

GEOSS Activities in Pakistan

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GEO Principal of Pakistan

Advisor on Meteorology & Climate Affairs

Government of Pakistan

Salient Features

- Approval of Climate Change Policy by Cabinet of Pakistan
- Expansion Agromet and Drought Advisory Services
- Extensive Exploration of Potential of Renewable Energy Resources
- Enhanced Network for Cryospheric Monitoring and Disaster Risk Reduction
- Satellite Snow Estimation for Hydrological Modeling

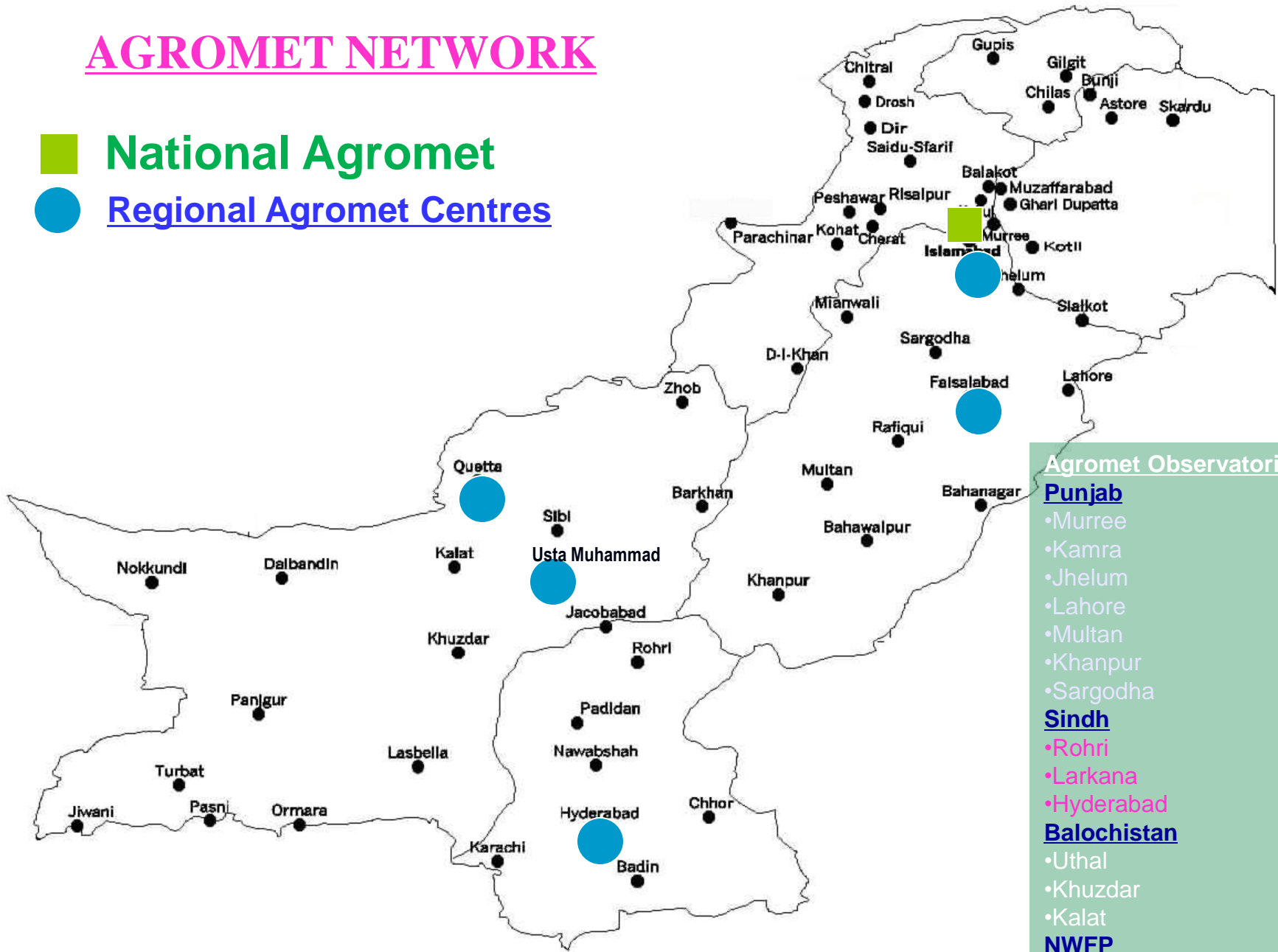
A large green circle is centered on a blue background. The background features faint, wavy lines that resemble water ripples. The text is centered within the green circle.

Drought/Agromet Advisory System

AGROMET NETWORK

 National Agromet

 Regional Agromet Centres



Agromet Observatories

Punjab

- Murree
- Kamra
- Jhelum
- Lahore
- Multan
- Khanpur
- Sargodha

Sindh

- Rohri
- Larkana
- Hyderabad

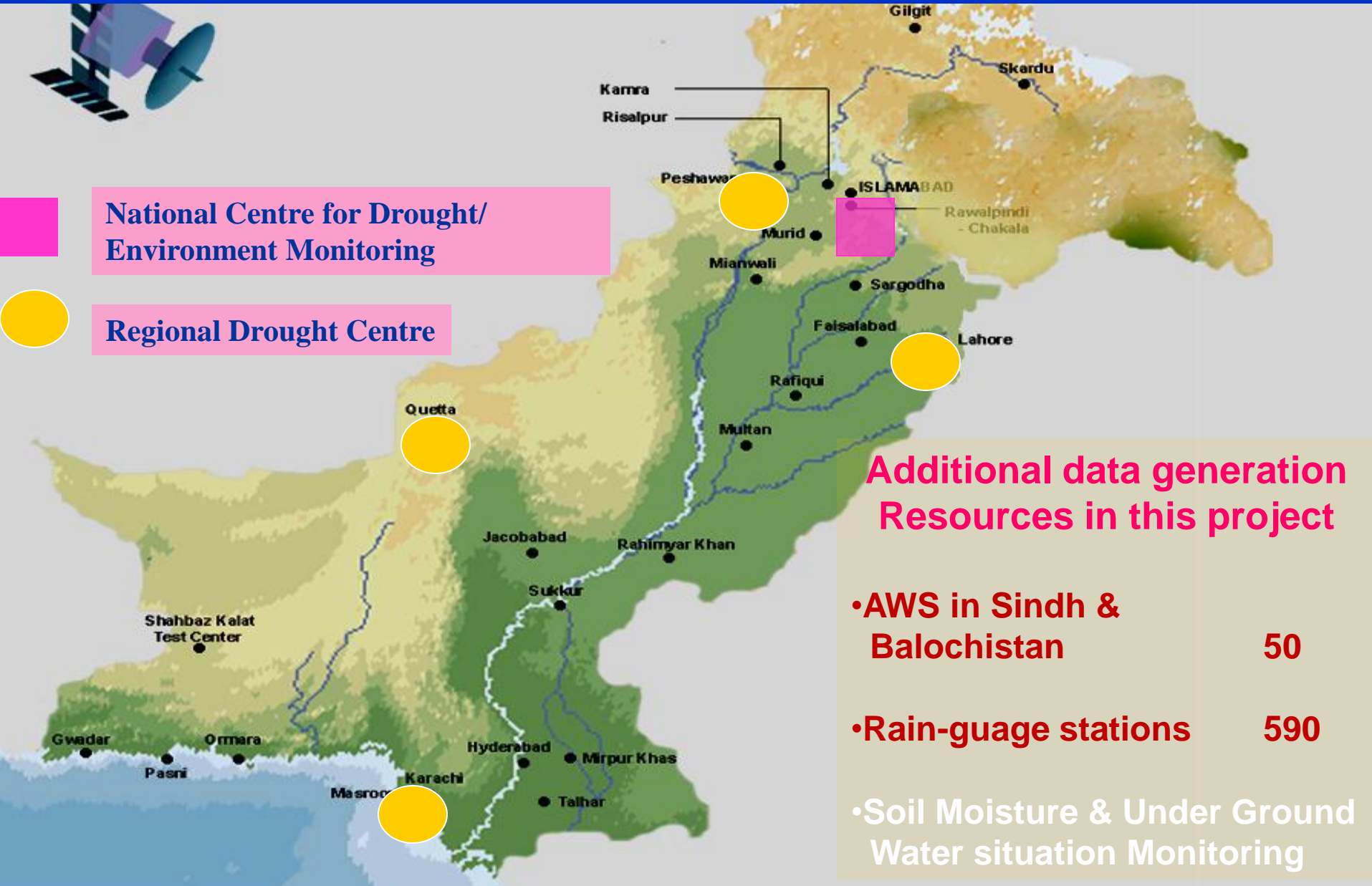
Balochistan

- Uthal
- Khuzdar
- Kalat

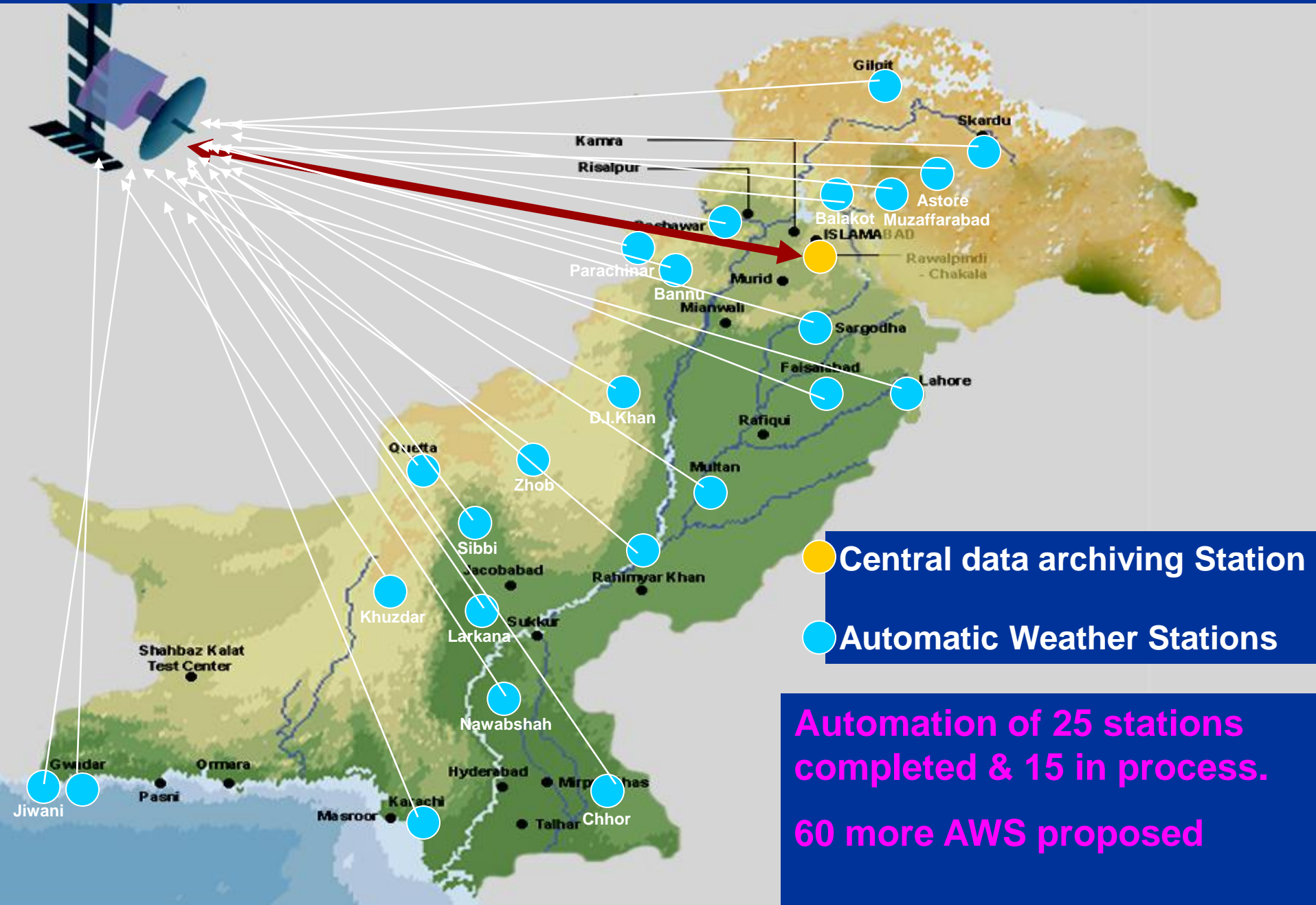
NWFP

- DIKhan
- Peshawar

Drought/Environment Monitoring & Early Warning Centre

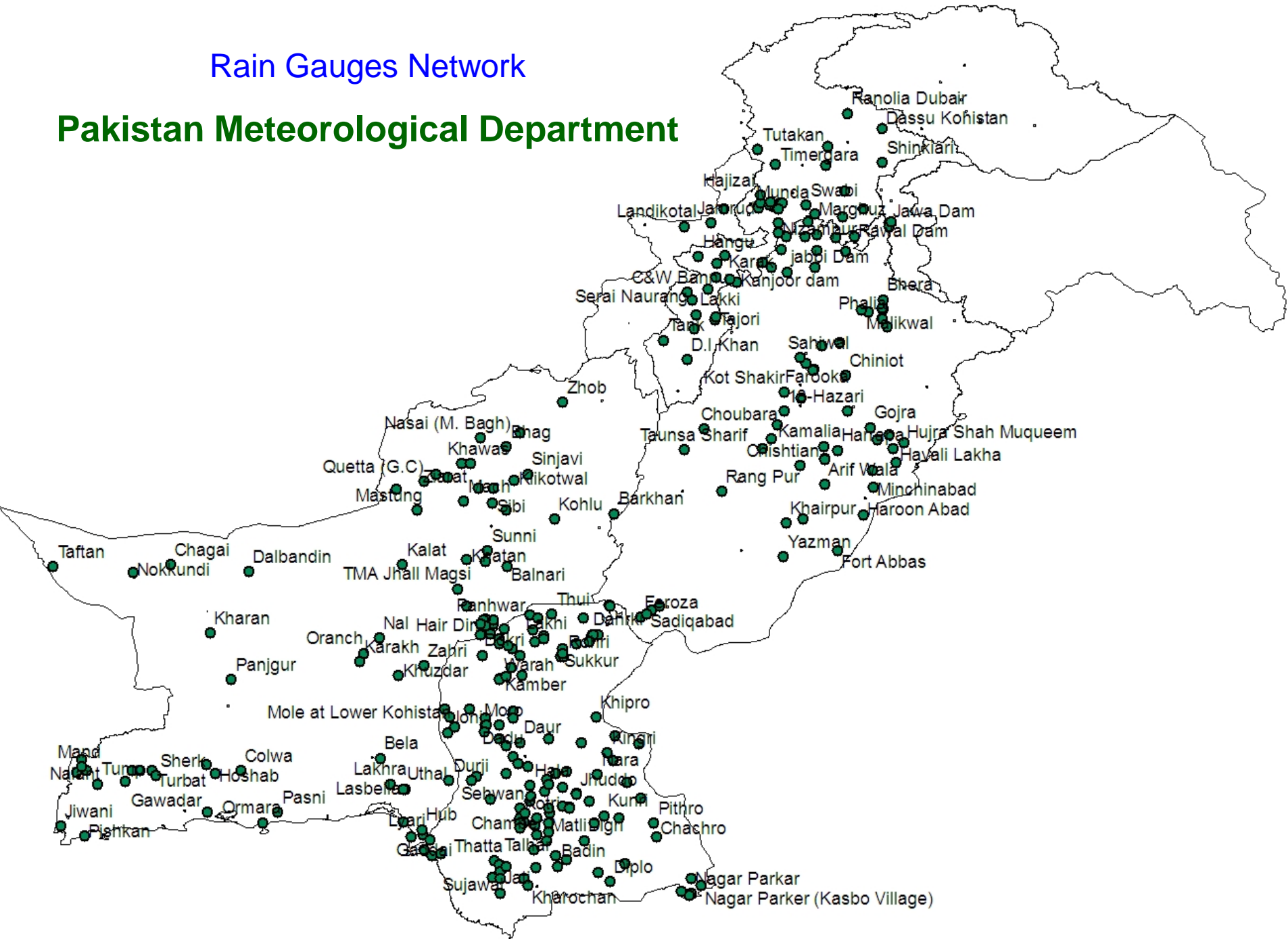


Automation of Meteorological Observing Network



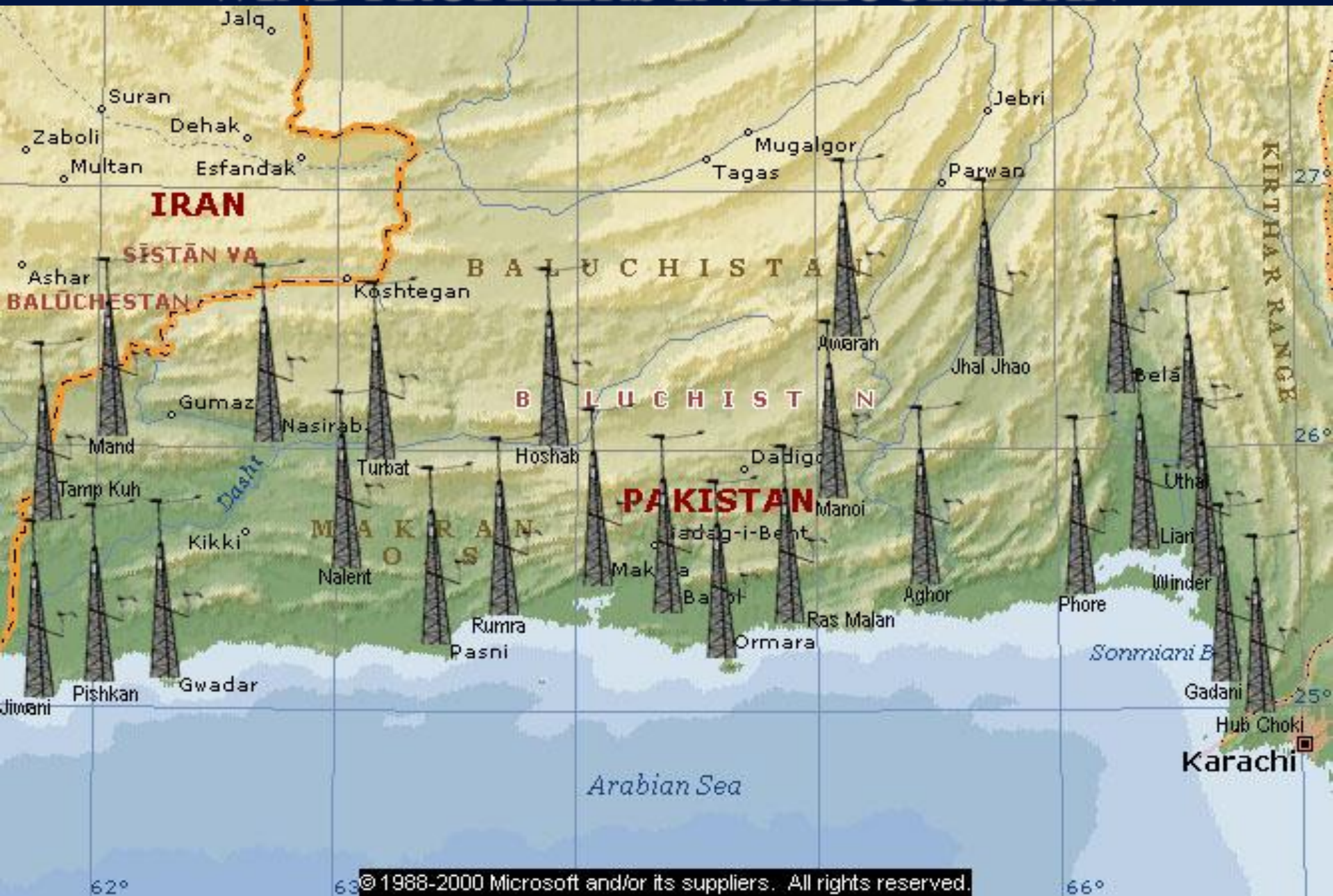
Rain Gauges Network

Pakistan Meteorological Department

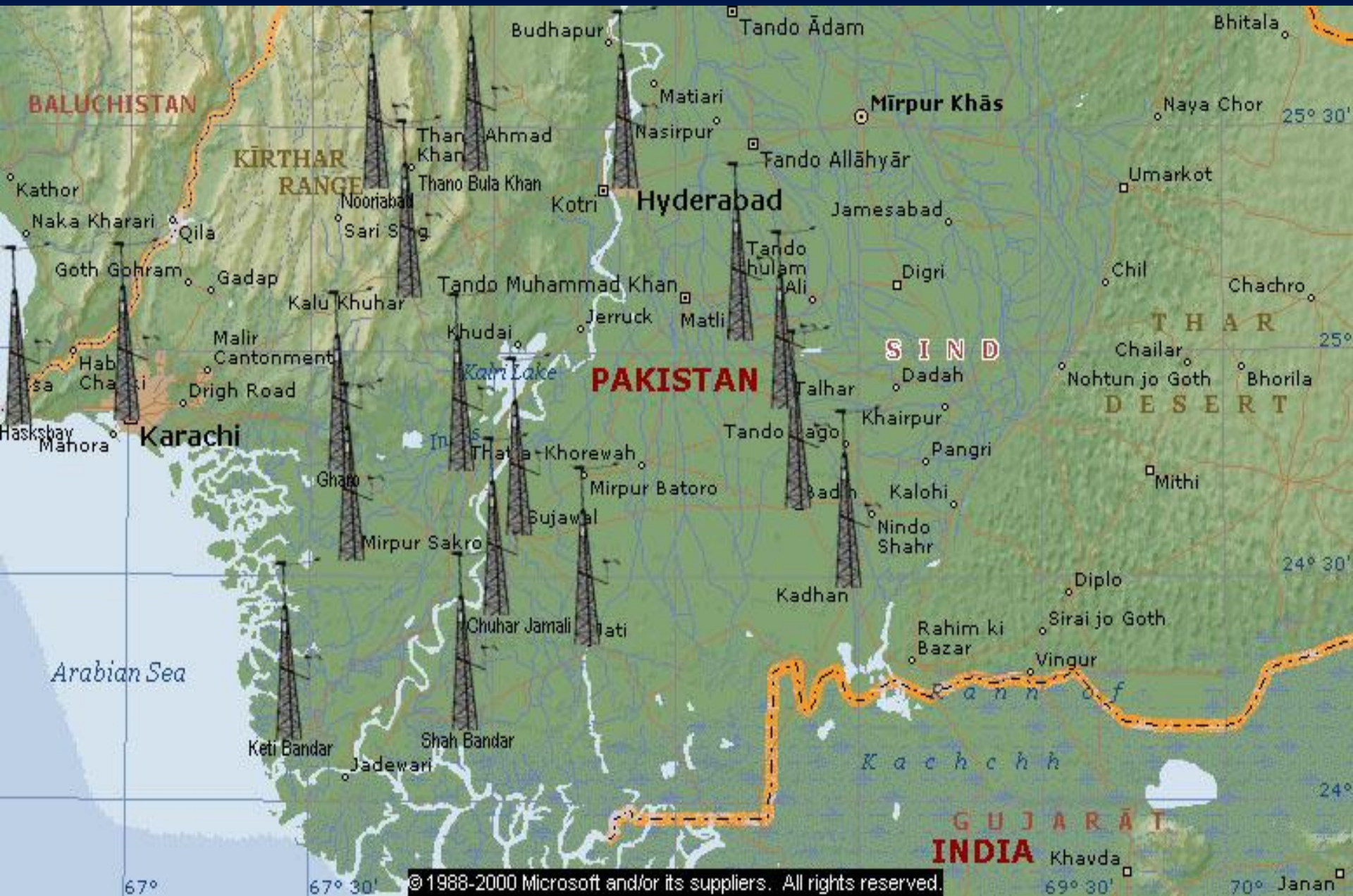


■ Renewable Energy Exploitation

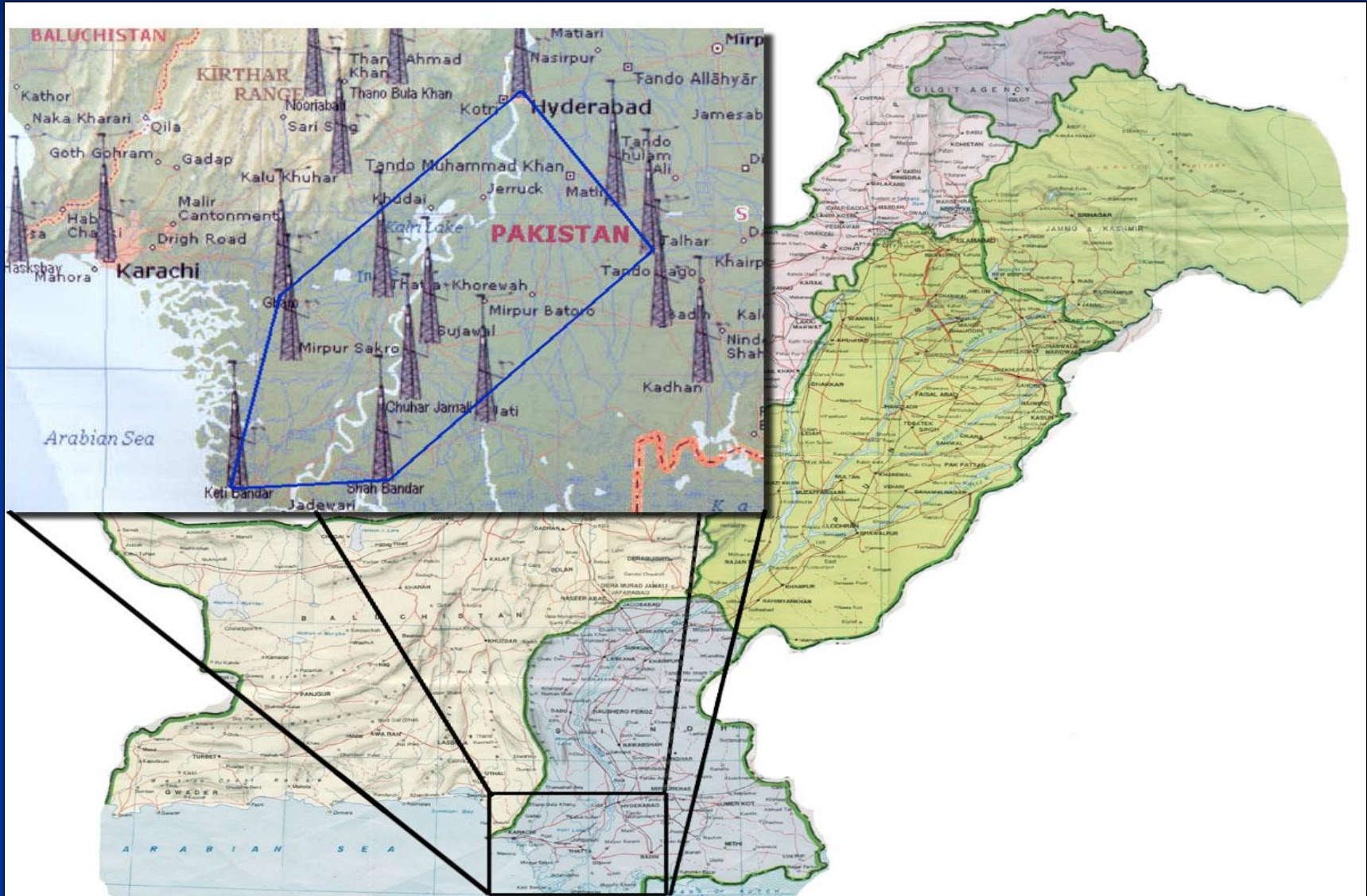
WIND PROFILERS IN BALUCHISTAN



WIND PROFILERS IN SINDH



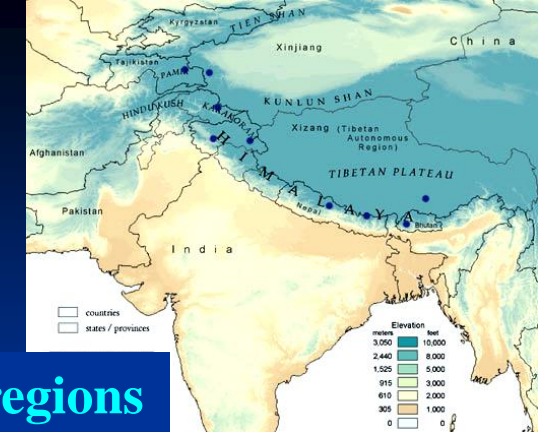
Potential area for wind power generation is around 9700 sq.km in Sindh



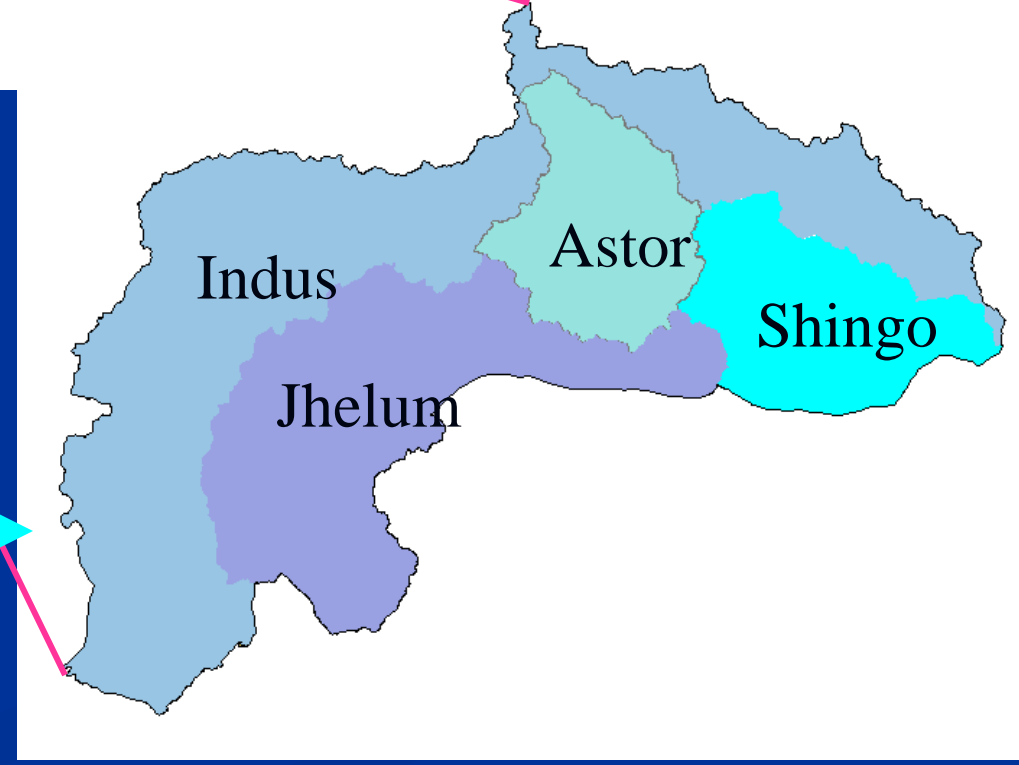
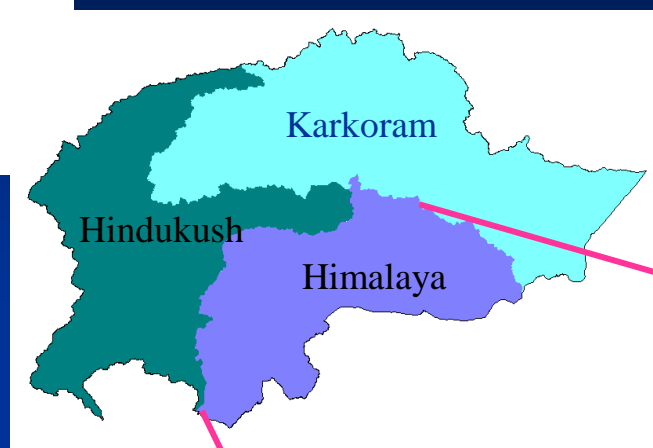
■ Cryosphere Monitoring



Glaciated Region of Pakistan



Major regions



Sub basins of Himalaya

GLACIERS OF PAKISTAN

- There are about **5024** glaciers in **10** river basins of Pakistan.
- About **2419** glacier lakes found in these river basins.
- Initially about **25** glacier lakes are found potentially dangerous for flash flooding (GLOF) Glacier Lake Outburst Flooding.

High Elevation AWS

- **Askole:** Down the terminus of Baltoro Glacier (3015m asl)
- **Urdukas:** At the terminus of Baltoro Glacier (3925m asl)
- **Concordia:** Base camp for K-2 (4750m asl)
- **Hinarchi:** Near the snout of Hinarchi Glacier (3250m asl)
- **Passu 1:** In Ablation Zone of Passu Glacier (3195m asl)
- **Passu 2:** In Accumulation Zone Passu Glacier (4555m asl)
- **Batura:** In Ablation Zone of Batura Glacier (3290m asl)
- Network of manned-observatories has been increased to 21

Ongoing Mass Balance Experiment Baltoro Snout 2011



Ongoing Mass Balance Experiment Baltoro 2011

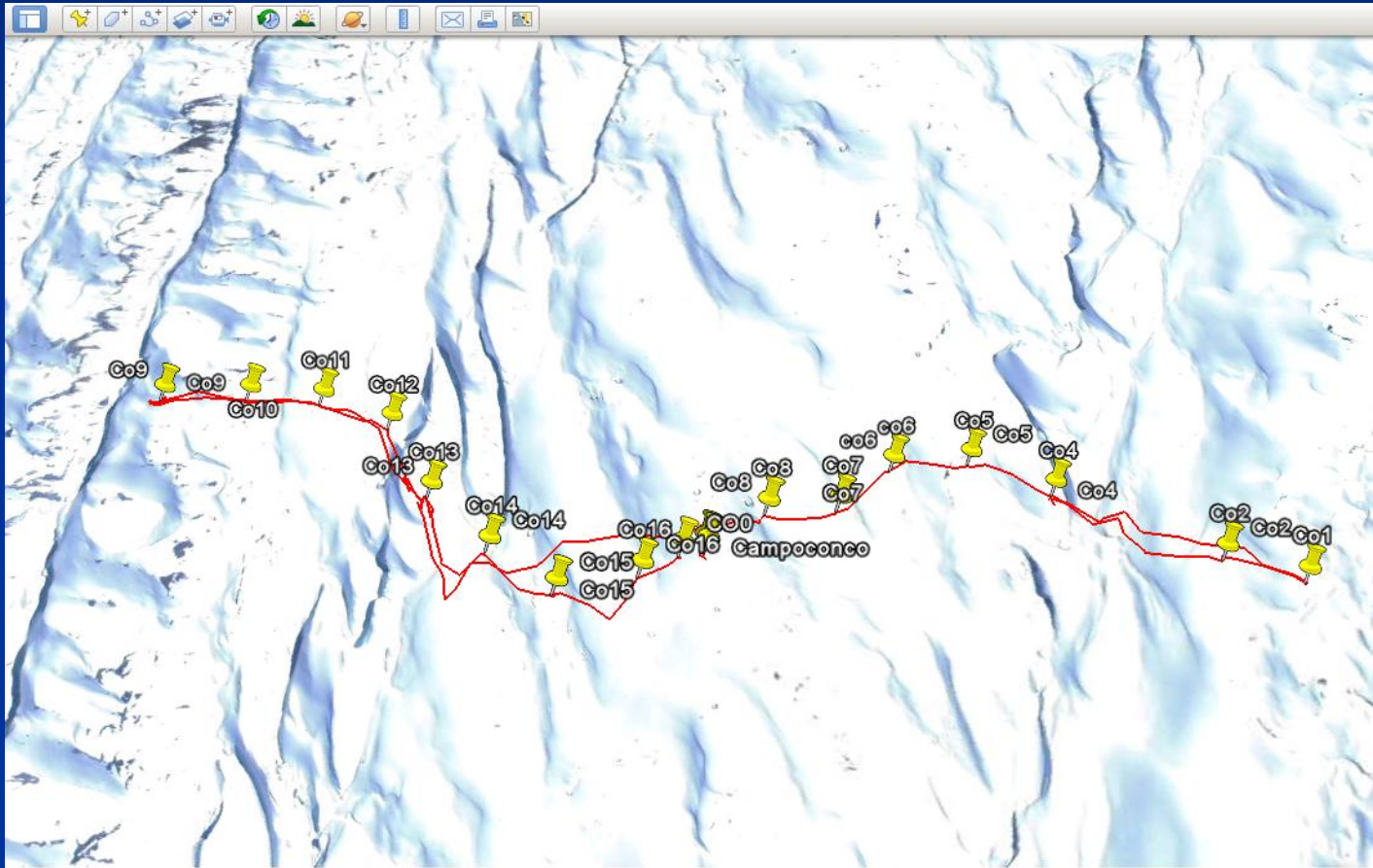
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Ongoing Mass Balance Experiment

Concordia 2011



Ongoing Mass Balance Experiment Concordia to Gore 1 2011

Google Earth

File Edit View Tools Add Help

Search

Fly To Find Businesses Directions

Fly to e.g., 37 25' 19.1"N, 122 05' 06"W

Places

- Latest Imagery
 - September 7th 2011
 - Previous Updates
- PMD
- Passu Terminal Lake Site
- Passu AWS
- 20-03-2010
- 23-03-2009
- 17-10-2001

Layers

Earth Gallery >>

lat 35.732279° lon 76.452480° elev 4433 m Eye alt 16.83 km

US Dept of State Geographer
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Image © 2011 GeoEye
© 2011 Google

Google

7/8/2001

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R&D Presentations

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Google Earth

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Ongoing Mass Balance Experiment

Urdukas to Paju 2011

Google Earth

File Edit View Tools Add Help

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- OziExplorer Data
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 - B15
 - B16
 - B17

Layers Earth Gallery

Imagery Date: 3/20/2010

lat 35.712643° lon 76.319842° elev 4201 m

Eye alt 20.97 km

Image NASA
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US Dept of State Geographer

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Start

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Snowmelt Runoff Mode ... Surface Mass Balance of ...

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Thank You

