



River Basins of Afghanistan

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Ketabton.com

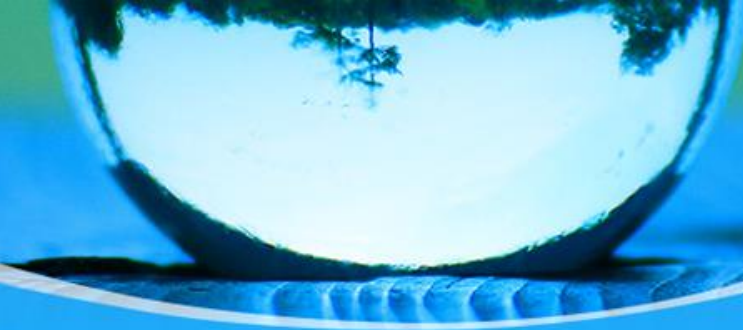
River Basins

- A river basin is an area of land drained by a river and its tributaries.



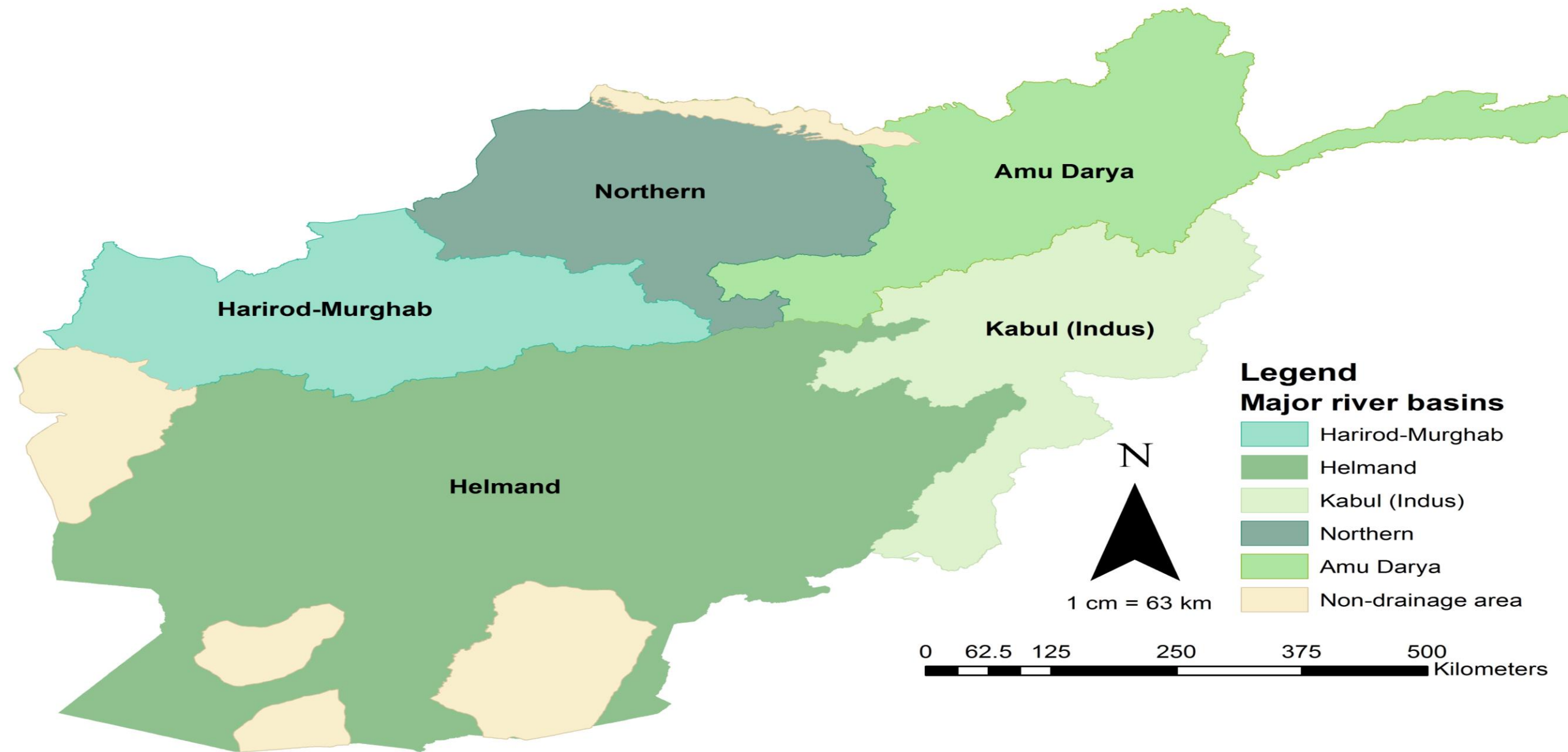
River basins have typical features, these include:

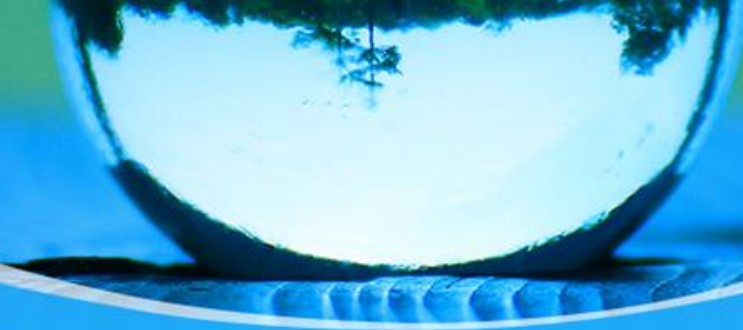
- Tributary – a smaller river or stream flowing into a larger river.
- A Watershed –an area of highland surrounding the river basin.
- Mouth – Where a river meets a lake, the sea or an ocean.
- Source – the start of a river.



There are five rivers basins defined
in Afghanistan (Map).

- i. The Amu Darya river basin
- ii. The Northern river basin
- iii. The Harirod-Murghab river basin
- iv. The Hilmand river basin
- v. The Kabul (Indus) river basin



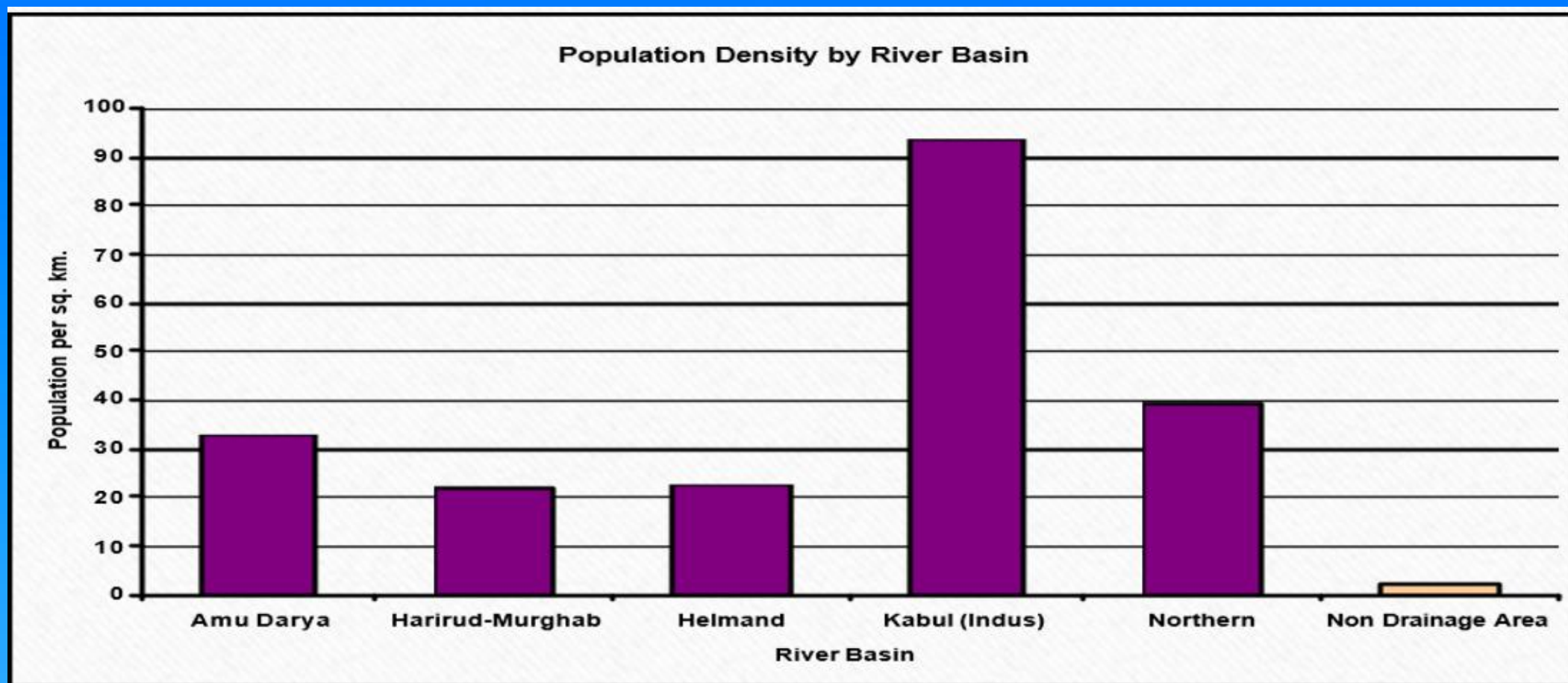


Kabul (Indus) river basin

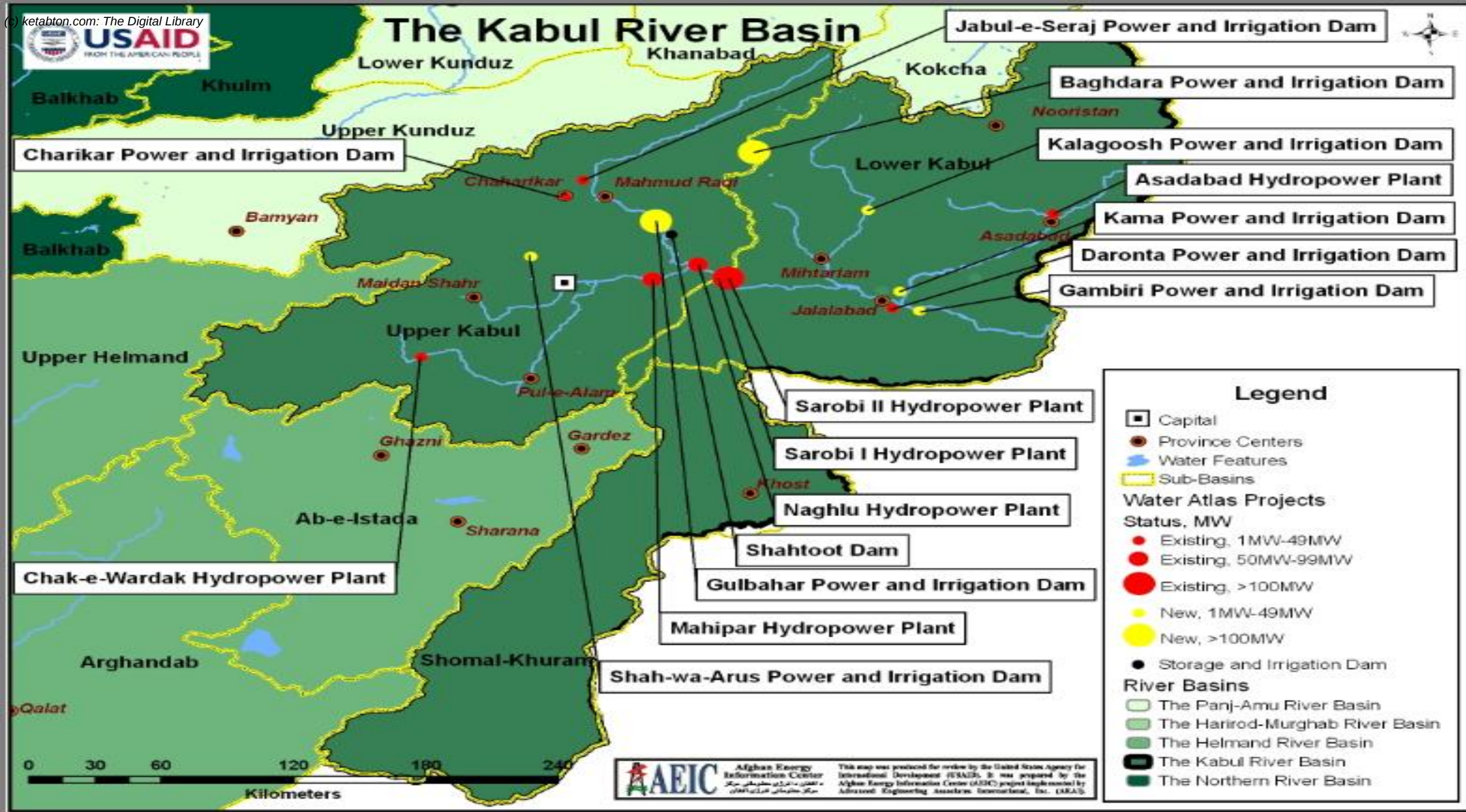
- Kabul River basin worn **77000 km²** Area.
- Kabul River sources 100 km far from Kabul city from Paghman Mountains (Awoni ghakhi)
- The **Major tributaries of** the Kabul River are the (Logar, Panjishir, Kunar, Alingar, Bara and Swat rivers)

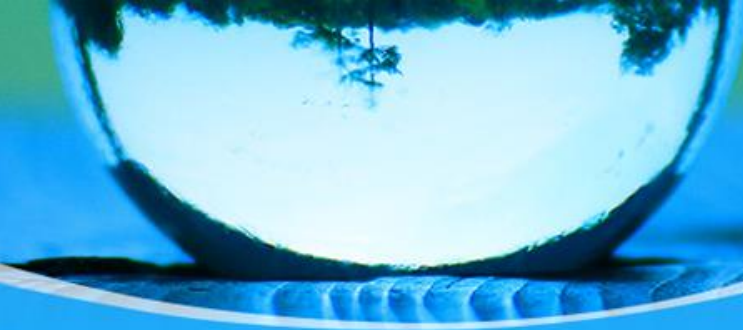
GRAPHS

Graph 1 the largest settled population density is found in the Kabul river basin, (about 40% of all population) with 93 inhabitants/sq.km. The national average is 32 inhabitants/sq. km (nomadic population not included).



The Kabul River Basin

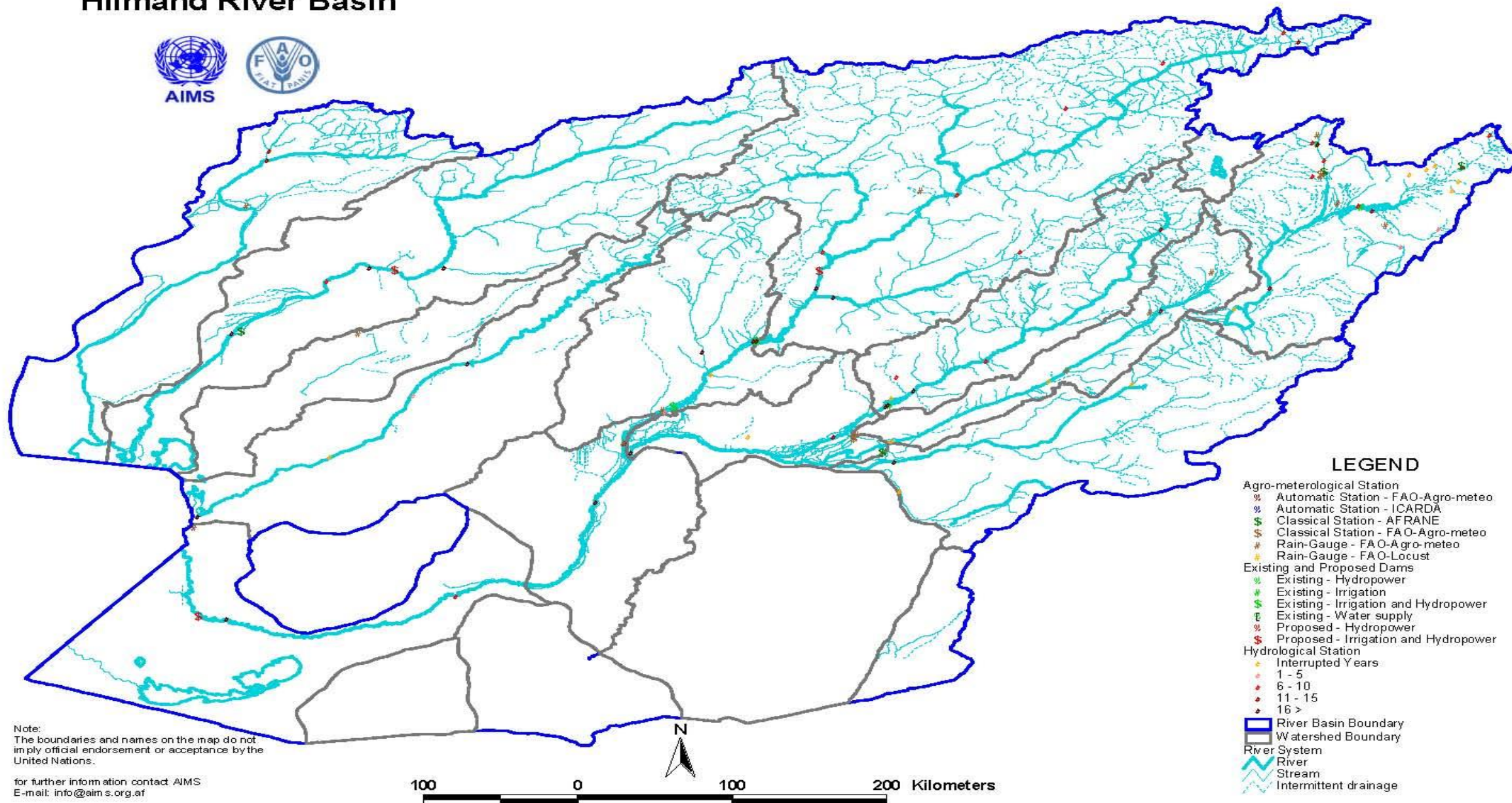




Hilmand river basin

- The Hilmand basin is the largest in Afghanistan, covering almost half (43 percent) of the national territory.
- Helmand river basin has 1400 km Length. And cover 262000 Sq.km Area.
- Helmand River also sources from Paghman Mountains.
- After 1150 km going Cross the Afghanistan border and enter to Iran.
- The major tributaries of the H R B are the (Adraskan, Arghistan, Frah rod, Arghandab, MusaKala, Ghazni, and Tarank)

Hilmand River Basin



Note:
The boundaries and names on the map do not
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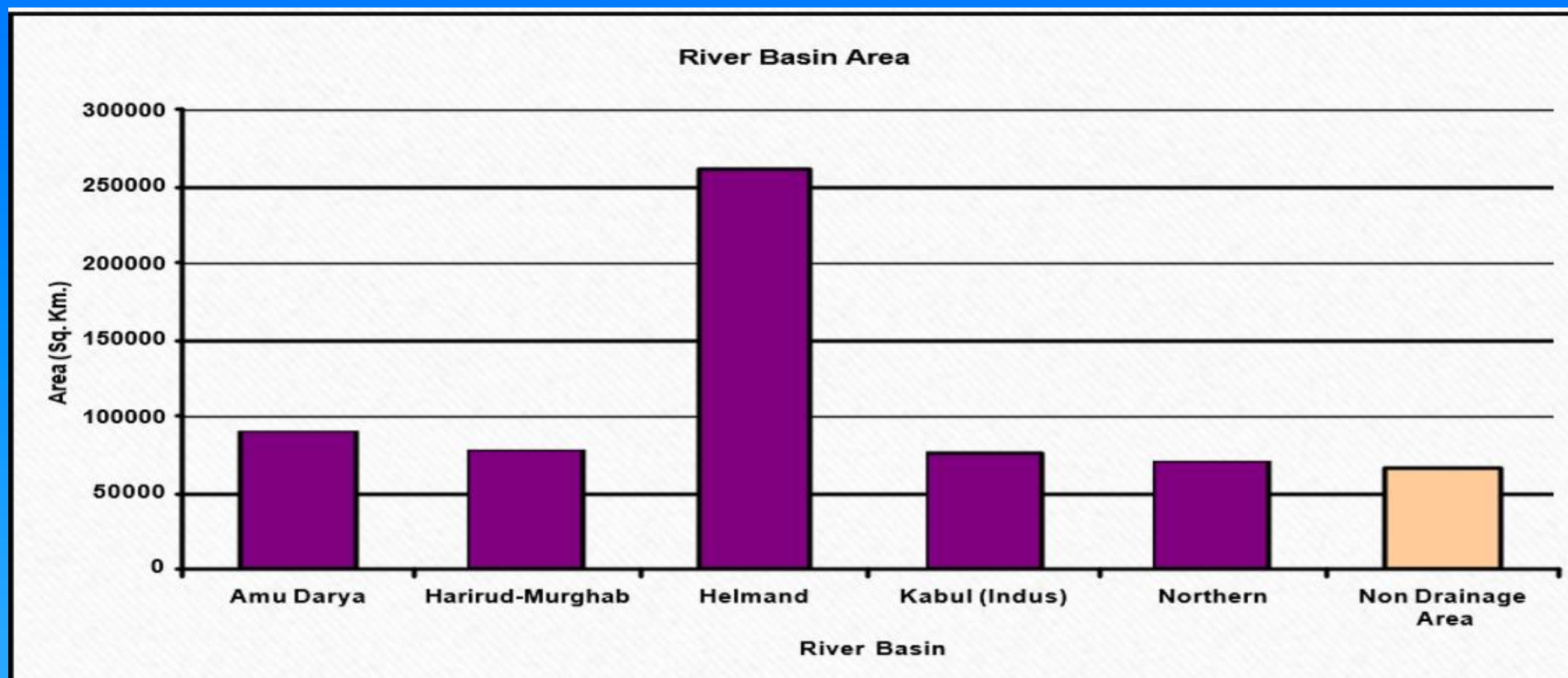
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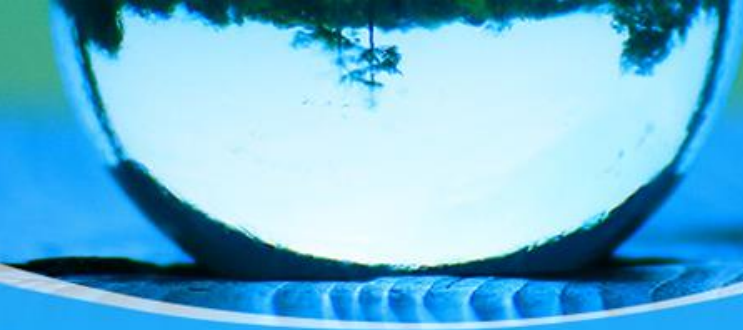
LEGEND

- Agro-meteorological Station
 - % Automatic Station - FAO-Agro-meteo
 - % Automatic Station - ICARDA
 - \$ Classical Station - AFRANE
 - \$ Classical Station - FAO-Agro-meteo
 - # Rain-Gauge - FAO-Agro-meteo
 - # Rain-Gauge - FAO-Locust
- Existing and Proposed Dams
 - % Existing - Hydropower
 - # Existing - Irrigation
 - \$ Existing - Irrigation and Hydropower
 - % Existing - Water supply
 - % Proposed - Hydropower
 - \$ Proposed - Irrigation and Hydropower
- Hydrological Station
 - % Interrupted Years
 - % 1 - 5
 - % 6 - 10
 - % 11 - 15
 - % 16 >
- River Basin Boundary
- Watershed Boundary
- River System
 - River
 - Stream
 - Intermittent drainage

GRAPHS

Graph 2 show that the largest number of settlements are located in the Helmand river basin..





Amu Darya basin:

- The Amu Darya basin has its **headwater** in the High Pamir Mountains of Afghanistan and Tajikistan.
 - The Amu Darya basin has total **227800 km²** Area. However 39% or (91000K²) of in Afghanistan.
- It has **2540** km length that **1200km** of this border between Afghanistan and Tajikistan, Uzbekistan, Turkmenistan.
- The **major tributaries** of the Amu River are the (Rustaq, Khan Abad, Kokcha, Kondozi) in AFG.
 - Also this basin has ability about **900 km** for shipping.
- **Therefore**, the basin has great hydropower potential that is largely **unused**.

Amu Darya River Basin

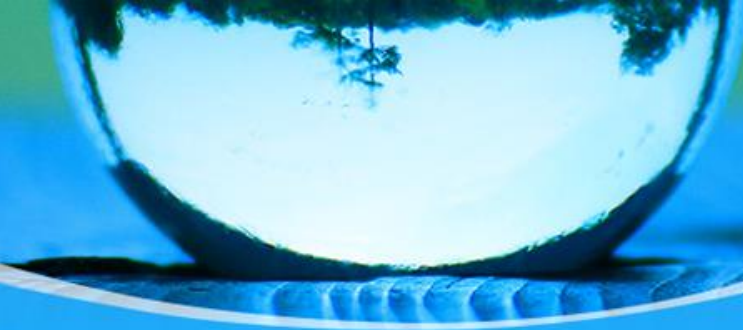


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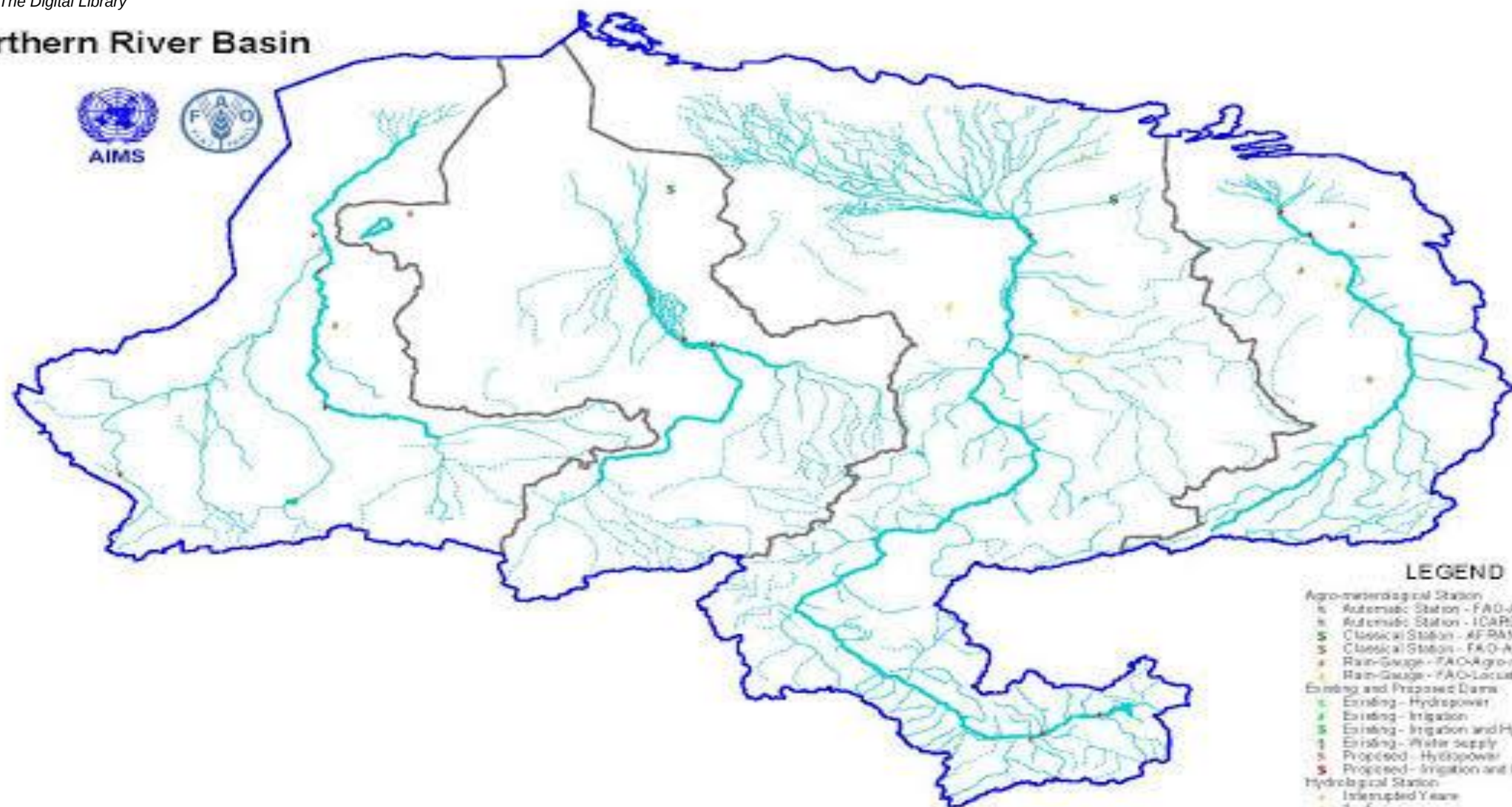
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Northern river basin

- The northern basin has the smallest annual flow contribution in Afghanistan
- The Northern river basin has total **71000 km²** Area.
- The major tributaries are the
- (Shirin Tagab, Sari Pul, Balkhab and khulam Rivers)
- This rivers **dry up** in irrigation canals or desert sands long before reaching the Afghan border and the Amu Darya River.

Northern River Basin



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- River Basin Boundary
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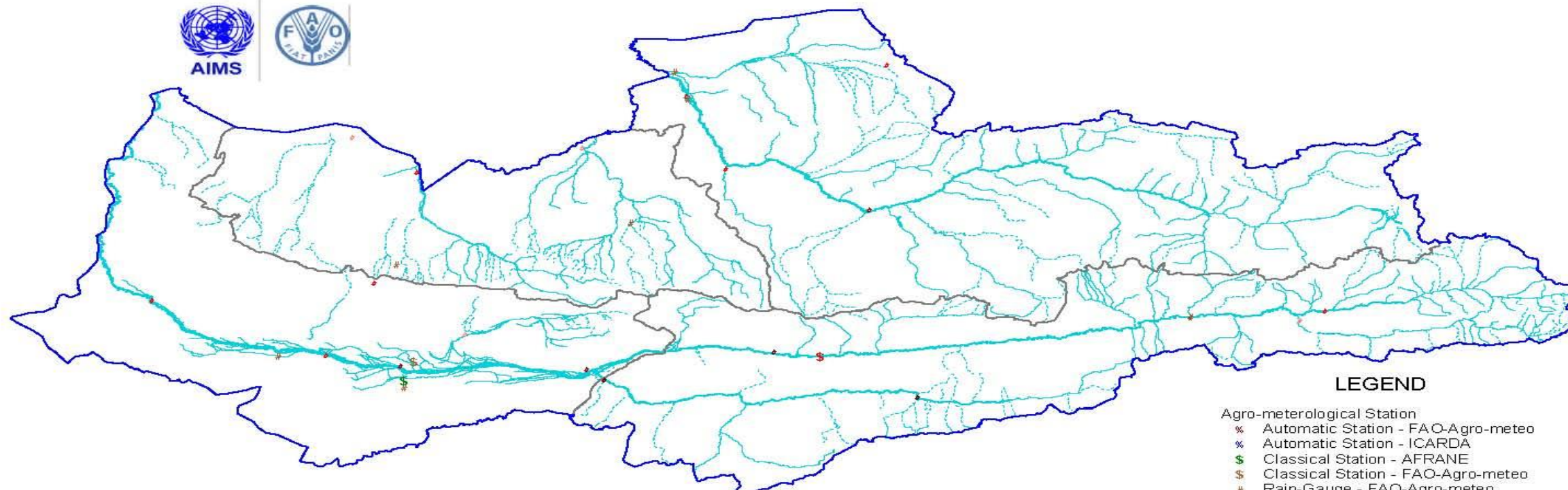
100 0 100 200 Kilometers



Harirod-Murghab river basin

- This basin make from Morghab and Koshakrod rivers.
- And has about 80000 Sq.km Area.
- The start from BaBa Mountains, and Flow 650 km in Afghanistan, and make 100 km border between Afghanistan and Iran.
- And dry of Tajan desert sand in Turkmenistan.

Bala Murghab River Basin

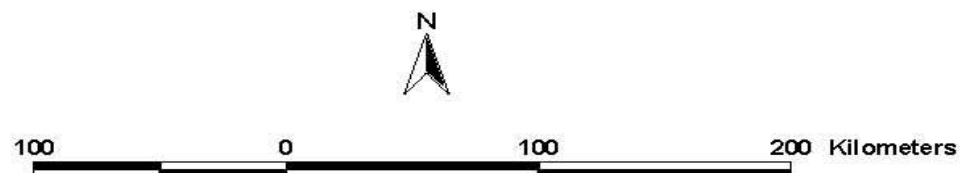


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 - % Proposed - Hydropower
 - \$ Proposed - Irrigation and Hydropower
- Hydrological Station
 - * Interrupted Years
 - 1 - 5
 - 6 - 10
 - 11 - 15
 - 16 >
- River Basin Boundary
 - Thick blue line
- Watershed Boundary
 - Thin brown line
- River System
 - Thick blue line: River
 - Thin blue line: Stream
 - Dashed blue line: Intermittent drainage

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In Hence:

- in collection water in Afghanistan almost Estimate (55% to 24% Milliard meter. Cube)
- In this situation 28% of Afghanistan water use at Economic activity (Like power and irrigation and other needs)
- And 72% of this water without any used and Cross the border.

The End





Thank you
for your Attention



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For assignment of hydrology

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