HELP Guiding Principles for Incorporating Environmental Justice into Flood Risk Management

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The issue:

 Recent disasters have highlighted their disproportionate impacts of floods (and other disasters) on disadvantaged communities.



- Historically, investments by government agencies, international financial institutions, and others in flood risk management (FRM) infrastructure have done much to lower deaths and property losses, and generally provide overall benefits to a nation.
- However, they often fall short of improving the conditions in disadvantaged communities.
- We can do more to ensure that disadvantaged communities share fully in this success.

What the report aims to do:

 Highlight approaches that can broadly and equitably engage stakeholders—regardless of race, color, national or ethnic origin, disability, gender identity or sexual orientation, or income—in all phases of the disaster cycle.



- This includes water resources planning and flood mitigation, preparedness, response, and recovery.
- Examine existing FRM frameworks and, using current research illustrated by case studies, lay out principles on how social and environmental justice principles can be included and evaluated in the planning and design of FRM.

Environmental justice intersects with flood risk management in all stages of the disaster life-cycle

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

b) **Risk analysis and evaluation**: Communication with disadvantaged communities helps to better understand their vulnerabilities and impacts.

c) **Appraisal of options**: 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: Passing laws and policies that may make it easier to adopt options beyond those with the highest standard cost-benefit ratios.

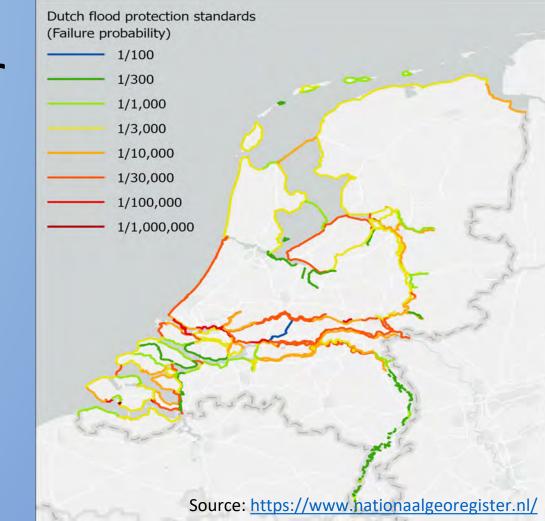


Principles and Best Practices

- Each watershed or basin—and the political and cultural landscapes in which it exists is unique.
- However, many of the principles and best practices may be useful to a wide variety of projects and geographies.
- The 15 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.

Ensure equitable benefits for disadvantaged communities

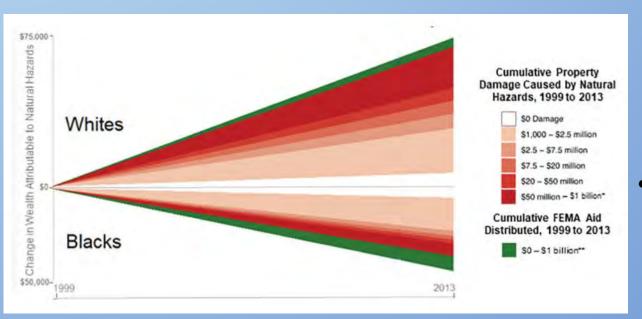
- Legislators and decision makers should promulgate laws and policies that assure disadvantaged communities receive an equitable share of benefits from FRM projects.
- Senior national leadership should ensure that these laws and policies receive appropriate attention and an early emphasis at the planning level.



Assistant Secretary of the Army for Civil Works issues Environmental Justice Guidance to the Army Corps of Engineers

Ensure equitable benefits for disadvantaged communities (cont'd)

 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.

Diversify representation in flood risk management

- 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 FRMrelated projects.

SB 160

California Senate Bill • 2019-2020 Regular Session

Emergency services: cultural competence.



Improve outreach and inclusion in flood risk management

- 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.



Improve outreach and inclusion in flood risk management (cont'd)

- 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.



In Myanmar, mortality rate of women between the ages of 18 to 60 years was up to twice that of men in the same age range.

Advance knowledge and education

- 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.

What really matters?

• *Policy and law matter,* as 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.

• Awareness matters, as a single-minded pursuit of engineering or political goals without an understanding of the human element may lead to failure.

• Communication matters, as the right message delivered via the wrong medium, or vice versa, will not be heard or heeded.

An example of great communication

Geoff Tooley

River level just hit 3m at Birdhurst, We need to inform Quarry Rd settlement

23:02

170

That is very serious thank you Geoff I will 21.67 11

Nonho just told mr the water is on the bridge now they are trying to help everyone - I said they must move everyone two houses deep away from the river and get everyone off the bridge and out from under the bridge - we tried to move the young young's this evening but they were not doing it and I don't trust



The river had reached three metres in westville the water will reach you in 20 minutes - this is serious please move everyone in any house or two next to the river away from the river now - the height of the water is going to rise a lot please tell everyone to move away from the river now 21:09 1

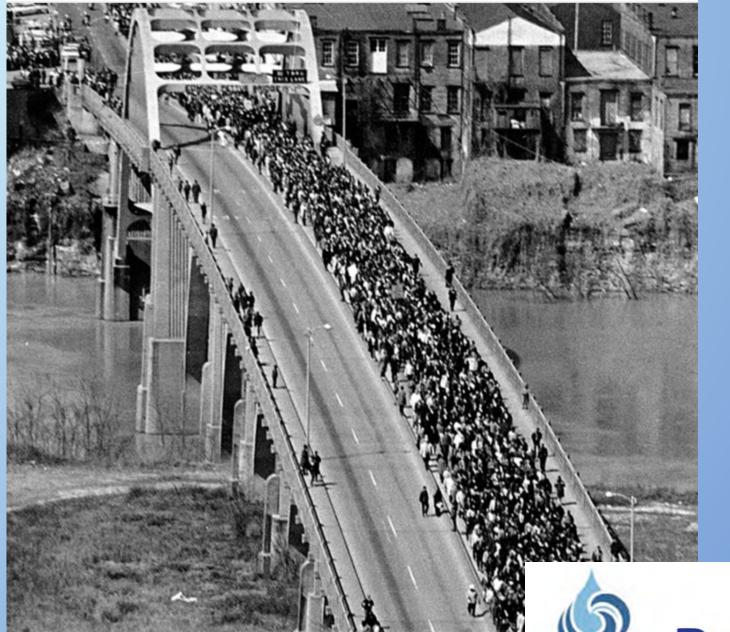
Nonho Quarry Rd The bridge is full of water 21.70

I am trying to call you - I (\sim) so sorry but you need to sound the alarm to everyone and tell anyone in

all billaria the 🗢 en 22.24 < 170 S. Connecting ... Rain should slow down by 10.30 and river should start getting lower by 12 or 12.30 -1.will Let you know if another storm cell is coming 10000 is everyone okay more -Nonfus Guarry Rd Not okay. 23.33 Nonho Quarry Hill 22.27 0 - 11

Moving Forward:

- 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.



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Contributors of case studies and other text **HELP** advisors **HELP** leadership and secretariat **Reviewers USACE and Deltares**

Civil rights marchers on the Edmund Pettus Bridge. Source: U.S. Army Corps of Engineers and City of Selma, Alabama (2021).



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