

# Conservation at the Population and Species Levels

## Establishing New Populations (Punjab, Pakistan)



This presentation explains how conservation efforts focus on protecting species and creating new populations, especially in Punjab where biodiversity is under threat due to urbanization, agriculture, and climate change.

## **Introduction to Conservation:**

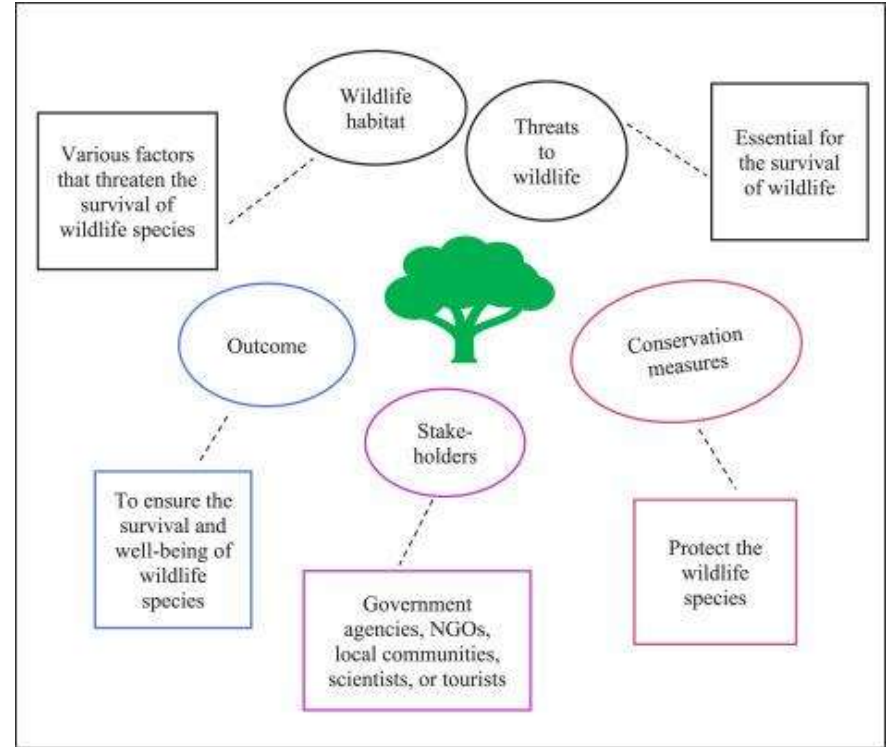
Conservation means protecting plants, animals, and ecosystems. In Punjab, rapid population growth and farming activities have reduced natural habitats.

Conservation at population and species levels ensures that wildlife survives and maintains ecological balance.

# What is Population-Level Conservation?

Population-level conservation focuses on protecting groups of individuals of the same species in a specific area.

In Punjab, this includes managing populations of animals like deer, birds, and freshwater species to prevent their decline.



# What is Species-Level Conservation?

Species-level conservation aims to protect an entire species from extinction.

For example, rare species in Punjab such as the Indus river dolphin or certain migratory birds need targeted conservation strategies to ensure survival across their habitats.



# Threats to Wildlife :

Major threats include:

- Deforestation
  - Water pollution in rivers (like the Indus)
  - Illegal hunting and poaching
  - Urban expansion and industrialization
- These threats reduce population size and can lead to species extinction.



# “Establishing New Populations:”

Establishing new populations means introducing a species into a new or restored habitat where it can survive and reproduce.

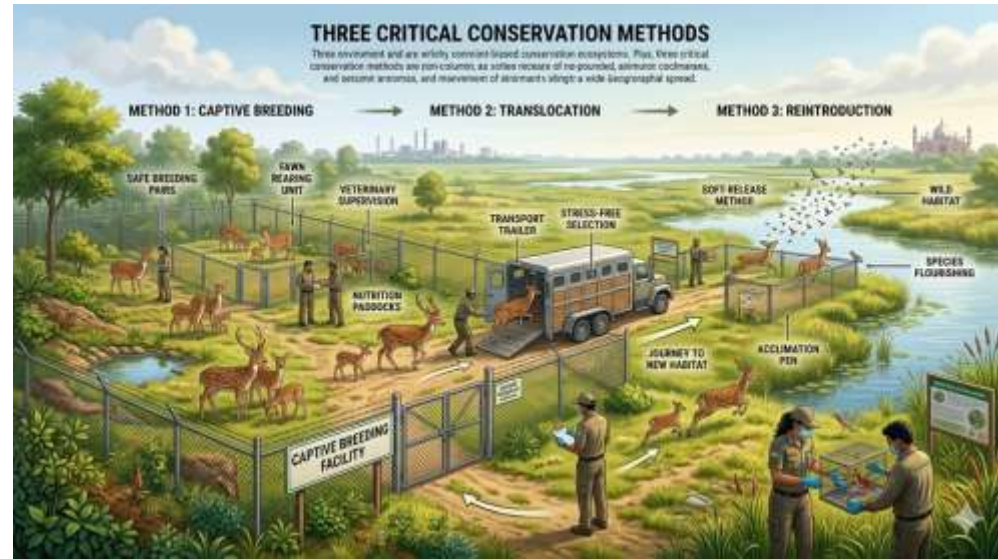
This is done when natural populations are declining or habitats are destroyed



# Methods of Establishing New Populations:

Common methods include:

- Reintroduction (bringing species back to original habitat)
- Translocation (moving species to new safe areas)
- Captive breeding and release  
In Punjab, wildlife departments use these methods to restore species numbers.



# Examples from Punjab:

- Reintroduction of deer species in protected areas like Changa Manga Forest
- Conservation of Indus River Dolphin in the Indus River
- Protection of migratory birds in wetlands like Uchhali Lake  
These efforts help rebuild populations.



# Importance of Establishing New Populations:

Prevents species extinction

Restores ecosystem balance

Increases biodiversity

Supports tourism and economy

In Punjab, it helps maintain ecological stability despite human pressures.



# Case Study – Indus River Dolphin Conservation

Indus River Dolphin is an endangered species found in the Indus River in Punjab. Due to pollution, dams, and habitat loss, its population declined to around 1,200 in the early 2000s. Conservation efforts by the government and World Wide Fund for Nature included rescue operations, habitat protection, and relocation of stranded dolphins. As a result, the population has significantly increased over time.

## **Figure (Data):**

2001 → 1,200

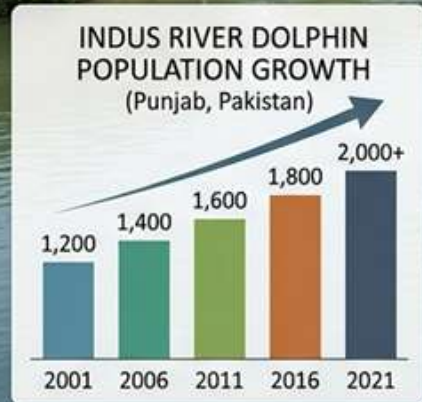
2006 → 1,400

2011 → 1,600

2016 → 1,800

2021 → 2,000+

# CASE STUDY: Indus River Dolphin Conservation, Punjab, Pakistan



CLEAN & PROTECTED ENVIRONMENT

HUMAN IMPACT & THREATS

## Conclusion:

Conservation at the population and species levels is essential to protect biodiversity in Punjab. Due to increasing threats like urbanization, pollution, and habitat loss, many species are at risk. Establishing new populations through reintroduction and conservation programs helps restore ecological balance.

To ensure long-term success, it is important to protect natural habitats, spread awareness, and support government and conservation efforts. By taking these steps, Punjab can preserve its wildlife for future generations.