

# Financing of reinforcement of dam infrastructure in developing countries

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The European Parliament adopted a resolution on financing of reinforcement of dam infrastructure in developing countries.

It notes that by current estimates there are more than 50 000 large dams, 100 000 smaller dams and 1 million small dams worldwide. Members stress that some 589 large dams were built in Asia from 1999 to 2001 and, as of 2006, 270 dams of 60 metres or larger were planned or under construction. They also point to the fact that the licence to construct the world's third largest dam, the Belo Monte dam in Brazil, was granted despite serious environmental concerns, as the dam will flood 500 square kilometres, thus causing severe damage to the Amazon's invaluable ecosystem and biodiversity and displacing 50 000, mainly indigenous people.

Parliament considers that, globally, no other natural hazard has proved more destructive to property or cost more human lives than floods over the past century, with a documented increase in the frequency of serious floods throughout the second half of the 20th century and that flooding will prove a critical issue in the coming decades.

In this context, Parliament considers it essential to adopt a multi-pronged flood strategy in regions where there is a critical threat of floods posed by unstable glacial lakes, exacerbated by the effects of global warming on precipitation patterns and by black carbon deposits, proved to accelerate glacial retreat. It deplores the utter lack of flood prevention measures in many Least Developed Countries (LDCs); but warns against relying on large dams to prevent flood damage, especially in a context of climate change, in which extreme precipitation events are likely to increase the intensity and frequency of flash floods, thereby raising concerns about dam safety.

**Use of dams:**Members stress that dam construction must be assessed in terms of its impact on river flows, the rights of access to water and river resources, and whether the dam will uproot existing settlements, disrupt the culture and sources of livelihood of local communities, or deplete or degrade environmental resources. They recall that floods in LDCs threaten not only lives but also the areas' development.

**Investments:**Parliamentnotes that balanced investment in demand-side management measures, land management, improved water capture and storage methods and institutions is needed to increase the sustainable and efficient use of water, to mitigate the effect of recurrent floods and droughts, and to achieve basic water security as a platform for Africa's economic development. It asks for priority to be given to investments that focus on growth, reduce rural poverty, build climate resilience and adaptation and foster cooperation in international river basin. Investment in capacity building is necessary as sound water management institutions can ensure sustained returns on water efficiency investments and optimise the allocation and use of water by multiple economic sectors.They strongly support the recommendations of the World Commission on Dams (WCD) according to which **priority should be given to optimising the performance of existing infrastructure** before building any new projects.Parliament takes the view that, unless high-producing agricultural areas are protected from the effects of flooding, emerging economies could see an abrupt turnaround in their development and a rapidly growing food security problem; recalls that, while the melting of the glaciers in the Himalayas is expected, first of all, to increase river flows for 20 to 30 years, the flows will decrease substantially in the longer term. It is essential to develop mitigation and adaptation strategies to address droughts in the future.

**Design of dams and climate change:** Members note that most dams are designed on the basis of historical data of river flows, with the assumption that the pattern of flows will remain the same as in the past. They point out that climate change has introduced huge uncertainties in the basic parameters affecting dam projects and that climate change is likely to exacerbate further the problems connected with sedimentation, whose accumulation behind these dams also deprives downstream plains of nutrients that are essential to soil fertility. They note that small water storage facilities can increase **climate resilience** by providing cost-effective solutions to water supply and drought mitigation and improve food security by increasing agricultural productivity. Small storage options include off-stream reservoirs, networks of multipurpose small reservoirs and groundwater storage. Furthermore, they stress that there is **little evidence to establish that big dams are the only, the best or the optimal solution** to the electricity question as they do not necessarily improve access to power for the poor and vulnerable sections of society.

They stress that constructing and reinforcing dams in LDCs is not enough to safeguard vulnerable areas and call for a concerted effort in dealing with the root of the problem, not merely the symptoms, **thus preventing the wasteful spending of EU taxpayers' money**. Parliament encourages financing institutions and the EU to finance capacity building and training in improved land management and improved water management storage methods that take into account scientific and technological knowledge and the revival of old knowledge such as ancient traditional irrigation systems. All financing from the EU should contribute to the promotion of the EU's policy objectives of sustainable development and food security, in accordance with the MDGs.

**Dams and electricity production:** in addressing the root causes of the increased frequency and intensity of floods, Members call on the EU to make further commitments in greenhouse gas reductions so as to meet its objective of limiting climate change to 2°C above the pre-industrial level. They urge the EU to widely implement and promote emission reduction measures targeting black carbon, such as the recovery of methane from coal, oil and gas extraction and transport, methane capture in waste management and the use of clean-burning stoves for residential cooking, which will contribute to combating climate change and to reducing glacial retreat. Convinced that small hydropower dams are more sustainable and economically viable than large hydropower; in particular, they stress that decentralised, small-scale options (micro hydro, home-scale solar electric systems, wind and biomass systems) based on local renewable resources are more appropriate in rural areas far away from centralised supply networks. They urge immediate action be taken with a view to **reducing black carbon and methane emissions**, mainly through the promotion of research and investments in technology aimed at reducing polluting emissions.

Other recommendations include:

- the establishment of a global early warning system for floods, landslides and tsunamis;
- the formation, as a matter of urgency, of a cross-border agency, established under the auspices of the United Nations, with the express purpose of sharing available data, addressing the problems and causes of transboundary water-related hazards;

Members stress that any **planning of dams should be evaluated according to five values:** equity, efficiency, participatory decision-making, sustainability and accountability. They urge, more broadly, that the decision-making process on dams take fully into account the notion of human rights and that there is a full evaluation of the environmental and social costs to be conducted in a transparent manner, with public participation, prior to the approval of any dam project.

**Impact on international relations and on populations:** Parliament points out that dam building projects have an impact on international security. Those impacts can be negative by creating cross-border conflicts, social unrest and harm to the environment. Members express concern that the World Bank has spent over USD 100 billion on the construction of dams, mainly for large-scale export-oriented hydropower projects, which have led to the displacement of an estimated 40-80 million people, the loss of livelihoods, damage

to ecosystems and the creation of massive debt burdens for developing countries. Parliament emphasises that people who have been displaced due to the construction of dams should not merely receive financial compensation but that their ability to secure their long-term livelihood needs to be ensured. It calls for the comprehensive evaluation of the full range of options available to reduce the impacts of floods and meet water and energy needs, with priority given to ecosystem-based solutions and to making existing systems more effective and sustainable. The EU is urged to pursue policies of 'soft-path' management to deal with floods.