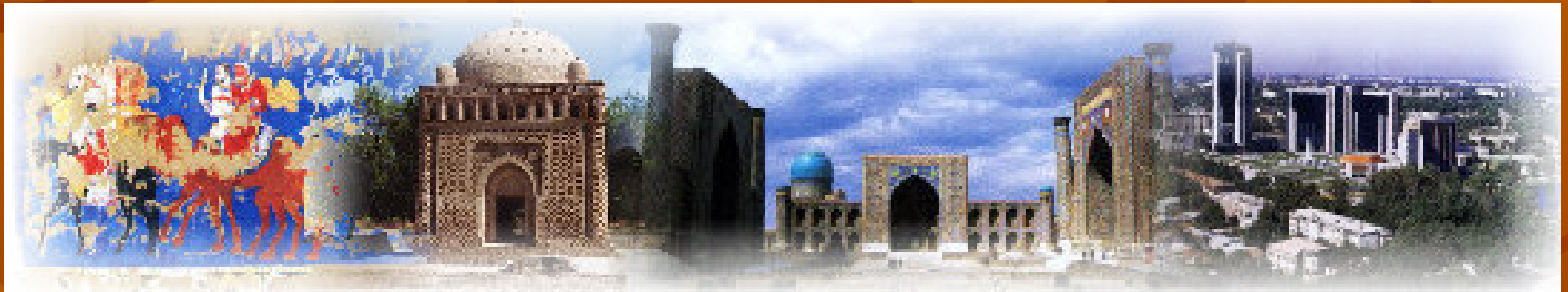


Access to safe drinking water in Karakalpakstan and Uzbekistan



Mehriban
Kyiv - 2007



Scale 1:18,000,000
Lambert Conformal Conic Projection,
standard parallels 47°N and 52°N



Boundary representation is not necessarily authoritative.

Background Information - Uzbekistan

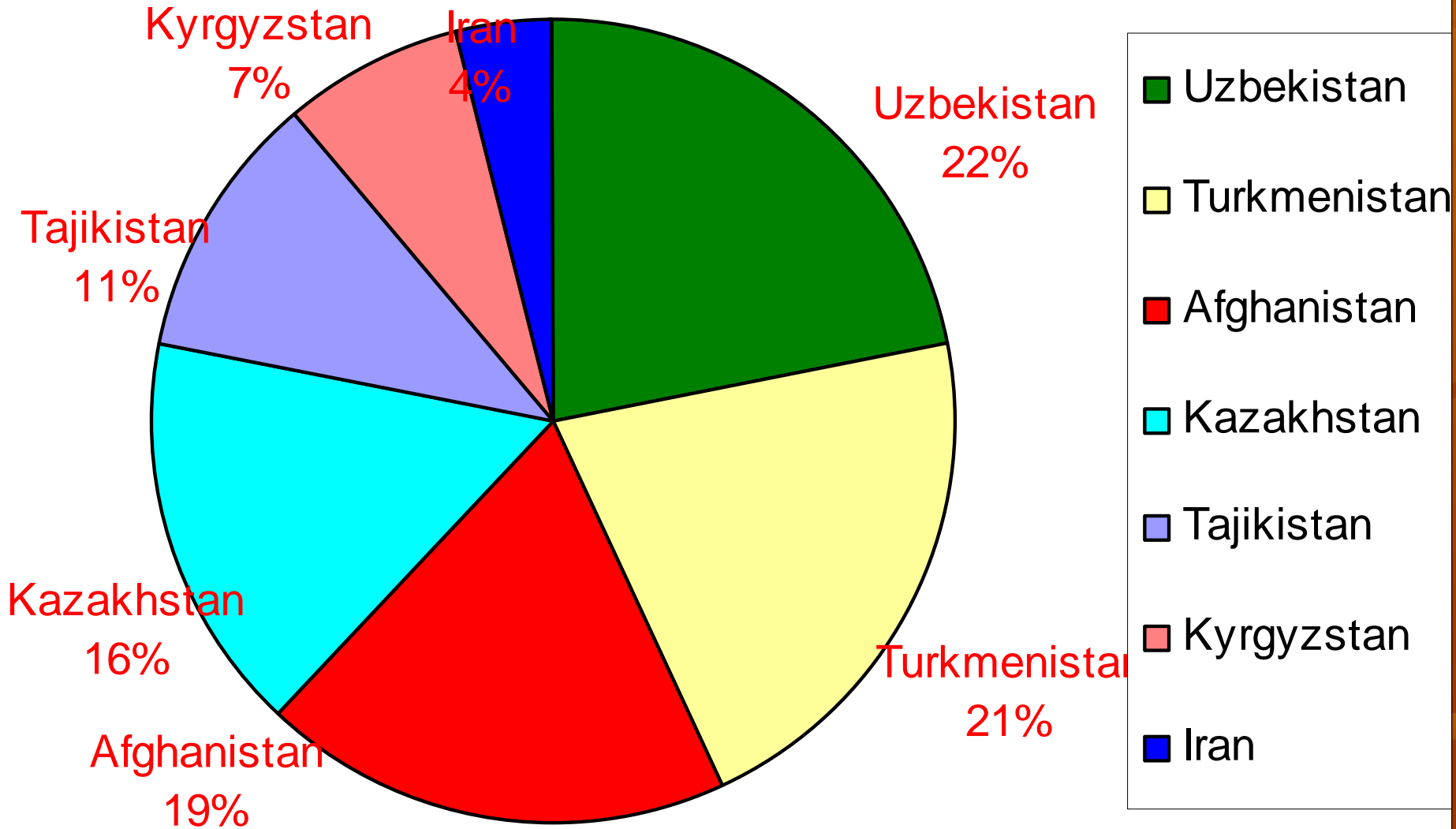


- Low income country (GNI - 450 USD per capita)
- Population – 26 mln, Population growth-1.5%
- Main source of income – agriculture (cotton export) and natural gas
- More than 60% live in rural areas
- WB: 89% of have access to ‘improved water source’
- WB: 73% of urban population have access to ‘improved sanitation’

Current Aral Sea



Aral Sea Watershed Division



Problems: I - Water Quantity

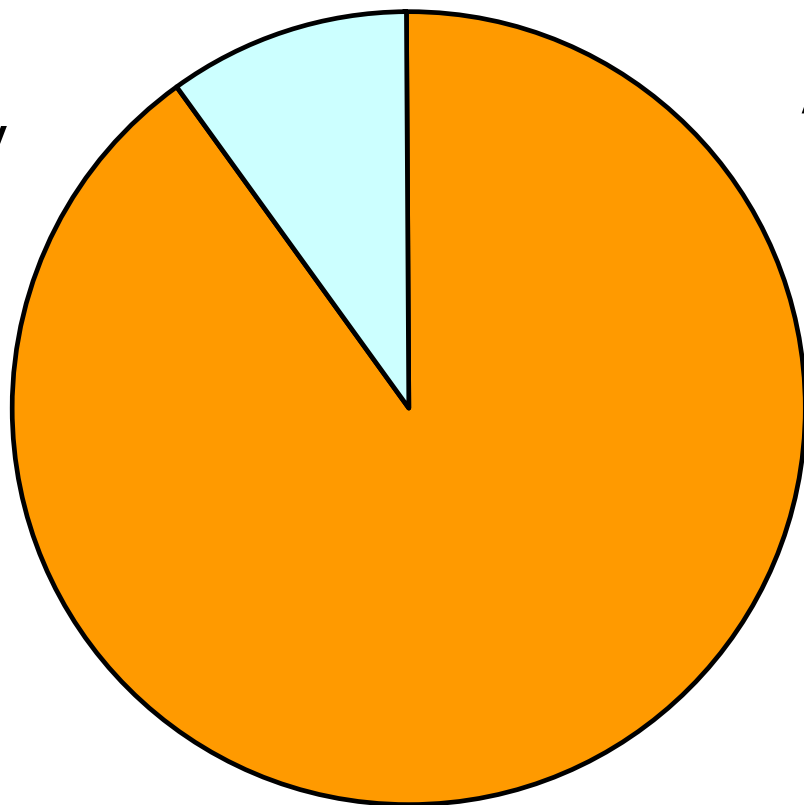
- Water of the Aral Sea watershed is a complex and complicated issue – lack of cooperation between 5 Central Asian countries + Afghanistan and Iran, and inequitable or unfair distribution and/or consumption
- Swiss Intl Cooperation Agency: competition for water in the Aral Sea
 - Tajikistan diverted water from upper Syr Darya River for their power plants
 - Kyrgyzstan have built dams and reservoirs
 - Uzbekistan have built many dikes besides irrigation channels

Water Consumption – Uzbekistan

- Agriculture is the largest consumer

Households
and
Industry

10%



Agriculture
90%

■ Agriculture

■ Household and
Industry

Problems: I - Water Quantity

- Growing demand – population growth
- Overuse: some 30 cubic meters of water required to produce a single kg of cotton or 8000 liters for one pair of jeans
- Very low precipitation, in Karakalpakstan annual precipitation is less than 100 mm
- WB: Inefficient irrigation channel systems are the main cause of the rise in water consumption and water losses



Problems: II - Water Quality

- Pollution sources:
- Agriculture: chemicals (for cotton, rice and wheat crops)
- Untreated sewage - pathogens: in urban areas hardly any drinking water treatment plants
- Industry
- Doctors Without Borders: drinking water sources have been poisoned by pesticides, fertilizers, excess salts, agricultural runoffs and drainage water. Heavy application of persistent organic chemicals for cotton production, and the local population is exposed to POPs by consuming the food and drinking the water
- Amudarya river water is polluted with chlorine and pesticides. Particularly downstream areas –



Currently in UZB more than
5 million people or about
20%
of population continue to
use
water from open canals and
polluted wells



Pollution from pit latrines and lack of awareness is one of the main problems of drinking water



Current water sources (hand-pumps and wells) in the project areas – Karauzyak and Nukus Regions are not suitable for human consumption



- Our water analyses from the project sites showed extremely high hardness and salinity, and do not meet any standards (Uzbekistan, EU, WHO)
- Furthermore the analyses detected some concentration of uranium, manganese (10 times more, in some instances even 40 times more), sulphate
- *Microbiological analyses: presence of microorganisms (coli index 3 times more than UZB standards)*

From own experiences:

- It is almost impossible to analyze drinking water (we have tried all existing labs: Republican and Nukus City Sanitation and Epidemiological Stations, Academy of Sciences, Nukus City Water Company, Ministry of Environment Protection, Urban Central Water Supply Company)
- Citizens have no access to information about the quality of drinking water
- Quality of drinking water is not a topic for a public discussion – lack of freedom of speech and free media, lack of awareness of people about the quality of water and its health impacts

Pricing Mechanism:

- Water price is regulated and set by the State
- In Urban Areas: 10 US cents for 1 m³
- In Rural areas: 8 US cents for 1 m³
- However, 50 % of water bills are never paid, it is difficult for people to shift from a free commodity to a paid service
- Since January 2007 Urban and Rural Water companies do not get any state subsidies and are self financed

- These companies unable to cover their basic expenses because of low prices, price control, unpaid bills and leakages (60% lost)
- Therefore - poor service (interruptions) and poor water quality



Health problems:

- Unsafe drinking water or water with chemical compounds used to increase crop capacity is the main cause of diseases in the region
- High mortality and morbidity rates compared to other countries of NIS (kidney, diarrhea, hepatitis, high blood pressure, anaemia, birth defects, sharp increase of TB)
- High level of infant and children mortality (under
- Annual state health spending in Karakalpakstan is 14 USD/per capita (includes administration costs of the MoH)

Hemoglobin level test of school children carried by the project



In rural areas of Uzbekistan water is not just a source of life, but a basic source of infections and diseases



People do not boil water for drink because of lack of awareness and lack of energy sources

Poor quality drinking water with salts and chemicals cause chronic illness



Trial of watercone, however it produces only 500 mg/day of water during summer



- Аўқат жеуден алдын...
- Суў ишиуден алдын...
- Аўқат писириуден алдын...
- Уйықлаудан алдын...



қолыңызды сабынлап жууыұды ұмытпаң!



Таза ишимлик суўы
бул сизиң ден-саўлығыңыз ушын
ең аҳмийетли ҳәм
ең керекли нәрсе!



Drinking water and Hygiene camp

One of the ways to prevent pollution is ECOSAN



Provision of Central Water Supply in Rural Areas of Karakalpakstan

- In Karauzyak Region:
- 28 settlements (villages) out of 105 have access to cwss or 15,634 out of 30,099 people - 51.9% of total population of Karauzyak

- In Nukus Region:
- 30 settlements (villages) out of 41 have access to cwss or 32,797 out of 37,247 people - 88.1% of total population of Nukus

- In the Republic of Karakalpakstan:
- 417 out of 1195 settlements have access to cwss or 392,941 out of 796,661 people – 49.3% of total rural population of Karakalpakstan

- Population: 476
- Households: 69
- Wells: 1
- Hand-pumps: 19
- Local health clinic: 1
- School: 1

