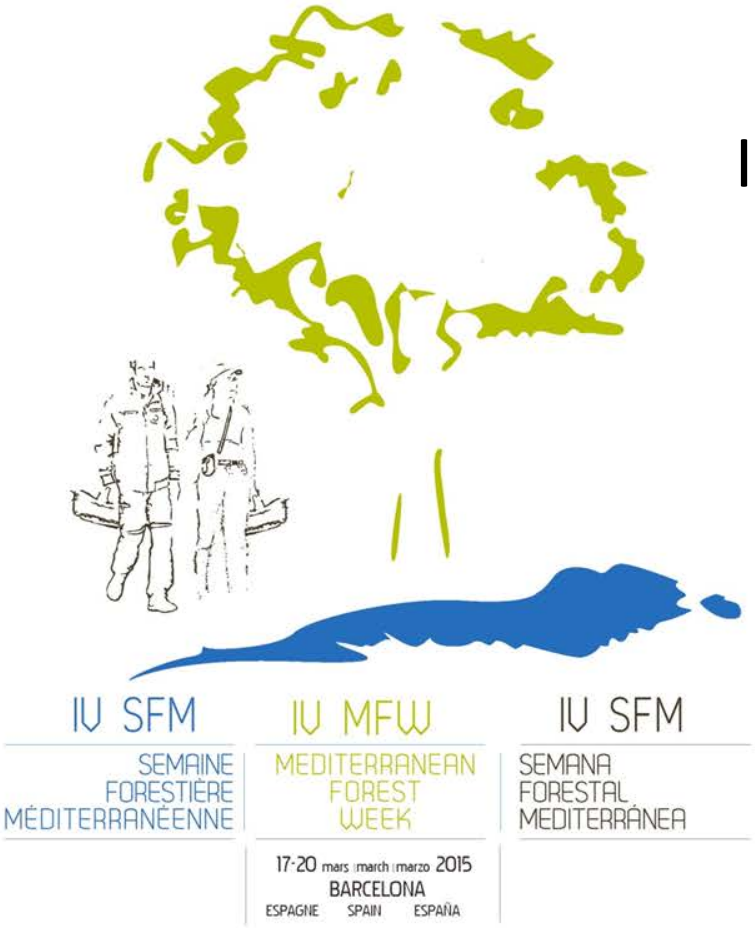


Implementation of the National Afforestation/Reforestation Programme (NARP)

Lebanon Mitigation Action

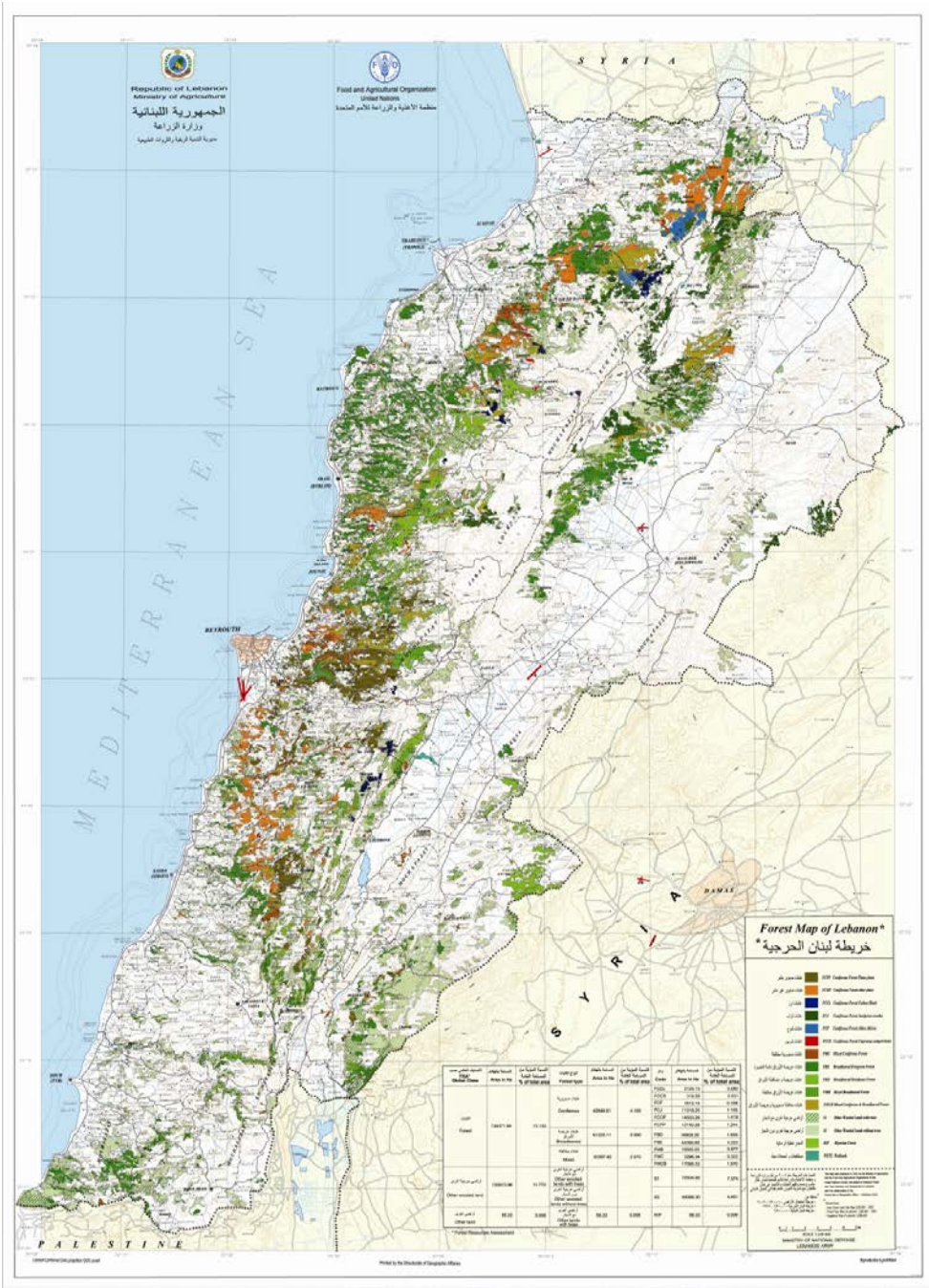
Dr. Chadi Mohanna
Ministry of Agriculture
RDNRD

Forests in Lebanon

- Total area : 10.452 Km2
- Forests: 13% of total area
- Other Wooded Land - OWL: 11%
- Major spp.: *Quercus sp*. (41.6%), *Pinus sp*. (20.3%), *Cedrus libani* (1.6%)

Forest ownership :

- 1/3 of private and religious properties
- 1/3 of communal lands (municipalities)
- 1/3 of state lands



Threats and Challenges

- Urban expansion, quarries and road construction.
- Forest fires.
- Illegal tree felling.
- Encroachment on forest lands by agriculture.
- Unorganized grazing inside forests.
- Insects and diseases.
- Shortage of funds needed to support reforestation
- Difficulty of natural regeneration particularly in dry areas (climate change)
- The conflict in Syria which resulted in the flux of over one and a half million refugees to Lebanon.
- Increased pressure on Natural Resources

The mitigation action

MoA in Lebanon has developed a NAMA :

- Implementation of the National Afforestation/Reforestation Programme (NARP)
- Restoring and developing forest land and tree cover
- Increase forests from 13% of Lebanon's total area to 20%
- Period of 20 years starting 2015.

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Five main components:

1. Identifying suitable areas for reforestation

2. Reforestation process

3. Developing and implementing a Measurement, Reporting and Verification (MRV) procedure.

4. Institutional adaptation and Capacity building.

5. Stakeholders consultation and local communities participation.

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1- Identifying suitable areas for reforestation (on going)

- Base map under construction (ARDP)
- State and communal lands
- Characterization of areas
- Suitable techniques
- Suitable species
- Mapping of reforestation units + scenarios
- Field verifications (MoA)
- Decision making and management tool for reforestation

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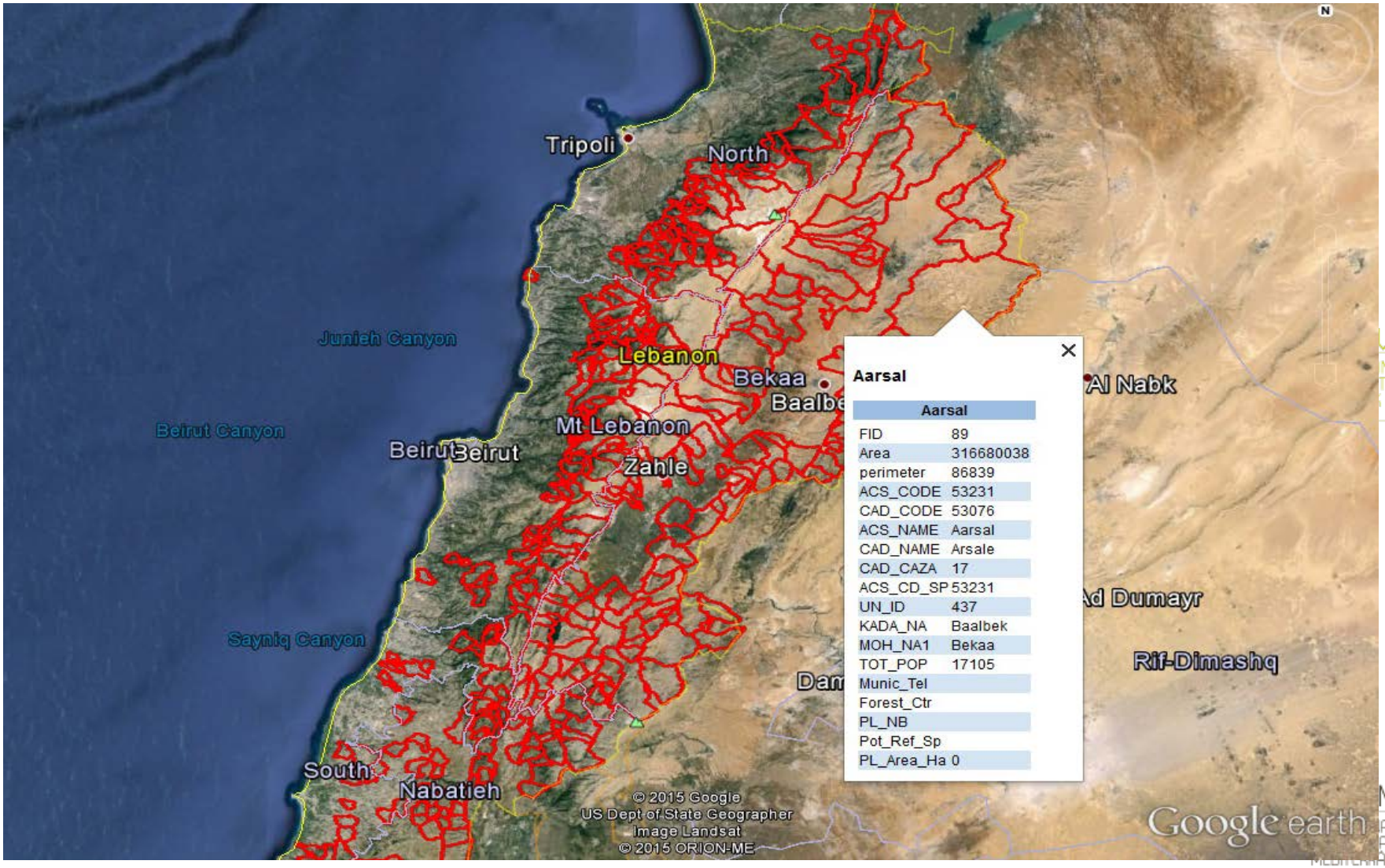
Villages borders



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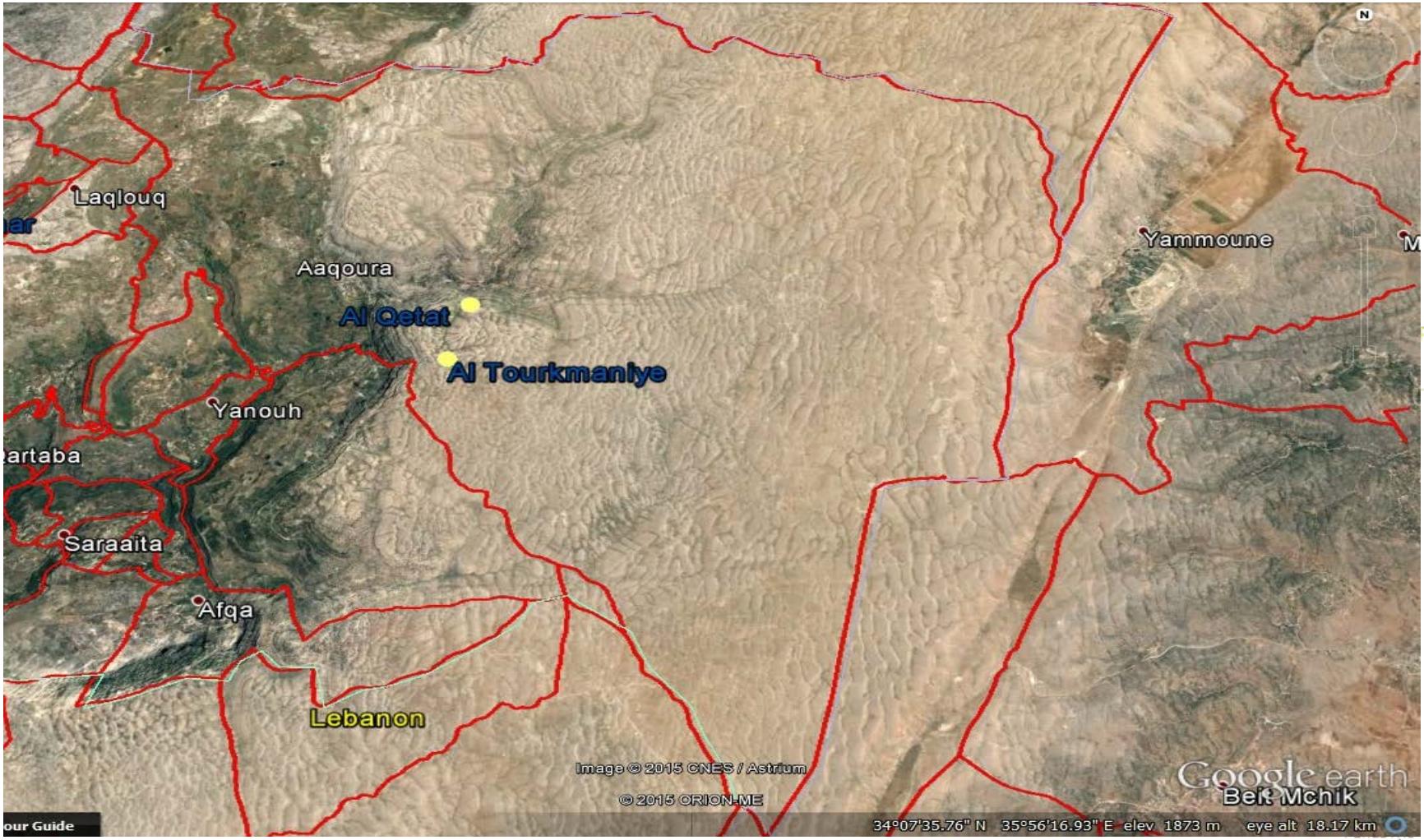
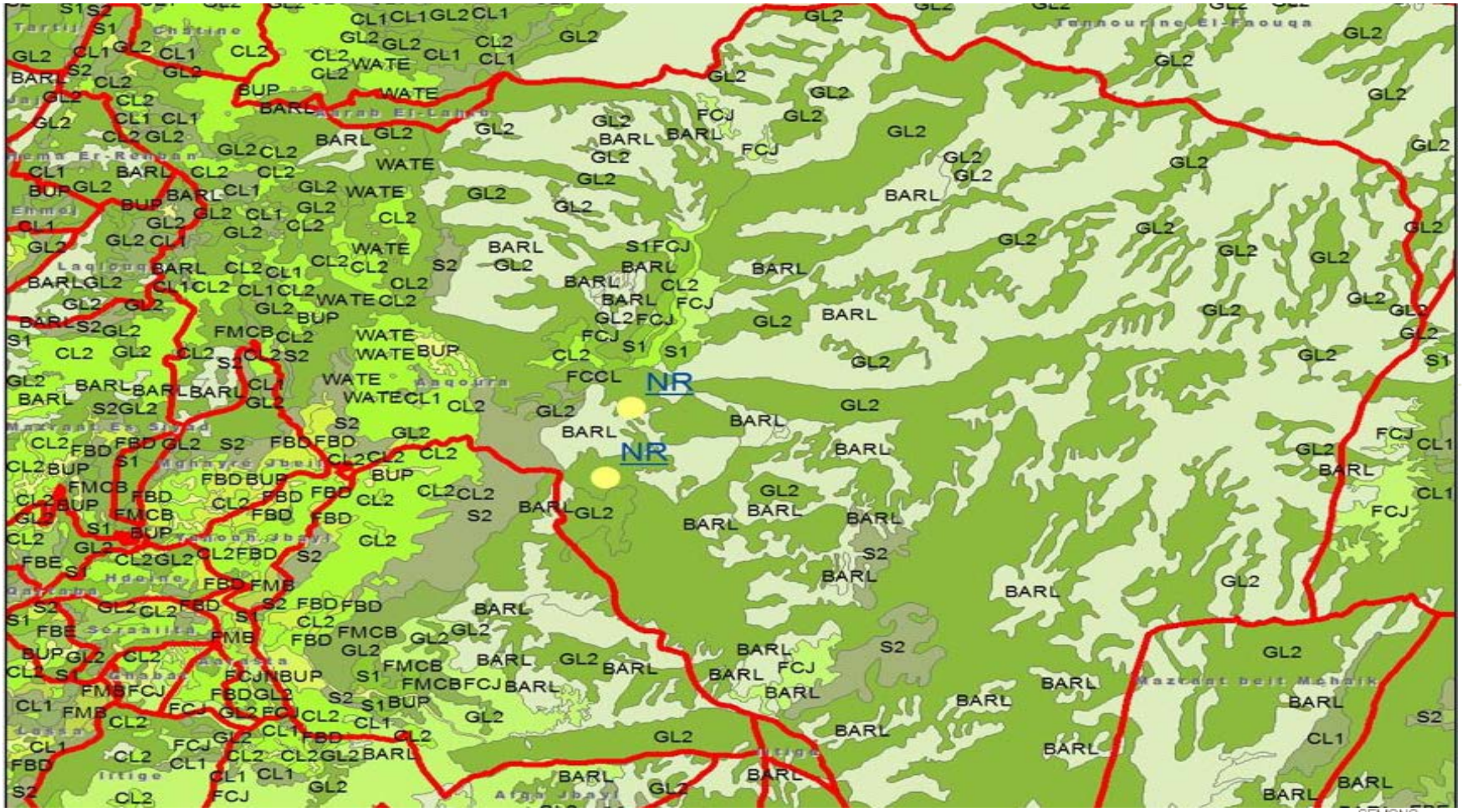
Reforestation sites in a village



LULC of the village



Altitude

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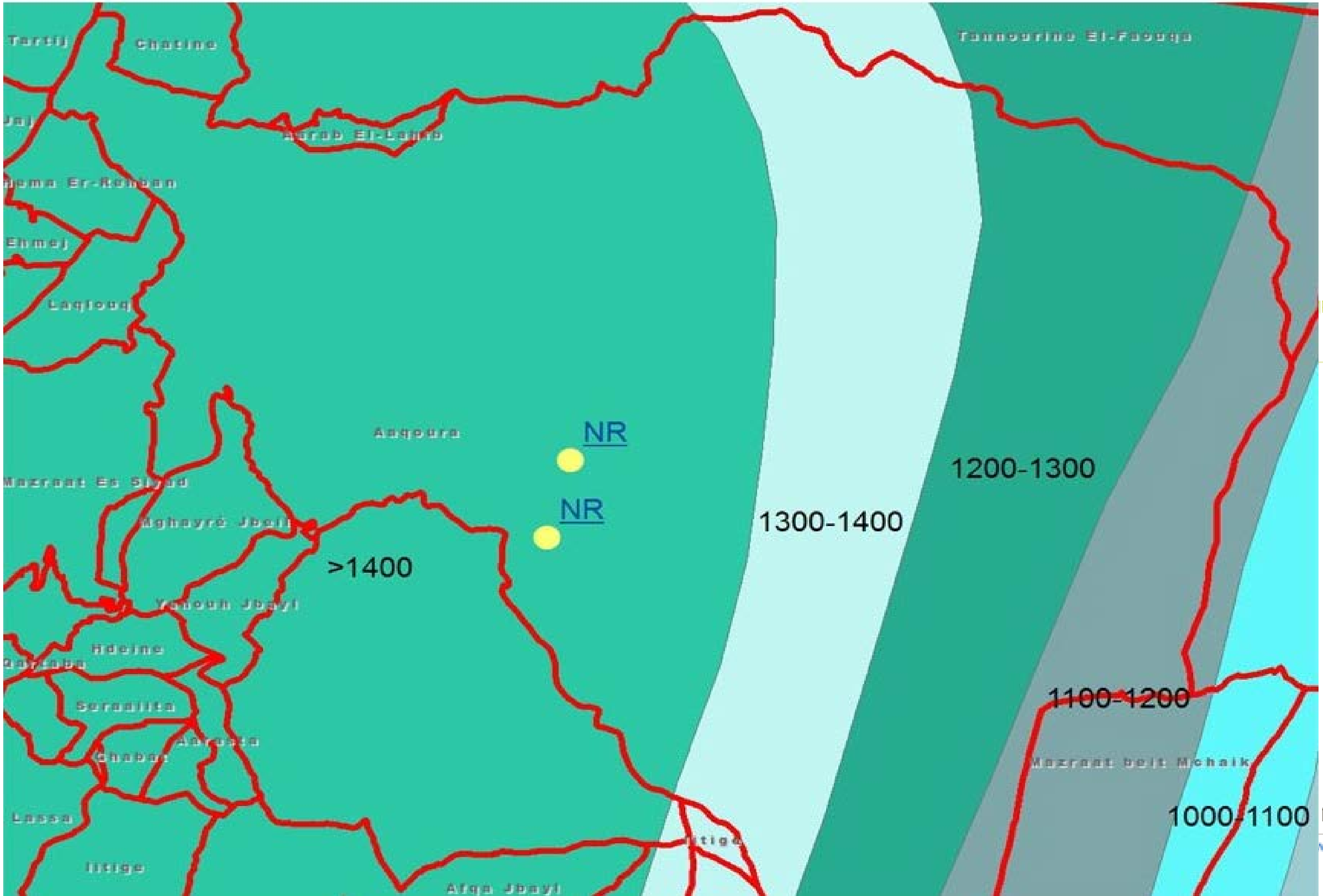

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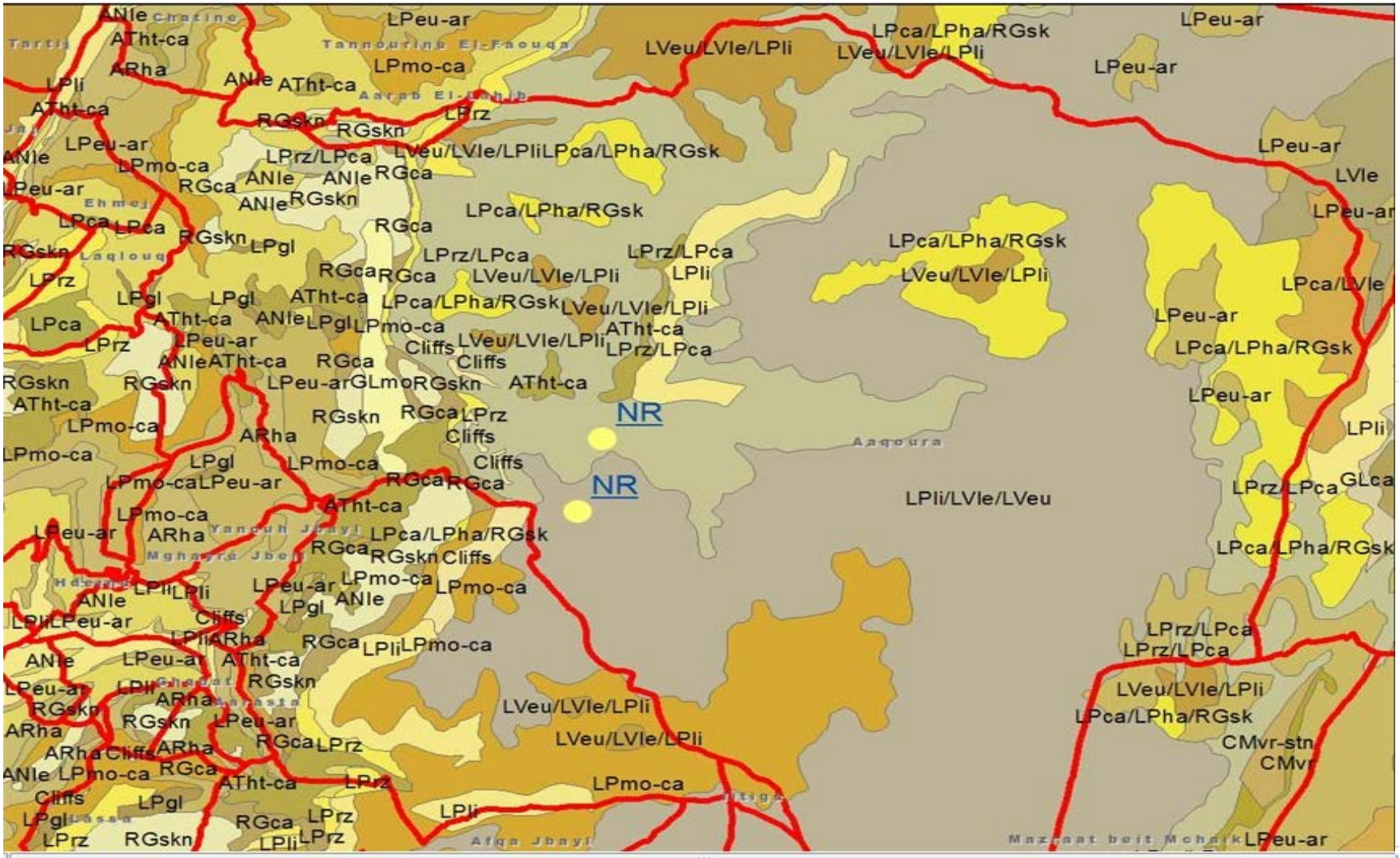
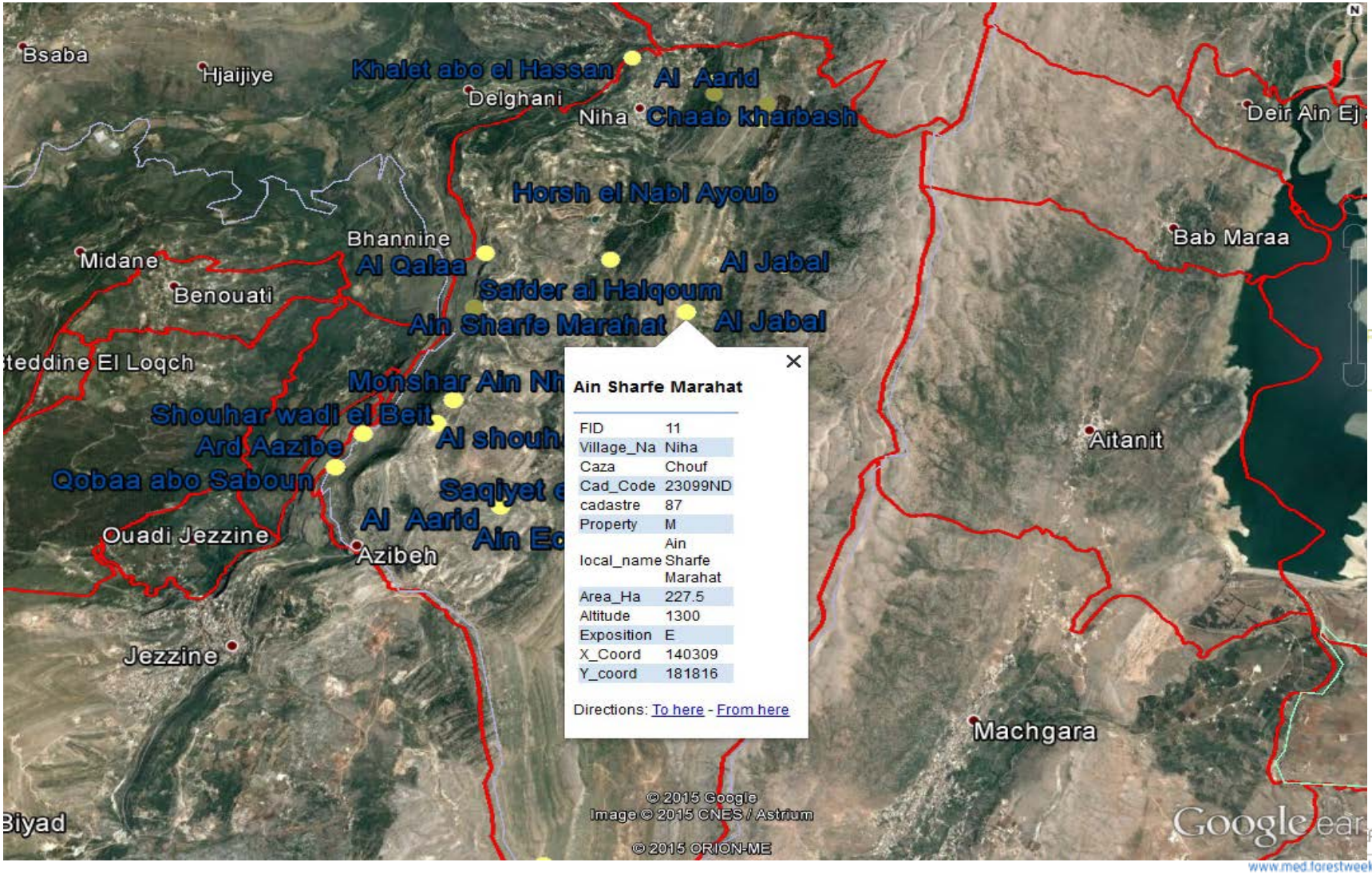
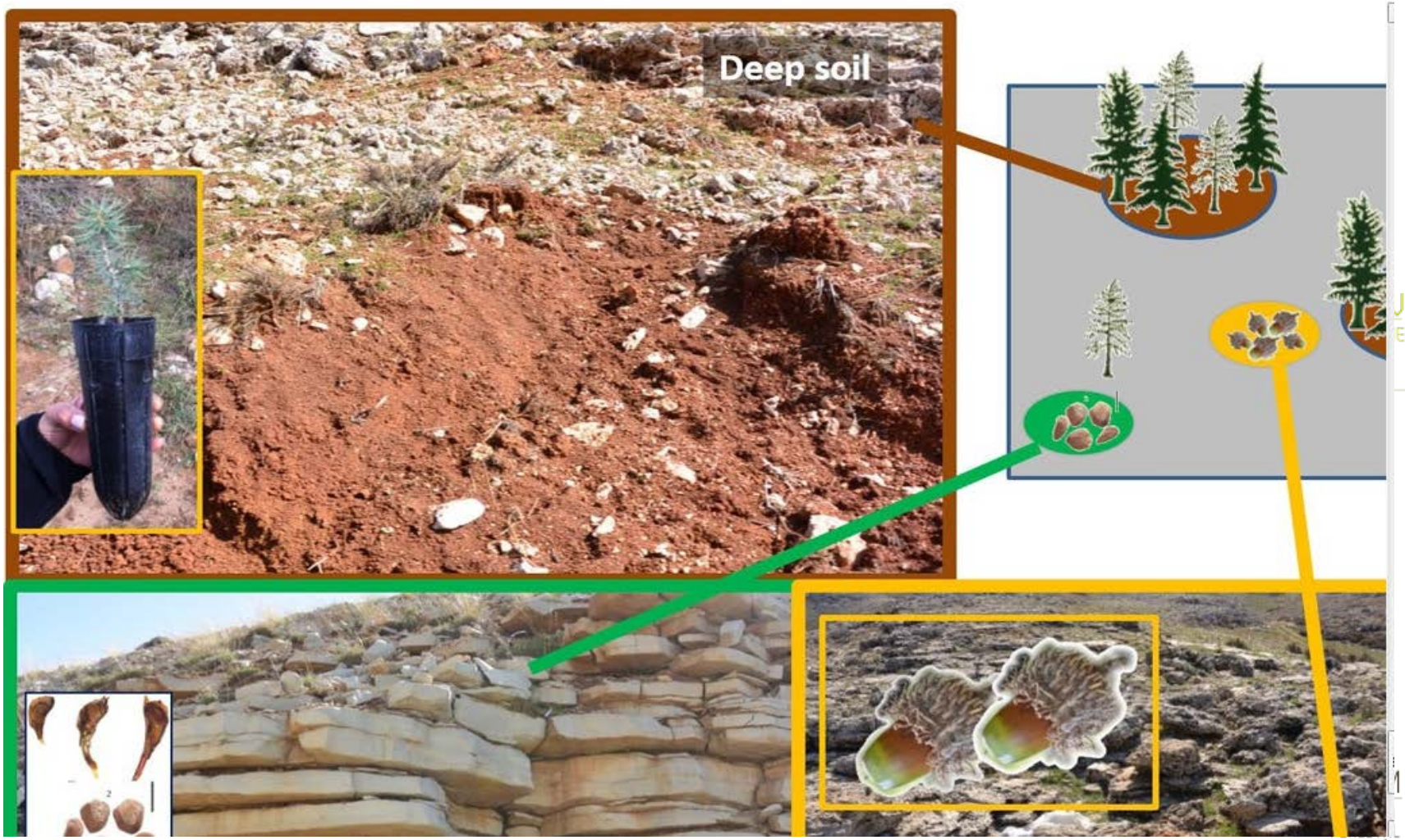
Soil type



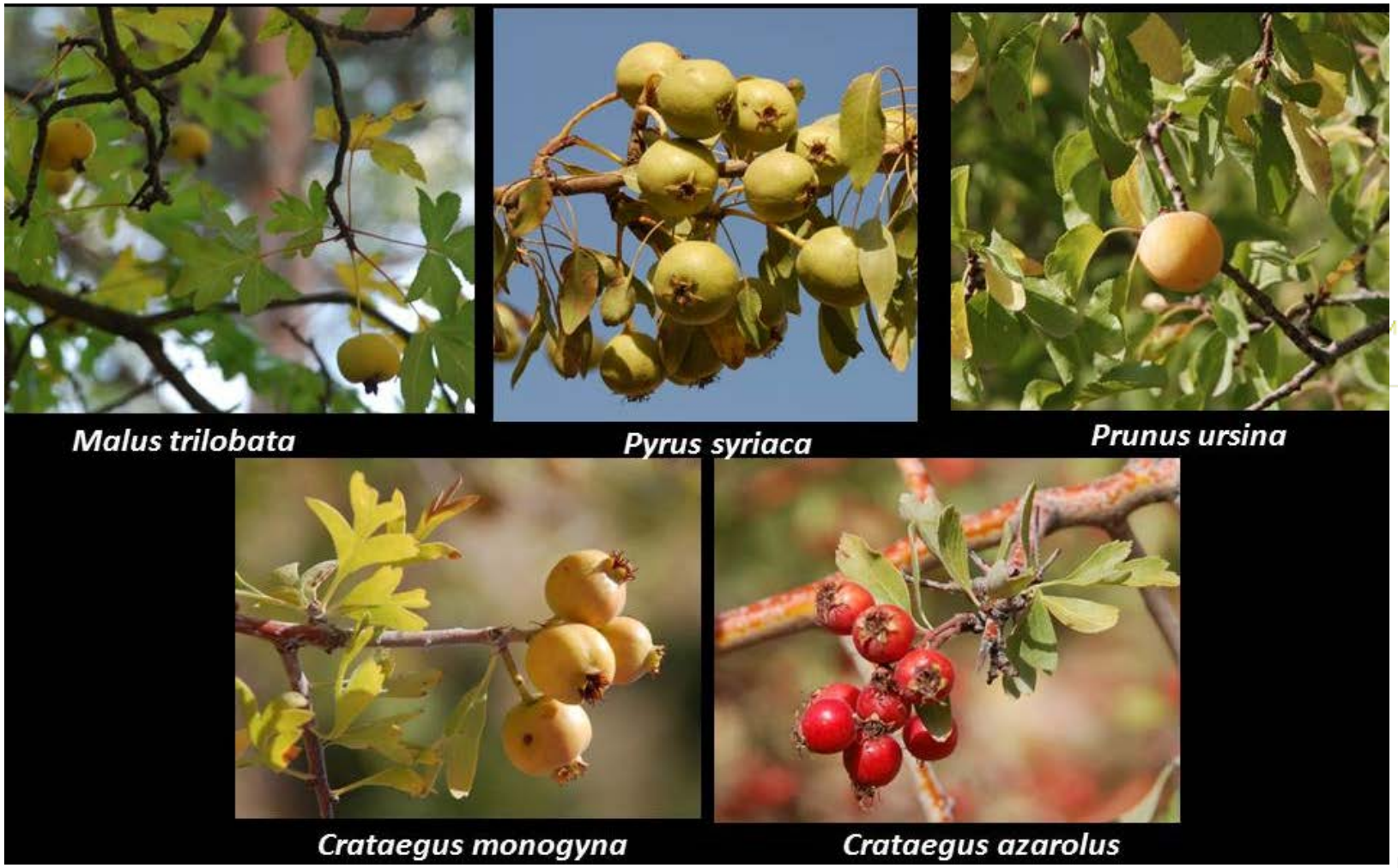
Reforestation site data



Planting techniques



Adapted/Associated species



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2- Reforestation process

- Gradually by phases
- First phase to be launched for 16.000 ha over a period of 8 years
- Next phases (on the basis of lessons learned)
- Surface will be increased to reach the target of 70000 ha in 20 years.
- Partnership approach (Universities, NGOs and Municipalities)

3- Developing and implementing MRV procedure

- Forest carbon stocks/reforestation scenario
  - Types of vegetation
  - Density
  - Etc…
- Local Inventory Report of GHG
- Adopting the GPG of the LULUCF sector (IPCC)

4. Institutional adaptation and Capacity building

- Enhancing skills of forest and natural resources practitioners
- Public sector, NGOs, Universities, Municipalities, …
- Specific capacity building for FA :
  - Complete site identification
  - Implement MRV procedures

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5. Stakeholders consultation and local communities participation

- Inter Ministerial Committee for the NARP
- Private Public Partnership
- Three widely active Ministries
  - MoA : Directorate of Rural Development and Natural Resources
  - MoE : UNCCC, UNCBD and Natural Reserves
  - MoIM : Municipalities and Civil Defense
- Large network of active NGOs

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Sequestered Carbon

- The estimated quantity of sequestered carbon will range between 8.07 tCO_2/ha/year and 9.3 tCO_2/ha/year.

- The cumulative sequestered carbon for the 16.000 ha over a period of 8 years will therefore range between 581040 tCO_2 and 669600 tCO_2.

- The cumulative sequestered carbon for the 70.000 ha could range between 11.4 million tCO_2 and 13.6 million tCO_2.

Co-benefits

Sustainable Development	Co-benefits
Ecological-environmental	Protective functions: protection of watersheds including biodiversity, soil and water conservation. Protection from wind and water erosion, coastal protection, landslides and air pollution filters.
Economic	Increase availability of wood and non-wood forest products: fuel-wood, food (fruits, edible plants, aromatic and medicinal plants), fodder, honey and many other NWFPs.
	Ecotourism. .
Socio-political	Employment opportunities. Transfer of technology and know-how.
	Gender equity.
	Mitigation of poverty in the poverty prone areas in the country especially in light of the conflict in Syria.
Inter-sectoral collaboration	Collaborate towards consensual land use planning system.
The private sector involvement	Valuable added value.

Incremental costs

- Institutional adaptation.

- Implementation of the MRV procedure:
  - delineation of project boundaries,
  - land use and land cover mapping,
  - capacity building

- Identify potential lands

- Acquisition of certain lands of special interest

- Establishing hill lakes: irrigation, fire fighting

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Thank you for your attention

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