Western expert says flooding in Pakistan is 'a disaster not seen before'

Professor emeritus Slobodan Simonovic answers questions on the flooding in Pakistan and the impact of climate change

By Justin Zadorsky, September 27, 2022

An aerial photo taken during 2022 Pakistan floods. (Wikimedia Commons)

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Flooding in Pakistan continues to ravage the country leaving millions displaced from their homes and many dead. In some areas it is expected to take several months to dry out. Civil and Environmental Engineering professor emeritus Slobodan Simonovic shares his thoughts on some of the contributing factors to the disaster and what can be done to prevent further flooding in the future.

What is happening in Pakistan right now?

Unprecedented rainfall during the month of August has caused a massive flooding disaster. As of last week there have been 1,500 reported deaths, and 33-million displaced people. The cost of the physical damage is close to $30-billion USD as more than a million homes have been damaged and infrastructure has been destroyed. Flood disasters like this one are a product of many factors. In the case of this flood, the sheer number of people exposed, inhabitation of floodplains, and severity of rainfall combined into a disaster not seen before.

What role does climate change play in flooding like this?

In recorded history, Pakistan has not had floods of this magnitude. Monsoon rain in June through September is common, but this monsoon was on steroids. A week ago the World Weather Attribution group published a study linking extreme weather in Pakistan and climate change. They found that climate change made maximum rainfall in August 75 per cent more intense than it would have been in a world without warming. They also stated that a heat wave in India and Pakistan earlier this year, also a consequence of climate change, worsened the flooding.

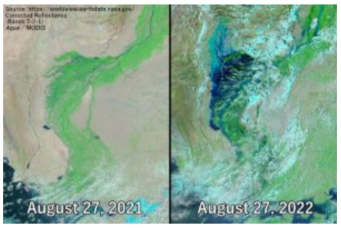
What are some of the short-term and long-term consequences?

In the short-term, the focus is recovery. People in Pakistan are going hungry, and water-borne diseases are already rampant. Very serious international efforts will be required to assist Pakistan in the recovery process both short- and long-term. The provisions of immediate assistance such as shelter and food is incredibly necessary.

In the long-term, a disaster of this magnitude will affect the economy of the country for quite some time. Agricultural and industrial production will require serious investment, as will infrastructure to repair thousands of kilometres of roads, hospitals and schools. Migration is also common in the case of disasters like this.

Why should the developed world be paying attention to these floods?

The development process over the last few decades has contributed, and is still contributing to, a changing climate. Emissions of greenhouse gases are warming the planet and not only in the territories of countries that are contributing the most, but the entire world. Pakistan's contribution to global warming is minimal and the price of this disaster is exceeding its ability to provide for its people.



A satellite comparison of the flooded regions in Pakistan. (Wikimedia Commons)

Can flooding at this scale be expected in other parts of the world?

There is no doubt. As warming continues, extreme climate events such as floods and droughts are going to gain intensity and frequency.

One important lesson must be that living in floodplains under climate change and other globally changing conditions (land use, population growth and migrations) should not be allowed.

What can be done to address future flooding?

A serious international collaboration is necessary to help people after disasters like this and to increase the resilience of people during future events. There is a long list of things that can be done: raising awareness of climate change impacts; predicting extreme events on time and reducing loss of life; moving people from vulnerable regions; planning for the increase in flood protection and investing in infrastructure that will be resistant to flooding. Those are just some of the things we should be doing collectively.

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