## WHATADIFFERENCE LARGE CARNIVORES MAKE

ECOSYSTEM SERVICES (NATURE SERVICES) = "THE BENEFITS THAT ECOSYSTEMS PROVIDE TO PEOPLE"

There are four main groups of ecosystem services: provisioning, regulating, supporting and cultural. Ecosystems need to be healthy in order to maintain the health of all living things within and around them, including humans.

CLEAN WATER PRODUCTION

DISEASE REGULATION

SOIL

**FERTILITY** 







REGULATION OF ANIMAL SPECIES WHICH MAY OTHERWISE BECOME OVERPOPULATED

THROUGH
THEIR INTACT ECOLOGICAL
PROCESSES, HEALTHY AND
FUNCTIONING NATURAL
AREAS PROVIDE PEOPLE WITH

MANY BENEFITS



SEED DISPERSAL

## THE ROLE OF LARGE CARNIVORES IN AN ECOSYSTEM

Large carnivores need massive areas of intact and uninterrupted habitat. Sustainably managing these habitats for carnivores also preserves the habitats of many other species.



CLIMATE

**REGULATION** 

**HEALTHY AND** 











ALL OF THESE PROCESSES HAVE BEEN KNOWN TO OCCUR IN SOME ENVIRONMENTS, BUT THEIR IMPORTANCE WILL VARY OVER TIME AND DEPENDING ON THE CONTEXT.

LARGE
CARNIVORES
AFFECT
ECOSYSTEMS
MAINLY BY HAVING
AN IMPACT ON THE
NUMBER OF PREY
AND SMALLER
PREDATORS, IN
ADDITION TO
OTHER ECOLOGICAL
INTERACTIONS

IMPACT ON PREY

1. Large carnivores can reduce the number of prey and affect prey behaviour because the prey chooses different habitats, its food source, group size and activity periods, and reduces the amount of time used for feeding.

2. Large carnivores help maintain healthier prey populations, as they can selectively cull weak members of ungulate herds and prevent the proliferation of infectious diseases among prey populations.

IMPACT ON SMALLER
PREDATORS AND
SCAVENGERS

1. Large carnivores may reduce the number of medium-sized predators like foxes, jackals, etc. and therefore the community structure of smaller prey.

2. Large carnivores can provide food for scavengers that take advantage of the increase in food left by large predators in the form of carrion.

## OTHER ECOLOGICAL INTERACTIONS

1. The impact of predators on nutrient cycling is ubiquitous, and it has to do with direct nutrient excretion, egestion or translocation within and across ecosystem boundaries after prey consumption.

2. Changes in vegetation and trophic cascades occur, as large carnivores are animals that survive by preying on other organisms, they can send ripples throughout the food web, regulating the effects other animals have on that ecosystem. One of the clearest examples of trophic cascades occurs when wolves prey on ungulates, which potentially keeps the ungulates moving around and their populations at lower numbers and more spread-out. This limits the impacts ungulates have on plant biomass – thus more trees, bushes, and grass can grow – which then preserves or creates habitat for many other species, from insects and reptiles to beavers and birds, especially around riparian areas (streams or rivers), preventing soil erosion at the same time.























