

An Overview to Mangrove Ecosystems in Iranian Coastal of Persian Gulf and Oman sea

Essay in Wildlife ecology and Management
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Introduction:

In My essay I focused basically on Mangrove forests its distribution, current situation, ecosystems, benefits , conservation plans , and factors which threat its existance in Iranian Coastal of Persian Gulf and Oman sea .

General information about Mangrove :

Mangroves or better to say Mangrove forests belong to Aquatic bioms including trees and shrubs that grow and reproduce in tropical and subtropical areas between latitude 25 N and 25 S , in salty coastal habitats. They are really resistant against harsh conditions and can bear brackish water up to 90ppt.

Other good characters of Mangroves which could be seen is the adoption of the plant to Low Oxygen, mediation of Salt intake, Nutrient Uptake (proper roots allow the plant to uptake gases from the air and other nutrients and minerals from inhospitable soil) and Limitation of water loss through its leaves.

The term 'Mangrove' may be used for all kind of plant species who are adopted and resistant against saline conditions but it can mainly refer to mangrove family of Plants , Rhizophoraceae and Avicenniaceae.

About 110 Species belong to to the Mangal.

110 Mangrove species , 54 species in 20 genera from 16 families make the true mangroves.

Worldwide Distribution:

Mangrove forests could be seen in many areas worldwide.

Africa:

Could be seen in countries like Kenya , Tanzania and madagascar , in Nigeria there is about 36000km² .

But Oil pollution has demolished its existance since last 50 years.

Americas :

It could be seen in trop and sub-trop. Parts of North, South and Central.

And in USA , it can be seen in Florida , mostly black mangrove,

Central America & Caribbean:

In countries like coastal zones of Costa rica, Nicaragua, Belize, Honduras and such, and among them Belize has the highest percentage.

New Zeland and Pacific Islands:

In Raglan Harbour and Ohiwa Harbour.

And around 25 species in Pac. Islands.

Asia:
in areas Such :

Indomalaysia ecozone:

Basically in Asia's south coast.

Islands in the Indian ocean, arabian sea , bay of bangal , south china and pacific
And countries such Vietnam, Cambodia, Taiwan , Indonesia and such.

Pakistan:

Located in Indus delta , and major mangrove forests on the coastline of Sindh and Baluchistan.

Middle East:

Mangrove biomes could be seen in Oman , Near Muscat, and in Arabic they are known as Qurm, therefore the Mangrove area in Oman is known as Qurm Park.

IRAN

This is my main focus in this essay .

So, Iranian mangrove forests occur between 25 11 N to 27 52 N , in northern part of Persian Gulf and Oman sea

Along three Provinces

Overview of Iranian Mangrove Ecosystem:

So , as it was mentioned , Iranian mangrove forests occur between 25 11 N to 27 52 N , in northern part of Persian Gulf and Oman sea , the total area of Mangrove forests are almost 10700 ha (Max:67.5 Min:0.01 km²)

Including Three Provinces of Bushehr , Hormozgan and Sistan & Baluchestan .

Within these forests , only two species of Mangrove can be observed including *Avicennia marina* from Avicenniaceae (Name comes from an Iranian Scientist called Avicenna) and *Rhizophora macrunata* from Rhizophoraceae. In which *A.marina* is dominant while *R.macrunata* is seen in Sirik region.

Persian name for *A.marina* is Harra and *R.macrunata* is Chondal.

Biological role of Mangrove in the area:

The Mangroves play important roles mainly in aquaculture and fishing

And beside that they are great nursery for aquatic animals like fishes and place of reproduction for birds

As well as protection of shorelines against massive waves and tsunami ,. Especially in Sirik region.

Trees branches and leaves are used for feeding of domestic animals like camels, its wood is used for wooden industries, and also As honey production is one of the sources of income for local people , so that industry may depend on mangrove flowers.

And in addition to all stuff above it is used as a herbal plant as it contains Saponins , Flavonoids and Tannins.

Mangroves vs. Persian Gulf Climate:

The climatic conditions in Persian gulf and Oman sea region can be really stressful although these plants have adopted themselves in the best way . (A.marina esp)

It is extremely hot and humid in Summer (between 35-45 degree depends on areas) and cold in Winter (12-16 degree).

Evaporation is more than annula rain income which is less tha 200mm3, and this rate has been decreased more and more over years (from 1982-1991) .

The salt level of water is around 38-50 ppb.

So we may say its one of the direst and most harsh worldwide zones.

Animal diversity of Iranian Mangrove:

More than 100 species of sea and shoreline birds, two endangered and 107 species of fishes, and 6-10 species of prawn and crabs resp, plus 2-5 species of sea snakes and turtels, phytoplanktons and other marine animals can be observed.

Basically beside harsh conditions , big diversity of animals live in that area.

Factors threatening the Mangrove forests and its ecosystem in Iran :

Unfortunately many factors is threathening this beautufl area and its ecosystem, therefore getting to know those danger factors can help us in controlling the crisis and conserving of Mangroves.

- 1- Overexploitation of Mangrove trees by rurals for purpose of animal breeding
- 2- Extreme tidal waves which lower its growth and development
- 3- any kind of change in the way or direction of river or delta
- 4- Changes in weather and climate conditions
- 5- Plant pathogens like insects (N.lenticularis) which may cause disturbances in plant growth and reproduction.
- 6-Mammals like rodents that can destry the vegetation by eating the seeds, leaves or fruits
- 7-Construction Projects for roads, facilities and such.
- 8-fishing extrapoitation
- 9- Oil Pollution by refinery near to Asalouyeh region
- 10- sewage and waste discharge to the area

Conclusion:

As We can see Mangrove forest with all its great and beneficial characters and ofcourse its importance for the maintainance of the ecosystem is in big danger of Demolishment in persian Gulf area . and It suffers from lacking of a sufficient conservation program.

The first step of solving each problem is to find out the disturbing factors , as I tried to look for these factors in this essay. (10 main ones)

The second step would be to destroy or atleast minimize the problematic factors via planning the most efficient program .

Here I have written those ways which can be helpful in saving and regeneration of this great and important ecological area.

1- Consulting with the best group of Scientifics in order to find out the best way after analysis of area with different methods

2- Educationg the rural and local people about the importance of forests and natural resources.

3- Immuniyizing the plants against pathogens and establishing a conservation group by government , as unfortunately no coservation plans has been taken to action before

4- controlling the population of animals (rodents)

5- Controlling and checking up the Refineries and oil ships by the state organizations.

6- Establishing a plan for fishing seasons. So fishers are not allowed to do fishing in some periods.

And ofcourse many more...

Resources:

Mangrove ecosystem in Iranian coastal of Persian Gulf

Sohrabi, Masoomeh

<http://www.wseas.us/e-library/conferences/2006venice/papers/539-380.pdf>

http://ejeafche.uvigo.es/component/option,com_docman/task,doc_view/gid,617/

Enviromental studies in Mngrove ecosystem of Qeshm island, Hosseini Somayeh

<http://www.wseas.us/e-library/conferences/2009/cambridge/EE/EE73.pdf>

Wikipedia.org

<http://en.wikipedia.org/wiki/Mangrove>

