PREDICTIVE ANALYTICS IN HUMANITARIAN RESPONSE

The goal of the OCHA Centre for Humanitarian Data is to increase the use and impact of data in humanitarian response. Created in 2017 and based in The Hague, the Centre includes four workstreams: data services, including management of the Humanitarian Data Exchange (HDX) platform, data responsibility, data literacy, and predictive analytics.

Predictive analytics involves the analysis of current and historical data to anticipate an event or some characteristic of an event (its likelihood, severity, magnitude, or duration). In the context of humanitarian response, predictive analytics includes several modelling methodologies aimed at anticipating humanitarian needs arising from different shocks, including:

- Weather and climate models predicting the occurrence and impacts of sudden and slow onset hazards such as droughts, floods, storms;

- Epidemic models used to better understand the main risk factors leading to major outbreaks or to project epidemic trends;

- Analysis aimed at projecting the evolution of humanitarian crises based on current and historical data;

- Other methods that assess the risk and the socio-economic impacts of disasters or other shocks.

The Centre's predictive analytics team is focused on increasing the trust and adoption of models to support improved decision making by humanitarian actors. We do this through the following activities:

1 Provide **technical support** to humanitarian partners.

- Conduct historical analysis, assess available models and forecasts, and design trigger mechanisms for use in anticipatory action frameworks.

- Define potential use cases for predictive analytics and develop new models as needed to fill gaps in available forecasts and projections.

- Act as a technical translator, ensuring effective communication between modelers and forecast producers, and humanitarian/development decision makers.

2 Promote the **responsible use of predictive analytics** in the sector.

- Facilitate the Centre's **Peer Review Framework for Predictive Analytics in Humanitarian Response**, which evaluates technical and ethical concerns of models; manage a Reviewer Pool of technical and ethical experts.

- Promote data responsibility with how data is shared and used for model development and the application of predictive analytics.

- Support decision makers with understanding uncertainty in projections.

3 **Build capacity** in the humanitarian sector.

- Provide documentation (blogs, impact stories, technical notes), tools and processes to facilitate the successful adoption of predictive analytics.

- Create a community of technical actors to share best practices and learnings on the application of predictive analytics in the sector.

- Offer model deep dives, training modules and events on predictive analytics in the sector.

CONTACT US

Let us know how we can support your work on predictive analytics. Send questions or requests by email to **centrehumdata@un.org**. Submit your model for peer review at **http://bit.ly/pa-model-review** or get directly involved by joining our Reviewer Pool at **http://bit.ly/pa-reviewer**.

For more information, visit our page on the Centre's website at **https://centre.humdata.org/predictive-analytics/**.

The Centre for Humanitarian Data **centre.humdata.org** | Join our mailing list: **bit.ly/humdatamailing** | Twitter: **@humdata** | Email: **centrehumdata@un.org**

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