; m2 of mine-cleared area, etc.

Reporting on the project progress and results will be conducted quarterly, with a Final Technical and Financial Report submitted upon project completion.

1. **Analysis of risks and undertakings**

The following risks for the project implementation and mitigation measures were identified:

| **Type of risks** | **Likelihood/probability** | **Mitigation measures** |
| --- | --- | --- |
| Lack of sufficient number of quality service providers to allow for delivery of re/construction works/services. | Medium | Credible service providers will be made aware of upcoming tender processes to encourage interest. |
| Floods and heavy rainfall re-occur in spring 2015 | Medium | Discuss with counterparts contingency measures and condition support with disaster preparedness plans at the local level |
| Winter conditions delay re/construction works | Low-medium | Plan carefully delivery of works, as per seasonal conditions |
| Heavy mines and UXOs contamination at selected sites | Medium | Careful mine surveillance and cooperation with relevant mine action authorities and subsequent adjustment of project activities |
| There is a risk of creating flood defences which can withstand current rainfall events, but not adequate for changes in climate | Medium | Modelling of necessary structures to meet appropriate flood events (i.e. 1 in 50 or 1 in 100 year floods) |
| Considering that the flood risk mitigation measures will involve adapting the natural water system, the potential for environmental risks has to be considered, such as: i) a decline in soil fertility due to the cessation of sediment deposition on land during flood; ii) damage to river-based flora and fauna; iii) interruption of natural geomorphological processes which could exacerbate flood bank erosion and flooding; iv) inappropriate disposal of silt to landfill. | Low/Medium | Risk mitigation measures and works will be designed while considering the various potential environmental risks and consequences. The role of partner institutions in this process will be very important. |

1. **Visibility**

The project will ensure visibility of results and outcomes, as well as of the valuable contribution and support to recovery of Bosnia and Herzegovina by the UK Government

Visibility, media-presence and public information sharing related to project activities and achievements will be ensured on a regular basis by the UNDP Communication Unit through: i) press events related to formal ceremonies or highlight project results in the field, where representation of UK Government officials will be sought ii) website posts; ii) social media posts; iv) display boards on investment site stating the UK contribution to the project results; v) photo and video stories.

1. **Project budget**

| **Activity** | **Unit** | **# of units** | **Unit value (£)** | **Total Cost (£)** |
| --- | --- | --- | --- | --- |
|
|  |
| **Component 1** | | | | |
| De-silting and cleaning of wastewater pipelines within public wastewater systems in 10 affected localities | lump sum |  |  | 140,000.00 |
| Small-scale reconstruction, necessary repairs and upgrades of the wastewater infrastructure in the 10 priority localities | lump sum |  |  | 40,000.00 |
| Engineer (2 engineers during 6 months) | month | 12 | 1,718.00 | 20,616.00 |
| **Component 2** | | | | |
| Earth works within priority sites | lump sum |  |  | 165,000.00 |
| River dredging and cleaning within priority sites | lump sum |  |  | 164,000.00 |
| Fortification of riverbeds and banks within priority sites | lump sum |  |  | 100,000.00 |
| Rehabilitation of watershed assets and infrastructure within priority sites | lump sum |  |  | 178,000.00 |
| Engineer (2 engineers during 6 months) | month | 12 | 1,718.00 | 20,616.00 |
| Environmental Impact Assessments | lump sum |  |  | 35,000 |
| ***Sub-total municipal projects*** | | | | ***863,232.00*** |
| **Project management** | | | | |
| Project Management (Project Management, Project Procurement Associate) | month | 12 | 3,100.00 | 37,200.00 |
| Monitoring and evaluation\* | lump sum |  |  | 10,000.00 |
| ***Sub-total project management:*** | | | | ***47,200.00*** |
| **Operational costs** | | | | |
| Travel | monthly | 12 | 582.9 | 6,994.80 |
| Visibility | lump sum |  |  | 2,500.00 |
| Office rent | month | 12 | 500 | 6,000.00 |
| ***Subtotal operational costs:*** | | | | ***15,494.80*** |
| ***Total budget framework:*** | | | | ***925,926.80*** |
| *GMS (maximum 8% of the total budget framework)* | | | | *74,074.14* |
| **TOTAL PROJECT BUDGET** | | | | **1,000,000.94** |
|  |  |  |  |  |
| *\* Budget item to be used by DFID to conduct project monitoring and evaluation* | | | | |

**Annex A: Logical framework**

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1. “Bosnia and Herzegovina Floods 2014, Recovery Needs Assessment”, June, 2014: <http://europa.ba/FloodsRecovery.aspx?lang=EN>. [↑](#footnote-ref-1)