

 Early Warning System

WB-P121507

Dasu Hydropower Stage I Project



## Quick Facts

<b>Countries</b>	Pakistan
<b>Specific Location</b>	Main Indus River, Dasu
<b>Financial Institutions</b>	World Bank (WB)
<b>Status</b>	Active
<b>Bank Risk Rating</b>	A
<b>Voting Date</b>	2014-06-10
<b>Borrower</b>	GOVERNMENT OF PAKISTAN
<b>Sectors</b>	Hydropower
<b>Potential Rights Impacts</b>	Healthy Environment, Housing & Property, Right to Food, Right to Health
<b>Investment Type(s)</b>	Loan
<b>Investment Amount (USD)</b>	\$ 588.40 million
<b>Project Cost (USD)</b>	\$ 3,787.70 million



## Project Description

The Dasu Hydropower Project would construct a 2,160 MW hydropower plant on the main Indus River, to be expanded to a capacity of 4,320 MW in the future "with very low cost". World Bank support for the project is aimed at building the capacity of Pakistan's Water and Power Development Authority (WAPDA) to prepare future hydroelectric projects. The bank describes this as a "high-risk-high-reward" project. This is a run-of-river project with five components:

1. construction of the main dam, and a hydraulic structure on the Indus River to raise the water level;
2. power generating facilities including turbines and generators, underground tunnels and sub-stations;
3. relocation of a section of the Karakoram Highway, construction of access roads and a transmission line from Dubair to Dasu;
4. installation of a transmission line from Dasu to Islamabad (via Mansehra);
5. Implementation of Social and Environmental Management Plans, including a Social and Resettlement Management Plan.

*Location:* The main Indus River about 240 km upstream from the Tarbela Dam, approximately 8 km from Dasu town (capital of Kohistan District of Khyber Pakhtunkhwa Province) and 350 km from Islamabad

*Resources needed:* the project will submerge 1800 hectares



## Early Warning System Project Analysis

### **Risk Assessment: Category A.**

The World Bank classifies proposed projects based on the type, location, sensitivity, and scale of the project and the nature and severity of its potential environmental impacts. Category A is assigned to a project only if it is likely to have "significant adverse environmental impacts that are sensitive, diverse, or unprecedented."

### **APPLICABLE SOCIAL & ENVIRONMENTAL STANDARDS**

#### **Environmental Assessment OP/BP 4.01**

World Bank documents state that the dam will "permanently alter the upstream aquatic ecology and habitat by transforming the fast-moving sediment-laden river into a narrow controlled reservoir" with resulting changes affecting about 570 ha of river and tributaries. Among the "major issues" identified in bank documents for the operation stage of the project are impacts on downstream water uses due to the filling of the reservoir, changes in river ecology in the reservoir area and resulting impacts on fisheries, and a break in the "connectivity" of the Indus River which will create a barrier to fish movement and is expected to impact the overall ecology of the river and aquatic fauna in a 4.4 km section of the river.

#### **Involuntary Resettlement OP/BP 4.1**

The World Bank estimates the project will displace 6,953 people from 767 households by submerging 34 villages/hamlets located upstream of the reservoir (half are located on the Left Bank of the Indus River and half are located on the Right Bank).

#### **Natural Habitats PO/BP 4.04**

the project will submerge 82 hectares of the Kaigah Community Conservation Area (KCCA), established by the government in 2000 to protect the endangered Markhor Sheep, as well as other mammal and bird species. This conservation area is considered critical habitat according to World Bank Policy on Natural Habitats.

#### **Forests OP/BP 4.36**

there will be a "significant" impacts on "the already dwindling forests" and wildlife of the area due to the resettlement of displaced people to higher elevations and the in-migration of a large workforce to the area over a period of 25-30 years, with 2000 to 3000 workers present at any one point in time. Impacts will include "more collection and commercial trade in firewood and herbs, illegal deforestation, logging, reclamation of land for agriculture and other activities", as well as an increase in "illegal practices such as poaching, trapping and hunting".

#### **Physical Cultural Resources OP/BP 4.11**

Bank documents note that there are "important cultural or archaeological resources in the vicinity of the Project" including 33 mosques and 16 graveyards that will be flooded by the dam's reservoir, as well as a large field of pre-historic and historic rock art (carving and inscriptions) around Shatial which "date to the Stone Age." The possibility of "chance" archaeological finds is also "high", as the Indus valley has been "the only connection between the Indian sub-continent and China since pre-historic times."

#### **Safety of Dams OP/BP 4.37**

The Dasu project site is located in a region that is classified as a "Serious Seismic Danger Zone" and the risk that the reservoir created by the dam will trigger earthquakes has been considered. World Bank documents state "the dam design is in accordance with the international standards (International Commission on Large Dams - ICOLD) for dam construction in an earthquake zone of class VIII. According to these standards the dam is considered to be safe under strong earthquake action."



## People Affected By This Project

### OUR RISK ASSESSMENT

#### The Right to Property and Adequate Housing

as noted above, the World Bank estimates that the project will displace 6,953 people from 767 households in 34 villages/hamlets. "A total of 945 houses and residential structures, 197 shops, 31 mosques, seven schools, two basic health units, three community centers and 17 graveyards will need to be relocated" and an estimated 21,000 trees will be affected. Bank documents state that 90% of the households to be displaced prefer to be relocated at higher elevations on their existing lands or on land acquired lands for the project within the same valley, while 10% prefer to receive cash compensation and move to join family members living outside the project area. Bank documents state that "relocation and resettlement across the river or downstream is also not a possible option as every tribe or sub-tribe considers them as 'very different' than others ethnically, socially and culturally." 27 potential locations for resettlement have been identified.

#### Right to Livelihood

the Resettlement Action Plan notes that people directly affected by the project will suffer the loss of income from many sources including: businesses, hotels, shops and restaurants, agricultural and, grazing land, olive, fruit and non fruit trees used as fodder for animals, fisheries, medicinal plants, mushrooms, timber and fuel wood, and loss of access to sand gold mining on the river bed.

#### The Right to Food

Bank documents state that 600 of the 767 households to be affected by the project will lose some agricultural land. The loss of agricultural lands and may impact the right to food, as most farming in the project area is subsistence farming and traditional terrace cultivation will be affected by relocation and the lack of terraced land at higher elevations. The loss of 280 hectares of grazing land for livestock and the increased in population densities at higher altitudes following resettlement may also impact the right to food, as people in the project area usually keep livestock " goats, sheep, even cows and bullocks and the search for pasture [at higher altitudes] is one reason for the seasonal migration between low and high altitudes." Changes in river ecology will impact existing fisheries, including the loss of existing fish spawning areas and some existing fish species "may gradually disappear from the main stream." Bank documents state that Limited financial resources compel people to undertake fishing - which is "mainly for self-consumption" - and also state that fish from the Indus "help to meet protein requirements of local people" in a region in which poverty and malnourishment are "chronic".

#### The Right to Health

The child death rates in the project area are "one of the highest in the world" and tuberculosis, respiratory infections, and chronic pulmonary conditions are each a "major public health concern" in Kohistan District. With existing health facilities facing "major shortages" in drug supply and services and numerous difficulties in recruiting health professionals willing to work in the remote district, World Bank documents note that the influx of a large migrant population of workers into the District may lead to conflicts over public health and safety. The Public Health Action Plan for the project identifies the following health-related factors and risks associated with the project: "multi-organ damages" resulting from oils, petroleum products and chemicals contaminating soil; increases in respiratory disease due to deterioration in air quality resulting from emissions of combustion gases and dust, with children being particularly vulnerable; the presence of a large construction workforce in a remote environment with risks that include sexually transmitted diseases including HIV/AIDS; public health issues related to resettlement, including access to safe drinking water and sanitation, diarrheal and other water borne illnesses resulting from contamination of water by human waste and sediment inputs; vector transmitted diseases, including dam impacts on the breeding areas of sand flies that transmit chronic and potentially fatal parasitic diseases (Leishmaniasis or Kala Azar); solid and



---

## Investment Description

- World Bank (WB)

Bank financing: World Bank

Borrower: Government of Pakistan, Water and Power Development Authority (WAPDA)

Amount of bank loan or investment: \$588.40USD Million

Total project cost: \$3787.70 USD million. WAPDA is expected to contribute US\$600-680 million.



## Contact Information

\*No contact available at time of writing.

## Consultation

World Bank documentation indicates that extensive consultations with affected communities have been undertaken and "will continue throughout the design and implementation of the various environmental and social action plans." According to the bank, WAPDA is responsible for carrying out these consultations through its Field Office in Dasu, and the consultations will "drive the planning and implementation of the resettlement program". Consultations are to involve the District Commissioner, village elders and heads, mosque leaders, members of an assembly of elder men (jirga) and people affected by the project. Consultations should include project planning, decisions, and implementation of compensation rates and payments, as well as the program to restore and improve the livelihoods of people affected by the project. Volume 12 of the Social and Resettlement Management Plan for the Project contains a set of development and community support programs, which "will be further discussed with jirga members and local administration prior to implementation."

Key concerns of affected people and communities raised during consultations thus far are summarized in the Social and Resettlement Management Plan, and include: compensation for land and other assets; provisions for alternative livelihoods; environmental and social issues including education and access to health clinic and market following relocation, and; health and safety issues. The influx of "outsiders" is identified as "a very big concern" for affected communities. On 28 July 2011, elders representing affected people submitted a 15-point Charter of Demands "as their benchmark for supporting the construction of the dam project." The Charter of Demands was not limited to compensation for losses. On the contrary, it includes demands for employment, education, and healthcare facilities and "was clearly a call for local area development and community development programs as benefits of hydro project development in Dasu".

World Bank documents state that a grievance mechanism will be established to allow affected persons/families to appeal against "any decision, practice or activity arising out of survey, data collection, compensation rates/awards, and resettlement-related benefits." The bank notes that grievances "could also be caused by other social and environmental impacts/issues." A four-tier "bottom up" system of grievance redress committees (GRC) will begin with a Village Level GRC, consisting of local representatives of the affected communities and village elders (malik), project staff and local government representatives. The Village GRC will receive grievances and work to resolve them locally within a defined timeline. If unable to resolve to the satisfaction of the person bringing the grievance, the case will be forwarded to a Union Council Level GRC. If not resolved there, the case will go to a District-Level GRC. If still unresolved, it will advance to the Project Level Independent GRC, to be led by a retired civil judge. If unable to resolve a grievance using any of the four GRC, a person bringing the grievance may access the court of law. According to the bank, all documents related to grievance redress cases will be maintained in the Deputy Director Office "for review or verification" by WAPDA, a review of GRC activities is to be conducted each year, and the result is to be posted on WAPDA's project website.

## ACCOUNTABILITY MECHANISM OF WORLD BANK

The World Bank Inspection Panel is the independent complaint mechanism and fact-finding body for people who believe they are likely to be, or have been, adversely affected by a World Bank-financed project. If you submit a complaint to the Inspection Panel, they may investigate to assess whether the World Bank is following its own policies and procedures for preventing harm to people or the environment. You can contact the Inspection Panel or submit a complaint by emailing [ipanel@worldbank.org](mailto:ipanel@worldbank.org). You can learn more about the Inspection Panel and how to file a complaint at: <http://ewebapps.worldbank.org/apps/ip/Pages/Home.aspx>.



## Bank Documents

- [Integrated Safeguards Data Sheet \(Appraisal Stage\) - Dasu Hydropower Stage I Project - P121507 \(English\)](#) [Original Source]
- [Official Documents- Amendment No. 1 to the Financing Agreement for Credits 5497-PK and 5498-PK \(English\)](#)
- [Official Documents- Disbursement Letter for Credits 5497-PK and 5498-PK \(Closing Package\) \(English\)](#) [Original Source]
- [Official Documents- Financing Agreement for Credits 5497-PK and 5498-PK \(Closing Package\) \(English\)](#) [Original Source]
- [Official Documents- Project Agreement with National Transmission and Despatch Company Ltd. for Credits 5497-PK and 5498-PK \(English\)](#) [Original Source]
- [Official Documents- Project Agreement with Water and Power Development Authority for Credits 5497-PK and 5498-PK \(English\)](#) [Original Source]
- [Official Documents- Recommendation of Statutory Committee for Credits 5497-PK and 5498-PK \(Closing Package\) \(English\)](#) [Original Source]
- [Official Documents- Supplemental Letter Ref. Financial and Economic Data for Credits 5497-PK and 5498-PK \(English\)](#) [Original Source]
- [Official Documents- Supplemental Letter Ref. Performance Monitoring Indicators for Credits 5497-PK and 5498-PK \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Project \(DHP\) : procurement plan \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Project : environmental and social assessment - executive summary \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project \(DHP-1\) : chair summary \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 1 \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 2 \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 3 \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 4 \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 5 \(English\)](#) [Original Source]
- [Pakistan - Dasu Hydropower Stage I Project : P121507 - Implementation Status Results Report : Sequence 6 \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 10\) : Grievance Redress Mechanism \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 11\) : Communication and Public Relations \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 12\) : Area Development \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 13\) : Costs and Financials \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 14\) : Implementation \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 15\) : Resettlement \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 2\) : Social and Environmental Assessment \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 3\) : Downstream \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 4\) : Social and Environmental Assessment \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 5\) : Socioeconomic \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 6\) : Public Consultation \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 7\) : Gender Action Plan \(English\)](#) [Original Source]
- [Pakistan - First Phase of the Dasu Hydropower Project \(DHP\) : resettlement plan \(Vol. 8\) : Public Health and Safety \(English\)](#) [Original Source]





---

### Other Related Projects

- WB-P167843 Additional Financing For Dasu Hydropower Phase I Project (Transmission Line)
- WB-P181423 Dasu Hydropower Project Stage I Additional Financing