

# World Bank assisting the Federation of Bosnia and Herzegovina to mainstream climate risk in road management

## Svjetska banka pomaže Federaciji Bosne i Hercegovine u prilagođavanju rizicima od klimatskih promjena u upravljanju cestovnom infrastrukturom

Bosnia and Herzegovina (B&H) has been suffering increased flooding and landslide events in recent years due to the impact of global climate change. In 2014 a 1 in 500 year flood event affected 60 towns and cities in 24 municipalities in the Federation of Bosnia and Herzegovina (FBH) resulting in €2 billion of damage to residential, community and commercial property and to the transport and communications systems in some cantons. Around €257 million of these costs were associated with repairing damaged roads.



Landslide, Location: Nemila, Main road M17, Section: Topcic polje - Lasva km 3+880 (Floods 2014)

Bosna i Hercegovina (BiH) pretrpila je značajne poplave i velika klizišta u proteklih nekoliko godina uslijed utjecaja globalnih klimatskih promjena. U 2014. godini poplava koja se javlja jednom u 500 godina pogodila je 60 gradova u 24 općine u Federaciji Bosne i Hercegovine (FBiH) što je rezultiralo štetom od 2 milijarde eura na stambenim i poslovnim objektima te transportnom sistemu u nekoliko kantona. Blizu 257 miliona eura ovih troškova odnosi se na sanaciju oštećenih cesta.



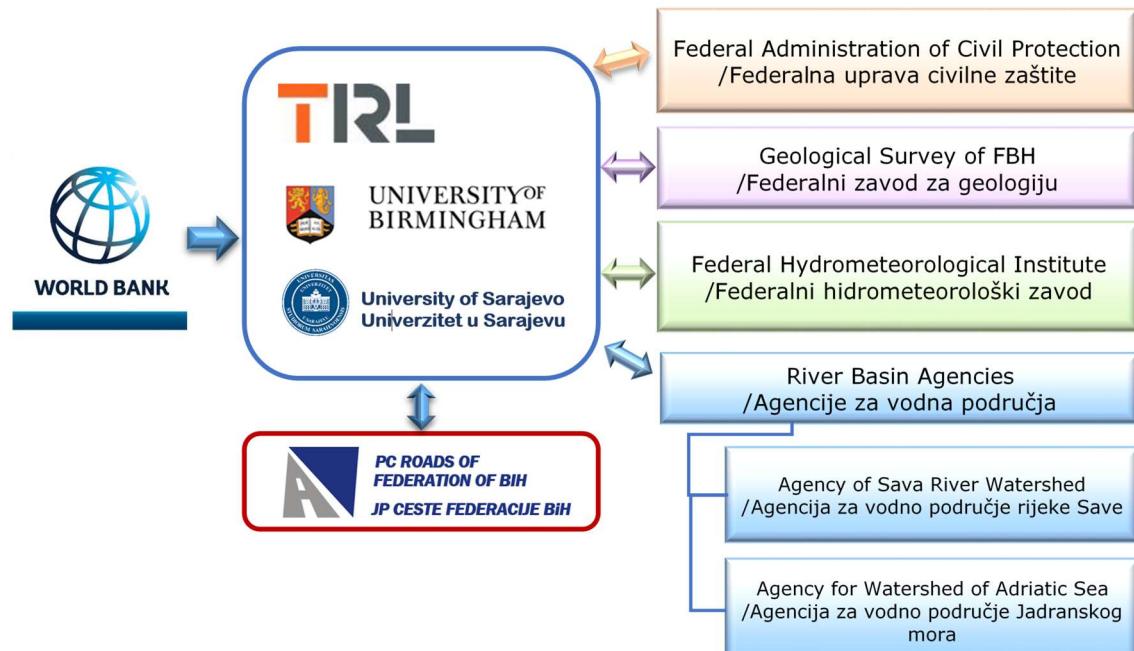
Main road M18, Banj Brdo, Priboj – Simin han km 14+420 – 14+650, Landslide above and below road grade line (Floods 2014)

Recognising the need to develop resilience in FBH road infrastructure to such events, the World Bank is funding a programme to increase the resilience of the main road network in FBH. As part of that programme a project to mainstream climate risk in road management has been agreed. The research consortium selected to deliver the project is led by the Transport Research Laboratory (TRL) in collaboration with both the University of Birmingham (UK) and the University of Sarajevo (FBH). The project team is supporting PC Roads FBH, which is responsible for the maintenance and management of the main road network in the Federation of Bosnia and Herzegovina.

The Federal Hydrometeorological Institute, the River Basin Agencies for the Sava River Watershed and for the Watershed of Adriatic Sea, the Geological Survey of FBH, and the Federal Administration of Civil Protection are all providing essential information required for the project.

Prepoznačajući potrebu za uspostavljanjem otpornosti cestovne infrastrukture u FBiH na ovakve događaje, Svjetska banka finansira program za povećanjem otpornosti magistralnih cesta u FBiH. U sklopu tog programa usaglašen je projekat za uključivanje klimatskih rizika u upravljanje cestama. Istraživački konzorcijum odabran za izradu projekta predvodi Transport Research Laboratory (TRL) u saradnji sa Univerzitetom u Birminghamu (UK) i Univerzitetom u Sarajevu (FBiH). Projektni tim pruža podršku JP Ceste FBiH koje je odgovorno za održavanje i upravljanje mrežom magistralnih cesta u FBiH.

Federalni hidrometeorološki zavod, Agencija za vodno područje rijeke Save, Agencija za vodno područje Jadranskog mora, Federalni zavod za geologiju i Federalna uprava civilne zaštite obezbijedile su neophodne informacije potrebne za projekat.



PC Roads FBH will implement the findings of the project in order to help with the provision of safe, efficient and resilient road network taking account of the excellent real-time information provided by both the River Basin Agencies (river water levels and flood warnings) and the Federal Hydrometeorological Institute (weather information, including fog alerts). Input from the Geological Survey will also enable PC Roads FBH to better manage landslide issues that have a significant impact on certain parts of the main road network.

The consortium is carrying out a systematic review of the data available for hazard and risk assessments, developing a suitable geographic information system structure for viewing hazard data, evaluating current disaster management procedures, and identifying future actions to improve the resilience of FBH's road network. An integral part of the project is to build the local capacity required to carry out hazard and risk assessment, to improve climate resilience work and to mitigate the impact of such hazards.

The project started in November 2017 and will end in July 2018. A number of dissemination activities are planned including two participatory workshops to be held in mid-March and in mid-June 2018.

For further details of the project and how you can engage in it, please contact:

Dr Sarah Reeves, TRL, [sreeves@trl.co.uk](mailto:sreeves@trl.co.uk)

Dr Suada Dzebo, University of Sarajevo, [suada.dzebo@gf.unsa.ba](mailto:suada.dzebo@gf.unsa.ba)

JP Ceste FBiH implementirat će rezultate projekta kako bi obezbijedili sigurnu, efikasnu i prohodnu cestovnu mrežu uzimajući u obzir odlične informacije u realnom vremenu koje pružaju Agencije za vodna područja (nivo vode u rijekama i upozorenja o poplavama) i Federalni hidrometeorološki zavod (informacije o vremenu uključujući i upozorenja na pojavu magle). Ulazni podaci od Federalnog zavoda za geologiju također će omogućiti da JP Ceste FBiH bolje upravljaju problemima klizišta koji imaju značajan utjecaj na određene dijelove mreže magistralnih cesta.

Konzorcijum sprovodi sistematski pregled raspoloživih podataka za procjenu opasnosti i rizika, razvija odgovarajuću strukturu geografskog informacionog sistema (GIS) za pregled podataka o opasnostima, ocjenjuje trenutne procedure upravljanja nesrećama i identificira buduće aktivnosti radi poboljšanja otpornosti cestovne mreže u FBiH. Sastavni dio projekta je izgradnja lokalnih kapaciteta potrebnih za obavljanje procjene opasnosti i rizika radi poboljšanja radova na otpornosti na klimatske promjene i ublažavanja utjecaja takvih opasnosti.

Projekat je započet u novembru 2017. i završava se u julu 2018. Planiran je velikih broj aktivnosti uključujući dvije radionice koje će se održati sredinom marta i sredinom juna 2018.

Za dodatne informacije o projektu i načinu na koji možete učestvovati, molimo kontaktirajte: