



INFORMATION, EDUCATION AND COMMUNICATION OF SNAKES AND CLIMATE CHANGE



1. What will happen to snakes and snakebites if rainfall patterns change due to climate change?

Most snakebites take place during the monsoon season. In Odisha, there will be an increase in annual rainfall in pre- and post-monsoon seasons and more erratic rainfall [1],[2]. This means that people will be at risk of snakebites for longer periods of time [3], [4], [5], [6]. Furthermore, the movement of floodwaters can wash snakes to more densely populated low-land areas [7] leading to increased exposure to human-snake conflict.

3. If the snake population declines due to climate change, how will it impact the ecosystem?

Snakes are both predators and prey. If the snake population declines, there would be serious consequences for the ecosystem. Snake predators such as mongoose, wild boar, hawk, eagle, and snakes will lose their food source and snake prey such as frogs, insects and rodents will overpopulate [1], [2]. This would create a disbalance in the ecosystem. Diversity is vital for the sustainability of a healthy ecosystem.

5. How do snakes help farmers?

Snakes protect crops from destruction by controlling the rodent population. Also, rodents consume seeds. When snakes consume rodents, they excrete the seeds in new locations, supporting the growth and survival of plants, becoming 'ecosystem engineers' [8], [9].

2. What will happen to snakes and snakebites if the temperature rises due to climate change?

People will be more vulnerable to venomous snakebites. This is because snakes are cold-blooded and will need to regulate their body temperature. Their behaviours will change, causing them to come out of hibernation when there are heat waves to search for fresh air and cool places [3], [4]. Snakes are thermally tolerant, however, over time, snake populations may be physiologically unable to cope with higher temperatures resulting in population decline [7].

4. How do snakes help human health?

Snakes prey on animals which carry diseases such as Lyme disease and Leishmaniasis. These diseases affect humans and animals. By preying on disease-carrying animals and insects such as sand flies, snakes control the spread of the disease. Without snakes, more humans and animals would be at risk of these diseases. Snakes are also required for the production of anti-venom. Without anti-venom, more people would die of snakebites [8], [9].

6. Why should we not kill snakes?

Most snakes are not aggressive and non-venomous, and often bite in self-defence, when threatened or provoked; trying to kill them will expose you to a higher risk of bite [10].

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