USIAD Water Projects

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Indus Basin Irrigation System

Figures in 000 Cubic feet unless indicated otherwise.

LEGEND

- **Rivers**
- **Barrages**
- **Dams**
- **Canals**

Existing

Proposed
schematic overview of Gomal Zam

- Reservoir (0.81 MAF)
- Dam
- Gomal River
- Main Canal (61 km)
- FATA
- KP
- Barrage
- 17 Secondary canals (204 km)
- 400 Watercourses
- Crops
- Waran Canal
- Command area (191,000 acres)
Gomal Zam Dam Multi-purpose Project

• River Gomal
• Phase 1 - Dam in FATA (Completed):
  – Live Storage capacity: 0.81 MAF
  – Power generation: 17.4 MW
  – USAID share: $45 million
• Phase 2 - Irrigation system in KP (Completed):
  – 265 km irrigation canal for 163,000 acre
  – USAID share: $52 million
• Phase 3 - Waran Canal in KP (In progress):
  – construction of 163 km canal for 28,000 acre
  – USAID share: $20 million
• Phase 4 – Agri Development in KP (In Progress):
  – Efficient and productive water use at farm
  – USAID share: $22 million
First time water released through canals in 150 years
Gomal Zam dam, barrage, main and secondary canal and command area
Dhana Irrigation project

- A weir at Dhana Toi River South Waziristan
- Major components:
  - 103 m long weir
  - 4km long Left side earthen irrigation canal
  - 5km long Right side earthen irrigation canal
  - Drinking water network for 15,000 people
- Command area: 1017 Acres
- Project completed
- USAID share: $17 million
Kurram Tangi Dam & Watershed Management project
Kurram Tangi Dam Project

- Stage I: Kaitu Weir (2 canals, diversion tunnel, two power houses, 18 MW, 16,380 acres land) **(In progress)**
  - Agreement signed with WAPDA December 2016, $81 million committed (Total budget $207, ($45 Italian, $81 GoP)).

- Stage II: Kurram Tangi main Dam
  - Three power houses, 65 MW, transmission lines, canal systems to irrigated 346,000 acres in FATA and southern KP. (Total budget estimated $700 million)
• LOCATION
  – Located on Kurram River supplemented by Kaitu River in the North Waziristan Agency
  – Both rivers originate in eastern Afghanistan with a total catchment area of 8031 square miles falling both in Pakistan and Afghanistan.

• Kaitu River
  – The Kaitu watershed area is 1,947 sq.m, out of which only about 8 percent (149 sq. miles) lies in Pakistan while 92 percent (1798 sq. miles) is in Afghanistan.
  – Kaitu River in Afghanistan is called Shamal. Most of the Shamal watershed lies within Khost Province with very small portions (13 percent) in the Paktika and Paktya Provinces.

• Kurram River
  – Kurram River watershed covers an area of 6,080 sq.m which lies mostly in Pakistan.
  – The Kurram River watersheds include Upper Kurram sub-watershed that lies between Kohe-e-Sufaid and Thal and the lower Kurram sub-watershed comprises the southern half of the Kurram River catchment which includes Tochi River sub-catchment of the Gardez province of Afghanistan.
Kurram Tangi Dam Integrated Watershed Management

- A way forward for Stage II
- Extend operational life of the dam and power generation
- Operational life of the canal system for irrigation
- Livelihood improvement in the catchment area and stabilization
- PC-1 (Project design in progress)
- USAID expected share $10 million
Kaitu River - Watershed

<table>
<thead>
<tr>
<th>Land Cover</th>
<th>Area (mile²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture / Crop</td>
<td>183.79</td>
</tr>
<tr>
<td>Barren Area / Hills</td>
<td>1619.59</td>
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<tr>
<td>Built up</td>
<td>35.68</td>
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<tr>
<td>Forest</td>
<td>74.66</td>
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<tr>
<td>Glacier</td>
<td>2.5</td>
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<tr>
<td>Nullah</td>
<td>39.18</td>
</tr>
<tr>
<td>Total Kaitu Watershed</td>
<td>1946.6</td>
</tr>
<tr>
<td>Watershed in Pakistan</td>
<td>149</td>
</tr>
<tr>
<td>Watershed in Afghanistan</td>
<td>1797.6</td>
</tr>
</tbody>
</table>
Satpara Development Project

- Satpara Dam located on Satpara stream of Indus River located in south of Skardu town
- Lies on the left bank of River Indus at about 8000 feet above sea level
- The dam storage capacity is 93,310 AF, generate 17.3 MW, and irrigate 15500 acres land
- Semi arid area with rugged mountain landscape, 200-225 mm average annual rain fall.
- Min temperature up to -10 °C (winter) and max up to 25 °C (summer)
- USAID share $46 million
The Programme Area

Districts: 8
Area: 87,250 sq km
Coverage: 74,200
Population: Apx: 1.4 million
“Situation Analysis of Command Area”
Project activities
Google Earth Shows History of Water and Dams in the Indus Basin

https://ia601608.us.archive.org/15/items/IndusIR/Indus%20IR.kml
THANK YOU