



Geo-referenced database on dams in Central Asia

Notes and References

General notes

A. Quality of data

The references used for the database were: i) International Commission on Large Dams (ICOLD). 2007. *The World Register of Dams*; ii) National Reports; iii) Information obtained from national experts through AQUASTAT national surveys; iv) April 2010 version of Global Reservoir and Dam (GRanD) Database; v) The Internet.

The database, in its present format, is neither complete nor can be considered error-free. It corresponds to the best available information at the time of the study.

B. Coordinates

Coordinates are given in both degrees, minutes, seconds and decimal degrees. Location was obtained through FAO AQUASTAT country profile surveys and geographical information as detailed in the national and other references columns in the database.

C. Large dam

According to ICOLD, a large dam is a dam with a height of 15 metres or more from the foundation. If dams are between 5-15 metres high and have a reservoir volume of more than 3 million m³, they are also classified as large by ICOLD.

While the database concentrates on large dams, in some cases if information on other dams was available, it has also been included, since AQUASTAT considers this information to be valuable.

D. Dam height

All heights are given in metres, with a precision of two decimals (cm), although most of the available figures are given with a precision of 1 metre.

E. Reservoir capacity and sedimentation rate

The reservoir capacity refers to the initial capacity, not taking into consideration the reduction in volume due to sedimentation. The level of sedimentation refers to the percentage of initial capacity lost due to sedimentation. This should be linked to a year, but not always the year is available.

Figure 1:
Major river basins with sub-basins and dams in Central Asia





Explanation of the fields of the dams database in Excel

Column Title	Explanation
Name of dam	The name of the dam
Country	The name of the country in which the dam is located
ISO alpha-3	Country codes used by United Nations
Administrative unit	The name of the sub-national administrative unit in which the dam is located. Was often determined using the GAUL dataset
Nearest city	The name of the city closest to where the dam is located
River	The name of the river on which the dam is located
Major basin	The name of the major river basin in which the dam is located.
Sub-basin	The name of the sub-basin in which the dam is located
Completed/operational since	Year in which the dam was completed, operational or improved
Dam height	Height of dam in metres. The precision given is two decimals (cm), although most of the available figures are given with a precision of 1 metre
Reservoir capacity	Capacity of reservoir in million (1 000 000) cubic metres (this is equivalent to hm ³). It refers to the initial capacity, not taking into consideration the reduction in volume due to sedimentation
Sedimentation rate	Percentage of initial capacity lost to sedimentation (%). This information is updated to be latest known.
Reservoir area	Surface area of the reservoir in square kilometres
Irrigation	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Water supply	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Flood control	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Hydroelectricity	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Navigation	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Recreation	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Pollution control	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Livestock rearing	An "x" here denotes the dam is used for this purpose. Check the comment for potential additional details.
Other	Purpose of the dam other than the 8 above. Check the comment for potential additional details.
Decimal Degree Latitude	Latitudinal coordinate of the dam, expressed in decimal degrees.
Decimal Degree Longitude	Longitudinal coordinate of the dam, expressed in decimal degrees.
National Reference(s)	Number of reference providing information on the dam, coming from a national source. The references are given in Notes and References of the regional file.
Other Reference(s)	Number of reference providing information on the dam, coming from a global or general source (for example ICOLD). The references are given in Notes and References of the regional file
Notes	In this column specific comments of importance to the dam are given



References and notes by country

Note: the reference numbers below correspond to the numbers in the columns "National Reference(s)" and "Other reference(s)" of the database

General/Other

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13. Ministry for Energy and Industry of the Republic of Tajikistan, UNDP Tajikistan. 2007. Strategy for development of small scale hydropower of the Republic of Tajikistan.
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17. Pertov G. N. 2009. Optimization of the work regime of Dams with Reservoirs. National Patent and Information Center of Tajikistan. Russian
18. <http://globalenergyobservatory.org/form.php?pid=41767>
19. Fars news agency. 2011. Source: Sangtuda-2 Power Plant Ready for Inauguration. Available at: <http://english.farsnews.com/newstext.php?nn=9006080111>



Turkmenistan

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- 21.** Ministry of water economy. 2007. Water sector. Programme for development of agriculture for the period up to year 2030

Uzbekistan

- 22.** OrexCA. 2011. Charvak Hydroelectric Power Station. Available at: <http://orexca.com/charvak.shtml>
- 23.** CAWATER. Main characteristics of reservoirs in Uzbekistan. Available at: http://www.cawater-info.net/analysis/register/pdf/reser_uz_e.pdf. Info coming from Ministry of Agriculture and Water Resources of the Republic of Uzbekistan
- 24.** Shavkat Rakhmatullaev, Frédéric Huneau, Philippe Le Coustumer, Mikael Motelica-Heino and Masharif Bakiev. 2010. Facts and Perspectives of Water Reservoirs in Central Asia: A Special Focus on Uzbekistan. *Water* 2010, 2, 307-320; doi:10.3390/w2020307.