

MIGRATORY PATTERNS OF BIRDS

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1.0. INTRODUCTION :

Climate change is significantly impacting migratory bird patterns, causing shifts in migration timing ;alternating breeding location, and disrupting food availability, often leading to reduce population numbers due to “Phenological mismatches” where birds arrive at their breeding grounds when their primary food source is no longer readily available; this is primarily driven by rising temperatures causing earlier spring conditions and changes in vegetation cycles. Many birds are migrating earlier in the spring due to warmer temperatures; potentially leading to issues if their food sources haven’t yet developed at their breeding grounds.

2.0 KEY POINTS:

Earlier migration, Altered migration routes , Habitat loss, Phenological mismatch, Reduced breeding success, Changes in species distribution

3.0. CHANGING OF CLIMATE:

The earth’s climate has been changing through. Some of the earth’s birds species were able to adapt to these changes, while others could not and have become extinct as a result. This is a natural process. However, the climate change we are experiencing today is different; human-induced global warming is happening at an accelerated speed and it is becoming increasingly difficult for many bird species to keep up with the resulting shifts. “In addition, adapting to climate change becomes even more difficult for some species, because other man-induced threats add to the challenge”¹.

The world’s remaining habitats are also lost or degraded for many other reasons, such as pollution, fragmentation, or conversion and over building. Further more, migratory bird species also suffer from barriers like wind farms or competition from newly introduced alien species. Species that are already on the decline due to these factors are especially vulnerable to climate change. In other words, for some species, climate change may give these already very vulnerable species the final push towards extinction.

4.0. GLOBAL WARMING:

“Global warming also influences the routes of many migratory birds and their annual migration rhythm”² A lot of migratory birds change their routes, shorten or completely

cancel their journey as a result of changing temperatures. For example ; some small bird species do not winter in Spain, France or in the north of Africa any more. Instead, they prefer to stay in England; where they breed cranes; which normally migrate to Spain and Portugal; stay in Germany, accompanied by starlings. Unfortunately their inactivity has severe consequences. They are not used to low temperatures and in case of a hard onset of winter, most of them won't survive.

5. 0. EFFECTS OF CLIMATE CHANE:

One of the major effect of climate change is the loss of habitats. The habitats migratory birds depend on are in danger to change and to disappear due to increasing temperatures, flooding or desertification. Coastal wetland areas that migrating birds use for nesting and foraging are an example. During their migration, birds rely on these areas to provide food and resting sea levels due to climate change cause the flooding of these habitats and they are lost for birds and other animals. Without these stop-over places, the birds have insufficient reserves to continue and have difficulties completing their journeys.

6.0. LOSS OF HABITATES:

The loss of habitats continues through increasing desertification for example of the Sahel region. Increasing populations lead to a demand for more land to grow crops and graze animals and to the intensified use of land. This contributes to further land degradation and leads to expansion of desert areas. Climate change worsens the effect by a rainfall in the Sahel region. As a consequence of the Sahara is one of the most challenging parts of the bird's journey because they have no possibility of resting. The Sahara expansion, combined with destruction of the habitats, gradually makes it nearly impossible for African-Eurasian migrants to cross this ecological barrier successfully. A lot of them will fail and perish.

Other habitats, among them many breeding habitats, are also strongly affected, for example the Siberian tundra where many goose species breed. They use the tundra's rocky Bed rock for breeding and raising their offspring. However, climate change is rapidly changing its vegetation structure. The increasing temperatures make the permafrost soil thaw, enabling forest to expand into the tundra. This new green carpet changes the habitat completely and makes it impossible for the geese to breed. Experts predict a loss of 10 to 93 % of the breeding habitat area of different arctic goose species as a result of this forest expansio

7.0. COUNCLUSION:

Although birds across the country are already feeling the impacts climate change of at a rate much higher than originally predicted, it's not too late to harness American's spirit of ingenuity and leadership to comfort this climate criss. Inaction is no longer available option is only preventing us from taking advantage of the opportunities to create jobs and economic prosperity in concert with bold, swift action to reduce the carbon pollution that is heating our planet and threatening the birds and other wild life we treasure.

The science is clear: we know what's causing climate change and we know what needs to be done to chart a better course for the future. As we watch nature being transformed by a warming world before our very eyes, It is clear that we must cut carbon pollution, speed our transition to clean energy and safeguard American's birds and other wild life. We have no time to waste.

8.0. FOOT NOTE:

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