

In the Hindu Kush Himalaya, floods are likely to become more frequent and severe in the future, because of the increase in **extreme precipitation** events. This will adversely affect communities and different social and economic sectors, such as agriculture, health, and hydropower in upstream and downstream areas both.



BAD FLOODS

Understanding these changes in hydro-climatic extreme events will help policy makers and planners design adaptation strategies to reduce the risks they pose. This would be instrumental in designing **infrastructure related to the water sector** (such as for hydropower and irrigation), and generate adaptation and mitigation options, by taking into consideration these future changes in the flood characteristics (magnitude and frequency).



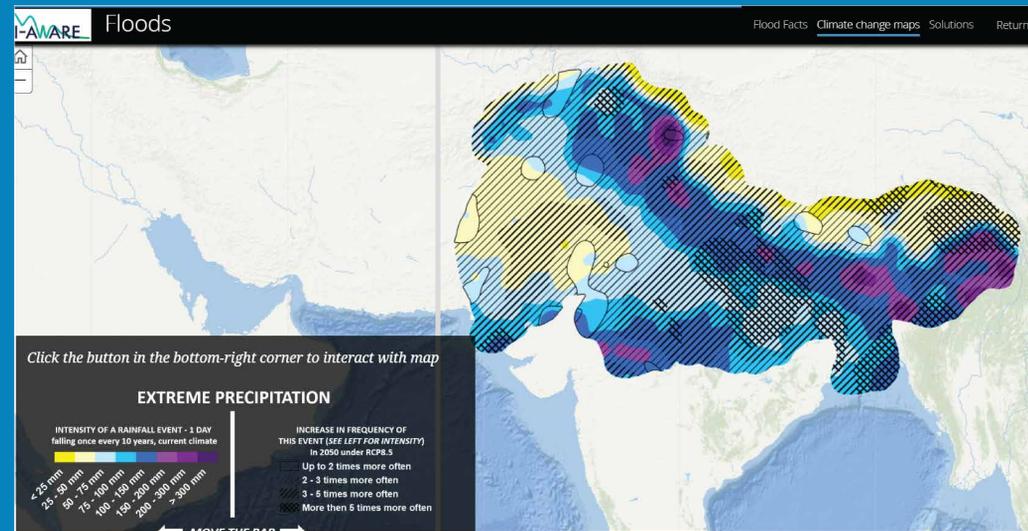
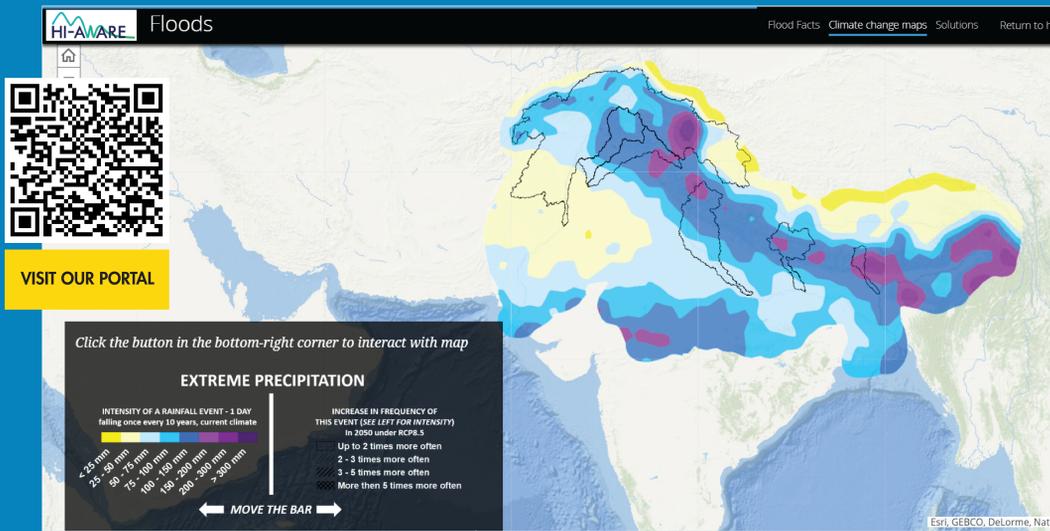
WORSE DROUGHTS

On the other hand - **frequent dry spells** and **prolonged droughts** are affecting crop productivity through water shortages and the loss of soil nutrients. Expected climate change-induced shifts in the quantity, timing, and composition of upstream water supply, combined with an increase in the demand for water due to socio-economic development

FUTURE PROJECTIONS

Current climate shows vast differences in precipitation intensity - **25mm to 300mm**

Future projections show that **intensity will increase** across the HKH



MANAGING AN UNCERTAIN FUTURE

Greater emphasis on irrigation and flood-control mechanisms is needed

There is need to engage the private sector in agricultural water management. Public and private partnerships have led to an increased availability of water for agriculture. Likewise, such partnership in promoting solar-powered irrigation pumps can also play a vital role by creating viable business models and upscaling the deployment of technologies.

Regional cooperation among countries in the HKH, as well as community involvement in promoting hard and soft solutions of riverbank management and interventions such as flood-resilient housing can also play a key role in managing flood impacts.

Flood Resilient Housing in HI-AWARE pilot site in Rangpur

