



KNOWLEDGE AND EXPERIENCE SHARING SYMPOSIUM

Towards Highly Rewarding and Inclusive Flood-based Livelihoods

Innovative Agroforestry and Flood Water Harvesting in Arid and Temperate

Ecological Regions under FBLS in Afghanistan

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4TH TO 8TH MARCH, 2019

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Innovative Agroforestry and livelihood in Arid and Temperate Region



Context and Relevance

Afghanistan used to produce 25% of world raisins before 1980s as its climate is most suitable for such produces. Similarly it has potential to grow deciduous fruit and nut trees requiring less water, no pesticides and chemical fertilizer thus having most environmental value.

Over a time period farmers have adopted strategies to grow such types of fruit and nut trees suitable to dry and cold climate and their produce can be stored for longer period.



Continues

- After continuous difficult situation in the country, now situation is changing .
- Multipurpose trees of temperate zone, requiring less water, include wall nuts, pomegranates, almonds, pistachio, olive, mulberry varieties. Date palm is another tree in this list which can easily be grown in warmer parts of Afghanistan.

The limiting factor among others is reliable and adequate supply of water and low cost storage facilities. For this flood water, rain water and snow harvesting techniques coupled with appropriate storage facilities of low cost and simple methods can be introduced to boost this sector.



Context and background

Before 2002 the area under agriculture was 1.2 million ha which has reached now to 2.4 million ha and still has potential of atleast 2 m ha. These trees can be planted at household level, marginal lands, on banks of fields, around water ponds, along water courses and on slopes.

Major hindrance is lack of water supply on regular basis and storage facilities. Moreover, limited work opportunities compel in country and abroad migration (Pakistan, Iran and other countries). The situation may worse when donor funded work decreases.

Initiating such programs of innovative forestry and rangelands development will contribute to uplift socio-economic conditions, environmental benefits and decreasing migration. Such interventions are low cost, simple methods, user friendly and will be sustainable.



Intervention strategies

Liaison with stakeholder working in this sector such as government ministries, research organizations, NGOs and civil society groups to avoid any duplication and reinvention of wheel and to share human, material, intellectual resources and knowledge.

Training in water harvesting techniques such as:

Flood water harvesting

Rain water harvesting in the field

Roof water harvesting

Snow harvesting

Road water harvesting

Nursery raising

Linking with market system for better benefits.



Approaches and methods

The project aims to reach decisions, through participation process, in initiating planned interventions to change their economic, social, and environmental situation in a positive way. The project will provide programs, facilities and services such as inputs including training and demonstration etc. to meet needs of project partners/ beneficiaries.

Work through networks of:

- progressive farmers
- Farmer groups
- Water user associations
- village development committees
- Cooperatives



Economic Empowerment of women through this project

Training of Women in nursery raising, seed collection and processing, Kitchen Gardening and Water Harvesting

Training in value addition such as processing of fruits (collection, drying, preservation, storage, labelling etc.)

Training in agriculture and livestock/dairy development.

Training in energy savings stoves

Training in organizational skills

Study/exposure visits



Major Interventions

- Dialogues and partnership with community/framer groups including women, vulnerable and marginalized groups
- Initiating and finalization of prioritized activities through consensus and formal MoUs describing the rights and obligation of project and its beneficiaries/partners.
- Training of farmers and village specialists in different sectors such as water harvesting, design and implementation of activities, managerial and administrative skills.
- Building water ponds
- establishment of micro drip irrigation system and other low cost methods
- Nursery establishment
- Tools and equipment provision required in project activities.



The Project activities and Role of FBFL foundation and Metameta

Over a time experience and knowledge is being gained in this unique field of flood based farming system.

FBLS has country chapters in several countries and resources are shared for capacity building throughout regions and within countries.

- Human resources
- Physical resources
- Knowledge

Through activities, experience sharing and backstopping



Suggested Activities for the Program

- Need assessment for training
- Development of training curriculum in local language(s)
- Selection of about 200 trainees through a placement test to make sure the right trainees with basic knowledge of language, interest and willingness are selected
- Demonstration and practical work
- Establishment/construction of water harvesting storage facilities
- Establishment of Nurseries
- Establishment of drip irrigation system and other low cost methods



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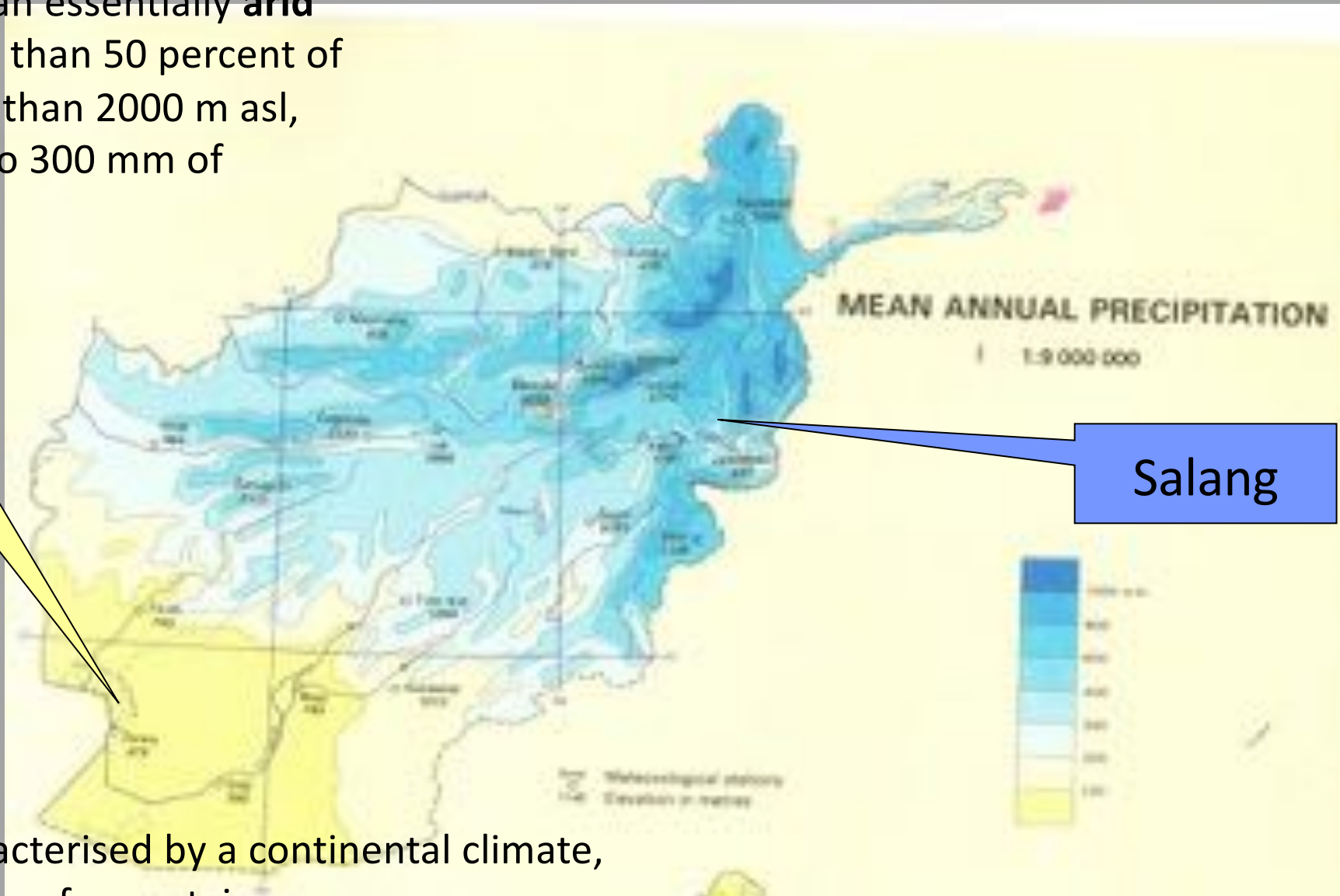
- Study/exposure visits of farmers to research station and model farms to see the new methods and techniques being used.
- training in energy saving stoves
- Training in livestock and dairy developments sector.
- Training in health and safety measures like first aid etc.
- Provision of inputs such as working tools, dresses etc. for women.



Rainfall: from less than 75 mm in Zaranj up to more than 1178 mm in Salang, mostly during winter.

The annual distribution of precipitation shows a picture of an essentially **arid country**, with more than 50 percent of the territory, lower than 2000 m asl, receiving 100 mm to 300 mm of precipitation.

Zaranj



Afghanistan is characterised by a continental climate, though the presence of mountains causes many local variations.

Land Use

Rainfed land

Irrigated land

Rainfed land

Pastoral land

Non agricultural land

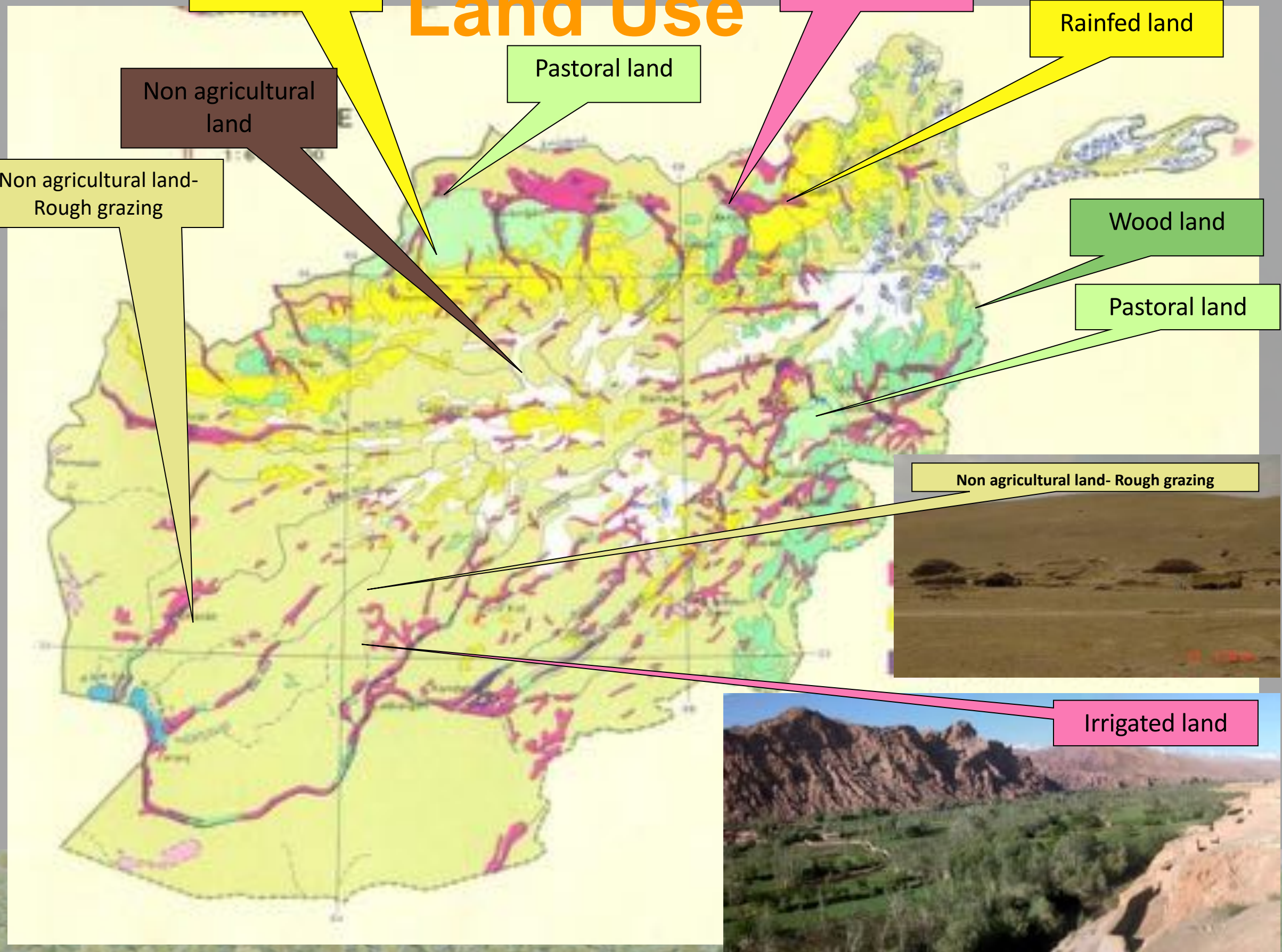
Non agricultural land-
Rough grazing

Wood land

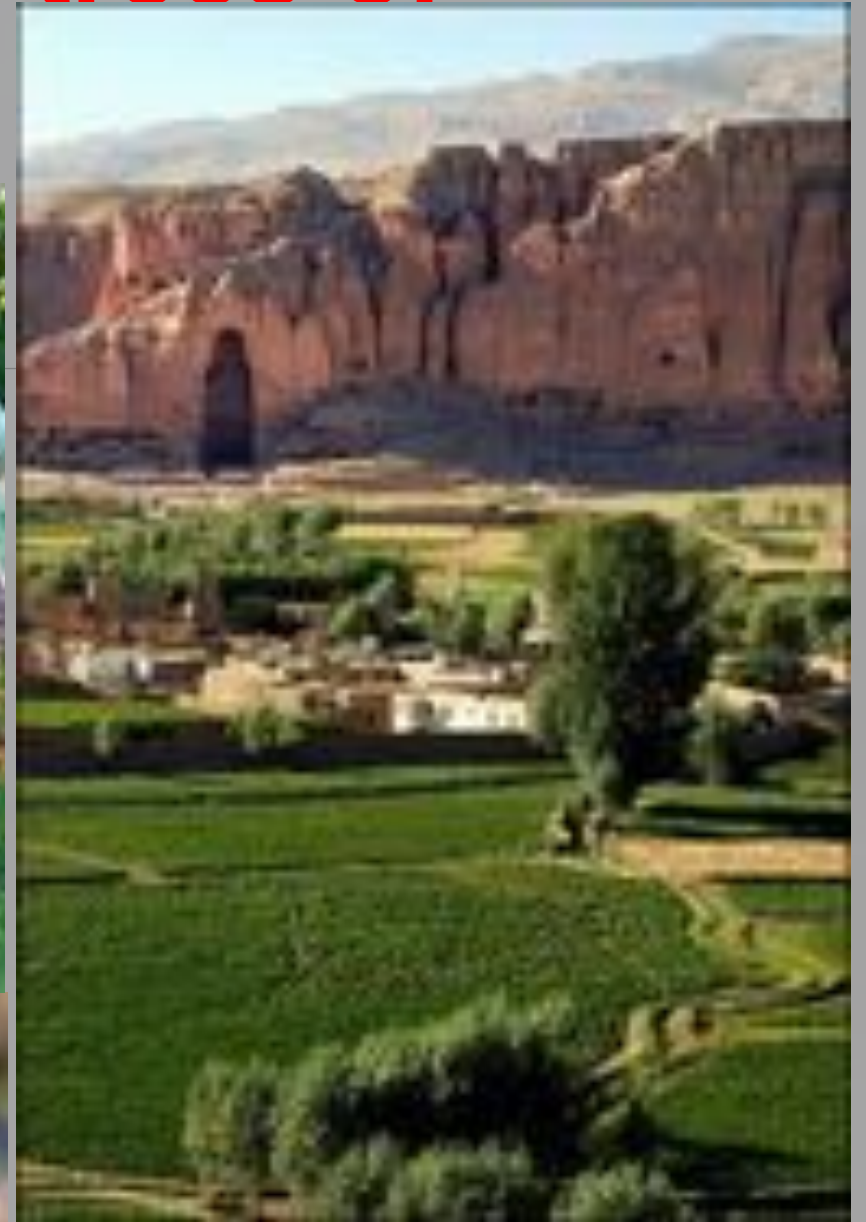
Pastoral land

Non agricultural land- Rough grazing

Irrigated land



Typical Multipurpose trees of Afghanistan







Comparison of Natural and man made plantation











Kitchen gardening through water reuse at household level and roof water harvesting
Fruit and vegetable preservation