



DATE: 5 SEPTEMBER 2026

1 Green Climate Fund (GCF) (Source: Down To Earth)

The Green Climate Fund (GCF) is the world's largest dedicated climate finance mechanism, created under the UNFCCC to help developing countries mitigate and adapt to climate change.

Formation

- **Established:** 2010 at COP 16 (Cancun) under the United Nations Framework Convention on Climate Change (UNFCCC).
- **Operationalised:** At COP 17 (Durban, 2011) as an operating entity of the UNFCCC's financial mechanism.
- **Headquarters:** Songdo, Incheon, Republic of Korea.
- **Governance:** Managed by a Board with equal representation from developed and developing countries.

Objectives

- Channel climate finance from developed to developing countries.
- Support a paradigm shift towards low-emission and climate-resilient development pathways.
- Help developing nations implement their Nationally Determined Contributions (NDCs) under the Paris Agreement.
- Prioritise the needs of particularly vulnerable countries (LDCs, SIDS, African states).



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2 UN Loss and Damage Fund (Source: Down To Earth)

It is a climate finance mechanism under the UNFCCC to help vulnerable developing countries cope with unavoidable and irreversible climate impacts that cannot be addressed through mitigation or adaptation.

Development

- **2013:** Warsaw International Mechanism (WIM) on Loss and Damage established at **COP19** to address loss and damage associated with climate change.
- **COP27 (2022, Sharm El-Sheikh):** Parties agreed to establish a dedicated Loss and Damage Fund.
- **COP28 (2023, Dubai):** Fund's governance, structure and initial capitalisation were finalised; the Fund became operational.

Note

- *World Bank serves as the interim trustee/host for an initial period.*
- **Voluntary contributions**, not mandatory assessed shares.

Loss and Damage

- **Loss**
 - **Economic Losses:** infrastructure, homes, crops, livelihoods, reconstruction costs.
 - **Non-economic Losses:** lives, health, biodiversity, ecosystems, cultural heritage, indigenous knowledge, territory.
- **Covers**
 - **Extreme Events:** floods, cyclones, heatwaves, GLOFs.
 - **Slow-onset Events:** sea-level rise, desertification, salinisation, glacier retreat.



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3 Coal Gasification (Source: The Hindu)

Coal gasification is a process that transforms Coal into a Synthetic gas (Syngas), consisting of a mixture of gases such as Carbon monoxide (CO), Hydrogen (H₂), Carbon dioxide (CO₂), Methane (CH₄), and Water vapor (H₂O).

- Syngas can be used to produce a wide range of Fertilizers, Fuels, solvents and synthetic materials.

Process

- **Preparation:** Coal is crushed into a fine powder to increase its surface area and enhance the chemical reactions during the process.
- **Gasification Reactor:** The crushed coal is introduced into a high-temperature and high-pressure reactor along with limited oxygen or air and steam.
- **Chemical Reactions:** In the absence of sufficient oxygen for complete combustion, the coal undergoes a series of complex chemical reactions.
- **Gas Cleaning:** The raw syngas produced from the reactor contains impurities like tar, sulfur, and dust. These impurities need to be removed through a gas cleaning process before the syngas can be used further.

Advantages

- Gasification boosts efficiency to 50%+ in integrated gasification combined cycle (IGCC) plants versus 30–40% in traditional coal plants, via gas turbine plus steam recovery.
- It cuts local pollutants (sulfur, particulates) through pre-use cleaning and enables >90% CO₂ capture potential.
- Applications include power, hydrogen, liquids (CTL), and chemicals, reducing oil import reliance.