

Review of EIAR for the Ilisu Dam and HEPP

Summary

Introduction

On July 3rd 2001, the Export Credit Agencies considering support for the proposed Ilisu Dam in the Kurdish region of Southeast Turkey released the Ilisu Consortium's *Environmental Impact Assessment Report* for the project and invited public comment.

This Summary, together with the enclosed reports and accompanying documents, constitutes a joint submission in response to the consultation on the EIAR from eight non-governmental organisations: Corner House Research (UK), the Ilisu Dam Campaign (UK), the Kurdish Human Rights Project (UK), Friends of the Earth (England, Wales and Northern Ireland), Berne Declaration (Switzerland), Campaign An Eye on SACE (Italy), Pacific Environment (US) and World Economy Ecology and Development (Germany).

In addition to this Summary, the submission consists of:

- Three reports prepared by the above NGOs commenting on the EIAR's treatment of issues pertaining to resettlement, alternatives and cultural heritage;
- An independent assessment of downstream and water quality issues prepared for the Corner House by consultant hydrologists Philip Williams and Associates (A Review of the Hydrologic and Geomorphic Impacts of the Proposed Ilisu Dam);
- Comments on the EIAR prepared by the Diyarbakir Bar Association;
- Annex, relating to specific matter in this Summary.

Summary of Submissions

In our submission, the information contained in the EIAR demonstrates a clearly sufficient and defensible basis for export credit assistance to be denied for the Ilisu project. Moreover:

1. The EIAR consideration of resettlement, hydrologic and geomorphic impacts, alternatives and cultural heritage is inadequate and, in many respects, seriously flawed and in breach of internationally accepted practice.
2. The EIAR does not meet its stated reference guidelines:
 - Ex-Im Bank's '*Environmental Procedures and Guidelines*' and '*Environmental Guidelines - Table 9: Hydropower and Water Resources Management*' have not been complied with.
3. The EIAR does not comply with relevant World Bank, OECD and World Commission on Dams' guidelines.
4. The recommendations of the December 1999 Environmental Review of the Ilisu Dam Project, commissioned by the UK government and conducted by Environmental Resources Management, have not been complied with.

5. The pre-conditions set by the Export Credit Agencies and their governments for granting export credit have not been fulfilled.

Consideration of resettlement, hydrologic and geomorphic impacts, alternatives and cultural heritage

Resettlement

- A Resettlement Action Plan has yet to be made public, contrary to internationally accepted practice;
- Critical problems regarding resettlement previously identified by participating ECAs have yet to be remedied;
- Key studies necessary to draw up a resettlement plan to internationally accepted standards have still to be undertaken or completed;
- The problems that the continuing Emergency Rule in the region poses for resettlement have been ignored;
- There has been inadequate, and in some cases no consultation with affected people on the project;
- There is still no accurate assessment of the numbers to be resettled or the number affected;
- Turkey's institutional capacity to carry out a resettlement plan to international standards has not been demonstrated;
- The gender implications of resettlement have not been adequately addressed;
- A credible budget for resettlement has not been prepared or secured;
- No provisions have been made for independent monitoring, contrary to the express conditions of the ECAs.

Hydrologic and Geomorphic Impacts

- The construction and operation of the Ilisu Dam by itself will significantly affect the hydrology of the Tigris River. It will alter the seasonal flow pattern by capturing all except large flood flows in the spring and releasing them in the autumn and it will create large daily flow fluctuations whose influence would be felt more than 65 km downstream at the Syrian border;
- The operation of the Ilisu Dam in combination with diversions from the future downstream Cizre project would probably significantly reduce summer flows in Syria and Iraq below historic levels. It is likely that a significant portion of the recommended minimum flow release from Ilisu of 60 m³/s during dry years would be diverted. It is even possible that with full implementation of the Ilisu/Cizre projects, during drought periods, all the summer flow could be diverted before it crossed the border;
- Future depletions of the Tigris river flows for planned irrigated agriculture within Turkey would further reduce these flows;

- Filling of the Ilisu reservoir could create low flow conditions downstream in Syria and Iraq more severe than those experienced in an extreme drought for two successive years;
- The Ilisu reservoir would eliminate small to moderate flood peaks downstream but would not significantly reduce extreme large flood peaks;
- There are large uncertainties in estimates of reservoir sedimentation rates. It is possible that with future deteriorating watershed conditions active reservoir storage losses would be in the range of 0.1 to 1 percent per year. This could adversely affect power generation within a few decades;
- Deposition of coarse sediments in the mouths of rivers discharging to the reservoir will cause increased flood levels, waterlogging, and increased channel migration along tributary rivers upstream;
- Large seasonal reservoir level fluctuations would typically expose approximately 100 km² of reservoir bed, as summer diversions increase upstream this drawdown area could increase to about 190 km².
- Capturing of coarse sediment in the reservoir will tend to induce scouring of the river channel downstream, lowering the river level and possibly lowering the adjacent water table as well;
- High levels of nutrients from sewage and agricultural runoff will cause eutrophication and anoxic conditions in the reservoir. Planned sewage treatment plants will not significantly reduce these levels;
- Anoxic conditions will probably mobilize heavy metals from reservoir sediments;
- Discharges from the reservoir will be anoxic and likely to contain high levels of nutrients, organic matter and hydrogen sulphide (H₂S);
- Downstream water supply in Syria and Iraq could be significantly affected by both reduction in summer flows and deterioration in water quality;
- There could be a significant increase in flood hazards downstream. The elimination of smaller floods will encourage the development of floodplain and river channel land; however these areas will still be subject to extreme flood events;
- The consequences of failure of the dam due to accident or act of war would be catastrophic, affecting millions of people living downstream;
- Summer exposure of large areas of reservoir bed, as well as aggrading river channels upstream, will provide a major habitat for disease vectors such as malaria etc;
- Pollution and eutrophication of the reservoir could create public health hazards for people drinking water or eating fish caught in the reservoir;
- Anoxic conditions in the reservoir will likely generate significantly higher levels of greenhouse gas methane emissions than occur from the existing landscape;
- Key EIAR conclusions are, variously, unsubstantiated, the information on which they are based is contradictory, incomplete, of unknown accuracy, or based on an inappropriate level of analysis;
- The methodology or logic is seriously flawed because the Project definition is unclear,

cumulative impacts were not addressed, trans-border impacts were ignored, and impacts were not analysed over the lifecycle of the project;

- Key decisions on the dam and operational design seem to have been made over 20 years ago without integrating environmental planning, as is now the established practice. Instead the EIAR attempts to analyse the consequences of decisions already taken and suggest mitigation actions that are not part of the project, which might be taken to reduce adverse impacts;
- There is no substantiation provided in the EIAR for the selection of the minimum monthly flow release of 60 m³/s. Nor is evidence presented that downstream riparian countries were consulted to establish such a minimum release rule;
- It does not appear that the proponents of the Ilisu dam have carried out the kind of technical studies reasonably expected to evaluate environmental impacts for a major project of this type. For example: reservoir water quality modeling, operational scenarios for future watershed conditions, river and reservoir sedimentation modeling, dam break analysis, and flow fluctuation attenuation modeling.

Cultural Heritage

- No ‘detailed plan’ to preserve Hasankeyf has been drawn up, contrary to the pre-conditions laid down by the ECAs;
- The Ilisu dam fails to meet international best practice standards on cultural heritage on a number of counts, including consultation with affected communities; assessing the full impact of the dam on cultural heritage; and allocating adequate resources to surveys and excavation;
- The implications of continuing Emergency Rule and the repression of the Kurdish ethnic minority for protecting the cultural heritage of the area have not been considered;
- The institutional arrangements for management of cultural heritage, whereby the military is in overall control, severely limit the possibility of undertaking the research necessary to comply with international best practice on cultural heritage;
- Even if the ECAs’ condition on Hasankeyf could be met, the Ilisu dam would still be in breach of international best practice on cultural heritage.

Alternatives

- Insufficient consideration has been given to the positives and negatives of hydropower;
- Insufficient consideration has been given to the positives and negatives of solar energy;
- Insufficient consideration has been given to the positives and negatives of wind energy;
- Insufficient consideration has been given to the positives and negatives of other alternatives such as gas;
- Insufficient consideration has been given to the potential of the non-project alternative of energy efficiency and demand side management.

Violations of US Export-Import Bank guidelines

The US Export Credit Agency, Export-Import Bank’s ‘Environmental Guidelines’ and

‘Environmental Guidelines - Table 9: Hydropower and Water Resources Management’ have not been complied with in that:

- *Water use and quality.* The EIAR does not quantify or provide hydrologic analysis of the impacts on flows across the border downstream, when it is clear that the project will likely create over-demand. The EIAR does not quantify or present water quality simulations to determine how severe water quality and public health impacts will be for the population around the reservoir or downstream, when it is clear that the reservoir will likely contaminate water supplies;
- *Natural Hazards.* The EIAR does not identify the area of influence at risk from dam failure and is dangerously misleading when it implies that large floods will be reduced downstream;
- *Ecology.* The EIAR does not quantify upstream and downstream river channel changes that have significant impacts on ecosystems. It does not address greenhouse gas emissions. A watershed management plan is discussed but not developed. No mechanism for implementing the plan is identified. Cumulative impacts are not evaluated.

Violations of Internationally Accepted Practice

In addition, it should be noted that the project fails to comply with the following internationally accepted standards for best practice:

World Bank

- World Bank Operational Policy 4.01, *Environmental Assessment*;
- World Bank Operational Memorandum, 3 December 1999;
- World Bank BP 17.50 *Procedures on Disclosure of Operational Information*;
- World Bank Operational Directive 4.30, *Involuntary Resettlement*;
- World Bank Draft Operational Policy 4.12, *Involuntary Resettlement*;
- World Bank Draft Bank Procedure 4.12, *Involuntary Resettlement*;
- World Bank Operational Directive 4.20, *Indigenous Peoples*;
- World Bank Operational Policy Note No. 11.03, *Management of Cultural Property in Bank-Financed Project*, World Bank, August 1999.

OECD

- OECD Development Assistance Committee, *Good Practice for Environmental Impact Assessment of Development Projects*, Guidelines on Aid and Environment No. 1, Paris, 1992;
- OECD Development Assistance Committee, *Guidelines for Aid Agencies on Involuntary Displacement and Resettlement in Development Project*, Paris 1992.

World Commission on Dams

- World Commission on Dams, *Dams and Development: A New Framework for Decision Making*, 2000:
 - Strategic Priority 1: Gaining Public Acceptance
 - Strategic Priority 2: Comprehensive Options Assessment
 - Strategic Priority 3: Addressing Existing Dams
 - Strategic Priority 4: Sustaining Rivers and Livelihoods
 - Strategic Priority 5: Recognising Entitlements and Sharing Benefits
 - Strategic Priority 6: Ensuring Compliance
 - Strategic Priority 7: Sharing Rivers for Peace, Development and Security
 - Guideline for Projects in the Pipeline

The specific breaches are tabulated in Annex 1 of this Summary and cross referenced to the materials provided.

On resettlement alone, the project breaches 7 World Bank guidelines on 30 counts; OECD DAC, 2 guidelines on 14 counts; and WCD six guidelines on 31 counts.

Failure to address concerns raised by ECAs

The recommendations of the December 1999 Environmental Review of the Ilisu Dam Project, commissioned by the UK government and conducted by Environmental Resources Management (ERM), have not been complied with. Specifically:

- An environmental management plan to World Bank OP 4.01 standards was required but is not included in the EIAR;
- The EIAR fails to assess the impact of building a 160km transmission line as well as other infrastructure, such as roads, associated with project construction, as was recommended by ERM. ERM warns that this failure breaches international best practice;
- The EIAR fails to consider the possible cumulative impacts of the Ilisu within the broader GAP project, as was recommended by ERM;
- In its analysis of alternatives to Ilisu, the EIAR makes no mention of available options such as demand side management and clean fuels, as ERM had requested.

*Details are provided in **Annex 2** of this Summary.*

Failure to comply with ECA Pre- conditions

The five pre-conditions set by the ECAs and their governments¹ have not been met. In particular:

1. Draw up a resettlement programme which reflects internationally accepted practice and includes independent monitoring.

- The non-disclosure of the full Resettlement Action Plan, not least to those who would be affected by resettlement, constitutes such a gross violation of international guidelines that an immediate stay should be imposed upon the application for support.
- There are no credible grounds for concluding that a resettlement plan has been drawn up which reflects internationally acceptable practice and there is much evidence in the EIAR to the contrary.
- The continuing repression in the region renders the key objective of proper consultation unattainable.

2. Make provision for upstream water treatment plants capable of ensuring that water quality is maintained.

- The planned water treatment plants will not significantly reduce high levels of nutrients from sewage and agricultural runoff and will cause eutrophication and anoxic conditions in the reservoir.

3. Give an assurance that adequate downstream water flows will be maintained at all times.

¹ See for example, HERMES "Official Export Guarantee Scheme of the Federal Republic of Germany Guiding Principles Environment. Consideration of ecological, social and developmental aspects," April 2001, para C 4.

- There is no substantiation provided in the EIAR for the selection of the minimum monthly flow release of 60 m³/s.
 - No evidence is presented that downstream riparian countries were consulted to establish such a minimum release rule.
 - It is likely that a significant proportion of the recommended minimum flow release from Ilisu of 60m³/s during dry years would be diverted.
 - It is even possible that with full implementation of the Ilisu/Cizre projects, during drought periods, all the summer flow could be diverted before it crossed the border.
4. Produce a detailed plan to preserve as much of the archaeological heritage of Hasankeyf as possible.
- The EIAR fails to provide any evidence of a detailed plan to preserve the archaeological heritage for Hasankeyf.
 - There is evidence that the condition could not be met under present institutional, legal and social conditions in the region.
5. A published assurance that the required consultation of neighbouring States has been carried out by the Turkish authorities.
- This has not been given. In view of the expressed views of the Syrian and Iraqi Governments, it is difficult to see how such an assurance could be given. (*Letters from the Syrian and Iraqi governments are reproduced as Annex 3.*)

Overall Conclusion

Proceeding with the Ilisu Dam would involve adverse social, environmental and cultural effects of such a magnitude that a decision to deny export credit assistance would be patently defensible.

Moreover, given the matters itemised above and contained in this submission, it can fairly be said that (i) international best practice has not been complied with in assessing and addressing such effects; and (ii) in all the circumstances, it would be both inappropriate and of questionable legality to approve applications for export credit assistance.