



IWRM Spiral for Western Basin/ Harirod - Murghab River Basin of Afghanistan



8th NARBO IWRM Training program 27 – Nov – 04 Dec 2013, Sri Lanka

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Introduction/Background

Salma Dam is an under construction hydroelectric and irrigation dam project located on the Hari River/Western Basin of Herat Province

Salma dam was originally constructed in 1976 on the Hari river basin, but was damaged early during the Civil war in Afghanistan. The reconstruction of the dam was first initiated by an Indian company (WAPCOS Ltd.) in 1988, but the project was left incomplete for a significant period of time due to the ongoing instability caused by the civil war. In 2006, India committed to funding the completion of the Salma Dam at an estimated cost of \$200 million. Once completed, the hydroelectric plant would produce 42 megawatts of power in addition to providing irrigation for 75,000 hectares of farmland (stabilizing the existing irrigation of 35,000 hectares and development of irrigation facilities to an additional 40,000 hectares of land).

Harirud-Murghab River Basins

Legend

- ▲ Salma Dam
- Villages
- District Centers

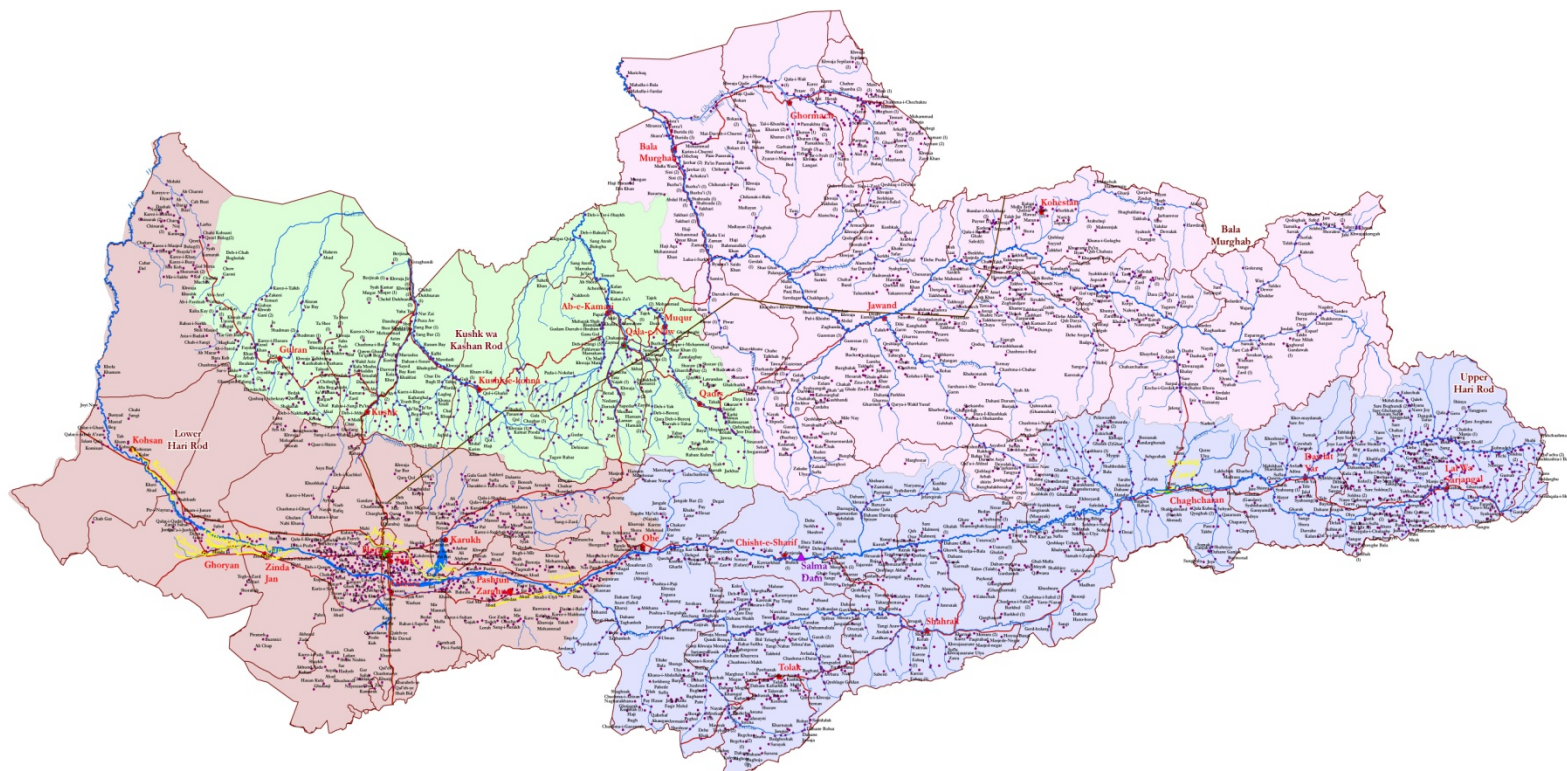
On-Going Projects

- Zendajan Canal
- Jul-New Canal
- Yahyaabad
- Syasang Canal
- Kohsan Canal
- Goryan Canal

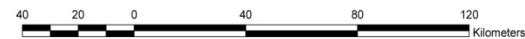
River Lines

River Basins

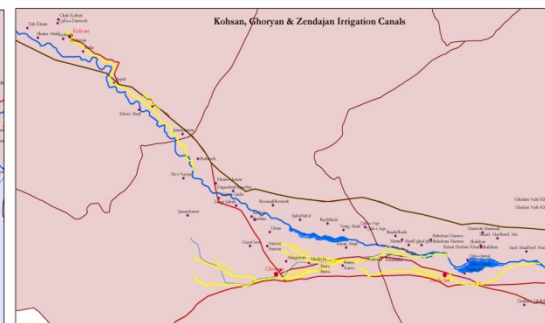
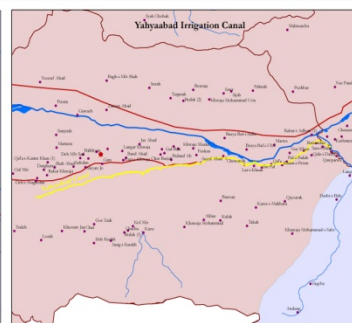
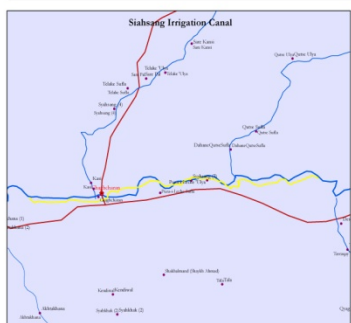
- Bala Murghab
- Kushk wa Kashan Rod
- Lower Hari Rod
- Upper Hari Rod
- All Lakes
- Province Roads
- National Roads
- District Boundry



MAP INFORMATION
 Map Produced : 22-Nov - 2011
 File Name : H.M River Basin.MXD
 Cartographer : Fatema Samim
 Projection : World Mercator
 Datum : WGS 1984
 Contact : PMU, Herat, Afghanistan



DATA SOURCES
 Base layer information including boundaries, roads, rivers and place names courtesy of the Afghanistan Information Management Service (AIMS).
 Update Canal Alignment, Drainages, Roads & Rivers based on Satellites Image
 Raster Imagery sourced from NASA and USGS.



Harirud-Murghab River Basins

Legend

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- Villages
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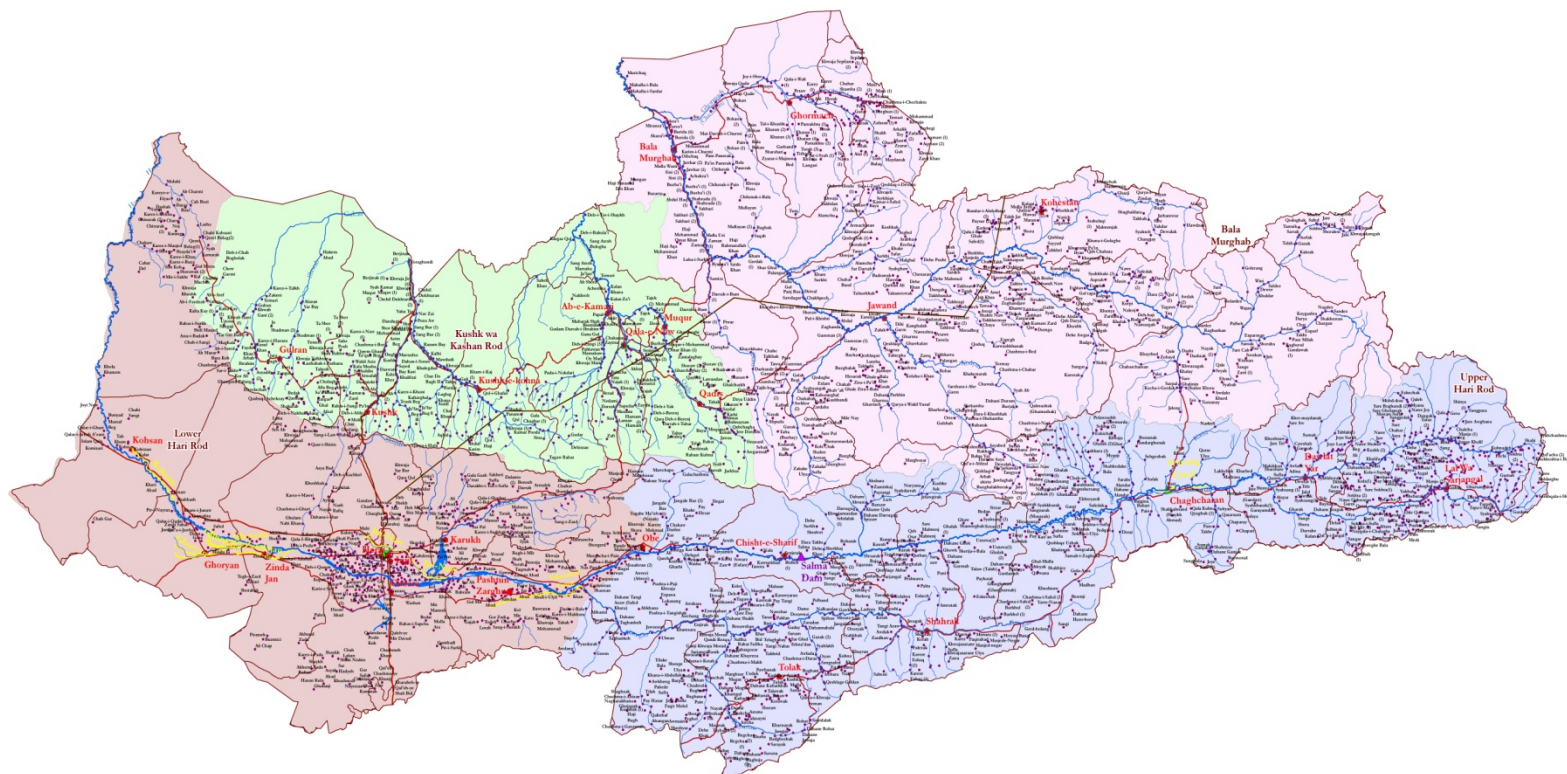
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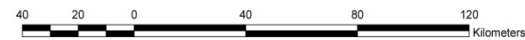
River Lines

River Basins

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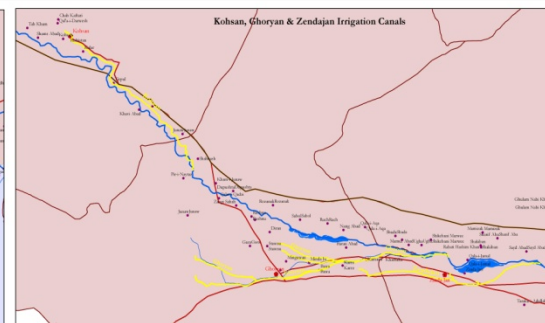
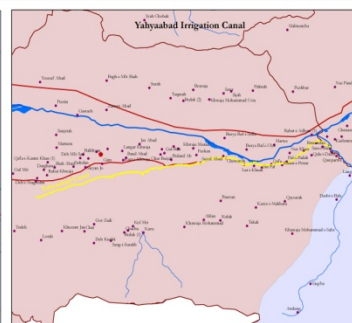
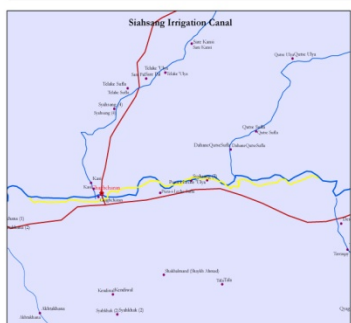
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Western Basins Water Resources Management Project
 MEW Water Management Department Building
 Qul-i-Urdo Road, Herat, Afghanistan



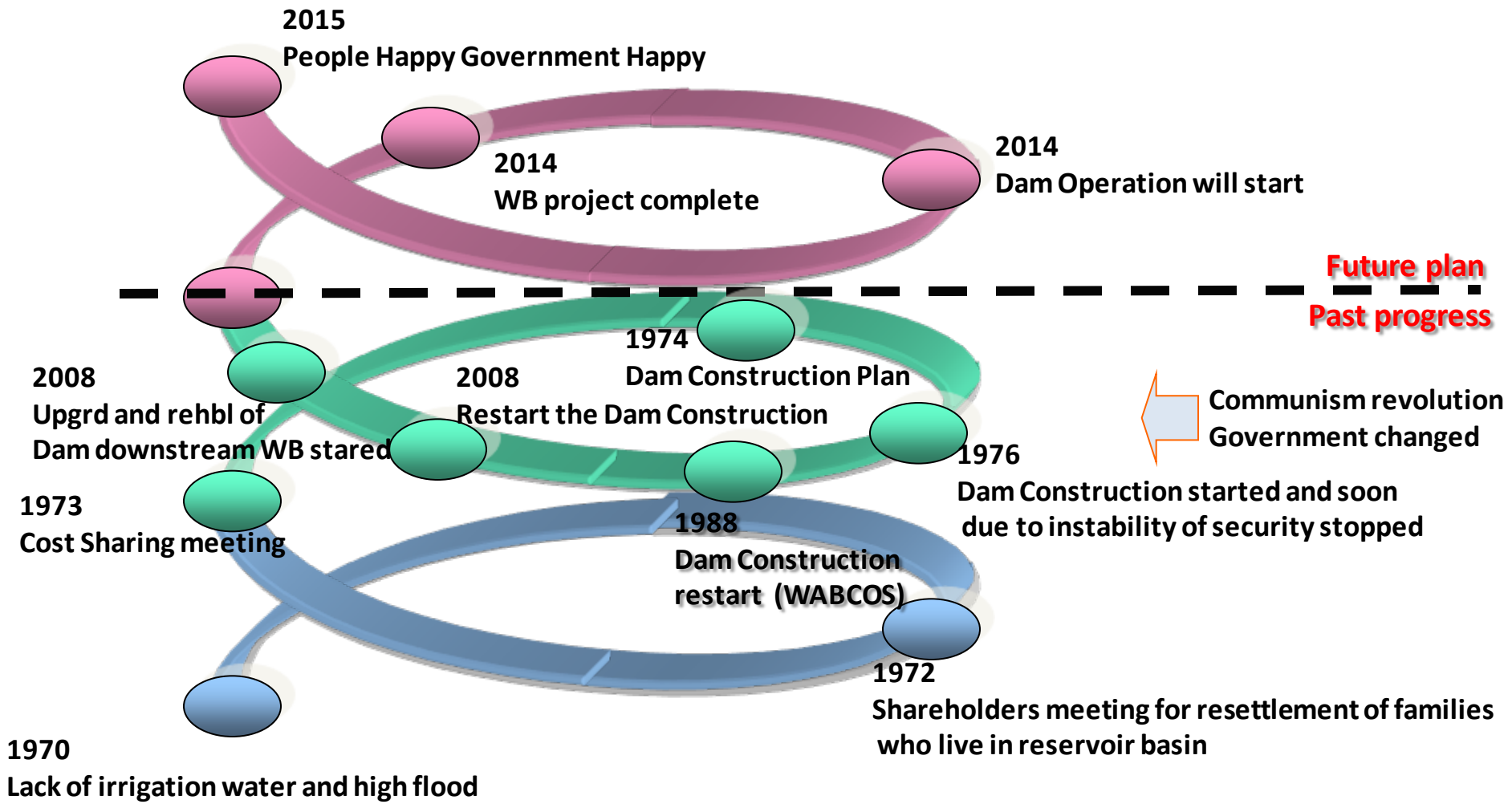
Location of Salma Dam

| | |
|--------------------------|------------------------|
| Location | Herat Province |
| Status | Under construction |
| Construction began | 1976 |
| Opening date | 2014 (est.) |
| Construction cost | US\$200 million |
| Owner(s) | WAPCOS |
| <u>Dam and spillways</u> | |
| Height | 107.5 m (353 ft) |
| Length | 551 m (1,808 ft) |
| <u>Reservoir</u> | |
| Active capacity | 560 MCM |
| Inactive capacity | 633 MCM |
| Catchment area | 11,700 km ² |
| <u>Power station</u> | |
| Turbines | 3 X 14 MW |
| Maximum capacity | 42 MW |
| Annual generation | 86.6 GWh |

Why Western Basin Project

By the time the Salma Dam going to be completed on 2014 the downstream canals should be ready for delivering the water to irrigation systems smoothly with limited loses, and upgrading the irrigation of land up to 40,000 of hectares which is the main responsibility of western basin project, The feasibility study has been done for Western Basin Project in 2004 and negotiation was underway with ADB for the cost of Implementation of Rehabilitation and Upgrading of Western Basin project then in 2006 the Financial agreement have been signed between ADB and the Government of Afghanistan, the physical work started on Feb. 2008 and will complete on 31 December 2014 (7 years)

IWRM Spiral for Western Basin Afghanistan



Thank you

