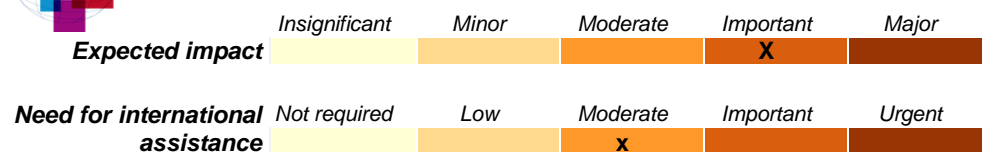




FLOODS IN SERBIA, BOSNIA AND HERZEGOVINA

Date: 19 May 2014



Crisis overview

- Serbia and Bosnia and Herzegovina (BiH) have been affected by cyclone Tamara experiencing extremely heavy rain, strong winds and low temperatures (ACT Alliance 16/05/2014). On 13 May, continuous, heavy rainfall began, and the region recorded three months' worth of rain in three days (WeatherChannel 17/05/2014). It is the worst rainfall recorded in BiH since 1894, when weather records first began (Reuters, 15/05/2014). In BiH, more than 40% of the country was under water (Islamic Relief, 16/05/2014).
- As of 18 May, more than 44 people have been reported killed in Serbia, BiH and Croatia, although government officials expect this figure to increase as water recedes. Overflowing rivers have burst into towns and villages, cutting off whole communities, while landslides have buried houses and cars (BBC, 16/05/2014).
- Officials have not yet come up with estimates of the damage caused by the floods, but they are expected to be high. The agricultural sector, on which the economies of the Balkan countries rely, is expected to bear the brunt of the record flooding (RT 18/05/2014).

Key findings

Anticipated scope and scale of the event

- As of the afternoon of 18 May, 44 people have been killed by the floods in Serbia (16), BiH (27) and Croatia (1). However the number of deceased is expected to rise in the coming days as waters recede. As of 18 May, the Government of Serbia reported that more than 24,000 people had been evacuated across the country. In BiH, no confirmed total figure for evacuees has been provided, although it is estimated to be at least 13,000 people.
- Forecasters are warning that Serbia's River Sava is set to peak again in the evening of Sunday 18 May. A major concern is that the floods will affect

Affected group	Total
Total Population	11,058,000
- Total population Serbia	7,224,000
- Total Population in BiH	3,834,000
Total Killed	44
- Killed Serbia	16
- Killed BiH	27
- Killed Croatia	1
Total Evacuated	37,352
- Evacuated Serbia	24,352
- Evacuated BiH	13,000
Population in flooded Area (est)	
-Serbia	More than 1 Million persons (14% of population)
-BiH	1,5 Million (40% of population)

Serbia's Kostolac coal-fired power plant, which currently covers 20% of Serbia's electricity needs. The flood has already affected the supply of electricity to hundreds of thousands of people across the two countries.

- In BiH, the water is slowly declining, but the situation still remains complex due to numerous landslides, causing houses to collapse and damage to roads.

Priorities for interventions in the coming weeks

The need for immediate search and rescue is critical. The extent of the flooding has the potential to create serious livelihood risks from loss of agricultural production. Another major concern is that the floods and landslides have raised the risk of injury or death from land mines left over from the wars in the 1990s, due to the fact that landslides swept away many of the warning signs around the minefields.

Constraints

Access to rural and remote areas will be a critical challenge in the coming days and weeks. Damaged roads and bridges are major obstacles in gaining access to, and evacuating affected people, and certain areas are only accessible by boat or helicopter.

Need for assistance

Both Serbia and BiH have issued a state of Emergency and requested international assistance.

Impact of Crisis

Killed

As of the afternoon of 18 May, a total of 44 people had been killed by the floods in Serbia, Bosnia and Herzegovina (BiH) and Croatia. In Serbia the official death toll is 16, with 12 deceased from the city of Obrenovac alone (RTE 18/05/2014). The recovery of dead bodies has started, but Government officials will not make the total number public before the complete withdrawal of the water (AFP 17/05/2014). In BiH, 27 have been confirmed dead (RTE 18/05/2014), of which 20 were from the town of Doboj (BBC 17/05/2014). One person has been confirmed killed in Croatia (RTE 18/05/2014).

Evacuations

In Serbia, a total of 24,352 people have been evacuated, 2,260 facilities inundated and 1,763 facilities endangered (GoRS 18/05/2014). People are being evacuated to schools, military barracks and relative's homes (InSerbia 15/05/2014). In the eastern BiH town of Bijeljina, approximately 10,000 people were being evacuated on 17 May after the rain-swollen Sava river pushed through flood defenses, endangering four villages outside the town (The Guardian 18/05/2014). Additionally, nearly all of Bosanski Samac municipality was flooded on 17 May, and many of the local residents were evacuated (Dalje 18/05/2014). Local media has reported evacuations from the towns of Maglaj, Doboj and Banja Luka, although the specific numbers of evacuees have not been confirmed (News24 16/05/2014). At least 13,000 people have been evacuated across BiH (RTE 18/05/2014).

Worst affected regions

Serbia: The most seriously affected regions in Serbia are Kolubara, Mačva and Morava (ECHO 17/05/2014). The town of Obrenovac (30 kilometres north of Belgrade) has been the hardest hit, and the entire town is now being evacuated amid warnings of more flooding (AFP 17/05/2014). The area along the Sava River, west of Belgrade, was among the places worst hit by the flooding. In Sabac, water levels rose by 6.2 meters (DW 16/05/2014).

Bosnia and Herzegovina (BiH): Observed from the air, almost a third of BiH, mostly its north-east corner, resembled a huge muddy lake, with houses, roads and rail lines submerged. According to the Government, about one million people, equivalent to more than one quarter of the country's population, live in the affected area (BBC 17/05/2014). In BiH, the affected municipalities include Maglaj, Doboj, Bijeljina, Zvornik, Brčko, Modriča, Bosanski Šamac, Tuzla, Vareš, Doboj Jug, Šekovići, Bratunac, Srebrenica, Kotor Varoš, Petrovo, Mrkonjić Grad, Sapna, Gračanica, Gradačac, Kakanj, Olovo, Breza, Visoko, Zenica, Kladanj, Banovići and Lukavac (ECHO 17/05/2014). The situation has been particularly difficult in the town of Doboj, where the floodwaters acted as a tsunami, three to four metres high (BBC 17/05/2014). The worst flood was reported in the capital Sarajevo and Tuzla regions, in the central parts of the country, as well as in the cities of Goražde and Bijeljina (IFRC 16/05/2014).

Croatia: Large parts of eastern Croatia are underwater, with several villages cut off and hundreds still fleeing the flooded zone in boats and trucks. Mass evacuations are taking place along the Sava River (RTE 18/05/2014). The media estimates that 7,400 people have been evacuated as of 18 May, with the most affected areas being Gunje (5,000), Racinovci (982) and Rajevo Selo (1,407) (Dnevo 18/05/2014).

Impact on critical infrastructures

Impact on power and electricity: The rainfall led to a 25% drop in power generation from Serbia's largest hydroelectric dam at Djerdap, due to controlled overflows (Bloomberg 17/05/2014). Serbia's sole power utility company EPS said it had halted two hydro-power plants due to high water levels on the Morava river. The floods have also disrupted production in two mines near Belgrade, the main suppliers of major coal-fired power plants (AFP, 15/5/2014). In Serbia, the government evacuated 6,000 people from the town of Baric (25 kilometers southwest of Belgrade), the site of an explosives factory (Bloomberg 17/05/2014). There are conflicting figures on the number of homes currently without electricity both in Serbia and BiH. According to reports from ECHO, as of 17 May, about 100,000 households in the area of Valjevo, Čačak, Loznica and Lazarevac (Serbia) were without electricity (ECHO 17/05/2014). In BiH, various news sources report that as of 17 May, an estimated 100,000 homes were without electricity (Reuters 17/05/2014).

Transportation – roads and railways closed: In BiH, hundreds of homes were inaccessible or flooded after the Miljacka river, which runs through Sarajevo, broke its banks on 14 May. Two towns in western Bosnia, Maglaj and Doboj, could only be

reached by boats since all roads were flooded (AFP, 15/5/2014). In BiH, a large number of roads leading from the country's interior towards the north were blocked by landslides. The railroad running from Sarajevo to Doboj was also blocked in several places (Dalje 18/05/2014). In Serbia, a major highway from Belgrade to Macedonia and Bulgaria was flooded and the traffic interrupted (Reuters, 15/05/2014). Railway traffic between Belgrade and Nis and between Belgrade and Bar was affected (ECHO 17/05/2014). Railway traffic with Montenegro as well as the southern town of Nis was also halted due to heavy flooding from the rivers Drina and Morava (AFP, 15/5/2014).

Closure of schools: The floods have led to the closure of schools in both Serbia and BiH (DW 16/05/2014).

Impact of current crisis on access of affected population to essential services

The need for immediate life-saving actions is critical. The extent of the flooding has the potential to create serious health risks from disease and livelihood risks from loss of agricultural production. (ACT Alliance 16/05/2014).

Serbia: According to the Government of Serbia, the immediate needs are aluminum motorboats, helicopters, blankets and rescue teams (B92 17/05/2014). **Food and livelihoods:** According to the Serbian Government, the country will need up to 5 years to restore its flood-stricken agriculture. Although the damage is yet to be estimated, it is already clear that a huge number of sown fields and fruit gardens have been inundated (ITAR-TASS 16/05/2014). Baby food, milk powder and diapers are also urgently needed (InSerbia 17/05/2014). **WASH:** An urgent request has been issued for high capacity water pumps and operational teams, channelled through the EU Emergency Response Coordination Centre (ECHO, 16/05/2014).

Bosnia and Herzegovina (BiH): BiH has requested helicopters and motorboats for evacuating people and transporting water, medicines and food (Tanjug 16/5/2014). BiH has requested pumps, generators, tents, humidity dryers, water purification sets, gas heaters for tents, and sanitation items (Sofia Globe 17/05/2014). **Food and livelihoods:** There are hundreds of stranded cattle that have fled flooded farms around Banja Luka. Many animals are trapped in the mud and dozens of sheep have been swept away by the floods (News 24 16/05/2014). Significant agricultural and forest areas are under water (ACT 16/05/2014).

Landslides

The rain caused nearly 300 landslides in Bosnia, burying dozens of houses and cars and further complicating relief efforts (ABC News 17/05/2014). Landslides triggered by the floods also raised the risk of injury or death from land mines left over from Bosnia's 1992-95 war. The landslides swept away many of the warning signs around the minefields (WeatherChannel 17/05/2014). According to BiH's demining agency, residents around the towns of Doboj, Maglaj and Olovo, which saw fierce fighting during the war in the 1990s, should be particularly wary (Guardian 18/05/2014).

Affected vulnerable groups

Serbia: According to the Serbian Commissariat for Refugees (SCR), at the end of 2013, there were around 209,000 registered IDPs in Serbia (IDMC, 2014). More than 180 asylum seekers, mostly from Afghanistan and Syria, were evacuated from a shelter near Obrenovac. The asylum seekers are safe but in need of food and water (News 24 16/05/2014).

Bosnia and Herzegovina: About 1,000 people, including babies, pregnant women, invalids and elderly were evacuated from the region of Željezno Polje in central BiH, where hundreds of homes were destroyed in landslides (Huffingtonpost 17/05/2014). Around 600 orphans sponsored by Islamic Relief are known to be affected (Islamic Relief, 16/05/2014). As at the end of 2013 there were approximately 103,000 IDPs in BiH, displaced by inter-ethnic violence, human rights violations and armed conflict between Serb, Croatian and Bosnian armed forces and militias, during the war in the 1990s. The vast majority of the IDPs live in private accommodation, but around 8,500 are based in collective centers. Living conditions were particularly dire for Roma, Ashkali and Egyptian (RAE) IDPs who mainly live in informal settlements with insecure tenure (IDMC 12/2013).

Humanitarian and operational constraints

Access to rural and remote areas will provide significant challenges in the coming days and weeks. Roads, bridges and utility infrastructures are damaged, and there is already a shortage of emergency response vehicles and equipment necessary to respond to a disaster of this scope and scale. The lack of financial and physical resources will further constrain the response (ACT Alliance 16/05/2014). In parts of Serbia evacuation operations were hindered due to inaccessible roads and bridges (IFRC, 16/05/2014).

Disaster Outlook

Long-term forecasts call for continued cycles of heavy rain throughout May (ACT Alliance 16/05/2014). Forecasters are warning that Serbia's River Sava is set to peak again on Sunday 18 May evening (BBC 18/05/2014). Currently, sandbags are containing the river which has swelled to 6.6 meters, but if the water rises to 6.8 meters, it will spill over the barriers (RT, 18/04/2014).

In BiH, as of 17 May, the water is slowly declining, but the situation still remains complex due to numerous landslides, causing houses to collapse and damage to roads (ECHO 17/05/2014). For the week starting Monday 19 May, meteorologists are expecting warmer temperatures which will make the full scale of the damage apparent (DW 18/05/2014).

Potential Aggravating Factors

Region already affected by floods earlier this year

Serbia was affected by floods approximately one month ago. From 16-17 April intense rainfall, followed by moderate snowfalls at higher altitude affected the

western, eastern and southern parts of Serbia, resulting in power losses and, in some places, traffic interruptions due to the collapsed road infrastructure in several villages (IFRC 25/04/2014). The main affected areas during these floods were slightly further south than the current floods. The rainfall also raised the water levels in rivers in BiH (ECHO 24/04/2014). However, the Serbian Red Cross has reported that its capacities are stretched due to previous response operations in the country (IFRC 16/05/2014).

Other vulnerability factors in Serbia

Lack of maintenance leading to reduced flood protection: In Serbia, the flood-prone areas cover about 1.6 million hectares and include over 500 larger settlements, more than 500 large commercial buildings, around 1,200 km of railway and more than 4,000 km of roads. Over 3,400 km of dams were built for flood protection and about 420 km of river regulation was realised. However, lack of maintenance of river-beds and embankments of waterways has led to a reduction of the level of flood protection (ClimateAdaptation 2014).

New government: Handling the flood could be a challenge for the recently appointed Serbian government (elections on 16 March) (Stratfor 18/05/2014).

Other vulnerability factors in Bosnia and Herzegovina

Poor flood control facilities: In BiH, the condition of flood control facilities is very poor as a result of war damage, many years without maintenance, and minefields that have been laid around some facilities. This is particularly true for towns along the Sava River. The consequences of floods resulting from exceptionally high waters in this area, if they were to occur, would be immeasurable. The situation is not much better in other parts of the country (ClimateAdaptation 2014b).

Recent anti-governmental protests: If Bosnians are not satisfied with Sarajevo's response to the natural disaster, recent anti-government protests could worsen (Stratfor 18/05/2014). Protests for early elections and against corruption and bureaucracy took place in Sarajevo in early February (Stratfor 11/02/2014).

Response Capacity

National Capacity

Serbia: The Emergency Situations Department of the Ministry of Interior engaged all available resources to protect and rescue the population. Police, Gendarmerie, Serbian Army units as well as the Red Cross are also involved in the rescue operations (ECHO 17/05/2014). This is the third response operation the Serbia Red Cross has been involved in this year and the resources are stretched to the maximum as a result (IFRC 16/05/2014).

Bosnia and Herzegovina (BiH): In BiH, due to limited capacity and resources, the Civil Protection and Armed Forces are not able to cope with their own resources and have requested international assistance (BiH MoS 16/05/2014).

State of Emergency

On 15 May, Serbia declared State of Emergency for the entire territory of the Republic (GoS 15/05/2014). On 15 May, a state of natural disaster was declared in BiH and the country has requested assistance through the EU Civil Protection Mechanism (ECHO 16/05/2014).

International Response

In less than a day and a half following the request, a total of 14 EU Member States offered assistance (EC 17/05/2014). On 16 May, the Government of the Russian Federation sent a team of rescuers to Serbia. The team has everything needed for SAR operations in the flooded area and is ready to operate autonomously for 15 days (GoRF, 16/5/2014). Having sent a request for international assistance, the Ministry of Security of BiH has achieved good cooperation with many countries and organizations. Help has been offered by Croatia, USA, Turkey and Slovenia, and numerous international organizations (MoS, 16/5/2014). On 16 May, the World Bank's Board of Executive Directors today approved a US\$24 million credit for the Drina Flood Protection Project for Bosnia and Herzegovina (BiH), to improve flood management of the Drina River in and around the towns of Bijeljina and Goražde (WB, 16/05/2014).

Key Characteristics of Host Population and Area

Key Indicators	Serbia	Bosnia and Herzegovina
Total population	7,224,000 (2012)	3,834,000 (2012)
% Population in rural areas	65% urban population (2010)	49% urban population (2010)
Gender and age distribution of population	14.8% 0-14 years old 16.9% 65 years and older	13.7% 0-14 years old 12.9% 65 years and older
Country Capital	Belgrade	Sarajevo
Main WASH figures		
Improved drinking water:	99% (2012)	99% (2012)
Improved sanitation:	99% (2012)	99% (2012)
Main health figures		
>5 mortality:	7 per 1,000 births (2012)	7 per 1,000 births (2012)
Infant mortality:	6 per 1,000 births (2012)	6 per 1,000 births (2012)
Maternal mortality:	16 per 100,000 births (2013)	8 per 100,000 births (2013)
Nutrition levels		
Stunting	6.6% (2010)	8.9% (2011-2012)
Wasting	3.5% (2010)	2.3% (2011-2012)
Literacy rates (<15 years)	98%	98%

Sources: UNICEF 2012, WB 2014a, WB 2014b, WHO 2013, WB 2012, WB 2013, CIA Factbook 2014a, CIA Factbook 2014b, WHO 2012, WHO 2010

Serbia and Bosnia and Herzegovina: Flooded areas and settlements (as of 18 May 2014)

