

## Rising Oceans, Sinking Cities: RSTV – Big Picture

### Guests:

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### Context:

- Oceans **acts as a sponge** for the ill effects of climate change by absorbing heat and Carbon dioxide generated by Greenhouse Gases. It is the same oceans which are likely to unleash their wrath on a Global Scale
- The United Nations **Inter Governmental Panel on Climate Change** (UN-IPCC) has recently published a **draft report** revealing that the **destructive changes of climate change have been set in motion**.
- Final report will be published only after thorough discussions with stakeholders.

### What does the report say?

- The Draft report says that even with the most optimistic emission reduction scenario, by the year 2050 **small island nations** and **many low lying mega cities** will experience extreme sea level events every year.
- The '**Big 4**' countries (**USA, China, India and the European Union**) will face the most devastating fallout of ocean and ice related impacts of Climate change

### What are the Concerns Raised by Climate Change?

- The **magnitude and frequency of natural calamities** that we are currently facing in the form of cyclones, forest fires (in Brazil, Bolivia, Canada and Australia), etc. indicates the seriousness of the problems we are going to face in the future.
- **Glaciers are melting** rapidly and consequently the volume of water in the oceans is increasing. It is estimated that around 400 million ton ice is being melted away every year in the last ten years.
- Any increase in temperature also has in the volume of water leading to global changes in climate
- This has resulted in pattern of changes world over in terms
  - Rainfall
  - Wind flow
  - Increase in storm surges
  - Changing the chemistry of oceans
  - Increase in Heat waves in the oceans
    - Heat wave is a phenomenon in which the surface temperature of oceans remain above the normal level for 2 to 5 days consecutively.

### What are the major causes?

- The coastal areas of both developed and developing countries are impacted by the abuse of the oceans through warming, pollution, changing chemistry of waters, oil spill, etc.
- **Attention** of the global community is still **limited to emission control** alone, while not much focus

is given to the implication of global warming across the systems.

- The close relationship between water, land and cryosphere is not adequately appreciated or addressed internationally.

### Consequences:

- With a long coastline of around **7500km**, a large area of **delta** land, and many **megacities within the low lying areas**, India is going to be particularly impacted.
- Since low lying areas are mostly occupied by poor people, they will be forced to migrate to hinterlands as the sea level rises.
  - Such '**ecological refugees**' will create political upheavals with global impacts.
  - Refugees will be in huge numbers, but none of the Governments worldwide have either assessed or prepared to tackle such crises.
- Since the ending of emission involves declining the functioning of many conventional industries such as automobile industry, many people may lose their jobs. Countries are often found to be allowing the operation of environmentally harmful industries to avoid the cost of job loss.
  - E.g., The slowdown in Indian automobile industry has introduced a dilemma for the government on **whether to prioritise jobs or environment**.
- Governments across the world are not sufficiently prepared to face the challenge of rising levels of oceanic tides and ocean line.
  - Almost none of the governments have devised strategies to safeguard their coastal areas during such disastrous situations.
- If the climatic conditions are going to continue, it will be difficult to achieve the **Sustainable Development Goals (SDGs)** before the set timeline of **2030**.
  - It is much difficult for reaching an agreement for **joint effort** by all the countries across the world.
- Amidst all this, there is a growing sense of uncertainty about the cost of adaptation to the changing climatic conditions.
- The **Paris agreement** had committed to an annual transfer of \$100 billion from the developed countries to developing countries.
- But the **United Nations Environment Program (UNEP)** estimates it to be **much more than \$100 billion**
- However, even the committed transfer of \$100 billion is not met and there is a **shortage** of around \$50-60 billion already.

### What are the Flaws in the Paris Agreement?

- Compared to the Kyoto protocols, the Paris agreement **did away with the capping of fixed target** for the signatories.
- **Kyoto Protocol-1** (2005-12) had set a target of **5% emission reduction** for the industrialised countries.
- **Kyoto Protocol-2** increased the target to **18%** reduction by industrialised countries, even though its implementation never came through.
- The **pledge and review system** introduced by the Paris agreement falls short of the earlier protocols.
- IPCC draft report indicates that even if the **Intended Nationally Determined Contribution (INDC)** targets of different countries are achieved, it will not be sufficient for resisting the impacts of climate change.
- Further, it was only because of the **small island countries** (who fear a wash out from sea level rise) that along with the target of maximum **2°C** target of average global temperature rise, the clause of hopefully achieving **5°C** was included. At present the goals set by countries may amount to a **3°C** reduction only.
- The report adds that even if every country has met their goals for a 2°C target, temperature rise will be still around 3°C. In the coming decade, we are going to cross the target of 1.5°C.

- Even if a  $1.5^{\circ}\text{C}$  is achieved, the **ocean level will continue to rise**.

### What are the Concerns Associated with the Responsibility of Global Powers?

- The '**Big 4**' countries mentioned in the IPCC draft report are also the **biggest emitters** worldwide, **except for India**. India's gross emissions and per capita emissions are both lower than the emission levels of the other members in 'Big 4'.
- At around 10 Gigaton of  $\text{CO}_2$  equivalent, **China is the largest emitter**. Its gross emission level is extremely high at around two times the emission of USA, the second largest emitter. The per capita emission of China is also approaching the level of developed countries in the **Organisation for Economic Co-operation and Development (OECD)**.
- However, the **major victims** of climate change will be **small island nations**. Ex.: **Kiribati** is looking for land in the fear of an impending wipe out due to sea level rise, **Indonesia** is planning to move its capital from Jakarta (in the Java Island) to Borneo Island.
- By indicating the worst impacts on the 'Big 4', the IPCC draft report has **removed the belief** held earlier that **only developing countries are going to suffer** from the impacts of climate change. It is anticipated that the governments of the developed countries will realise the threat and respond accordingly.
- However, the **vigour and energy** which was seen initially after the **Paris agreement** is **no longer visible**. Ex.: **China** is opening new coal mines and reducing the measures taken for pollution control, **US President Donald Trump** has withdrawn from the deal and did not take part in the **G7** climate change summit.
- After witnessing serious **flooding** this year, China is planning to intensify its action against climate change. They are about to prepone their **peak emission** year to 2025 as compared to the target of 2030 agreed during the Paris deal. It will be a major gain internationally. But they should have done this long ago.
- It is argued that the **low level of enthusiasm** is a result of the **ongoing trade war** between USA and China. They are relaxing their position on climate change so as to keep the economy stable.
- In **the USA**, the city of **Manhattan** is particularly vulnerable to rising sea level. Even though there exists a suggestion of **constructing a wall** along the coastline, it will not suffice the purpose of avoiding a total wipe out of the city by 2100.
- President of **Brazil** is extremely sceptical about climate change and believes that development comes first before environment.
- It is amusing and disturbing at the same time that **pro-development and anti-environment** policies are found to be growing across the world even after the Paris agreement.

### What is the Way Forward for the Fight against Climate Change?

- It is required to **accept** that the **emission mitigation** efforts of the past few decades were inadequate such that adverse impacts of climate change are already showing and we are supposed to adapt ourselves to it.
- Much more needs to be done by countries around the world by **committing** to bring down the level of threats posed by climate change, learning from the impending threats predicted by the IPCC report.
- An **interim report released by the IPCC** in 2018 assures that it is possible to limit the temperature rise to  $5^{\circ}\text{C}$  if serious actions are taken immediately.
- More than maintaining the Paris pledge, countries need to come forward with **more aggressive emission cutting strategies** and other resolutions.
- Since the **time is very limited** due to dramatic changes, **out of the box thinking** needs to be promoted which can bring in adaptation mechanisms and changes, by percolating on **war footing** nature into the society and governments.
- Vulnerable countries and the international community need to prepare themselves for taking care of the impending problem of **ecological refugees**. Estimations and efforts need to be taken towards that

end.

- Action against climate change is not limited to national level governments. **Local communities**, particularly the **coastal communities**, need to be **empowered** to adapt and mitigate the impacts of climate change. Funds needed to reach them, for empowering them to face the uncertain situations in the decades to come.

### What should be India's Role in the Fight against Climate Change?

- Even though India is **not among the biggest contributors** of the problem, we are **among the most vulnerable** countries to its consequences.
- India is **doing well with respect to other countries** in terms of achieving the targets **of the Paris agreement** and promoting **non fossil fuels**.
  - We have already achieved the target for **installed solar power capacity**, and we are planning to raise the target. The **International Solar Alliance** formed under India's initiative has given impetus to the transition into solar power.
  - However, India **could still step up** her efforts in the climate change front.
- It is required to utilise and upgrade the excellent **network of railways** which is a far less polluting, cheaper and having less requirement of space than highways, as a mode of transport. In that direction, we need to calibrate our developmental roadmap so as to not blindly follow the developed countries.
- Since the countries worldwide are failing at the climate change front, India should take up the **leadership role** by demonstrating examples for other countries such as China and the USA which are sceptical about climate change.
- **Diplomatic efforts** are required to **impart pressure on other countries** to ensure that they are also making commitments comparable to the efforts made by us. Ex.: The International Solar Alliance (ISA) as a platform for transition to solar energy.
- This factor is particularly important this year, because the countries worldwide are supposed to update their targets agreed under the Paris deal.

### Conclusion:

- The draft report of IPCC has influenced the **public domain** by clearly indicating the amount and range of threat posed by climate change to humanity and the planet as a whole.
- **Individuals, societies and nations** have to come together, find a solution and act immediately.
- India needs to take up a **pole position** and provide **out of the box solutions**, which are achievable in a **given timeframe**, while calibrating her own **developmental needs**.