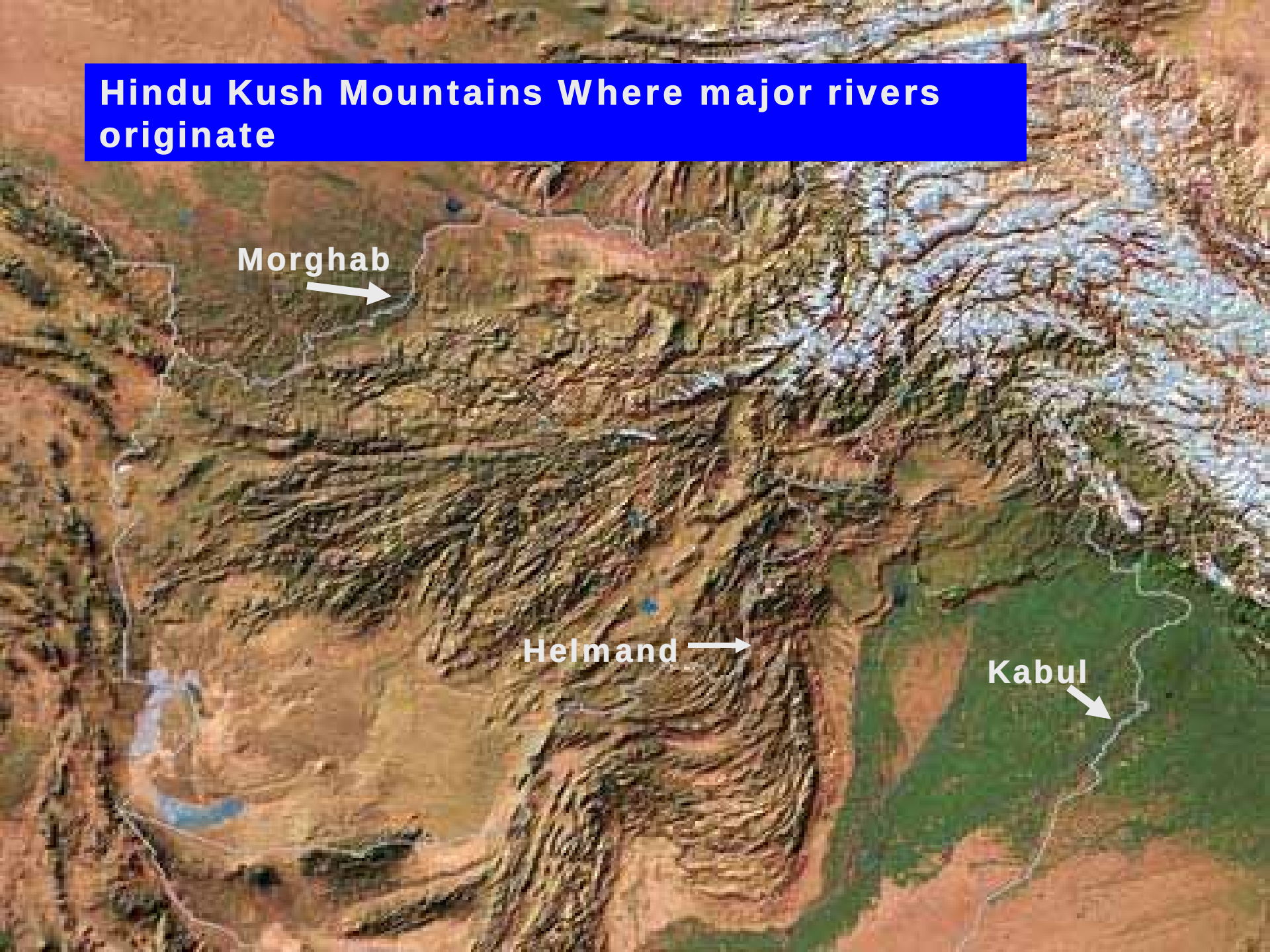
Afghanistan
Issues, Constraints and Objectives


UZBEKISTAN
KYRGYZSTAN
CHINA
TAJIKISTAN
TURKMENISTAN
Mazar-e Sharif
Qala Jangi
Kunduz
Taloqan
Meymaneh
Bamian
Bagram
Herat
(Hirat)
KABOL (KABUL)
Tora
Bora
Jalalabad
Peshawar
ISLAMABAD
AFGHANISTAN
Shindand
Ghazni
Gardiz
Khost
(Khowst)
Hazar Qadam
Tarin Kowt
Zawar
Kili
Farah
Kandahar
IRAN
Chaman
Quetta
PAKISTAN
INDIA


Hindu Kush Mountains Where major rivers originate
Morghab
Helmand
Kabul

Water Recourses:

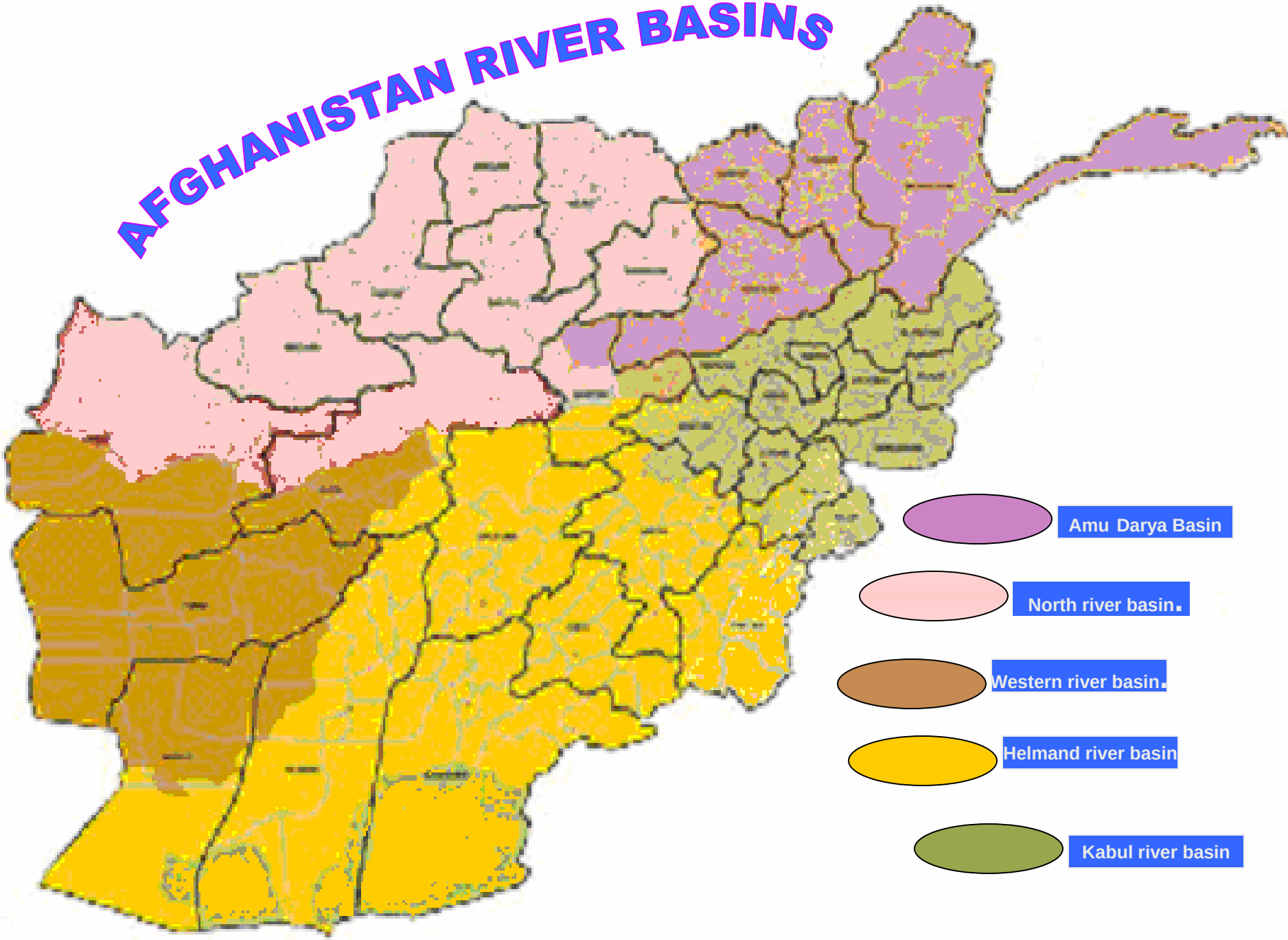
Surface Water Resources:

Although Afghanistan is located in half deserted atmosphere, it is still rich in water resources mainly due to the series of high mountains such as Wakhan, Hindo Kush, and Baba covered by snows. Over 80% of the country's water resources have their origin in the Hindo Kush mountain ranges at altitudes above 2000 m which function as a natural storage of water in form of snow during winter and thus support perennial flow in all major rivers by snowmelt during summer.

Afghanistan consists of 5 large river basins:

Amu Darya Basin.
Helmand river basin.
Western river basin.
Kabul river basin.
North river basin.

AFGHANISTAN RIVER BASINS



Although these 5 River Basins covered some of provinces which shown in table 3.

No	Name of the river basins	Provinces which are under cover in every River basin
1	Amu Darya Basin	Kunduz, Takhar, Badakhshan, Baghlan and Bamiyan
2	Helmand river basin	Uruzgan, Ghazni, Zabul, Kandahar, and Helmand
3	Western river basin	Ghor, Farah, and Nimroz
4	Kabul river basin	Kunar, Laghman, Kapissa, Parwan, Nangarhar,Kabul, Logar, Wardak, Khost, and Pktika
5	North river basin	Badghis, Faryab, Sare Pul, Jawzjan, Balkh, and Samangan.

The important River under these five river basins is shown in Table 2.

	Name of the river basins	Rivers which included in every basin	Storage of capacity (billion m^3)
1	Amu Darya Basin	Wakhan, Kokcha,Kundnz,Pamir/Panj, Murghab, Shirin Tagab, Kashan, Kushk, Gulran	21
2	Helmand river basin	Helmand, Arghandab, Ghazni, Trank, Arghestan, Musaqala	6.5
3	Western river basin	Khash, Farahrod, Adraskan, Hrirod, etc.	2.5
4	Kabul river basin	Kabul, Kunar, Alisheng, Alinegar, Panjshir, Shutol, Ghorband, Laghman, Logar, Maidan	18
5	North river basin	Badghis, Faryab, Sare Pul, Jawzjan, Balkh, Samangan and Bamiyan.	7
Total		5	55

The total potential of the water resources in Afghanistan is about 75 billion M3 out of this 55 billion M3 is the surfaces water and the rest 20 BM3 is the under ground water. Presently usage of surface water is 20 BM3and 3 billion M3 of ground water due to 25 years wars .

Irrigation in Afghanistan:

The history of irrigated agriculture in Afghanistan goes back to more than 4500 years ago. Except for a few areas where rain fed agriculture can be practiced, agricultural production in most of the country is not possible without irrigation as the rainfall is either meager or unreliable. The allocation of water and land is closely related to customs and traditions of the sedentary population, and maintenance works of irrigation schemes have always been a well-defined activity in the farmers' seasonal calendar. Irrigation systems in Afghanistan can be divided into tow categories: traditional irrigation system and modern irrigation system. Sources of water for drinking and irrigation are Rivers, Karezes, Springs, Tube Weels, and Arhads.

Afghanistan has 7822 ----- Rivers 182of them are biggest

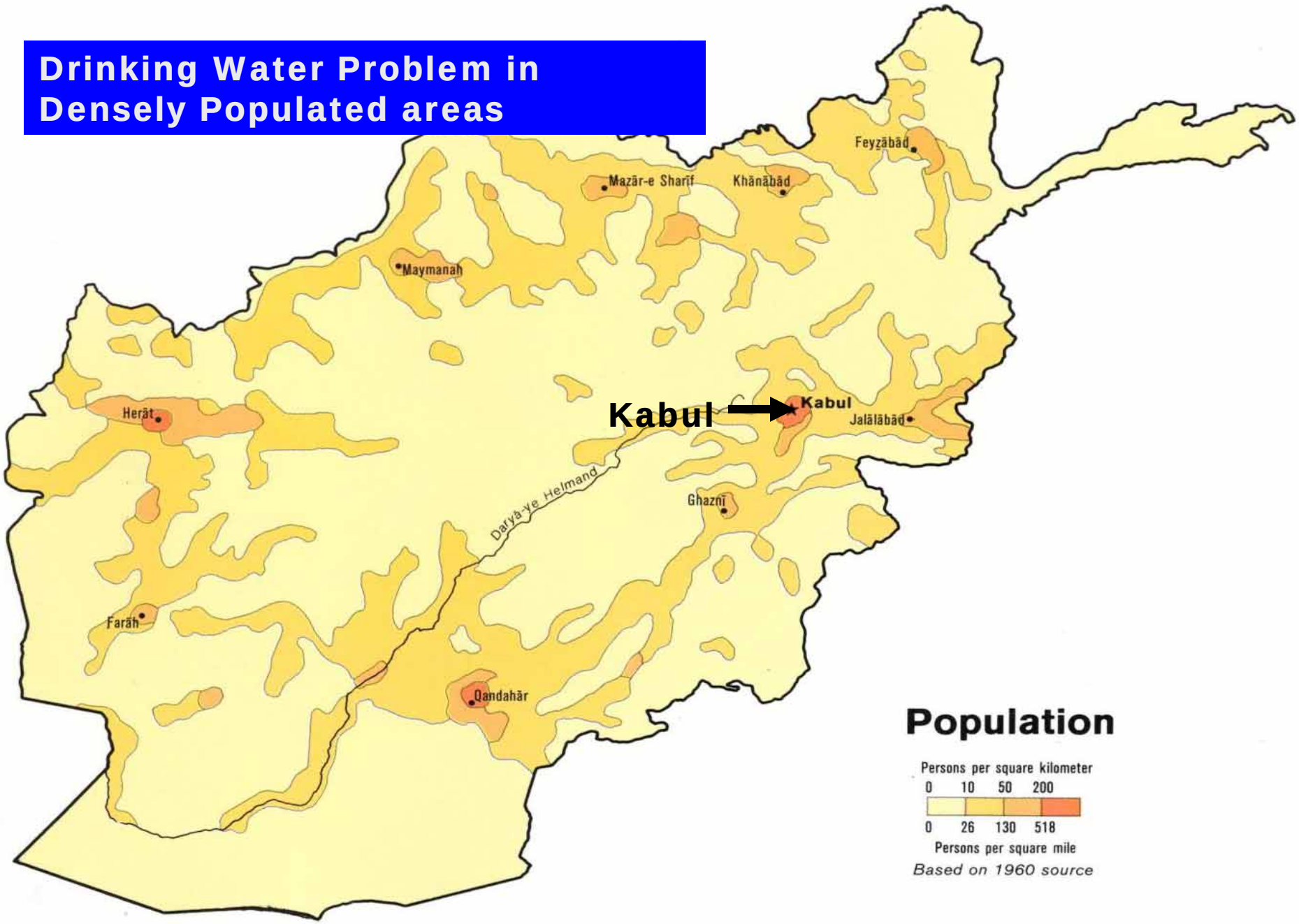
6000 ----- Karezes

9740 ----- Springs

6598 ----- Tube Wells

3000 ----- Arhads

Drinking Water Problem in Densely Populated areas



Issues

- Traditional Irrigation systems – low irrigation efficiencies
- Damaged irrigation infrastructure due to several years of war and conflicts
- Continuous drought for the last 10 years
- Watershed management problems due to inaccessibility of mountain terrains
- Lowering of groundwater tables due to drought
- Weak institutions – due to years of conflict

- Inadequate storage facilities for hydropower, irrigation and drinking water supplies

Constraints

- Lack of capital for major investments in the water sector
- Inadequate capacity for managing river basins and water resources
- Farmers lack knowledge of proper water management

Objectives

- Have an efficient and productive irrigation sector
- Providing safe and adequate drinking water supply to the population
- More investment in water storage facilities for irrigation, hydropower, drinking water supply and groundwater recharge
- Development of groundwater
- Encourage private sector investments in irrigated agriculture