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**UNDP**  
**The former Yugoslav Republic of Macedonia**  
**Project Document**

**Project Title: Response to Flash Floods in Skopje and Tetovo**

**16 August 2016**

Implementing Party: UNDP  
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Project Title: Response to Flash Floods in Skopje and Tetovo  
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Management Arrangement: DIM

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Allocated resources:	
• Government	n/a
• Regular	n/a
• Other: TRAC 1.1.3	USD 75,000
Unfunded budget:	n/a

Agreed by UNDP:

Louisa Vinton, Resident Representative

16 August 2016



## 1. SITUATION ANALYSIS

Devastating flash floods hit Skopje, the country's capital city, on the night of 6-7 August 2016. The floods left 23 people dead or missing and destroyed entire neighborhoods in the city's northeastern outskirts in the districts of Gazi Baba and Aracinovo (see map). Heavy rains also flooded low-lying urban areas in Skopje and caused damage in parts of Tetovo that had been hit in floods in 2015. A section of the "ring road" highway that circles Skopje was destroyed, with 70 cars reported trapped in the flooding. In all, the floods left 5,000 houses damaged or destroyed and directly affected an estimated 25,000 people.



*Affected areas in the City of Skopje and surrounding area – 08 August 2016 (EU Copernicus)*

The floods were caused by rainfall of unprecedented magnitude and concentration. Meteorologists report that high winds drove a massive cloud from west to east over Skopje which then halted above Skopska Crna Gora Mountain and dumped 93 mm of rain onto the affected area in a period of just five hours. This is roughly one-fifth the total average annual precipitation for Skopje. The rainfall created powerful torrential flooding that swept across the ring road and the northeastern Skopje suburbs. Water levels reached as high as two meters in some settlements and left many houses submerged in mud.



*Floods cars in central Skopje – 6 August 2016*



*Vehicles washed off Skopje A2 Ring Road – 7 August 2016*

The most-affected neighborhoods—Smilkovci, Singelic, Stajkovci, Ekonomija, Indzikovo, Creshevo, Viniche, Kamnik and Cento—are a mix of residential and agricultural, and the area supplies much of the fresh fruits and vegetables upon which the capital city depends. These crops were completely destroyed, posing a long-term risk to local livelihoods. In addition, heavy losses were reported in local livestock

(poultry, sheep and cattle), posing short-term health threats and long-term harm to farmers. The area is also ethnically mixed, and the flood destroyed both Macedonian and Albanian settlements.



*Most affected area of villages of Stajkovci, Singelic and Indzikovo (07 August 2016)*

Flooding of this type in this area took even the expert community by surprise. UNDP consultants who have been working for years on flood risk analysis explain that the affected area had never historically been hit by floods, and that torrential flooding had been expected instead on Vodno Mountain in Skopje (the consequences of which would have been far more disastrous given local population density) and in the mountains around Tetovo. The suspicion is thus that climate change is transforming the country's extreme weather patterns and that therefore prevention measures need urgently to be reassessed.

The flash floods in Skopje were the third flood disaster to hit the country in the past 19 months. In January and February 2015 the southeast and south of the country were hit by river flooding left one dead and caused EUR 36 million in damages, mostly to infrastructure and agriculture. Then, on 3 August 2015, heavy rains caused flash flooding in the mountains around Tetovo that killed six and the Pena River inundated the center of the city. Losses from the Tetovo flooding were estimated at EUR 29 million. UNDP experts note that the conditions that caused the Tetovo flooding in August 2015 were remarkably similar to those in Skopje one year later. The Tetovo floods were assessed as a one-in-a-hundred-year event, whereas (according to preliminary analysis) the Skopje floods are assessed as a one-in-a-thousand-year event.

While the weather conditions were unprecedented, the severity of the impact and the frequency of flooding have focused attention on human factors that may have contributed to the disaster. This applies in particular to the high number of fatalities, which experts see as excessive given the circumstances.

Early-warning systems do not exist and the hydro-meteorological system has little capacity to translate forecasts in meaningful public guidance. Skopje has experienced rapid urbanization, and zoning regulations and building codes have gone ignored and un-enforced. Drainage systems are lacking; Skopje has only 20 percent of the storm-drain channels and other drainage infrastructure that it needs for its road system. This is why underpasses and inclined roads in Skopje are routinely flooded after even light

rain. Storm-drain channels are regularly put to inappropriate use, including garbage and landfill. What preventive infrastructure has been built – check dams, for example – often goes un-maintained. Residents often have little awareness of how to keep safe during floods (especially flash floods).



These shortcomings have long been a focus of UNDP activities in the country, and the Skopje floods reaffirm key UNDP flood-prevention priorities: improving policies, infrastructure and public awareness.

The official response to the crisis has also raised questions. The Government on 7 August declared a 15-day crisis situation for the cities of Skopje and Tetovo. Under the leadership of the Steering Committee that is convened in crisis situations, a far-reaching emergency response was mobilized, involving the Rescue and Protection Directorate, the Army, the police, fire brigades, municipal structures and the Red Cross. However, from the very first hours, complaints were voiced about lack of coordination and implementation of clear rescue protocols. Social media were full of reports of entire settlements waiting days for any sign of official assistance. Official communications were lacking or delayed. As in past crises, there were too many players on the ground; confusion abounded about command structures and it was hard to know who was in charge of what. Efforts to compensate by civil society organizations and individuals often served only to heighten the chaos. Criticism was also heard that assistance was being provided selectively, depending upon political party or ethnic affiliation.

Field visits by three UN teams on 10 August 2016 found striking differences in circumstances between different locations. Overall, however, residents were mostly fending for themselves, relying on assistance from family and friends, with only haphazard support from official sources (see Annex 1).

International efforts to support the humanitarian response were complicated by official delays in assessing the situation and identifying priority needs. A first list of requested goods was only shared with international organizations on 9 August 2016 (see Annex 2), and this was in essence a compilation of rescue supplies for which the need had passed (for example, 3,500 raincoats); and the Crisis Management Center took four days, until 10 August 2016, to issue a first situation report (see Annex 3).



*Cleaning up after flash floods in the village of Stajkovci*

Where the official response has kicked in most efficiently is in establishing commissions at both regional and national level to assess damages in preparation for the payment of official compensation. This is a standard practice that has been applied in all recent crises, both to cover damage to houses and residential property and for farms and agricultural businesses. While compensation helps address the immediate needs of affected families, farms and businesses, it tends to reinforce the assumption that disaster is inevitable and to deflect attention from changes that would prevent future disasters.



*Cleaning up after flash floods in the village of Stajkovci*

The UN system in the country has mobilized to help address both humanitarian needs and support longer-term recovery and reconstruction, in line with the “build back better” principle. For all the chaos of the official response, poor coordination and communication on the ground, humanitarian needs are expected to be met within the coming weeks.

Given its long-standing efforts to improve river-basin management and introduce flood prevention measures in line with the EU Floods Directive, UNDP has from the start been seen as a reliable partner for the national authorities. Working in coordination with the European Union Delegation and the World Bank, UNDP thus encouraged Government counterparts to consider requesting a Post-Disaster Needs Assessment (PDNA). An official request for a PDNA was conveyed to the UN and the EU on 16 August 2016, following an initial request to the World Bank for support in conducting a rapid damage assessment (see Annex 4). Intensive preparations are already under way to convene an appropriate expert team.

## **2. PROJECT OUTPUTS AND ACTIVITIES**

To respond to the Government request for support in conducting a PDNA and to enhance coordination, the UNDP office in Skopje is requesting USD 90,000 in TRAC 1.1.3 funds. This funding will be used to support the needs assessment and Government-led early recovery and post-disaster coordination efforts.

Project work will build on the UNDP Country Office’s past emergency-preparedness initiatives and enhance ongoing activities in flood recovery, urban resilience and integrated river basin management. These include a EUR-10-million project to reconstruct infrastructure damaged in the river flooding of early 2015 and a CHF-3-million project to protect the Strumica River Basin in the southeast.

Under the overall coordination and guidance of the Deputy Prime Minister for European Affairs, the project will be implemented in close coordination with national partners, including:

- Crisis Management Centre
- Ministry of Local Self-Government
- Ministry of Agriculture, Forestry and Water Management
- Ministry of Environment and Physical Planning
- Ministry of Transport and Communications
- Protection and Rescue Directorate
- Cities of Skopje and Tetovo
- Affected municipalities

The PDNA will be conducted in partnership with the World Bank and the European Union. Given the focused geographical area affected by the floods, the PDNA approach will be “light” but with a clear emphasis on persuading the Government to embrace the broader lessons learned for national impact.

Specific project outputs include:

### **Output 1: Supporting Post-Disaster Needs Assessment and Early Recovery Framework**

#### **Planned activities:**

- Support PDNA work by national partners, in coordination with World Bank and EU and ensure the participatory nature of the PDNA process;
- Help assess damage, recovery and risk-reduction needs in key sectors;
- Provide technical support to the Government and cities of Skopje and Tetovo in drafting and developing an early recovery framework and action plan.

**Output 2: Strengthening post-disaster coordination efforts**

**Indicative Activities:**

- Organize coordination meetings for post disaster recovery in partnership with national and local level authorities.

**3. MANAGEMENT ARRANGEMENTS**

The UNDP CO will implement the project over 12 months under direct implementation modality (DIM).

#### 4. ANNUAL WORK PLAN BUDGET SHEET

EXPECTED OUTPUTS and indicators including annual targets	PLANNED ACTIVITIES <i>List all activities including M&amp;E to be undertaken during the year towards stated CP outputs</i>	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
		Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount In US\$
<b>Output 1:</b> Supporting Post-Disaster Assessment and Early Recovery Framework  <b>Baseline:</b> Low capacity for post-disaster needs assessment  <b>Indicators:</b> # of sectors identified # of participants in PDNA process # of reports  <b>Targets:</b> PDNA prepared Early recovery framework and action plan formulated	Support PDNA work by national partners, in coordination with World Bank and EU and ensure participatory nature of the PDNA process	X	X			UNDP	TRAC 3	International consultants National consultants Contracts Travel	20,000 25,000 10,000 5,000
	Help assess damage, recovery and risk-reduction needs in key sectors	X	X						
	Provide technical support to the Government and cities of Skopje and Tetovo in drafting and developing early recovery framework and action plan	X	X	X	X				
<b>Sub total Output 1:</b>									60,000



<p><b>Output 2:</b> Strengthened post-disaster coordination efforts</p> <p><b>Baseline:</b> Low post disaster coordination; Lack of advice</p> <p><b>Indicators:</b> # of counterparts supported # of coordination meetings held # of reports produced</p> <p><b>Targets:</b> Improved post-disaster coordination capacity based on expert advice</p>	<p>Organize coordination meetings for post disaster recovery in partnership with national and local level authorities</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>UNDP</p>	<p>UNDP CO</p>	<p>Consultants Contracts Travel</p>	<p>8,000 5,000 2,000</p>
<p><b>Sub – Total Output 2:</b> 15,000</p> <p><b>Total:</b> 75,000</p>								

## **Annex 1: Report from field visits by UN staff to flood-affected areas, 10 August 2016**

### **Main findings:**

Although all relevant institutions are visibly present in the field, the lack of coordination remains the main challenge to ensuring a more efficient response. Improving coordination has been marked as a necessity during prior natural disasters that have affected the country in the last 19 months.

At this stage, there is no need for additional basic humanitarian assistance such as food and water from the UN agencies. However, the UN should continue to closely monitor and assess the needs as they emerge over the coming weeks, as there are still many unknowns about the impact of the disaster.

There is a need to carry out an in-depth assessment of the impact of this disaster on a number of sectors and to prepare a comprehensive recovery plan. This is an area where the UN agencies can be of great support to the national institutions. Forward-looking prevention measures need to be planned.

### ***Villages of Singelic, Creshevo, Smilkovci and Belimbegovo***

- Based on information received from emergency agencies, 15,000 citizens and 2,000 houses have been affected by the floods in the broader area of Singelic.
- Ten (10) people with disabilities have been evacuated to the Boarding School "Partenij Zografski". There are several cases recorded of people with disabilities still remaining with their families, however, due to the ongoing clearing operations, these families need additional daycare assistance or medical doctors to be available 24/7.
- The agricultural sector has been hardly hit, and almost 100% of the land has been affected. Drop-by-drop irrigation systems installed in the farms have been destroyed.
- Receding waters are being drained in the direction of the village of Belimbegovo. The sewage and pump drainage networks are not functional.
- Clean-up efforts are ongoing and there is a visible presence of all relevant institutions, including police, army and health services. Nevertheless, a lot of citizens are still left on their own to clean up properties.
- Coordination among institutions present in the field is clearly insufficient. Operations are not well organized. This is causing delays and decreasing the impact of collective and individual efforts. For example, many people are working on pumping out water from households, but since the issues with the drainage systems has not been solved, water is flooding the houses again.
- The teams that visited the affected areas noted that several food and water distribution points have not been visibly marked. It is not clear whether these points are managed by the Red Cross or by self-organized groups and individuals. Also, the team did not notice the presence of persons with Red Cross insignia. Upon return to the office, the team established contact with the Red Cross, and it was clarified that the Red Cross is currently conducting distribution through the Macedonian Army or door-to-door, to ensure that the ones most in need receive immediate assistance. The Red Cross is currently still focused on water and food distribution. It is expected that the distribution of hygienic and other supplies will start after the water and food distribution is completed.
- There is a fully operational medical checkpoint, with one doctor and one nurse. They are providing necessary medical treatment and first aid. The health service is very well organized. Several clearly marked checkpoints have been established, and it seems that this is the most organized service in this area.
- A veterinarian is present in the area and is receiving applications for cattle registrations. However, the Protection and Rescue Directorate stated that in line with regulations and procedures, the cattle need to be put down in order to prevent the spread of infectious diseases.

- There are many traffic challenges. A big number of vehicles is having difficulties going in and out, including private cars, official cars and clean-up vehicles, and this needs to be organized better as soon as possible.
- Solid waste and deposited materials are collected on designated locations (for the Singelic/Stajkovic area, the designated location is the football stadium) and transported to the Vardariste landfill afterwards.
- The team was under impression that there are no immediate needs for humanitarian aid and that the responsible institutions should be able to deal with this aspect, as they are receiving humanitarian assistance from various sources (domestic and international).

### **Creshevo**

- The coordination of activities in this village is carried out by special units of the Ministry of Interior and of the Protection and Rescue Directorate.
- The army is also present in the field.
- Half of the village has regained access to electricity and the other half is expected to regain it in the course of today.
- A Red Cross assessment team is on site. And there's also a team from Serbia helping citizens to pump out water and clean garbage and mud from houses.

### **Smilkovci**

- This village was severely affected by the floods and there were four casualties.
- Teams from the Ministry of Interior, the Protection and Rescue Directorate and the army are helping the citizens.
- The Red Cross has already delivered humanitarian aid (food, hygienic items and blankets) house-to-house and the process is monitored by the army. There's a clearly marked distribution point in the local church.
- There is no electricity in the village.
- Drainage canals are not functional and the agricultural land has been severely affected.
- Private construction companies are helping to clean-up the area and a Bitola Sewage company is pumping out the water.

### **Belimbegovo**

- Six out of the seven factories located in the Belimbegovo area are flooded because of the water coming from Singelic and Stajkovci.
- A number of houses in the village have been severely affected, most probably because of the high level of underground waters.

### **Settlement Hasan Beg (Singelic).**

- According to the information from the local community, over 10,000 people and 2,000 houses have been affected by the floods.
- The damage is particularly visible especially in the residential area, which at first glance seems completely destroyed.
- There was a visible presence of police forces and members of the Center for Crisis Management in the "25 May" school - the central location from where all aid is being distributed to checkpoints.
- During the visit, no Red Cross representatives were present.
- It was obvious that the main challenge here is the aid distribution, which is not being managed by institutions but by a group of volunteers called "Crisis Center of Hasan Beg". This group is accepting donations and distributing it, however, there's no clear protocol how this is functioning. Even though

there's a large police presence in the "25 May" school, the team witnessed high tensions between the local population asking for donations and the "Crisis Center of Hasan Beg" group.

- Additionally, on the main street, a couple of NGOs have also established donation checkpoints and they are delivering support directly to the affected citizens.
- It is very difficult to access the inner-streets of the Hasan Beg settlement, and the assumption is therefore, that the population living here is at a higher health risk.

### **Indzikovo**

- No human casualties have been reported.
- A total of 80 houses in this village have been affected, but the water has already been pumped out.
- Vehicles from the Serbian fire brigade helping citizens were spotted at the main road at the entrance to Indzikovo, and a public communal enterprise vehicle was there as well.
- About 90% of the village has electricity.
- The water was checked and it is potable.
- No needs for health interventions have been reported.
- The Red Cross teams have already distributed humanitarian aid to all 80 houses. A villager from Indzikovo employed in the Municipality of Gazi Baba is coordinating the flood response.
- The locals told the team that the people waiting in line for bread and water were not directly affected by the crisis (but are mainly poor people living in the area). People who have truly been affected have opted to work on cleaning-up houses, rather than waiting in line for food and water.

### **Strachinci**

- Over 30 houses from a total of 135 have been affected by the floods.
- Many yard walls have been destroyed.
- The road to Strachinci has been cleared by mechanization; however it is still very difficult to access the village. There's a lot of waste and debris on both sides of the road.
- The Municipality of Gazi Baba provided heavy mechanization to help clean-up the main road leading to the village.
- Some villagers are not allowing for any work to be carried out in their yards as they are waiting for damage evaluation teams to come and make initial assessments, to ensure they get proper compensation.
- There is one water and food distribution checkpoint. The checkpoint is not clearly marked but all villagers are aware of its location.
- The Red Cross brought 165 food packages in two days. They have also been receiving food and water from humanitarian organizations and individuals.
- Currently, there's a need for hygiene products.
- The distribution of humanitarian aid is carried out by local religious leaders and NGOs.
- Women and children have moved out of the village and are staying relatives in surrounding villages.
- Half of the village has no electricity, because the electricity supply pole in the middle of the village is broken. EVN (the electricity supply company) has announced that they have people in the field, working to repair it.
- Institutional presence was visible: police was regulating traffic, state evaluators for agriculture damages and animal control are in the field.
- The assessment of damages to households still needs to be completed.
- The local government representative (president of the local village council) informed the DMT team that there's currently no need for water and food.

### **Municipality of Aracinovo**

- No casualties have been reported.
- The DMT team had a brief meeting with the Mayor and got his initial feedback on the situation. Based on info gathered from the Mayor, over 1,000 people and 100 households have been affected.
- The Public Communal Enterprise was in the field, helping to local citizens cleaning-up their houses.
- The police are regulating traffic on the crossroads connecting Aracinovo to the main ring-road.
- Up to date, the Red Cross distributed 1 truck with 4 tons of water, 100 packets of food, 150 blankets, 75 mattresses and 48 packets of cheese. There is no information on whether the Red Cross will bring further aid in the coming days.
- The aid distribution checkpoints are not clearly marked, but the villagers seemed to know where to ask for donations.
- The water is not potable and there is currently no electricity.
- The Crisis Management Center and the Army brought in 14 pumps to help pump out the water out.
- Two teams of evaluators are in the field (mixed teams of government and municipality).

**Annex 2: Note from Ministry of Foreign Affairs on floods in Skopje and needed items, 9 August 2016 (attached)**

**Annex 3: Situation report from the Crisis Management Center covering 6-10 August 2016**

On 6th of August 2016, some peripheral inhabited areas of Skopje - the capital city of the Republic of Macedonia, were affected by heavy rains. This kind of rain is classified as waters that are appearing once in a 1000 years, because according to the statistics the probability of this kind of phenomenon is approximately 0.1 %. The National Hydro-Meteorological Service, in a distance of 5 km (in air km) from the affected area, 93 liters of rainfall per square meter were measured, with an estimate that at the most affected locations more than 200 liters of rainfall per square meter within time frame of 20 minutes has fallen.

The most affected areas from the disaster are the municipalities of Gazi Baba and Aracinovo or more exactly the following villages: Smilkovci, Singelic, Stajkovci, Ekonomija, Indzikovo, Creshevo, Viniche, Kamnik and Cento. It is an area of 50 square km with 5.000 households and 20.000 residents. The households and overall infrastructure is flooded up to 2 meters.

The consequences of the heavy rains were felt throughout the whole territory of the city of Skopje. Also, at the villages of Shipkovica, Brodec and Vejce, which are part of the municipality of Tetovo, big material damage of the road infrastructure was caused while the households were not affected.

The first flood wave caused the biggest damage in the area of Skopje and unfortunately 22 human lives were lost (all Macedonian citizens) and more than 100 people were hospitalized. In the first hours of the heavy rains, in night conditions with no electricity more than 1.000 people were rescued from the flooded homes and vehicles. The Initial estimates indicate complete or partially flooded and/or collapsed houses and facilities, such as barns, garages for agricultural machinery, light vehicles, trucks, as well as cattle food storages. Also, there are damaged or completely destroyed vehicles, agricultural machinery, greenhouses and horticultural crops in the middle of harvest (as the main source of finance for the population in this area). The majority of the cattle and poultry is dead or flooded.

The road infrastructure is almost completely destroyed; including the highway, the ring road Skopje is closed and has been out of use due to the damages. Public bus service has been terminated.

The flooded areas are without electricity for 4 days and cannot be established in the next few days, because 3 substations are still flooded and the biggest part of the electrical infrastructure of the households is under water.

The water supply network is still completely out of use. The first analysis showed no bacteriological failure of the drinking water, but the recommendations to use bottled water only remain in power. The fecal canalization system and septic tanks are completely flooded, and the fecal and atmospheric waters are mixed. The telecommunications are limited only on the mobile network.

At the session held on 7th of August 2016, the Government of the Republic of Macedonia has adopted a Decision to declare a crisis situation due to the increased amount of rainfall that caused floods on the territory of the Republic of Macedonia. The decision applies to the areas of Skopje and Tetovo and will be in force for 15 days.

**Engaged Forces:**

The first responder units (police, firefighters and emergency medical service) provided primary help to the affected population. Taking into consideration the development of the situation, by order of the President of the country the Army was included in the rescue operation for the purpose of search, rescue and transportation of the affected population.

For the purposes of dealing with the consequences the resources of the national Red Cross, the Protection and Rescue Directorate, public utility enterprises of the city of Skopje (Public Enterprise "Water supply and sewage systems ", PE "Communal hygiene ", PE "Streets and roads ", PE "Parks and green surfaces ", tow service and funeral service) and volunteers were engaged the following day.

In order to assist to the local government the firefighting units of Sveti Nikole, Kumanovo, Bitola, Kavadarci, Prilep, Tetovo and Gevgelija were engaged, with teams and firefighting vehicles and water tanks.

Available heavy equipment (excavators and skippers) of public and private enterprises was engaged, as well as the Army.

The Ministry of Health and the Ministry of Labor and Social Policy, in cooperation with the Red Cross, have established two reception centers and two distribution centers. The number of permanent population accommodated at the reception center is relatively small (42 persons and 3 persons with special needs) due to the traditional way of care provided by relatives and friends. Changeable number of people is engaged in flooded households during the day which only stay overnight at the reception centers.

The overall organization and distribution of bottled water, canned food, hygiene and family packs, diapers and baby food, clothes and shoes, blankets and mattresses, are entrusted to the national Red Cross - as an entity of the Crisis Management System. Priority for clearing up is a removal of dead animals, safe transport and destruction and disposal in 2 dedicated landfills, under the expert supervision of the Food and Veterinary Agency.

**Upcoming priority actions:**

- Clearing up road infrastructure from mud, trash and damaged vehicles;
- Clearing up households from flood water and silt;
- Clearing up agricultural land from flood water and silt;
- Cleaning and repair of communal infrastructure (water and sewage);
- Disinfection, fumigation and eradication of the affected area.

**Upcoming activities:**

- Repair and reconstruction of flooded homes and providing necessary furniture;
- Reconstruction of road infrastructure, including the part of the wrecked highway;
- Reconstruction of part of the drainage canal.

Skopje, 10.08.2016

**Crisis Management Headquarters**

**Head of the CM HQ**

**Suzana Saliu**

**Annex 4: Government request for Post-Disaster Needs Assessment (attached)**

