

# HELP Guiding Principles for Incorporating Environmental Justice into Flood Risk Management

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Photo credit: U.S. Navy

Flood risk management (FRM) has done much to lower deaths and property losses, but we can do more to assure that disadvantaged communities share fully in this success. Here we highlight approaches that engage disadvantaged communities in all phases of the flood risk management process—from water resources planning to flood mitigation, preparedness, response, and recovery. Additionally, an overall picture is provided regarding how water resources engineers, planners, managers, and decision makers—from the working level to the policy level—can extend their efforts to assist communities in need without jeopardizing their other commitments to reducing loss of life and property.

## Environmental Justice and Flood Risk Management (FRM)

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Environmental justice is defined as the fair treatment and meaningful involvement of all people, regardless of race, color, national or ethnic origin, disability, gender identity or sexual orientation, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

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Environmental justice intersects with flood risk management in all stages of disaster life-cycle. These include:

**a) Data and information gathering:** For example, economic, demographic or cultural data may be used to understand where disadvantaged populations are located.

**b) Risk analysis and evaluation:** For example, communication with disadvantaged communities helps to better understand their vulnerabilities and impacts.

**c) Appraisal of options:** For example, considering alternative (more equitable) benefit indicators when prioritizing and evaluating options.

**d) Making, implementing, and reviewing decisions to reduce, control, accept or redistribute flood risks:** For example, the passing of laws and policies that may make it easier to adopt options beyond those with the highest cost-benefit ratios.

FRM is implemented by a broad range of entities. These include national water resources, hydropower, agricultural, natural resource management, and planning agencies; multilateral development banks; and other institutions. Local and regional agencies and institutions typically share in planning, construction, and management of infrastructure, and in the development and enforcement of relevant environmental, housing and health regulations.

Although FRM has been utilized for millennia, here we focus primarily on FRM practices during the last century. Water resources planning and management have evolved greatly during this time, including our approaches to engaging disadvantaged communities. This body of experience has contributed to the environmental justice “best practices” that are summarized in the next section and are increasingly being implemented around the world.



Photo credit: Liliana Navarro, SOCPAC

## Principles and Best Practices

Each watershed or basin—and the political and cultural landscapes in which it exists—is unique. Summarized below are some of the principles and best practices that may be useful to a wide variety of projects and geographies. The practices highlighted here cover both policy and action, at

both national and local levels. They are organized into four general categories: a) Ensure equitable benefits for disadvantaged communities, b) Diversify representation in flood risk management, c) Improve outreach and inclusion in flood risk management, and d) advance knowledge and education.

<b>Ensure equitable benefits for disadvantaged communities</b>	Legislators and decision makers should promulgate laws and policies that assure disadvantaged communities receive an equitable share of benefits from FRM projects.
	Senior national leadership should ensure that these laws and policies receive appropriate attention and an early emphasis at the planning level.
	Decision makers should focus on a comprehensive evaluation of the total, not just economic, benefits of each project or program.
	In the recovery phase of a flood event, policy makers should carefully consider how assistance is distributed.
<b>Diversify representation in flood risk management</b>	Government ministries and agencies should recruit and hire a workforce that is more representative of the full spectrum of the communities that need protection.
	Government institutions should ensure diverse representation on every board and committee that is constituted to advise on FRM-related projects.
<b>Improve outreach and inclusion in flood risk management</b>	Government agencies should develop a strategic plan for engagement and communication with disadvantaged communities.
	Government agencies should initiate outreach and engage disadvantaged communities early in the study process for a new project, and continuously throughout the project.
	Local non-governmental partners should be carefully chosen based on trust by disadvantaged groups for outreach and disaster response.
	Communication messages and materials for disadvantaged communities should be clear and actionable, and tailored to the target audiences.
	Planners should minimize barriers to participation in meetings, such as holding meetings at well-known centers in the community and on evenings and weekends.
<b>Advance knowledge and education</b>	Planners should avail themselves of GIS-based and probabilistic screening tools that can help identify communities at risk and prioritize investments in urban flood resilience.
	Government ministries and agencies involved in designing flood preparedness exercises and early warning systems in regions with traditional or indigenous communities should incorporate traditional knowledge and practices to the extent possible.
	Government agencies should pay special attention to how early warning and other information flows to and from neighborhoods and individuals.
	National agencies, international banks, universities and research institutes, UN agencies, NGOs, and others should coordinate on a shared research agenda to fill in knowledge and methodology gaps.

## Moving Forward

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Several common threads pass through many of the recommendations:

- Policy and law matter. For example, many of the best practices cannot be implemented if land-use and planning regulations lead to poorer communities being located in more vulnerable locations to flooding.
- Leadership matters, and little may be accomplished at the working level if senior agency leaders are not on board.
- Relationships matter, and strong ties between government agencies at all levels, local organizations, and the people affected by their decisions are essential.
- Communication matters, as the right message delivered via the wrong medium, or vice versa, will not be heard or heeded.
- Awareness matters, as a single-minded

pursuit of engineering or political goals without an understanding of the human element may lead to failure.

FRM and environmental justice are merely components of the broader framework of integrated water resources and land-use planning; they cannot be considered in isolation. Some of the best ways to strengthen flood resilience among disadvantaged communities involve integrating FRM with broader community development and revitalization efforts. Thus, the relationships built during, and lessons learned from, efforts to incorporate environmental justice into FRM can be leveraged beyond water resources management and disaster planning towards a better integration of vulnerable communities into our social and economic systems.



Photo credit: Joselyn Augustino, FEMA



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