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Towards good governance of hydraulic works: exploring management instruments

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As pointed out by the World Commission on Dams, many large-scale hydraulic infrastructural works have failed to reach the desired or expected performance. Inappropriate decision making processes are essentially responsible for these deficiencies, both during the planning and the management (operation) phases. The Commission also promotes a new framework for decision making which shares certain key values with IWRM principles, namely efficiency, equity and ecological integrity.

Good governance is understood to mean adequate water management, which is generally agreed to result in balancing economic factors (productivity, efficient use of water) and social factors (access for all, lifeline amounts affordable by all) within a sustainability framework (environmental impacts are limited such that ecological integrity is maintained; water systems are maintained). In essence this implies that an equity-efficiency-ecological trade-off (E3 trade-off) must be found when planning and/or managing hydraulic infrastructural works. Since water management is about allocating a public good it is political in nature. Finding the "right" balance is therefore finding the balance that is most acceptable to a society. However, this is potentially a delicate exercise since egalitarian and environmentally responsible policies can always be criticised on the grounds that they lead to efficiency losses, and vice versa.

In the paper we first argue that equity, although politically attractive, should be operationalised by the concept of equality, a variable that can be quantified. We then review the available instruments (markets, property rights, capacity-sharing options, upstream/downstream compensation) that can be implemented to attain equality and ecological integrity goals and discuss potential trade-offs and win-win configurations.

The paper subsequently discusses some methodologies for finding stable solutions for E3 trade-offs, i.e. solutions that are accepted by society. The possibility of implementing these instruments to alter the distribution of water-derived revenues in an egalitarian direction is analysed.