

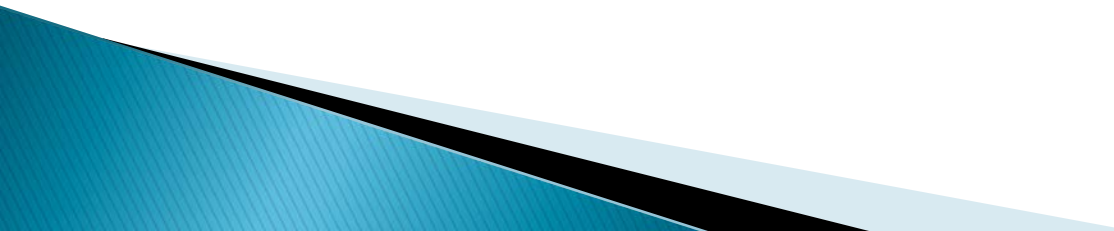
# Jebel El Dair as biosphere reserve

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# Background Information

- ▶ Sudan has 5 Main Ecosystems
  - ▶ Total of 13 Protected areas(including Jebel El Dair), distributed in these ecosystems as follows:
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# Distribution of protected areas in the ecosystems of Sudan

Ecosystem	No. of protected areas	Area, km <sup>2</sup>	Percentage
Desert	2	75364	71
Semi-desert	5	2745	2.6
Low rainfall savannah woodland	3	11189	11
High rainfall savannah woodland	1	13971	13
Marine	2	2785	2.6
Total	13	106054	100

## Background Information....cont.

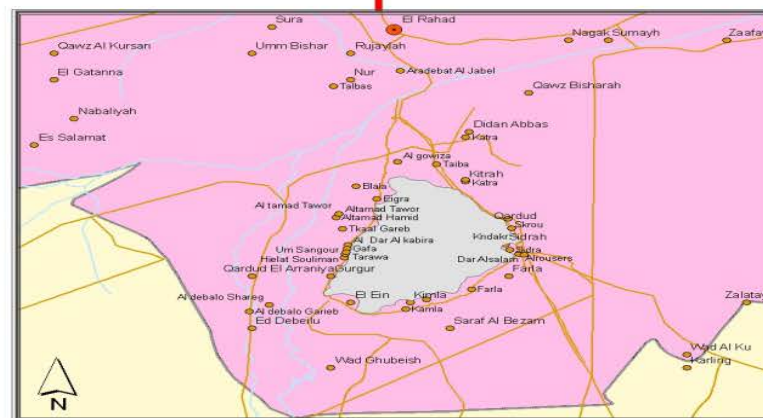
- ▶ Jebel Al Dair National Park (JADNP) is located at south eastern corner of North Kordofan (NK) State, between latitudes  $12^{\circ} 00'$  and  $12^{\circ} 30' N$  and longitudes  $30^{\circ} 30'$  and  $31^{\circ} 00'$  (Fig 1).
- ▶ It covers a total area of 315,460 km<sup>2</sup>, falls within the northern limits of the dry savannah woodland – grassland.
- ▶ Jebel AL Dair, as the name designates, appears from a distance as a bunch of mountain tops, clustering in a circular form, with several peaks of varying heights, some of which rise up to over 1400 meters above sea level.





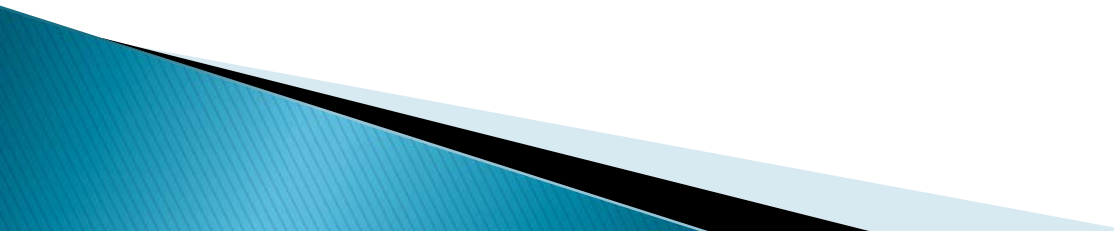
#### Legend

- State Capitals
- Principal Towns
- Secondary Towns
- ★ Administrative Centres
- Village
- River/Wadi
- Road
- ⬭ Jebel Al Dair
- ▭ State Boundary



- ▶ Enclosed between the grouping humps and peaks of the massif, are several flat plains of sizable areas and differing elevations given the local names “fawas”.
- ▶ From these fawas many streams and khors originate to form a network of water courses that drain the mountain into the lower valleys.
- ▶ The park also contains a variety of habitats in four distinct biophysical environments with their specific fauna and flora, including the Higher elevation slopes and escarpments( at 900 to 1424 m),
- ▶ Fawas or enclosed flat plains( at 900-1200 m), Upland valleys and streams (at 800- 1200 m and the Lower slopes down the foot hills (at 500-800 m).



- ▶ There are 43 villages(16 are large villages) with total numbers of 22700 persons.
  - ▶ Traditionally and since a long time ago, some tribes in the area used to practice nomadic grazing.
  - ▶ The new settlers picked up subsistence farming mixed with limited grazing of sheep's and goats and small traditional farming, planting groundnut and some vegetables in home farms called *Jobraka* at the foot of the jebel.
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# Important values of Jebel El Dair

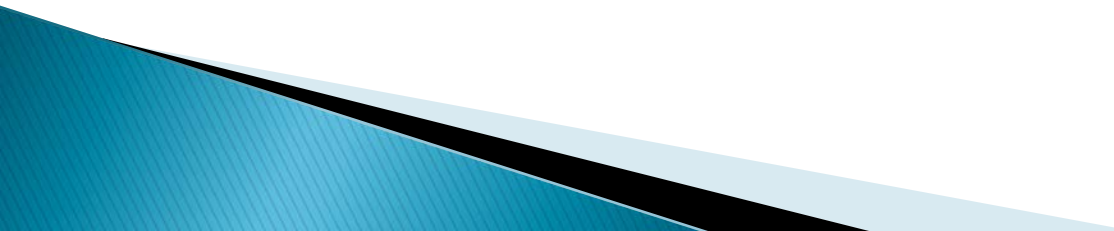
Source: Management plan 2013, IFAD Project)

## 1. Natural and Ecological values:

- The hydrology of Jebel El Dair is very essential to the whole area of Er Rahad Locality.
- JADNP as an upland watershed area contributes a great volume of water, through its many khors and streams to khor Abo Habel, which is the major and largest water course in Er Rahad Locality.





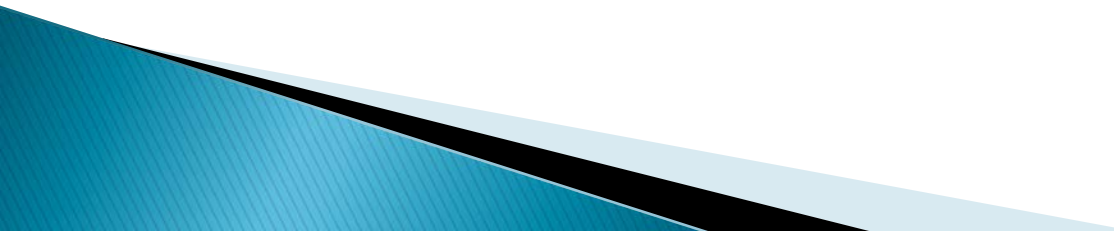
- ▶ the **springs** in the Jebel constitute the main sources of water for the wildlife species, birds, and domestic animals and to the local communities
  - ▶ JADNP as a watershed area constitutes an essential water source in such arid land ecosystem.
  - ▶ The natural forests at Jebel El Dair are valued by the local communities as part of their heritage for the wilderness and aesthetic values
  - ▶ Over 90 species of trees and grasses, providing the shelter and food to wildlife species.
  - ▶ Twenty two species of mammals, 17 species of birds and 6 species of reptiles were found
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## 2.Socio-economic values:

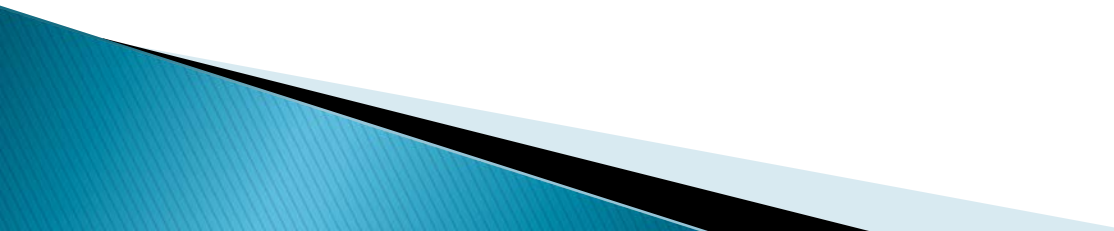
The local inhabitants gain benefits from the jebel as 28% of them collect wood, 26% use the jebel for grazing, 23% collect medicinal, aromatic plants and grasses such as *Cymbopogon nervatus*), 12% collect fruits and honey, and 9% gain benefits (bush meat) through hunting.

The jebel provides different fruits for different purposes (as food, medicine and trade)


The most frequent activity is logging of trees for:

- building materials,
  - house hold furniture
  - wood hand crafts handles for agricultural implements
  - charcoal production trade or for domestic use as fuel
  - JADNP has high potential as a recreation area because of the different tourism elements especially its beauty sight seeing areas
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### 3.Cultural values:

- Many cultural festivals are held yearly
  - The community practiced its rites and symbolic life, which are weaved around myth
  - The Kujur, who is found as symbol up the jebel, is of a mythical origin and many if not all have absolute cultural beliefs in the outstanding abilities of the Kujur and the economic exploitation of the Kujur to the people
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## The challenges:

- ▶ JADNP is affected by human activities and land-uses occurring on and outside its boundaries.
  - ▶ The local communities depend on the Jebel' resources for their livelihood.
  - ▶ The richness and diversity of plants and forest resources in the Jebel encouraged more human settlement around the Jebel.
  - ▶ New settlement exerted more pressure on the resources; through poaching, resource extraction such as timber and firewood and medicinal plants collection.
  - ▶ The park managers are facing the challenge of law enforcement in such situation.
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## Bundles of Bamboo (Gana) collected



**(Source: Management plan 2013, IFAD Project)**

## Cutting trees for Charcoal





## Collection of fruits and wood



## Selling of medicinal plants



**(Source: Management plan 2013, IFAD Project)**



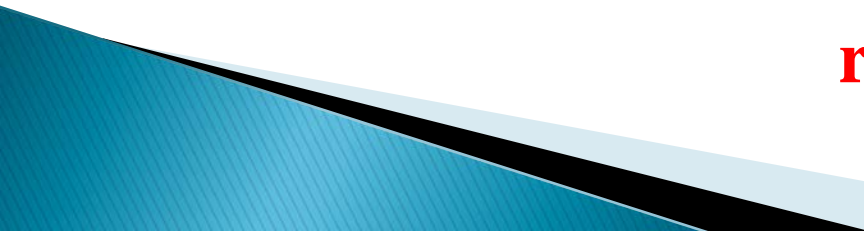


**Tree branches and grasses for house building**



**(Source: Management plan 2013,IFAD Project)**

## **Solution towards wise Management :**

- ▶ The Western Sudan Resources Management Programme (WSRMP) funded by IFAD, was approved in 2002.
  - ▶ The Programme addresses the capabilities, resources and incentives for the reform of the existing natural resources governance system.
  - ▶ The Programme design:
    - ▶ **Sustainable and equitable management of natural resources;**
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## Management Plan for Jebel El Dair:

- JADNP Management Plan 2013-2017 has been developed by WCGA/ Protected Areas Department through a participatory planning process involving a broad cross section of JADNP stakeholders
- **It is a Road map for better** conservation of biodiversity and best management of the resources
- ▶ The Management plan aims to **better** conservation of biodiversity by :
  - 1- Long-term sustainable Conservation of species and habitats
  - 2- Sustainable use of resources through the integration of local communities in the utilization and management of the natural resources.
  - 3- Maintenance of the P A as a coherent system.

# Approaches

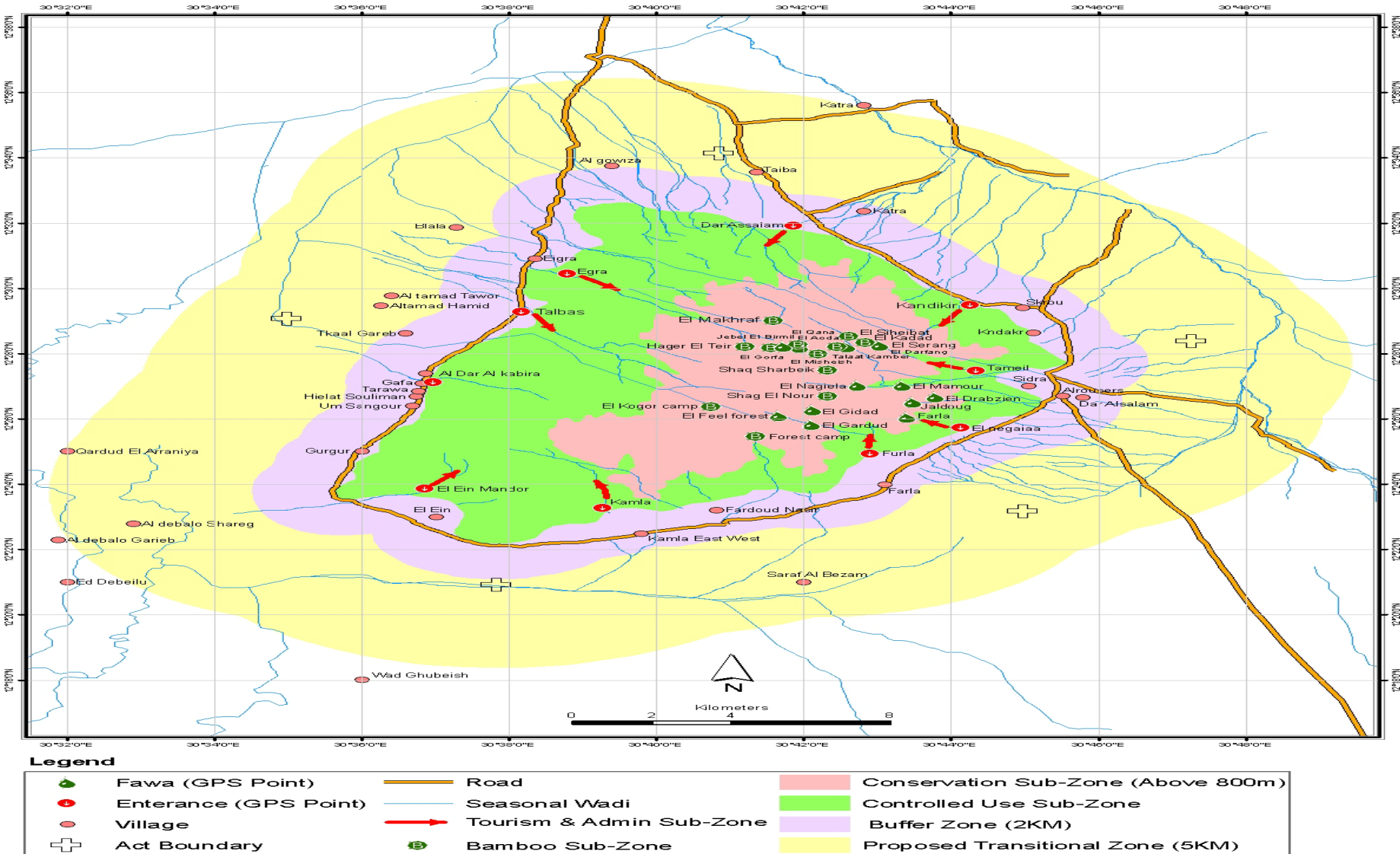
- 1 – the ecosystem approach and
- 2- the Biosphere reserve (BR) approach

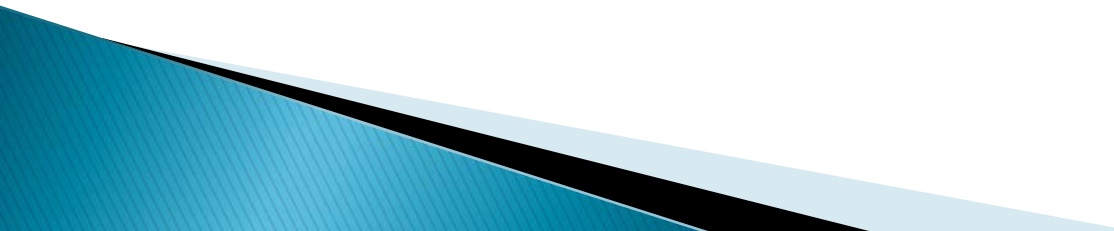
- ▶ 1- The **ecosystem approach** is a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way
- ▶ Thus, the application of the ecosystem approach will help us to reach a balance of the three objectives of the Convention on Biodiversity;
- ▶ conservation, sustainable use and the fair and equitable sharing of the benefits arising from the utilization of genetic resources.
- ▶ The philosophy and actions associated with the ecosystem approach have many reserve concepts.



- ▶ The **Biosphere Reserve (BR)** concept is one way of involving people in biodiversity conservation. This approach links ecology with economics, sociology and politics.
- ▶ Performance and achievement are evaluated on a regular basis and the views and desires of local communities remain paramount.
- ▶ The B R Concept is an integrated approach that focus on the conservation of the biodiversity and proper management of its resources, towards sustainable development for the benefits of local communities.
- ▶ Could be maintained through articulation of zones.  
(Core, buffer and transitional)

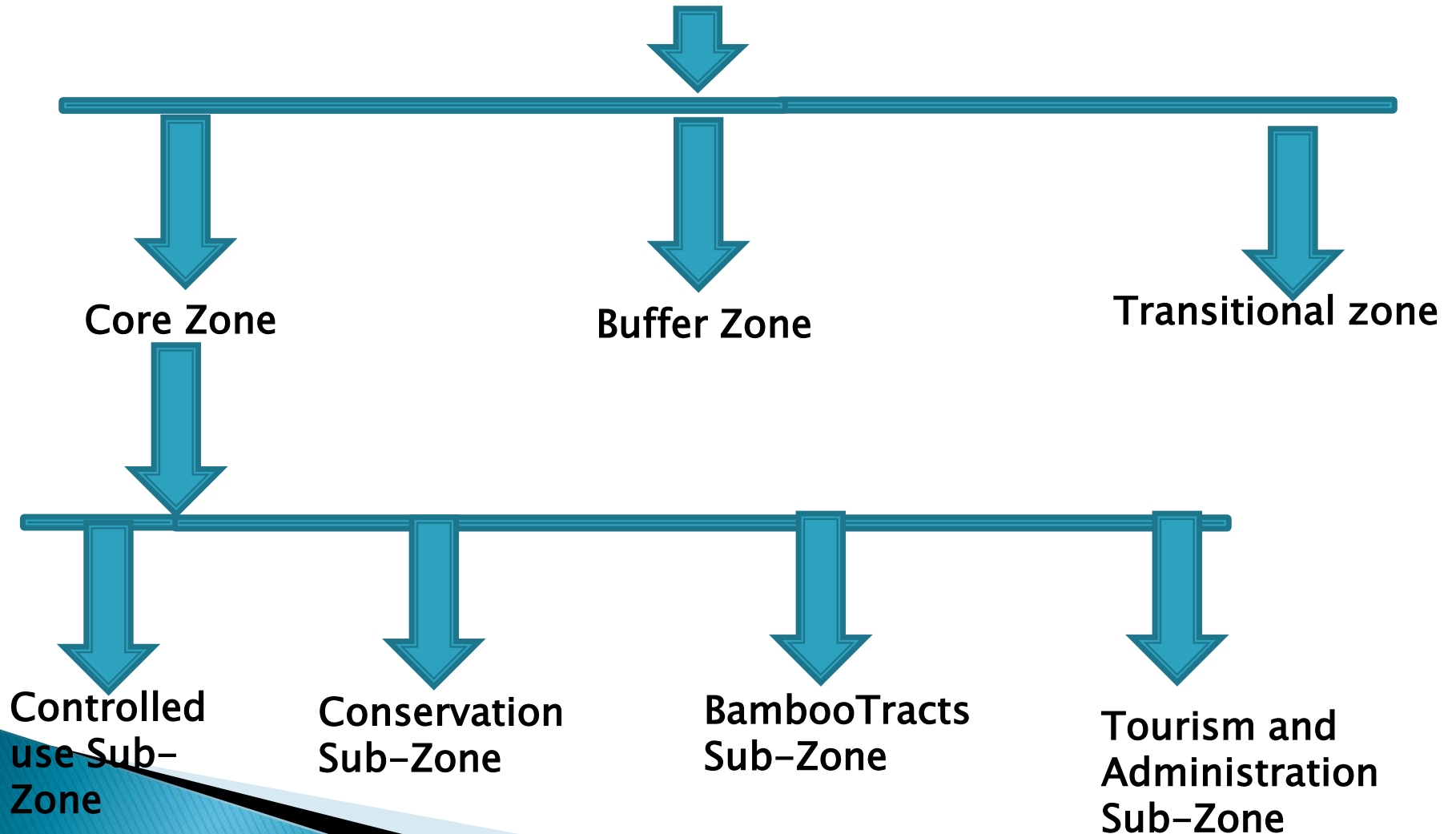
# Zonation of Jebel El Dair



- ▶ The primary factors in establishing the JADNP zonation scheme are the need to protect vulnerable habitats and biodiversity contained in the national park, and the need to manage and mitigate human impacts on the resources.
  - ▶ In order for park managers to achieve different management aims in different parts of the protected area as seen in the following sketch:
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# Jebel El Dair Zonation

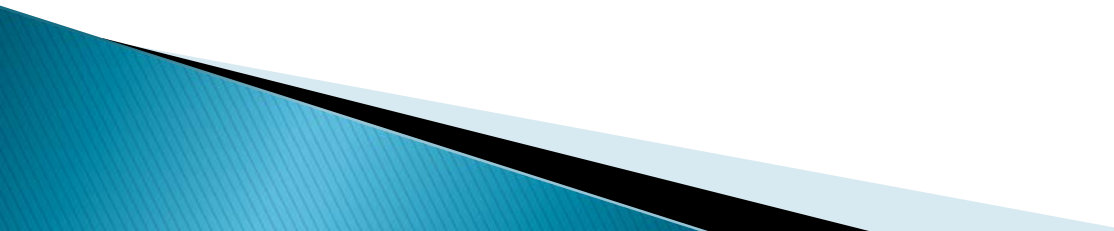
The main zones have been identified as related to sustainable use



## Recommendations:

- ▶ Implementation of the Management programmes that address the key aspects of the JADNP's management including:
- ▶ **Ecological Management and Monitoring**::-to enhance the conservation and understanding of JADNP's outstanding values and ecological services through targeted ecological management and management-oriented research and monitoring.
- ▶ **Tourism Management and Development**:- to develop Jebel Al Dair National Park as an ecotourism and adventure destination that complements other tourist attractions and provides optimal community benefit.



- ▶ **Community Partnership** :- is to help local communities living within JADNP to adopt increasingly sustainable livelihood and resource use practices that benefit both the Park and the community
  - ▶ **Park Operations programmes**:-to ensure the integrity of, and minimize environmental impacts on, JADNP's outstanding biodiversity, ecological and economic values through the implementation of an effective, efficient and adequately financed management system
  - ▶ Implementation of such management programs through the **BR Concept** to Enhance both community livelihoods and sustainable resource use.
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A serene sunset scene over a village. The sun is a bright orange orb on the horizon, partially obscured by the silhouettes of several traditional houses with conical roofs. A large, leafy tree stands prominently on the right side of the frame. The sky transitions from a deep orange near the horizon to a pale blue at the top. The foreground is dark and mostly in shadow.

# Thanks you

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