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GRMI

GLOBAL RISK MANAGEMENT INSTITUTE

DECARBONISATION

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PROGRAMME
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OUTLINE

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- **Carbon Foot print**
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- **Why India needs Decarbonisation?**
- **What is Net – zero, why it is relevant?**
- **Key commitments by companies towards Decarbonisation**

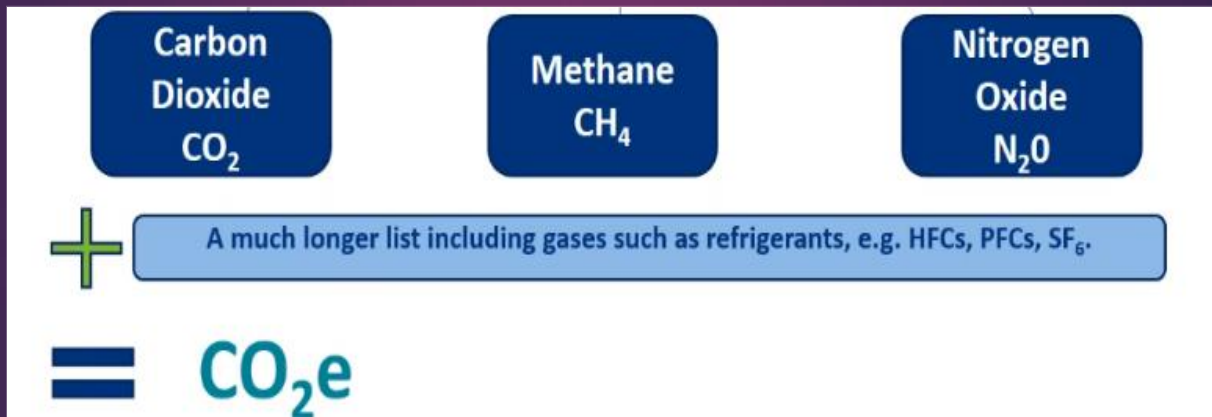


What is Decarbonisation and need for it?

- Decarbonisation refers to the process of reducing carbon dioxide (CO₂) emissions resulting from human activity in the atmosphere.

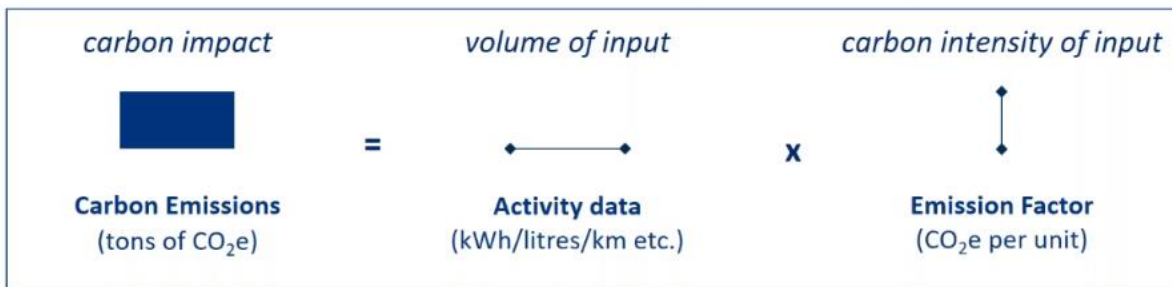
Carbon Foot print

A carbon footprint is the total green house gas (GHG) emissions caused directly and indirectly by an individual, organisation, event or product, and is expressed as a carbon dioxide equivalent.

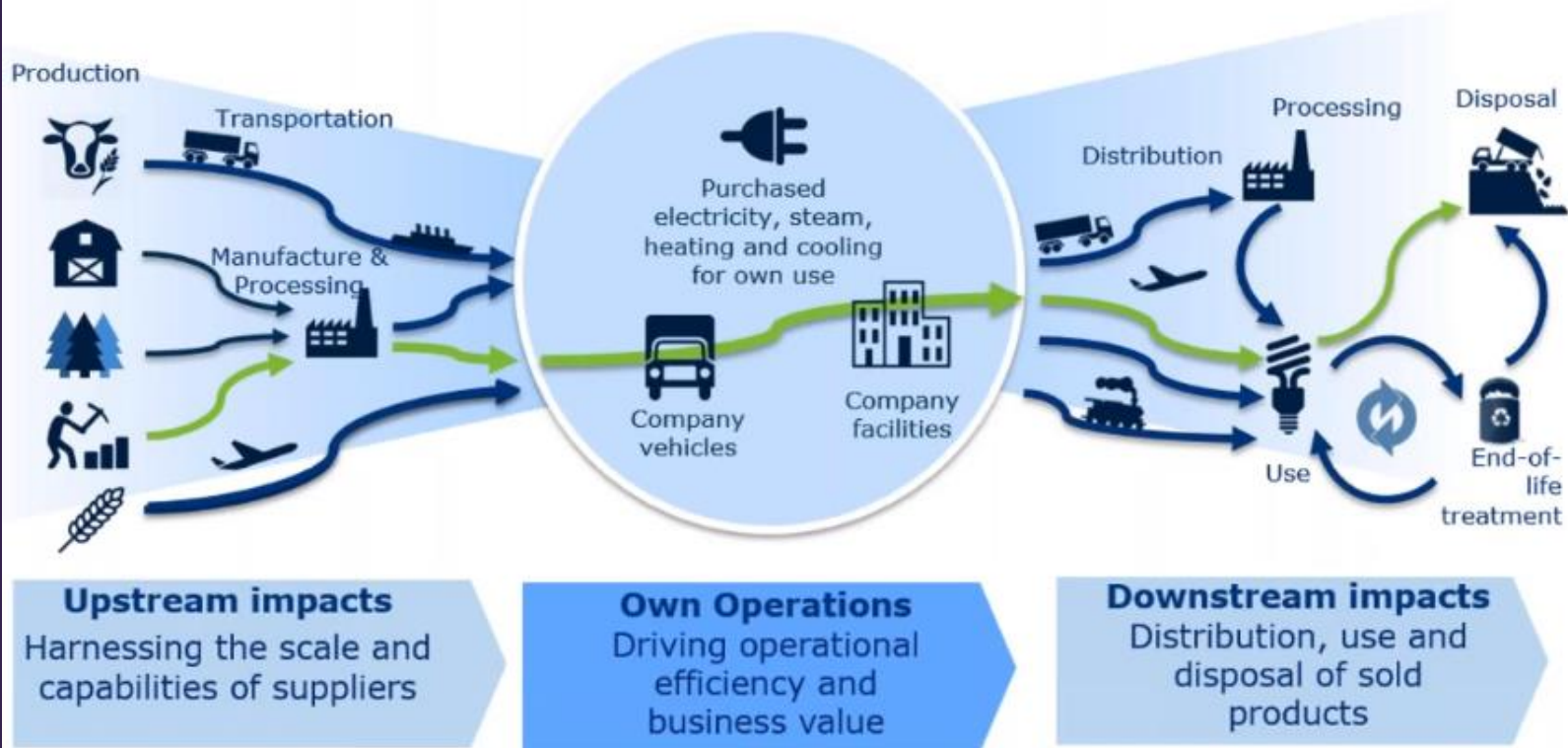


Carbon Footprint

= Sum of activities that produce carbon emissions multiplied by an emissions factor

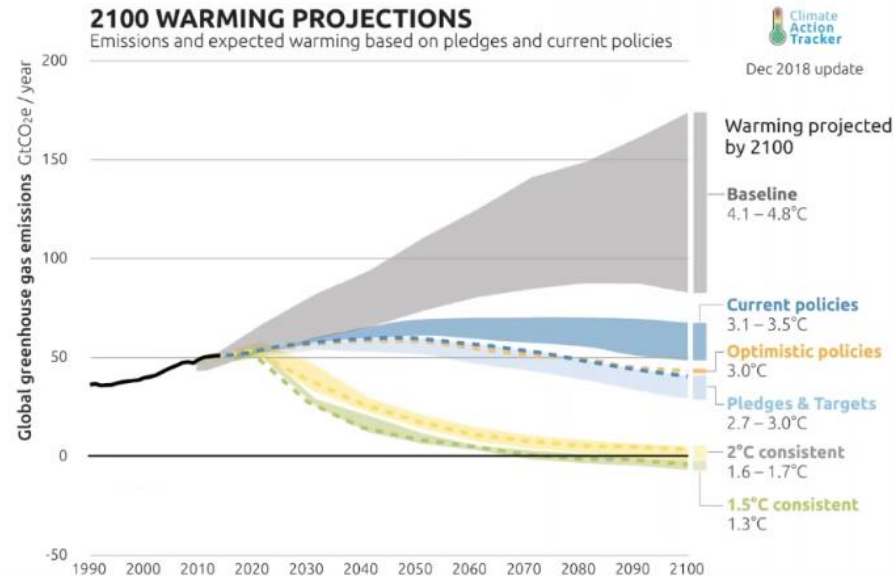


Greenhouse gas (GHG) emissions across the life cycle



Global commitment towards Decarbonisation: The Paris Agreement

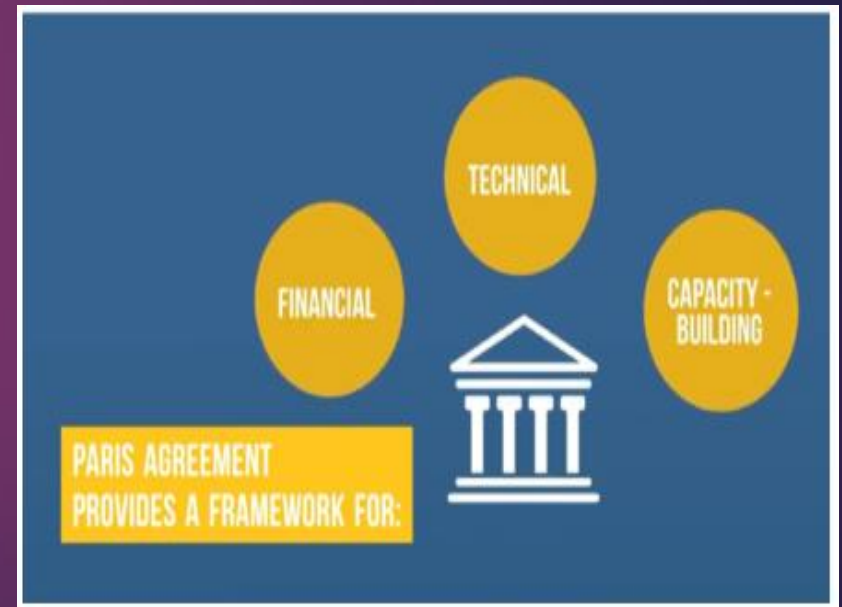
Climate targets so far submitted to the UN by governments collectively lead to global emissions far above the levels needed to hold warming to below 1.5°C



- The Paris Agreement is a **legally binding international treaty on climate change**.
- Its goal is to **limit global warming to well below 2, preferably to 1.5 degrees Celsius**, compared to pre-industrial levels.
- To achieve this long-term temperature goal, countries aim to **reach global peaking of greenhouse gas emissions as soon as possible** to achieve a climate neutral world by mid-century.

How does the Paris Agreement work?

- Country submit their plans for climate action known as **nationally determined contributions (NDCs)**.
- In their NDCs, countries communicate actions they will take to **reduce their Greenhouse Gas emissions** .
- The Paris Agreement invites countries to formulate and submit **long-term low greenhouse gas emission development strategies (LT-LEDS)**.

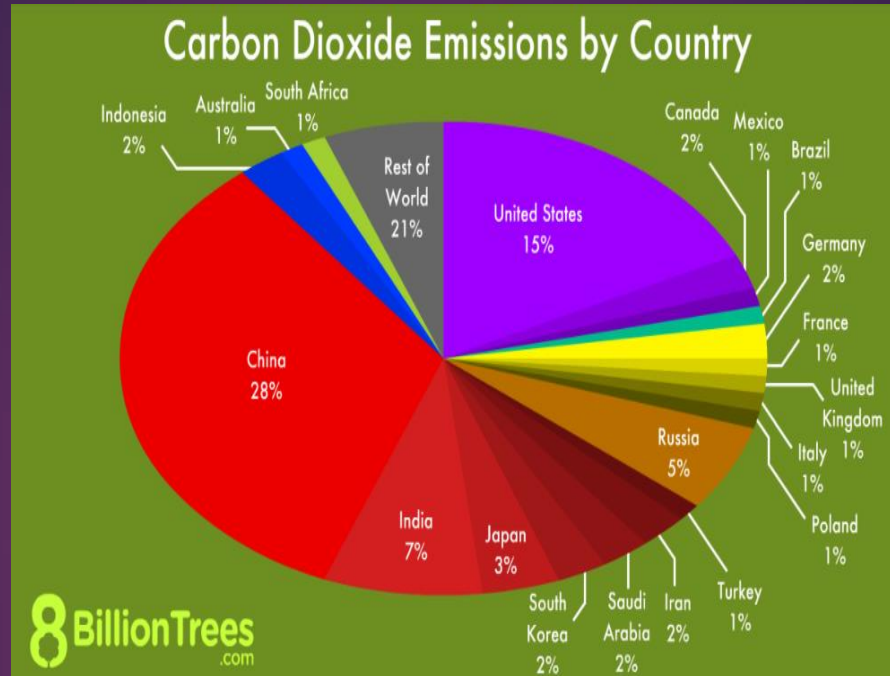


How are we tracking progress?

- With the Paris Agreement, countries established an **enhanced transparency framework (ETF)**.
- The information gathered through the ETF will feed into the **Global stocktake** which will assess the collective progress towards the long-term climate goals.
- This will lead to recommendations for countries to set more ambitious plans in the next round.

Mostly used Technical solution for Decarbonisation

- **Electrification of heat.**
- **The use of hydrogen as fuel** in a furnace or as feed-stock in chemicals, or as a reactant in chemical processes.
- **The use of biomass as fuel** or feed-stock.
- **Carbon capture and storage.**
- **Carbon capture and usage.**



Why India needs Decarbonisation?

- India is very vulnerable to climate change, notably due to the melting of the Himalayan glaciers and changes in weather cycles.
- India's carbon emissions stand at **2.46 billion tonnes** today (6.8% of the world's total).
- Assuming a similar growth rate today, the country's emissions will rise to around **4 billion tonnes by 2030**.

India's contribution:

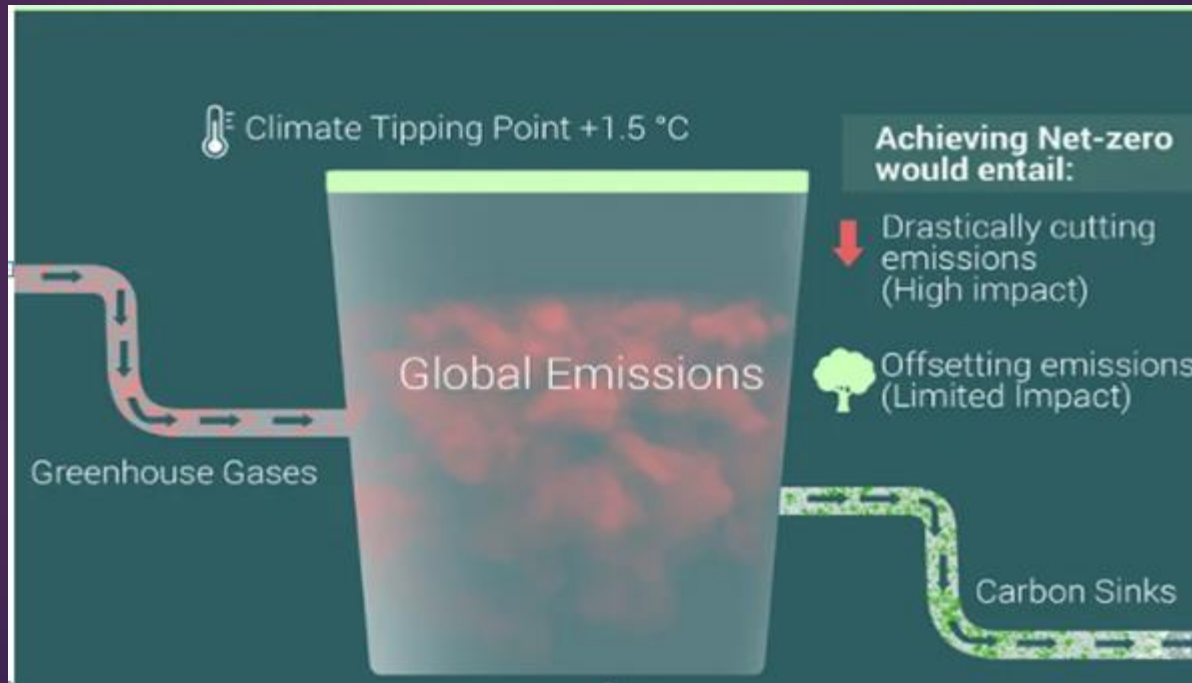
1. Increase non-fossil energy capacity to 500 GW (gigawatts) by 2030.
2. Meet 50 percent of energy requirements from renewable energy (RE) by 2030.
3. Reduce the total projected carbon emissions by 1 billion tonnes (BT) by 2030.
4. Reduce the carbon intensity of the economy by less than 45 percent.
5. Achieve net zero carbon by 2070.



- India's **electricity pricing policy** needs to be significantly overhauled.
- Absorbing a **greater percentage of variable renewable energy (VRE)**.
- **Banking sector reforms.**

What is Net – zero, why it is relevant?

- Net-zero is a climate outcome where greenhouse emitted into the atmosphere are balanced by removal in equal amounts.
- The 'net' effect is that the global temperature remains unchanged.

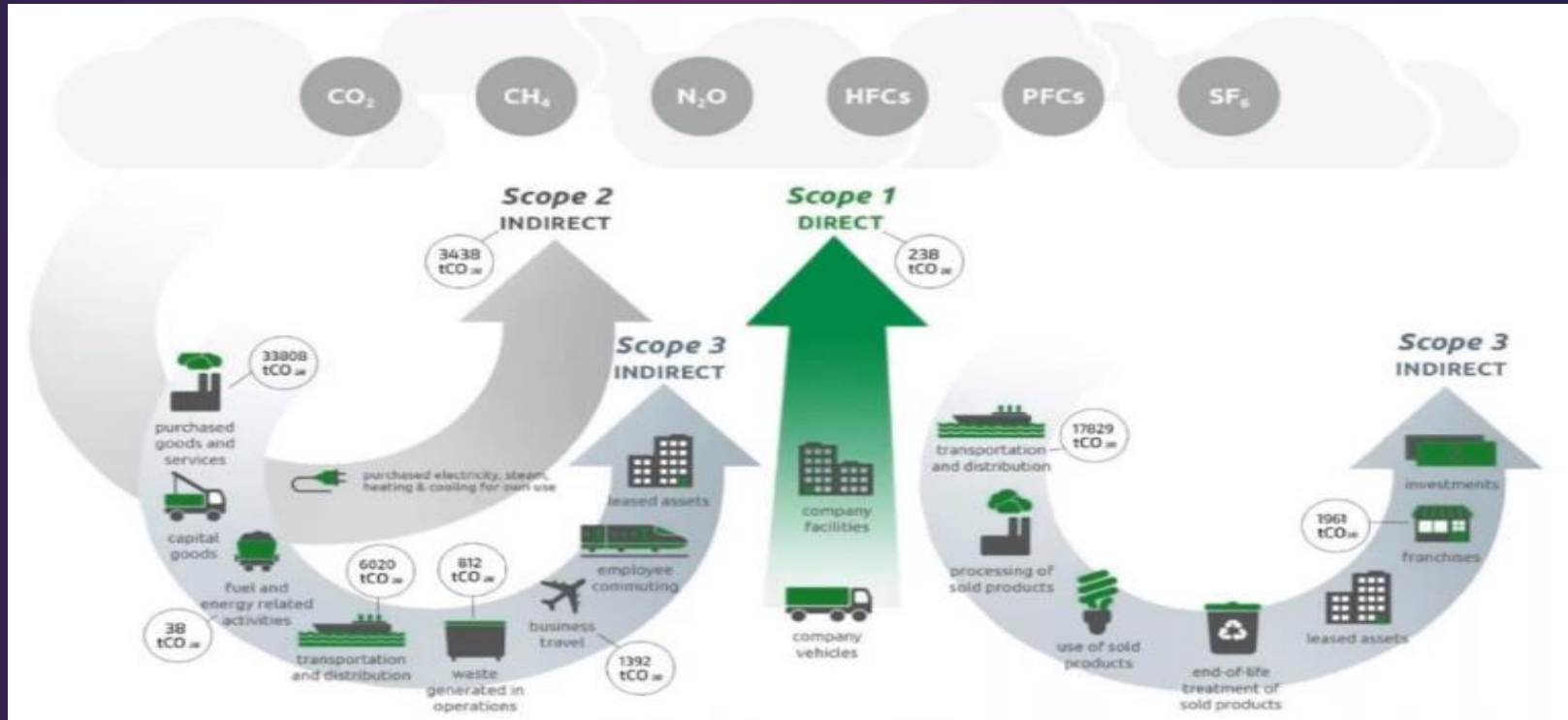


Why Should Companies Care?

- Climate Risk plays a major role in an organisation`s future forecast.
- If companies didn`t consider the climate risk, there is chance for potential business losses from
- Physical phenomena like climate uncertainty.
 - Emerging regulations.
 - Emission caps.
 - Changing customer behaviour and preferences.
 - Potential legal issues.



What Can Companies Do?



- It's easier for companies to achieve net-zero that doesn't affect the fundamentals of their business.
- The challenge will be a lot bigger for companies that will have to fundamentally alter their business. The energy sector, for instance, is still largely coal-powered and contributes more than half of India's emissions.

Key commitments by companies towards Decarbonisation:

- **Reliance:** To meet its net carbon zero target, firm said it will use newer technologies to reduce emissions, and plans carbon capture and storage.
- **HDFC Bank:** It aims to reduce water consumption, single-use plastic and plant 25 lakh trees to offset its carbon footprint.
- **JSW Steel:** JSW are prioritising resource utilisation, for which it has invested in and implemented a range of iron and steel making technologies.
- **HUL:** Ends coal use across its plants in sustainability push.

India Inc.'s Climate Goals

Some of India's largest companies have set climate targets for themselves.



Net Carbon Zero by 2035



Net Zero Emissions by 2030



Carbon Neutral by 2031-32



Carbon Neutral by 2040



Net Zero Emissions by 2040



Carbon Neutrality achieved, plan to cut emissions further by 2030



Jaguar Land Rover to be Net Carbon Zero by 2039

How To Assess these Pledges?

- See the **companies' history of clean energy adoption.**
- Their **ability to access finance to deploy such solutions** can be another parameter to assess whether their plans are realistic or not.
- **Government regulations.**

References:

- <https://www.orfonline.org/expert-speak/indias-policy-pathways-for-deep-decarbonisation/>
- <https://thewire.in/government/at-cop26-has-pm-modi-dragged-india-onto-path-of-decarbonisation-before-its-ready>
- <https://www.theecoexperts.co.uk/blog/most-polluting-companies>
- <https://www.downtoearth.org.in/dte-infographics/59269-global250.html#:~:text=%E2%9D%B6%20India's%20state%20Downed%20company,CO2%20output%E2%80%94942431%20million%20tonnes.>
- <https://www.greenmatters.com/p/how-do-carbon-emissions-affect-environment>
- <https://www.nationalgeographic.com/environment/article/greenhouse-gases>
- <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>



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