WHAT ARE INDICATOR SPECIES?

An indicator species describes an organism that is very sensitive to environmental changes in its ecosystem. Indicator species are immediately affected by changes to the ecosystem and can give early warning that a habitat is suffering. An increase or decline of indicator species can indicate certain environmental conditions

Changes associated with external influences such as air pollution, outbreak of disease, water pollution, climate change etc. first appear in Indicator Species.

INDICATOR SPECIES INDICATE :

✓ the progress in biodiversity conservation & health of ecosystem.

✓ impacts & threats on biodiversity, to detect changes in environment & monitor pollution and its effects.

✓ targets to evaluate sustainability measures.

✓ to be a barometer to assess how a specific ecosystem is doing and how human activity is impacting on the areas.

ECOLOGY OF BIRDS AS AN INDICATOR OF CLIMATE CHANGE

Changes in abundance & behavior of birds, their arrival at their breeding grounds and their disappearance in late autumn have been used to forecast the changes in the environment they live in. Other factors like change in land use also influence the migration behavior of birds.

CONTACT

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BIRDS AS INDICATORS OF HEALTHY ENVIRONMENT

A HABITAT GOOD FOR BIRDS IS A GOOD ENVIRONMENT FOR PEOPLE

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Though you may think that birds are only good indicator species for air pollution, their interaction with the rest of the ecosystem makes them excellent to monitor the overall quality of certain habitats.
Lets take a look at the different problems that birds can determine. Changes in bird population are often the first indication of environmental problems.
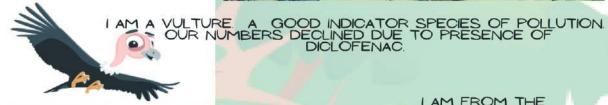
INDICATOR SPECIES

We are sensitive to environment changes.

Our increase or decline in population indicate certain environmental condition.

LOW GREEN COVER

POLLUTION

HABITAT DESTRUCTION

WE ARE TRYING TO FIGURE OUT THE ORIGIN OF THIS PANDEMIC.

WAS IT A BAT OR A PANGOLIN, OR SOME OTHER BEAST?

WE HAVE NOT CLEAR CUT THE FORESTS...

DAMMED THE RIVERS...

CHANGED THE CLIMATE...

OR CONDUCTED ILLEGAL WILDLIFE TRADE.

...NOR HAVE WE DESTROYED BIODIVERSITY AND OPENED THE PANDEMIC PANDORA'S BOX!

I AM A VULTURE. A GOOD INDICATOR SPECIES OF POLLUTION. OUR NUMBERS DECLINED DUE TO PRESENCE OF DICLOFENAC.

We are useful to assess how a specific ecosystem is doing and how human activity is impacting on the areas.

I AM FROM THE CROW FAMILY I HELPED IN EARLY DETECTION OF WEST NILE VIRUS.

MY MORTALITY HAS BEEN CONSIDERED AS AN INDICATOR OF OUTBREAK OF DISEASE.

I AM A PEREGRINE FALCON. I PREY MAINLY ON BIRDS. USE OF DDT & OTHER PESTICIDES RESULTED IN MY DECLINE. MY DECLINE WAS AN INDICATOR OF OVER USE OF PESTICIDES.

I AM A HOUSE SPARROW A BIOINDICATOR OF URBAN ECOSYSTEM QUALITY MY PRESENCE TO SOME EXTENT INDICATES THE HEALTHINESS OF THE ENVIRONMENT.

I AM FROM THE WOODPECKER FAMILY MY PRESENCE IN A FOREST INDICATES THE PRESENCE OF MORE NUMBER OF OTHER BIRD TYPES.

MY PRESENCE DETERMINE THE QUALITY AND QUANTITY OF OLD - GROWTH FORESTS WHICH ARE THREATENED BY DEFORESTATION AND POLLUTION

I AM A HORNBILL. I RELY ON FRUITS, PARTICULARLY FIGS, AS IT FORMS A LARGE PART MY DIET. I AM A GOOD 'INDICATOR SPECIES' FOR THE HEALTH OF THE FOREST MY NESTING BEHAVIOR ALSO MAKES ME A GOOD INDICATOR SPECIES BECAUSE I REQUIRE LARGE TREES TO NEST IN, WHICH MEANS THAT I HAVE A STRONG PREFERENCE FOR UNDISTURBED FOREST.

WE ARE THE WADERS. OUR NESTING NEAR A WATER BODY IS DEPENDENT ON AVAILABILITY OF PREY. CONSTRUCTION OF CANALS OR ANY OTHER ACTIVITY THAT ALTERS THE FLOW OF WATER SEVERELY DEGRADES OUR ECOSYSTEM.

OUR SENSITIVITY TO PROPER ECOSYSTEM FUNCTIONING MAKES US VALUABLE INDICATORS OF HABITAT QUALITY.