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## Assam's Flood and Kaziranga's Ecosystem

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### Why in News

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The recent flood in Assam has led to heavy casualties, displacement of peoples and animals and destruction of property and environment.

It has also led to inundation of 80% of the area of Kaziranga National Park.

### Key Points

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- **Reason behind Floods:**
  - **Ill-maintained or poorly constructed river embankments** are the main reason behind the flooding.
    - One major feature of flood management in Assam is **total dependence on embankments**.
    - Assam began constructing embankments in the 1960s and most of them have outlived their utility. Many of these started breaching or collapsing from the 1990s, more seriously from the 2000s.
  - **Massive deforestation in catchment areas** of rivers or release of waters by dams upstream.
  - **Climate change** is also a factor behind floods.

- **Floods in Kaziranga's Ecosystem:**
  - Experts believe that **floods are necessary for Kaziranga** by virtue of its **riverine ecosystem**. The system won't survive without water.
    - **Kaziranga National Park and Tiger Reserve (KNPTR)** is sandwiched between the Brahmaputra river and the Karbi Anglong Hills. The entire area is formed by alluvial deposits from the Brahmaputra and its tributaries.
  - The regenerative nature of floods **helps replenish Kaziranga's water bodies and maintain its landscape**, which is a mix of **wetlands, grasslands and semi-evergreen deciduous forests**.
  - The floodwaters **function as a breeding ground for fish**, which are carried away by the receding waters into the Brahmaputra. i.e the Kaziranga's floods replenishes the Brahmaputra's stock of fish.
  - The waters also help **get rid of unwanted plants such as water hyacinth** which collect in huge masses in the landscape.
- **Issues Involved:**
  - **Frequent Floods:** Earlier, a big flood would come once in ten years, now they come every other year.
  - **NH-37:** When the flood water hits a certain level, the animal moves towards safer, higher ground in the Karbi Anglong hills. However, they have to cross NH-37 which cuts across the park, which leads to the killing of animals in road accidents.
    - Animals are also killed by poachers who take advantage of their vulnerability.
  - **Human-animal Conflict:** Animals also move towards villages in floods, this leads to **human-animal conflict**.
- **Steps taken during Floods:**
  - The authorities keep a track of updates from the **Central Water Commission**, and **monitor water levels** of the Brahmaputra tributaries upstream in Arunachal Pradesh.
  - **Camps are organised to create awareness** against poaching and harming wild animals that are rendered vulnerable during the floods.”
  - When the floods hit, **Section 144 of CrPC** is imposed along NH-37, speed limits are enforced and fines levied. Barricades are also placed to help animals cross over to Karbi Anglong.

## Way Forward

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- In the absence of long-term alternatives, the government has to **invest in strong, durable embankments** to ensure that the situation does not deteriorate every year.

- Kaziranga, with its **rich grassland habitats**, has a primary role to play in supporting the wildlife populations.
- **Emphasis needs to be put on securing animal corridors** and ensuring a safe passage to the Karbi hills.
- **Need for a landscape-scale conservation approach** that recognises the value of the Karbi Anglong hills.

The highlands of Karbi Anglong, where the animals take refuge, are the lifeline of the park during the floods.

**Source: IE**