

Comments to the Environmental impacts of the Ilisu Dam Project in Turkey: Focus on fish and biodiversity

Summarized by Berne Declaration, Switzerland, August 2006

A review of data from the Environmental Impact Assessment (EIA) indicates the main environmental impacts on the biodiversity of the Ilisu dam project are:

- the threat to at least 18 vulnerable species including the critically endangered Euphrates Soft-shelled Turtle (*Rafetus euphraticus*) which only occurs in the Euphrates and Tigris Rivers;
- threat to at least 10 or more endangered bird species
- impacts on biodiversity downstream

After reviewing the EIA and its amendments, the following major concerns remain:

- (a) Given the major international concerns about water resource use between Turkey and its affected neighbours, building the dam without agreement on water allocation between Turkey, Iraq and Syria will significantly add to tensions in what is already a tense region.
- (b) There has been no consideration of cumulative impacts which is remarkable considering the number of built and planned dams and the large amount of habitat, archaeological sites and people affected. A cumulative impact assessment is urgently required.
- (c) No appropriate mitigation measures have been proposed to minimise the negative impacts on biodiversity. There is inadequate information to comprehensively assess the biodiversity impacts and therefore design the necessary mitigation measures required.
- (d) The Environmental Management Plan (EMP) which is required for Category A projects is insufficient.
- (e) The study by Prof Erhan Ünlü provided by the consortium is irrelevant for the project as it does not regard the project area.

Summary of relevant guidelines

The Ilisu project needs to comply with Turkish law and the Organisation for Economic Cooperation and Development (OECD) recommendations proposed for Export Credit Agencies. These OECD recommendations state that the country's laws must be adhered to and one or more listed standards followed. When the country's law overlaps with the standards the more stringent should apply (IEG 2005). This EIA attempts to comply with World Bank standards for: Environmental Assessment (OP 4.01); Involuntary Resettlement (OP/BP 4.12); and Cultural Property (OP 4.11) (see table 1). However, these policies and procedures are not legally binding.

This project does not fully comply with the Environmental Assessment (OP 4.01) since it does not:

- take into account ‘trans-boundary and global environment aspects’ (paragraph 3);
- include a cumulative impact assessment even though there are regional impacts (paragraph 7);
- The Environmental Management Plan (EMP) which is required for Category A projects is insufficient. No mitigation measures for securing biodiversity are listed.
- ‘eliminate or offset adverse environmental impacts, or to reduce them to acceptable levels’ (Annex A paragraph 3).
- Proponents of this project have not attempted to comply with Natural Habitat (OP/BP 4.04) and Projects on International Waterways (OP/BP 7.5) which are also relevant.

Evaluation of information presented in the EIA

Site description

Landuse data is presented on a GIS map and various tables such as: landuse per catchment and dam area; landuse and number of building along different sections of the dam per area; crop percentages and farm animal numbers per affected province; and forestry and protected areas. Population data included: the number of people and population growth per province; literacy rate and education level; employment rate and activity; and sources of livelihood. The project selected this site largely because of the suitable geology. Land zoning data was not included and is required.

Baseline information

1. The EIA did **not outline the methods used to survey the baseline environment for archaeological or biological data**. Instead it refers to commissioned GAP studies carried out by various Turkish Universities, data from universities and government departments, and research reports. Fifteen archaeological excavations have been carried out and the findings published. Although these publications are not listed, some information is available from the Turkish Center of Research and Assessment of the History’s (TACDAM) website (TACDAM n.d.) but survey methods and a list of archaeological items are not displayed. Biological data is drawn from two key reports “*GAP Regional Environment Study-Dicle Basin (Environmental Study for Diyarbakir and its Surroundings) Project*” (Dicle University 1993) and “*GAP Biodiversity Research Project 2001-2003*” (Doga Dernegi 2004) as well as commissioned surveys, relevant data and other reports.
2. These reports **could not be found even from the GAP website of publications** (GAP 2005). So for both baseline studies the necessary information was not available to make comments on the survey methods, if these could be repeated easily, or whether they conform to best practice.

Biodiversity impacts

The EIA reports that **22 river fish species will be adversely affected**. Of these, 4 species are rare, 5 vulnerable and 7 have indetermined status (see Appendix C). One species, *Liza abu* (indetermined status), will have its movement hindered by the dam wall. **The critically endangered Euphrates Soft-shelled Turtle (*Rafetus euphraticus*) only found in the Euphrates and Tigris will be affected**. Asiatic Red-Wattled Plover (*Vanellus indicus*) and Pied Kingfisher (*Ceryle rudis*) will be the most adversely affected birds. One vulnerable plant species related to the chickpea (*Cicer echinosperum*) will be directly affected by impoundment. At least nine other threatened wetland species and unique wetland communities will be adversely affected directly downstream.

-> Of the identified threatened species and communities, no information is presented on their distribution, conservation status, current protection and threatening processes. The names of the threatened wetland species and communities are also needed. There is no comprehensive species list of all plants found in the affected area and their conservation status. A comprehensive fish species list is needed (at least two species in the text were not in the species list). A full analysis on the impacts to reptiles, amphibians, bats and mammals is also required.

Mitigation and enhancement

Biodiversity mitigation – The EIA recommends the Turkish Government create protected areas from state owned land and suggested the islands in the dam and areas next to the dam are suitable locations. It also recommends establishing a commercial fish hatchery rearing lake fish species.

Best practice guidelines and literature are not referred to when designing mitigation strategies. Mitigation measures are generally clearly stated although the size and exact location of the protected areas are not stated.

The suggested mitigation measures will not address biodiversity impacts. The commercial fish hatchery will rear lake fish species, not the threatened river fish species impacted by the dam. Infact, the commercial hatchery is likely to further threaten these river fish species. The other threatened species are dependent on river, wetland or floodplain ecosystems, however, no such areas are suggested for protection. Furthermore, there are no mitigation measures for the threatened species and communities directly downstream.

Key issues that need clarification from this EIA are:

- (a) What commitment is there by the Turkish Government to implement the mitigation measures recommended by the EIA?
- (b) What baseline data and survey methods were used to collect biodiversity information?
- (c) A comprehensive unbiased environmental management plan and safeguard plan for the endangered species to maintain the unique biodiversity of the Ilisu region are needed.