

BIRDS DIVERSITY OF INDIA

ASAD R. RAHMANI
DIRECTOR



Bombay Natural History Society

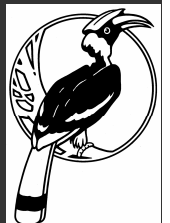
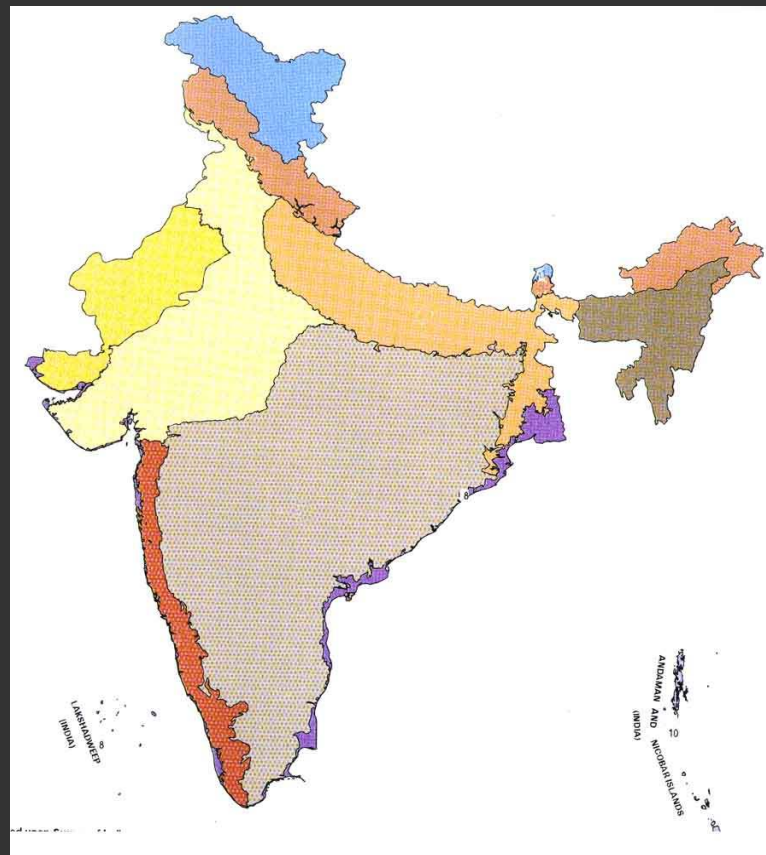


Bird Diversity in India



- Indian subcontinent : part of Oriental biogeographic regions
- India is among 12 Mega-diversity countries of the World
- > 9,000 birds in the world
- Indian subcontinent : >1300 species
- Over 13% of the world's birds found in India
- 48 bird families out of the total 75 families in the world.

Biogeographical Zones in India





Center of radiation of many species

- *Drongos, Leaf birds, Pittas*
- *Parrotbills, Flower-peckers*
- *Pheasants*

- Not many physical barrier
- Fauna from Palaeartic, Ethiopian, Indo-Chinese and Indo-Malayan
- Dominant bird fauna 'Indochinese'
- Birds of warm, moist tropical forests



- **176 endemic to the Indian subcontinent**
 - 30 (17%) have affinity to the Palaearctic
 - 109 (62%) are related to Indochinese
 - 30 are related to Ethiopian species,
 - 7 of unknown affinity
-
- **Majority of species of some groups found in the Indian subcontinent**
 - 71% of the treecreepers (Certhiinae),
 - 62% of accentors (Prunellinae),
 - 55% of laughing thrushes (Garrulacinae)
 - 50% of ioras (Aegithininae)
 - 37% of the barbet
 - 38% of drongos

New species



Indian subcontinent thoroughly researched during the last 200 years.

Very few new discoveries

- Nepal Wren Babbler *Pnoepyga immaculata* discovered in 1991, and Serendip Scops-owl *Otus thilohoffmanni* discovered in Sri Lanka in 2003.
- New species or subspecies of Pheasant in Arunachal Pradesh, and very recently Bugun Liiochicla, a new species to science, discovered in Arunachal Pradesh in 2006



Western Ghats

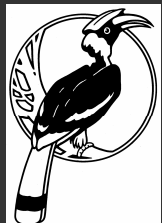
>500 Bird species,
including 16
endemic

- Several species endemic to the Western Ghats are largely confined to evergreen broadleaf forest, among them the Black-and-Orange-Flycatcher *Ficedula nigrorufa* and Wynaad Laughingthrush *Garrulax delesserti*.



Island species

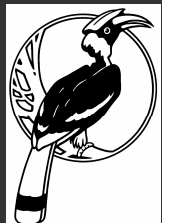
- Narcondam Hornbill is confined to 7.5 sq km Narcondam Island, and nowhere else in the world.
- 350-400 individuals are present
- Nicobar Megapode is endemic to Nicobar group of islands



Scrub



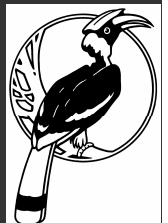
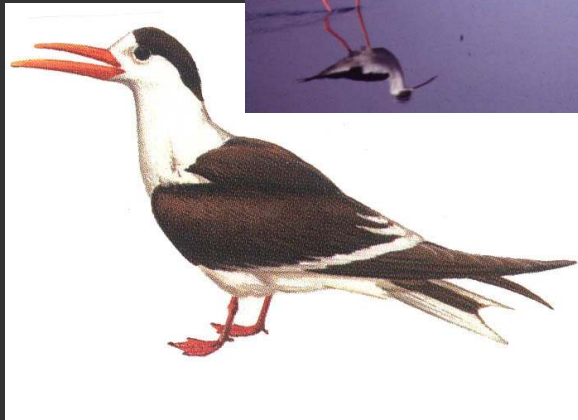
- It has developed in the region where trees are unable to grow either because of poor soil or they are too wet.
- One of the most interesting bird species is the endangered Jerdon's Courser *Rhinoptilus bitorquatus*.





Wetlands

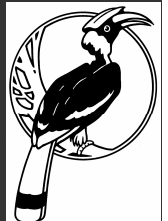
- Wetlands are abundant in the region and support large number of waterfowl.
- A total of 33 of the subcontinent's wetland bird species are globally threatened including the Spot-billed Pelican, Black-necked Crane and Indian Skimmer.





Important wetlands

- Keoladeo
- Chilika
- Loktak
- Sambar
- Pulicat
- Vembanad
- Hokersar





Grasslands



- The most important grasslands for birds in the subcontinent are the seasonally flooded grassland occurring across the Himalayan foothills and the floodplains of the Indus and Brahmaputra rivers, the arid grasslands of the Thar desert and grasslands in peninsular India, especially those in Madhya Pradesh, Maharashtra and Karnataka.

The Indian desert



Arid (9% of area of India)

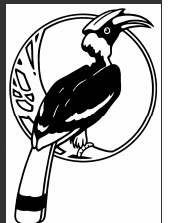
One of the smallest deserts in the world,

High avian diversity

Located at cross-roads of the Palaeartic and Oriental biogeographic regions.

Low endemicity

Stoliczka's Whinchat



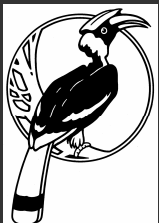


- Most of the regions endemic grassland birds are seriously at risk. These include three non-passerines, the Swamp Francolin *Francolinus gularis*, Lesser Florican *Sypheotides indica* and the Great Indian Bustard *Ardeotis nigriceps*

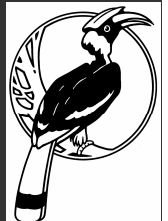
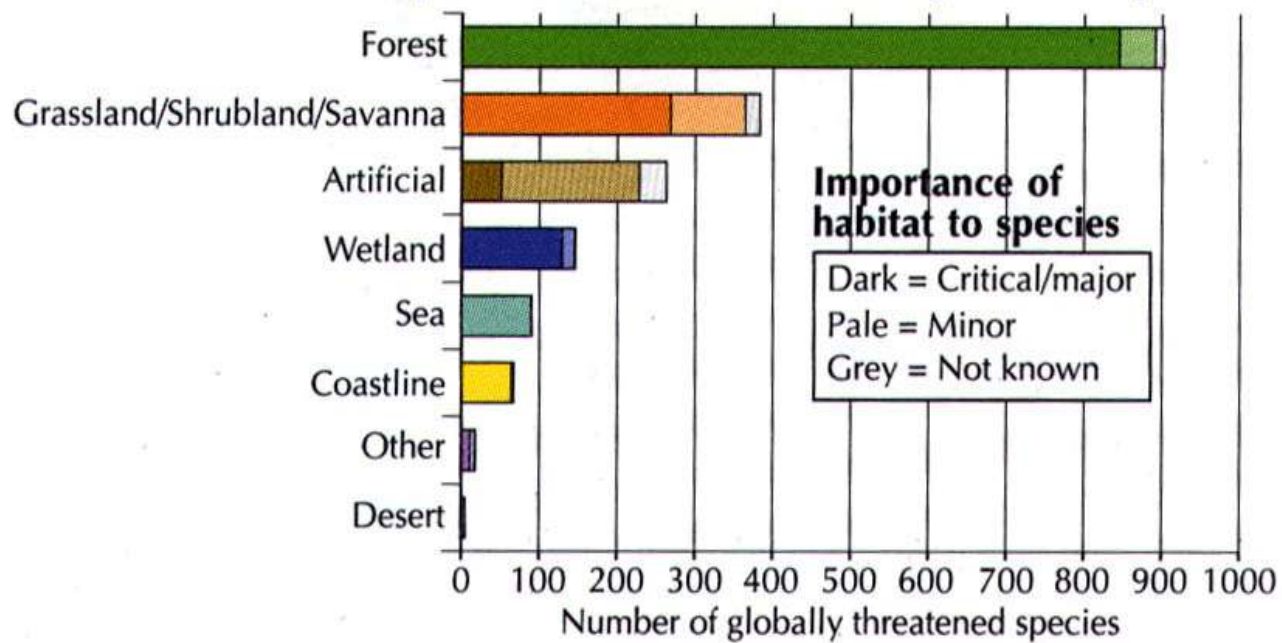


Threats to Birds

- **Habitat loss is the greatest threat**
- **>50% globally threatened birds and 2/3 endemic birds are dependent on forests**
- **Emerging diseases such as Bird Flu, Bird Malaria.**
- **Climate Change**
- **Non-target effect of some veterinary drugs such as Diclofenac**



The habitats upon which threatened species depend



Five major reasons why birds become rare

(1) Long living and slow breeder

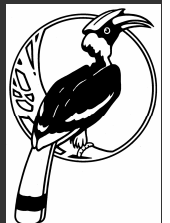
Thinly but widely distributed

e.g. **Raptors**
 Bustards
 Storks
 Cranes

(2) Specialists

Birds with very specialized habits and Habitats

e.g. **Swamp Francolin**
 Bengal Florican
 Hornbills
 Pheasants



(3) Island inhabitants

Endemics and specialists

e.g. Narcondam Hornbill

(4) Colonial Breeders

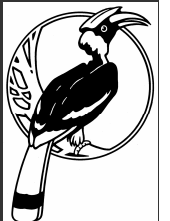
**e.g. Terns
Pratincoles
Skimmers**

(5) Migratory species

Long distance migrants, often in different countries.

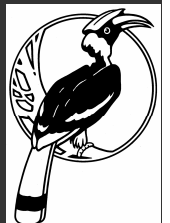
International cooperation necessary for conservation

e.g. Siberian Crane

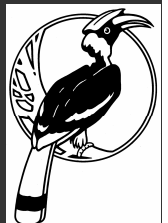


Conservation measures

- We now have the knowledge to maintain the wonderfully rich and varied bird life that still exists. The challenge facing us now is to use this knowledge and apply our skills, imagination and resources to deal with the problems before it is too late.
- Traditional protection, religious beliefs, legal measures and the efforts of conservation organizations have all helped to counter partially the threats confronting birds in the subcontinent.
- Legal conservation measures are in force in our country. In 1952 the Indian Board for Wildlife (IBWL) was set up by the Government.
- Wildlife Protection Act 1972 was enacted.
- Major wetlands of international importance are protected under the agreement of Ramsar Convention.



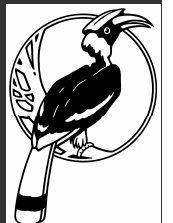
- India became a member of CITES in 1976. Also in IUCN and ICBP(now called BirdLife International).
- Presently there are more than 540 national parks and sanctuaries covering more than 4% of the country's surface area.
- Particular emphasis is being given to protecting sites of high species diversity and endemism such as the Western Ghats as well as ecologically fragile areas.
- At least 35 protected areas in India are devoted primarily to bird conservation.
- Local, national and international non-governmental organizations have made a major impact on bird conservation



INDIAN BIRD CONSERVATION NETWORK (IBCN)

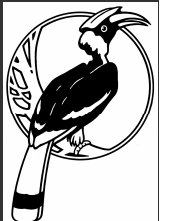
MISSION

**to promote conservation of
biodiversity by means of
development of a national
network of individuals,
organizations and the
Government**

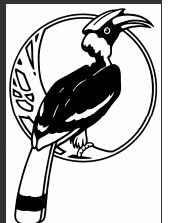
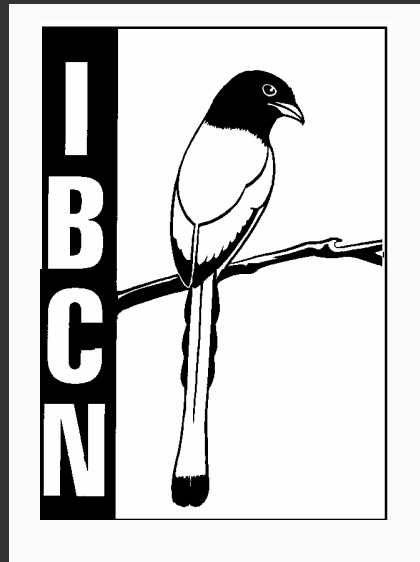
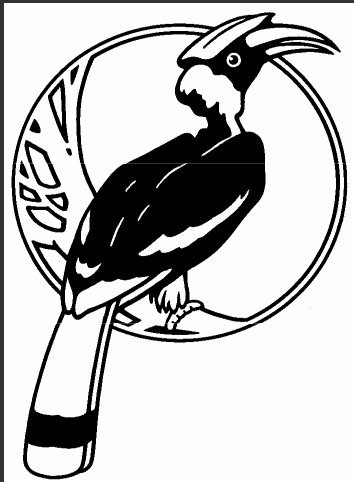


IMPORTANT BIRD AREAS (IBA) PROGRAMME

INDIA

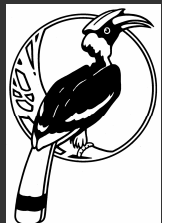


The Partners



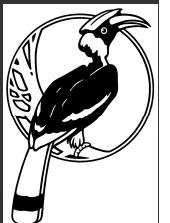
AIMS OF IBA PROGRAMME

- To identify and protect a network of sites, critical for the long-term survival of wild bird populations, for which a site based approach is appropriate
- To gather as much information as possible on key bird species and sites that are important for them especially those remained neglected in the past



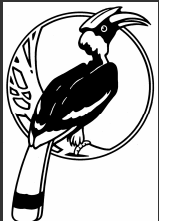
ADVOCACY

- Site specific conservation action
- Monitoring



IBA Criteria

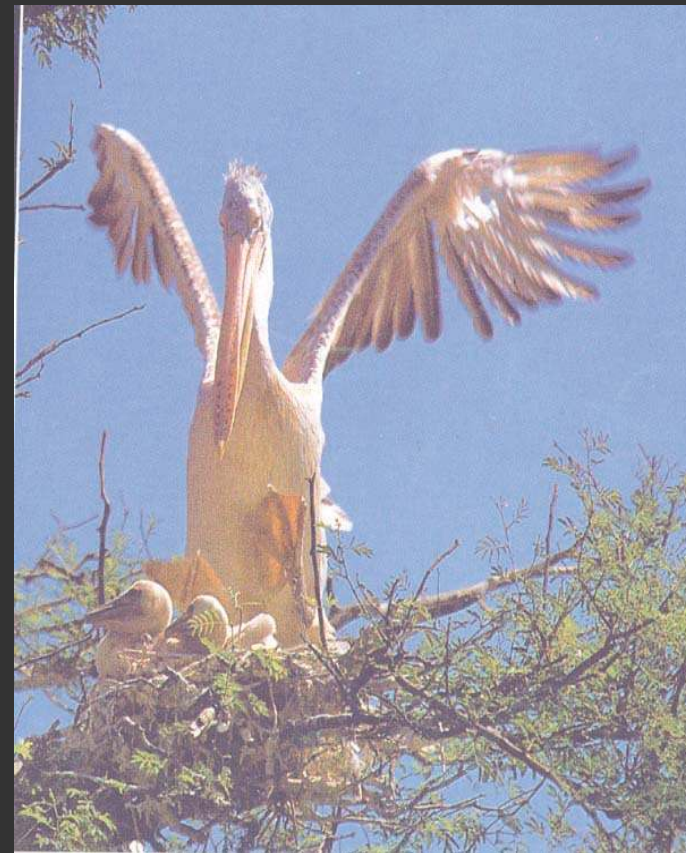
- 4 standard global criteria
- Uniform and cost-effective
- Global conservation currency



Category A1: Globally Threatened Species

Criterion...

The site regularly holds the significant numbers of a globally threatened species

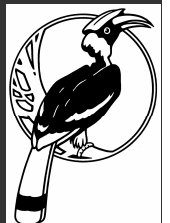


Category A2: Restricted Range Species (Endemic Birds)

- Criterion...



The site is known or thought to hold a significant component of a group of species whose breeding distributions define an Endemic Bird Area (EBA) or Secondary Area (SA)

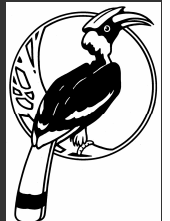


Category A3: Biome-restricted Assemblages



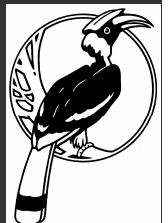
■ Criterion...

The site is known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome



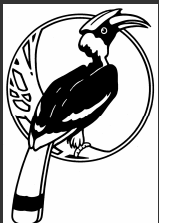
Category A4: Congregation

A4(i) The site is known or thought to hold on a regular basis, $\geq 1\%$ of a biogeographic population of a **congregatory waterbird species**



Category A4: Congregations

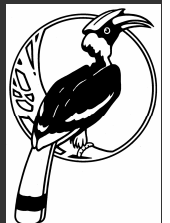
- A4(iii) The site is known or thought to hold on a regular basis $\geq 20,000$ waterbirds or $\geq 10,000$ pairs of seabirds of one or more species



Category A4: Congregations

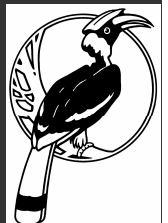


- A4(iv) The site is known or thought to exceed thresholds set for migratory species at bottleneck sites

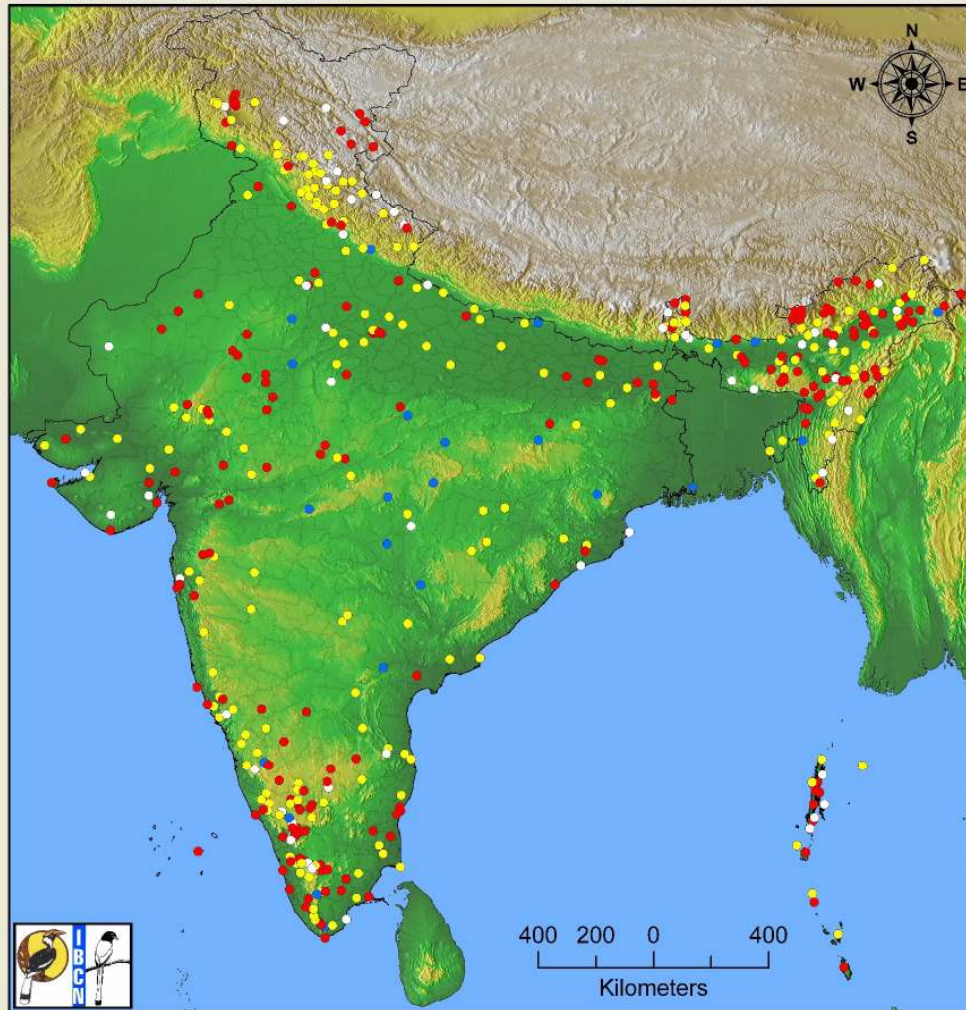


IBAs are sites which can:

- support as many species as possible
- cover the widest possible range of species
- form a network through the species range
- include best examples of the species natural habitats as well as marginal areas
- be large enough to support self-sustaining populations of as many species as possible for which it was identified

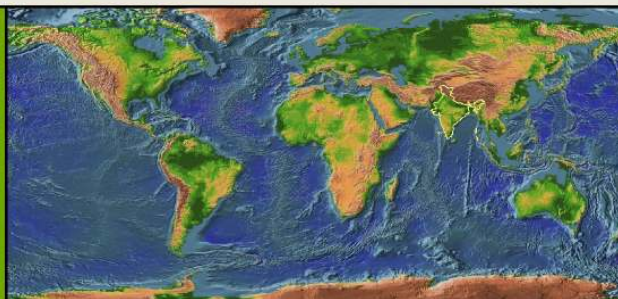


Protection Status of Important Bird Areas in India

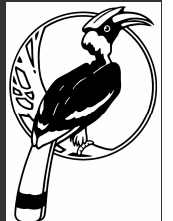


Legend

- Not Officially Protected
- National Park
- Tiger Reserve
- Wild Life Sanctuary



Birdwatchers travel all over the world



Bird watching business in the USA

According to National Survey on Recreation and Environment

- Bird watching is highly popular
- Fastest growing activity in the USA
- In 2001, 71 million Americans participated in bird watching, 250% higher from 1980.

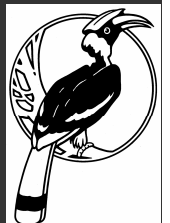
According to U.S. Fish and Wildlife Service

- Americans spent
 - 21 billion US dollars in 1991
 - 30 billion in 1996
 - 40 billion in 2001



Ospreys of Loch Garten

- Osprey was extinct in U.K. for 40 years
- One pair discovered breeding in 1954 but the nest was robbed.
- In 1958, the RSPB started 24 h vigil
- First year, 20,000 visitors came
- Till now, more than 2 million visitors
- By 2001, there were 150 pairs in U.K.
- In 1950s, RSPB had 20,000 members, now 1.4 million
- The Osprey still occupy the same, battered old tree
- Special website: www.ospreys.org.uk



Birding Worldwide Covering the Globe in 2001



For a free copy of our 54 page
2001 Catalogue covering
18 destinations please phone, fax
or email us at Birding Worldwide.



Birding Worldwide Pty Ltd

Level 3, 818 Whitehorse Road,
Box Hill, Victoria 3128 Australia

Phone: +61 3 9899 9303

Fax: +61 3 9890 8911

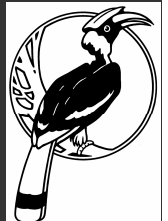
E-mail: enquiries@birdingworldwide.com.au

Website: www.birdingworldwide.com.au

PHOTOSYNTHESIS 5403



We should see that no species becomes extinct due to human causes



Thank you

