

# **Capacity Building on National and Subnational Planning for Sustainable Disaster Risk Reduction, Climate Change Adaptation, and Mitigation**

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Maldives National University Campus, Male

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## **Data Governance and Policy Design for Disaster Risk Reduction**

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(ESCAP-APDIM)

# 1. Key issues for consideration and analysis

1. Data availability and sharing
2. Policies, laws, and regulations
3. Investments and budgeting
4. National and sub-national capacity
  - Administrative capacity
  - Financial capacity
  - Technical capacity

# 1. Key issues and challenges (continued...)

5. Policy-Academia interface

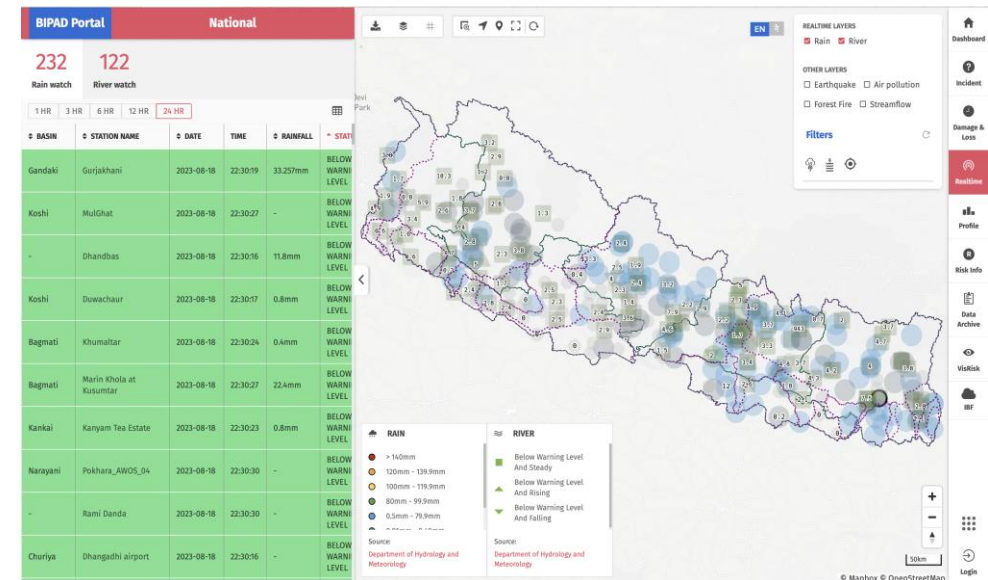
6. Private-Public interface

7. Early Warning Systems (EWS)

8. Transboundary Risk and international cooperation

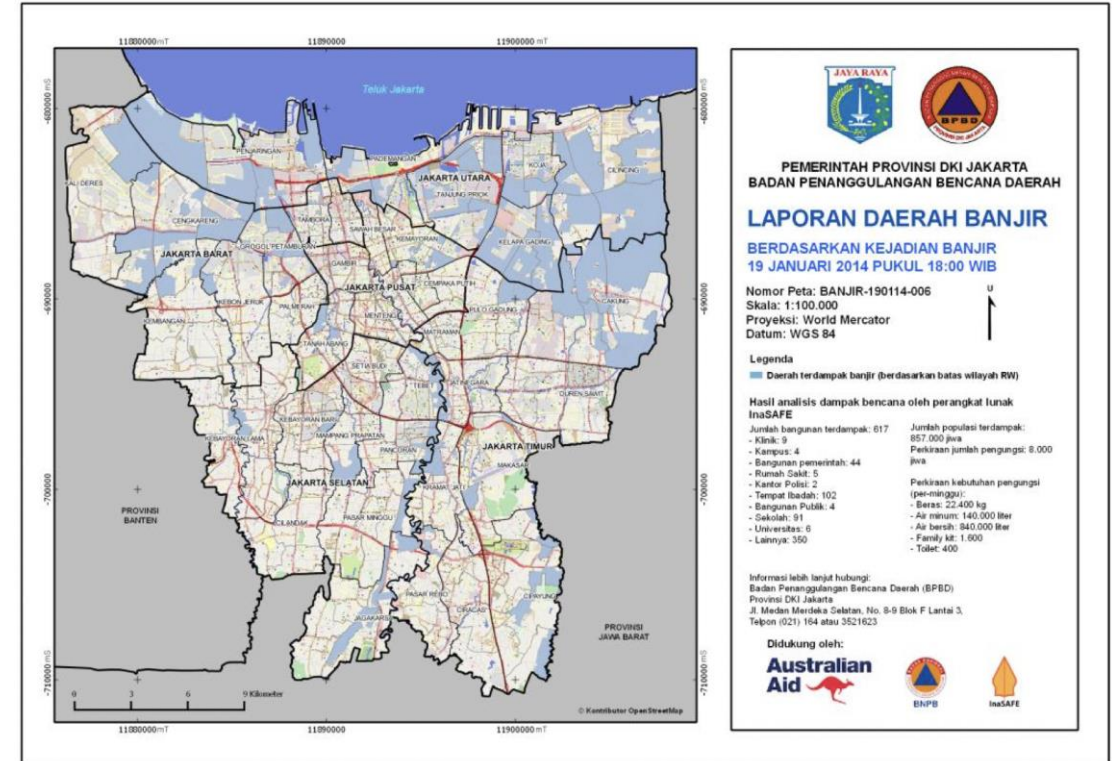
# Nepal - Building Information Platform Against Disaster (BIPAD)

**BIPAD portal** is an integrated and comprehensive Disaster Information Management System (DIMS) initiated by the Government of Nepal, Ministry of Home Affairs, and is currently owned by the National Disaster Risk Reduction and Management Authority (NDRRMA). It was established in 2019. It is an open platform that gathers information from different departments such as the hydro met office, the forest fires department, geological dept. It is built to have a bottom-up approach to disaster data sharing, while enhancing all the phases of the DM cycle and facilitating disaster communication and post-disaster coordination.



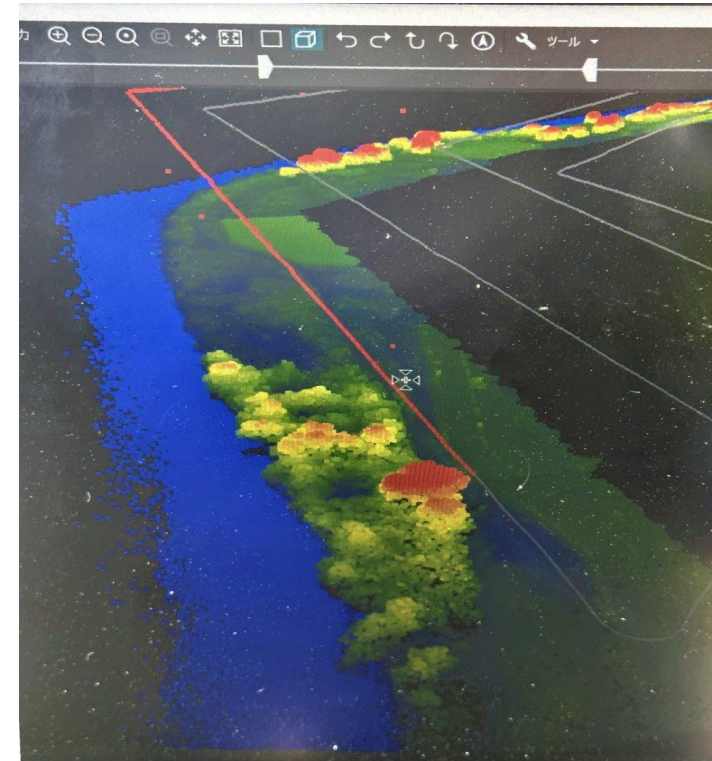
# Indonesia - InaSAFE for impact assessment Jakarta floods 2014

The collaboration between HOT (Humanitarian OpenStreetmap Team) and BPBD - DKI Jakarta (Badan Penanggulangan Bencana Daerah – Daerah Khusus Ibukota Jakarta) has resulted to the provision of highly detailed and accurate flood maps for the period of 12 January to 10 February 2014. These maps show the inundation level in affected areas. In addition, BPBD was also provided with InaSAFE maps with additional visualization of the number of buildings (mainly public facilities) that were affected by the flood and the estimated number of internally displaced people (IDPs). Such maps that were published on daily basis were proved to be useful for a number of stakeholders.



## Japan - Use of drones for impact assessment and real time monitoring

An example of the use of technological advancements can be seen in Japan. In May, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) conducted a drone demonstration, achieving continuous flight for over three hours. Normally drone batteries last up to 20 minutes, and have to be released very close to the damaged site, so they had to be transported there, whereas now they can be sent to the site. Another use for drones is for monitoring purposes, so in pre disaster situations, where they can detect anomalies that could be codified into the EWS.



## Maldives - Sea level rise and climate change adaptation for the agricultural sector

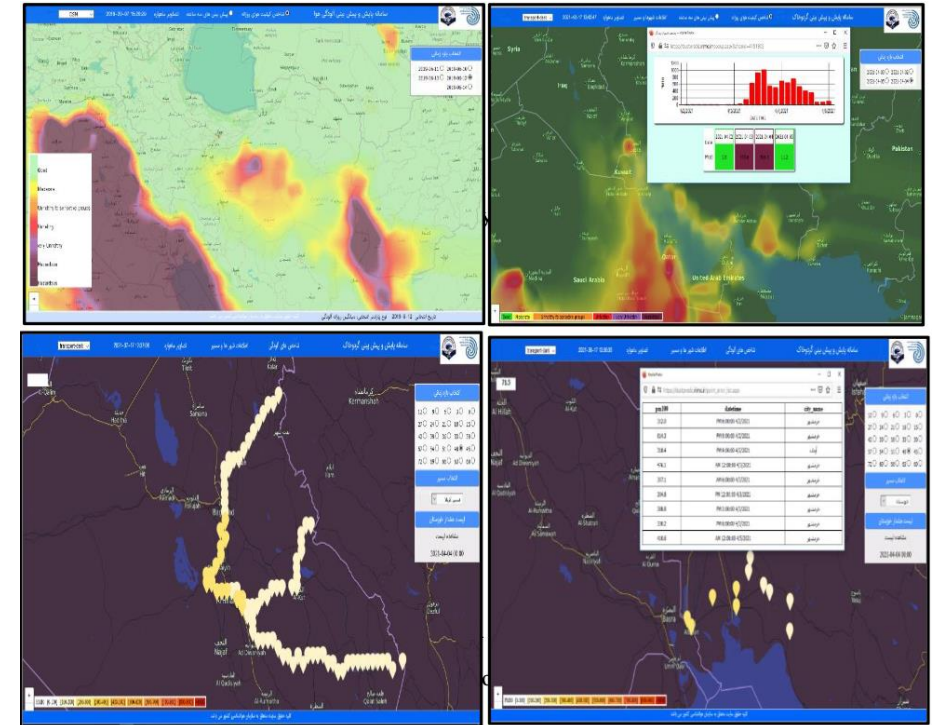
A great example of the necessary focus on slow onset events is being shown by Maldives. The country is well aware of the potential adverse effects of sea level rise and climate change on the agricultural sector, and thus on the economy and livelihood of the country.

Exposure data on crops, collected through the ESCAP supported portal, is being used to describe long term impacts of climate change, and identify potential solutions such as alternative crops, relocation, shifting or aligning to the changing ecosystem.



# Iran - Sand and Dust Storm EWS

One of the Hazard that is usually overlooked in risk assessments is sand and dust storms. In the case of the Islamic Republic of Iran, however, some successful initiatives have been developed to tackle these threats, and to improve dust monitoring and forecasting services in the region. Furthermore, the Sand and Dust Forecasting and Warning System (implemented in the Research Institute of Meteorology and Atmospheric Science under the supervision of IRIMO) provides predictions of the the concentration of dust particles in the atmosphere in Iran and in the neighboring countries for up to the next 72 hours. It can show 6 levels of air quality in terms of amount of dust: clean, medium, unhealthy for sensitive, unhealthy, very unhealthy, and dangerous groups







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# Graphical presentation of a Multi-Hazard Early Warning System (MHEWS)





## 2. Recommendations

- 1. Disaster risk knowledge.** incorporating all forms of knowledge, from indigenous to scientific, translating it into information that can be sent to the population in order to mitigate, prepare for, and respond to potential threats.
- 2. Detection, monitoring, analysis and forecasting** of the hazards and possible consequences. A more solid monitoring network seems to be a requirement and a potential future development for all the respondents. Boosting real time monitoring, while integrating the information into a platform that can combine risk assessment and real time information would be incredibly beneficial for preparedness and disaster response.
- 3. Warning dissemination and communication.** Warnings are the necessary step to trigger disaster response. Local practices have been identified throughout the region to ensure that the entire population is reached by the warnings, however, a gap is evident between the national and local levels, which might be bridged by the integration of these practices into formalized early warning Standard Operating Procedures (SOPs).

## 2. Recommendations (continued...)

**4. Preparedness and response capabilities.** All the data that has been previously collected should inform timely issuing of warning, which in turn should prompt immediate action. Action should be codified in response plans that integrate all the previously collected information and allow all the stakeholders to act upon it. In order for this to happen, information needs to be collected and response codified into procedures that take into account different levels of vulnerability and capacity.

**5. Increase the use of internationally available risk data and information** and harmonize data collection. Bearing in mind the possibility of avoiding duplication of budget for information that is already available, it would be beneficial to have a clear understanding of the data and information related to transboundary risk that is currently being collected or updated by different countries.

# THANK YOU



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