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Aqueduct: an interactive tool to empower global water risk assessment

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The Aqueduct Water Risk Atlas (Aqueduct) is a publicly available, global database and interactive tool that maps indicators of water related risks for decision makers worldwide. Aqueduct makes use of the latest geo-statistical modeling techniques to compute a composite index and translate the most recently available hydrological data into practical information on water related risks for companies, investors, and governments alike. Twelve global indicators are grouped into a Water Risk Framework designed in response to the growing concerns from private sector actors around water scarcity, water quality, climate change, and increasing demand for freshwater.

The Aqueduct framework includes indicators of water stress, variability in supply, storage, flood, drought, groundwater, water quality and social conflict, addressing both spatial and temporal variation in water hazards. It organizes indicators into three categories of risk that bring together multiple dimensions of water related risk into comprehensive aggregated scores, which allow for dynamic weighting to capture users' unique exposure to water hazards. All information is compiled into an online, open access platform, from which decision-makers can view indicators, scores, and maps, conduct global risk assessments, and export data and shape files for further analysis.

Companies can use this tool to evaluate their exposure to water risks across operations and supply chains, investors to assess water-related risks in their portfolio, and public-sector actors to better understand water security. Additionally, the open nature of the data and maps allow other organizations to build off of this effort with new research, for example in the areas of water-energy or water-food relationships.

This presentation will showcase the Aqueduct Water Risk Atlas online tool and the features and functionalities it offers, as well as explain how it can be used for both private and public sector applications. The session will feature a live demonstration of how the tool can be applied to evaluate exposure to water-related risks worldwide and drive change on the ground by prioritizing areas for investment to increase resilience to natural hazards.