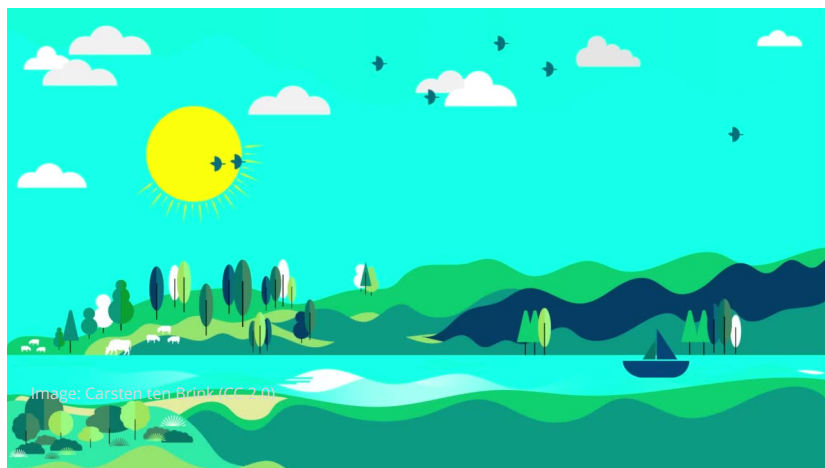# STAKEHOLDER ENGAGEMENT: THE FUTUREDAMS GUIDE

A policy brief on engaging stakeholders in water-energy-food-environment systems assessment and planning.

- '<u>Engaging stakeholders in water-energy-food-environment systems assessment and planning</u>' is a state-of-the-art guide for conducting participatory planning processes and a review of existing relevant approaches
- The Water-Food-Energy Environment (WEFE) Nexus occupies a central place in most countries' development strategies. Development planning can be improved by using modelling software that demonstrates the different options for development and their impacts.
- However, these benefits can only be achieved with inclusive, participatory stakeholder planning, otherwise models will merely reflect selective and narrow interests, and potentially unsustainable outcomes, whether for the economy, society or the environment.
- The FutureDAMS Guide details how to undertake inclusive, participative planning practices, including what principles to follow and who should be involved.
- More participation and inclusion can best identify how to compensate those negatively impacted, including how to effectively share the benefits of infrastructure projects with such communities.

The 5-step process

1. Foresight development needs
2. Which projects meet development needs?
3. Convene stakeholder group for modelling
4. Run participatory modelling assessment
5. Present a recommended set of options

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What is the FutureDAMS Guide?

The FutureDAMS Guide is a 5 step approach for how to undertake stakeholder planning that aims to make recommendations about new and existing infrastructure in a river basin. It is linked to the FutureDAMS model which simulates and assesses multiple options for interventions in the water-food-energy-environment nexus. The process aims to deliver the best development outcomes possible.

We believe that the best decisions will be reached through a participatory process bringing together the full range of people with a stake in river-basin planning processes, from the government, to researchers, civil society, businesses and citizens. Collectively, their knowledge, experience and perspective can ensure informed decisions are taken that should maximise benefits whilst minimising costs. The Guide describes how to recruit and run this broad stakeholder process, how to bring this group together in a way that allows fair input. It outlines best practice in such stakeholder processes and the pitfalls to avoid.

The guide has a score sheet to test each of the 5 steps' performance. It also contains a section that brings together the literature on stakeholder practices, demonstrating their benefits, limitations and challenges. We also compare different approaches to assessing dams and river-basin infrastructure.

Who is the Guide for?

- It is designed for those wanting to make decisions about new and existing infrastructure in the water-food-energy-environment nexus. It is especially designed for those seeking to use the FutureDAMS computer simulation model.
- It is relevant to policymakers undertaking strategic national or regional planning processes. It helps identify the key developmental challenges and the solutions that can meet them.
- It can be used by non-governmental organisations, researchers and civil society groups who want to create, or advocate for, a participatory stakeholder plan for the Water-Food-Energy-Environment nexus.

The benefits of the FutureDAMS Guide

- The Guide collates best practice evidence on planning and decision making in the Water-Food-Energy-Environment nexus into a user-friendly document.

- An inclusive stakeholder approach can develop the most informed choices. It brings together all those who have experience and knowledge of river basins. This includes formal, scientific knowledge and informal, place-based knowledge and experience of those living with, and using the nexus.

- A stakeholder approach is most capable of generating balanced development solutions, recommending infrastructure that delivers the maximum benefit and minimum cost.

- Inclusive approaches can help forge consensus and generate solutions that have wider public legitimacy.

Why We Need This Guide and the Dangers of Modelling

Amongst those engaged in planning development, researching and thinking about the Water-Food-Energy-Environment Nexus, there has been an increasing use of sophisticated computer models to make decisions about dams and other investments. The major advantages to using models are an increased ability to measure interrelated effects of any infrastructure construction, or a change in existing operations. For example, how might a power plant's use of water, or a new factory, influence farmers? How might the creation of a nature/biodiversity reserve change hydropower production? The use of a model helps rapid assessment of such changes and this helps think strategically and more holistically about the whole system being affected.
However, models are only as good as the data they use and the assumptions they make.

The Data

Relying on modelling is risky as the data used in any model is not always reliable. Many developing countries have poorly funded statistical departments. Equally, given national security risks, opposition and scepticism from governments, access to data may be barred. There can also be major issues in data accuracy given lack of knowledge about rural populations, informal livelihoods and less-studied ecological regions. These issues can be overcome through including stakeholders in the modelling process and using their formal and informal knowledge to check the data and model's accuracy.

The Assumptions

Models reflect the biases and interests of the people running them. For example, energy planners may care about increasing reliable power supply, not about the detrimental effects this could have and will therefore create a model reflecting measuring their concerns. Although appearing to be technical, modelling exercises are therefore profoundly political. To recognise this, the process for determining what the model should measure and what the recommendations should be needs to take account of the gamut of those affected by the decisions being modelled.

Premises of the Guide

We believe that it is vital to consider the fundamentals before discussion of any dam project:

- What are a countries' development needs and then what are all of the types of projects that could meet those needs?
- A dam should only be considered once these first fundamental questions are answered and should be compared against alternative solutions to meeting water, food and energy needs.

The guide essentially advocates a socio-political process of bringing stakeholders together who have different interests and may disagree about what the priorities should be, and what development solutions are. Dams, and river infrastructure, have far-reaching consequences. Whilst some dams are undoubtedly national icons, the infrastructure has a long history of controversy with unfulfilled economic impacts, significant displacement of people and wide-ranging negative environmental and climate consequences. The common assumption that dams produce 'green energy' is often erroneous. Planning of the nexus therefore requires rigorous and inclusive process. This will likely create debate, but it is only through lively discussion that a widely-accepted consensus can be forged or a solution found that genuinely maximises benefits whilst minimising costs.

Future DAMS

Design and Assessment of water-energy-food-environment Mega-Systems

FutureDAMS is a research project funded by UKRI as part of the Global Challenges Research Fund. The consortium is working to improve the planning and governance of water-energy-food-environment systems by developing the knowledge base, tools and approach to enable resilient and sustainable development in a warming world.

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