Integrated Water Resources Management in Afghanistan

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Integrated Water Resources Management (IWRM) is a participatory planning and implementation process, based on sound science, that brings stakeholders together to determine how to meet society’s long-term needs for water and coastal resources while maintaining essential ecological services and economic benefits.
IWRM helps to protect the environment, foster economic growth and sustainable agricultural development;

promote democratic participation in governance, and improve human health.

IWRM is emerging as an accepted alternative to the sector-by-sector, top-down management style that has dominated in the past.
IWRM in Afghanistan is the integrating concept for a number of water sub-sectors such as hydropower, water supply - sanitation, irrigation, drainage and environment.

The key policies and strategies of IWRM in Afghanistan:
**Vision:** poverty reduction and unemployment, economical and social development and public welfare through effective management of water resources in Afghanistan.

**Goal:** gradually decentralize the relevant activities to main river basin and sub river basin institutions to access maximum utilization of water resources for social – economical development, environmental protection and sustainable development.
Afghanistan:

Location: Southern of Tajikistan, Uzbekistan, Turkmenistan north and eastern of Pakistan & western of Iran.

Area:
- total: 652,000 sq km
- Land boundaries:
  - total: 5,5 km
  - border countries: China 76 km, Iran 936 km, Pakistan 2,430 km, Tajikistan 1,206 km, Turkmenistan 744 km, Uzbekistan 137 km
The Map of Afghanistan
**Terrain:** mostly 75% mountains; plains in north and southwest

**Elevation extremes:**
- lowest point: Amu Darya 258 m asl
- highest point: Nowshak 7,485 m asl

**Population:**
32,700,000 (July 2008 est.)

(The World Fact book) and population growth rate is 2.6%.
**Land use:**
Arable land 12%, permanent pastures 46%, forest and woodland 3% and other is about 39%. The total area of irrigated land is more than 30,000 sq km.
Environment - current issues:

Soil degradation; overgrazing; deforestation (much of the remaining forests are being cut down for fuel and building materials); desertification.
Afghanistan Climate:
The climate is typical of an arid & semi-arid steppe, with cold winters and dry summers. The mountain regions of the northeast are sub-arctic with dry and cold winters.
34 provinces of Afghanistan covers an area of 652,000 square km, nearly; average elevation about 1300m.

Generally semi-arid steppe, with wide regional variations, the climate varies sharply between highlands and lowlands.
Lowest Recorded Temperature: -26°C in the Hindu Kush

Highest Recorded Temperature: 49°C recorded in Jalalabad

Mean Annual Precipitation: [250mm p/year]
Compare of precipitation 2004, 2005, 2006 with mean long term precipitation of all country
Water Resources & River Regimes:

In Afghanistan, most rivers have maximum flow in spring and early summer and minimum in late summer and winter.

Afghanistan divided in five River Basins:
Map 2. River Basins in Afghanistan