Environment – The Silent Victim of War

Mains: *GS III – Environment| GS IV – Ethics*

Why in News?

In the context of recent conflicts in West Asia, particularly the US-Israel war on Iran, environmental damage is no longer episodic but cumulative and persistent and the environment has increasingly emerged as a silent yet significant casualty of modern warfare.

What are the environmental consequences of recent conflicts in west Asia?

- **Greenhouse gas emissions and climate change –** Military operations are highly energy-intensive.
- Recent estimates suggest that wars generate massive greenhouse gas (GHG) emissions in short periods.
    - **For instance**, military mobilisation, missile strikes, and destruction of infrastructure significantly contribute to carbon emissions, exacerbating global climate change.
- **Air pollution and toxic contamination –** Strikes on oil refineries and storage facilities release large quantities of soot, particulate matter, and toxic gases.
- These emissions can lead to phenomena like black rain and pose immediate health risks such as respiratory and cardiovascular diseases.
- The use of chemicals like glyphosate in conflict zones further aggravates environmental toxicity.
- **Marine and coastal ecosystem damage –** The Persian Gulf region is particularly vulnerable.
- Damage to oil tankers and coastal infrastructure increases the likelihood of oil spills, which devastate marine biodiversity.
- Such spills affect fisheries, coral ecosystems, and long-term ecological balance.
- **Soil and water contamination –** Destruction of industrial zones releases hazardous substances, including heavy metals, into the environment.
- These contaminants seep into soil and groundwater, affecting agriculture and drinking water supplies.
- **Disruption of critical infrastructure –** Attacks on desalination plants, essential in arid regions, threaten water security.
- Environmental damage thus directly intersects with human survival and public health.

What are the historical perspectives?

- **World wars –** World War I led to the destruction of approximately 350,000 hectares of forest.
- World War II caused widespread ecological damage, including deliberate flooding of farmland in the Netherlands and destruction of ecosystems across Europe.
- **Vietnam war –** The Vietnam War marked a turning point where environmental destruction became a deliberate strategy.
- The use of herbicides like Agent Orange destroyed millions of acres of forests and croplands, leaving long-term ecological and health consequences.
- **Gulf war (1991) –** The deliberate release of oil into the Persian Gulf created the largest oil spill in history, contaminating vast coastal areas and damaging marine ecosystems.
- **Russia–Ukraine conflict –** Recent conflicts have impacted the protected ecological zones, including biodiversity-rich habitats, demonstrating that even internationally recognised conservation areas are not immune.
- **Shift from episodic to cumulative ecological crisis –** Earlier conflicts caused localized and time-bound environmental damage. However, modern warfare signifies a paradigm shift:
    - **Multi-domain warfare** (land, air, sea, cyber) expands the scale of environmental harm.
    - **Persistent emissions and pollution** contribute to long-term ecological degradation.
    - **Cumulative impacts** from repeated conflicts intensify climate change and biodiversity loss.
- Thus, environmental damage is no longer incidental but systemic, creating a prolonged ecological crisis.

What are the existing legal and policy frameworks?

- **ENMOD Convention (1976) –** Prohibits the use of environmental modification techniques as weapons.
- However, its scope is narrow and does not cover conventional environmental damage caused by warfare.
- **Geneva Conventions – Additional Protocol I (1977) –** Article 35(3) prohibits methods causing widespread, long-term, and severe environmental damage.
- Article 55 mandates protection of the natural environment during warfare.
- **Rome Statute of the International Criminal Court (1998) –** Recognises environmental war crimes but sets a very high threshold ("widespread, long-term, and severe"), limiting its applicability.
- **UN International Law Commission Draft Principles (2022) –** Provides guidelines for environmental protection before, during, and after conflict, including protection of indigenous lands and post-conflict restoration.
- However, these are non-binding.

What are the gaps in the existing frameworks?

- **High threshold for liability –** The requirement of "widespread, long-term, and

severe" damage makes it difficult to hold actors accountable for many forms of environmental harm.

- **Lack of enforcement mechanisms –** Most frameworks lack independent monitoring and enforcement bodies, leading to weak compliance.
- **Exclusion of carbon emissions –** Current laws do not adequately address war-related greenhouse gas emissions, despite their global impact.
- **Non-binding nature of guidelines –** Recent principles lack legal enforceability, reducing their effectiveness.
- **Limited accountability and reparations –** There is insufficient emphasis on restoration and compensation for environmental damage.

What about ecocide as an emerging legal concept?

- **Definition and scope –** Ecocide refers to widespread or severe destruction of ecosystems, whether intentional or negligent.
- **Significance –** Expands accountability beyond wartime actions to peacetime environmental destruction.
- Lowers the threshold for prosecuting environmental harm.
- Recognises the intrinsic value of ecosystems.
- **Potential impact –** If incorporated into international law, ecocide could:
    - Strengthen deterrence against environmental destruction.
    - Enable prosecution of state and non-state actors.
    - Promote environmental justice and restoration.

What measures could be taken?

- **Strengthening legal frameworks –** Lower thresholds for environmental war crimes.
- Expand definitions to include cumulative and climate-related damage.
- **Binding international agreements –** Convert non-binding principles into enforceable treaties.
- **Independent monitoring mechanisms –** Establish international bodies to assess and document environmental damage in conflict zones.
- **Integration of climate considerations –** Include military emissions in global climate agreements and carbon accounting systems.
- **Emphasis on restoration and reparations –** Post-conflict reconstruction should prioritise ecological restoration alongside economic recovery.
- **Recognition of ecocide –** Incorporate ecocide into international criminal law to ensure accountability.

What lies ahead?

- The environment is undeniably a silent casualty of war, bearing long-term consequences that extend far beyond the battlefield.
- The shift from episodic environmental damage to a persistent ecological crisis underscores the urgency of rethinking existing legal and policy frameworks.
- Recognising environmental protection as integral to peace and security, and embracing emerging concepts like ecocide, can pave the way for a more sustainable and accountable global order.

- Without such reforms, the ecological costs of warfare will continue to undermine both human well-being and planetary health.

Reference

The Indian Express| Ecocide

