Implementation of INDCs
Advancing Mitigation and Adaptation Actions for Climate Change

Climate Change Webinar Series

Puducherry Climate Change Cell, DST&E

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SAPCC: A Vehicle to Decentralise Climate Action

- Different vulnerabilities in each state, Differences in exposure to instances and extent of CC →Differentiated Impacts of CC in each state
  - Eg. Rajastan VS Kerala : Different vulenrabilities, different capacities and therefore diferentiated impacts of CC

- NAPCC and SAPCC are both reflective of a co-benefit approach; Actions that address developmental concerns while tackling climate issues
- SAPCC; Important milestone and a pro-active stance from the Government of India in decentralizing the efforts towards climate change actions

SAPCC 1.0: Lessons Learnt

<u>The first time that the states were required to highlight and focus on climate action</u>

- A compendium and a wish list of climate actions; Lack of actionable points, both in terms of finances and in terms of implementation
- Lack of clarity and actionable points ; No clear objective or output, No medium term or long term planning
- Mainly a standalone document
- Inadequate financial resources dedicated for the purpose of SAPCC
- Lack of requisite capacity development; There was a need to sensitise agencies/dept beyond the appointed nodals.

SAPCC 2.0: Need for Revision

The need for revising the SAPCC 1.0 was guided by two factors;

- India now has new Nationally Determined Contributions (NDCs)
- India now has key lessons from all states highlighted from the SAPCC 1.0

Common Framework for the Revision of State Action Plan on Climate Change, MOEF&CC

As per MoEF&CC Common Framework for SAPCC Revision

1. Introduction
2. State Profile
3. Climate Profile
4. Vulnerability Assessment
5. Climate Change Strategy: Mitigation
6. Climate Change Strategy: Adaptation
7. Financing the SAPCC
8. Institutional Mechanisms
9. Monitoring and Evaluation

Chapters in the SAPCC

Guiding Document on Sectoral Plans

- Electrification of Public Transport
- Roadmap for assessment of Renewable Energy options
- Water Resources Management Plan

Puducherry SAPCC: Status

The consultative meetings with key nodal officers under each of the Missions is underway with the following objectives:

1. Understand the key priorities of departments with regard to climate action
2. Identify new actions being taken up by the department to respond to climate change
3. Seek inputs on the data gaps

Inception Phase

- Review of existing SAPCC document
- Stakeholder mapping
- Design research plan

Data Collection

- Literature review of scientific assessments for the state
- Interviews with key line Ministries/Departments

Framing of SAPCC

- **Analyze quantitative & qualitative data to document the SAPCC**
- **Based on the analysis the revised SAPCC will be developed**

Puducherry: Climate Profile

	SAPCC 2.0
1.	Projection of temperature and rainfall at higher granular level i.e. at regional level for each of Puducherry, Yanam, Karaikal and Mahe.
2	Climate profile of all four UT regions as per IMD dataset included.
3.	Two latest IPCC AR5 scenarios viz RCP 4.5 & 8.5 being used to present future projections using ensemble of 21 IPCC CMIP5 models downscaled to the study location for Max, Min and Mean temperature and rainfall.
4.	Future (2021-2050) climate extremes indices (viz. consecutive dry days, consecutive wet days, warm days and warm spell duration index) are being included.
5	Information from IMD cyclone atlas being included under the revised cyclone hazard section over the area of Tamil Nadu, Andhra Pradesh and Kerala coastal belt from 2000-2018.
6	Historical sea level rise trends and future estimates using existing literature.

Climate Profile

1. Temperature: increase in annual and seasonal min-max temp
   - considerable changes in temp extreme events over all the regions of the UT
2. Rainfall: overall increase in annual rainfall while there is a decrease in number of wet days and consecutive wet days along with an increase in dry days
   - an increase in very heavy precipitation days in all the regions with the highest increase in Mahe

Puducherry: Vulnerability Assessments

	SAPCC 2.0
1.	Key climate sensitive sectors were identified after consultation with the UT; Agriculture, Water, Health, Coastal Resources and Disaster Management
2	Assessment of Puducherry's vulnerability to Climate Change to focus on a sectoral analysis, where the key climate sensitive sectors have been identified as; Agriculture, Water, Health, Coastal Resources and Tourism.
3.	Integrated Vulnerability Assessment: An indicator based approach to assess the UT's biophysical, socio-economic and institutional vulnerabilities across the main climate sensitive sectors identified
4.	IPCC (2014) definition, which identifies Vulnerability as the *'propensity or predisposition' of a system to be adversely affected and encapsulates the elements of 'sensitivity or susceptibility to harm and lack of capacity to cope and adapt' of the said system*
5	Vulnerability Assessment to be done at a regional level for Puducherry, Yanam, Karaikal and Mahe.

Sectors

Agriculture : Increasing variability in rainfall patterns and increased salination of soil due to sea level rise, adversely affect the Agricultural sector of the UT.

- An overall increase in annual rainfall and intensity of rainfall, with a decrease in the number of wet days imply a consequent increase in flooding. Salination from Sea Level Rise on the other hand imply a decreasing soil fertility and crop productivity

Water: Sea level Rise, increase in the intensity and frequency of disasters such as storms, cyclones and tsunamis, increased variation in rainfall and temperatures→ will affect the available freshwater resources

- to increased instances of coastal flooding, inundation of low lying areas and decline in recharge rates of freshwater
- Significant decline in the groundwater tables of the UT

Health : Increase in temperatures, sea level rise, extreme weather events and alteration in precipitation patterns impacts human health by increasing instances of vector borne and water borne diseases, instances of heat stress and floods, to indirect impacts on natural and socio-economic systems

Coastal Resources and Disaster Management: The UT is subject to hydro-meteorological challenges such as Sea Level Rise (SLR), and geo-physical hazards, with an increasing risk and frequency

Mitigation and Adaptation Strategies

- A Mission-wise approach has been adopted; This would entail understanding the varied interventions with development and climate co-benefit being undertaken by all the line ministries of the UT
  - Updates on the status of implementation for each intervention
  - Understanding the reasons behind an efficient and not-so efficient implementation of interventions
  - Listing new strategies proposed after the formulation of first climate change plan under the Missions?
  - the technical, financial and capacity related constraints for carrying out implementing the Missions

- Preparation of medium and long-term mitigation and adaptation pathway for the UT

Water Management Plan

- Challenges due to CC faced by water resources of UT: Rapid depletion of its groundwater resources, saline water intrusion in coastal water bodies and groundwater, increased frequency and intensity of disasters such as tsunamis, storm surges, etc.
- Limited freshwater resources in the UT ; crucial to address these challenges appropriately and effectively.
- Many key initiatives taken for improving the condition of water resources, yet there are still many issues that are yet to be addressed.

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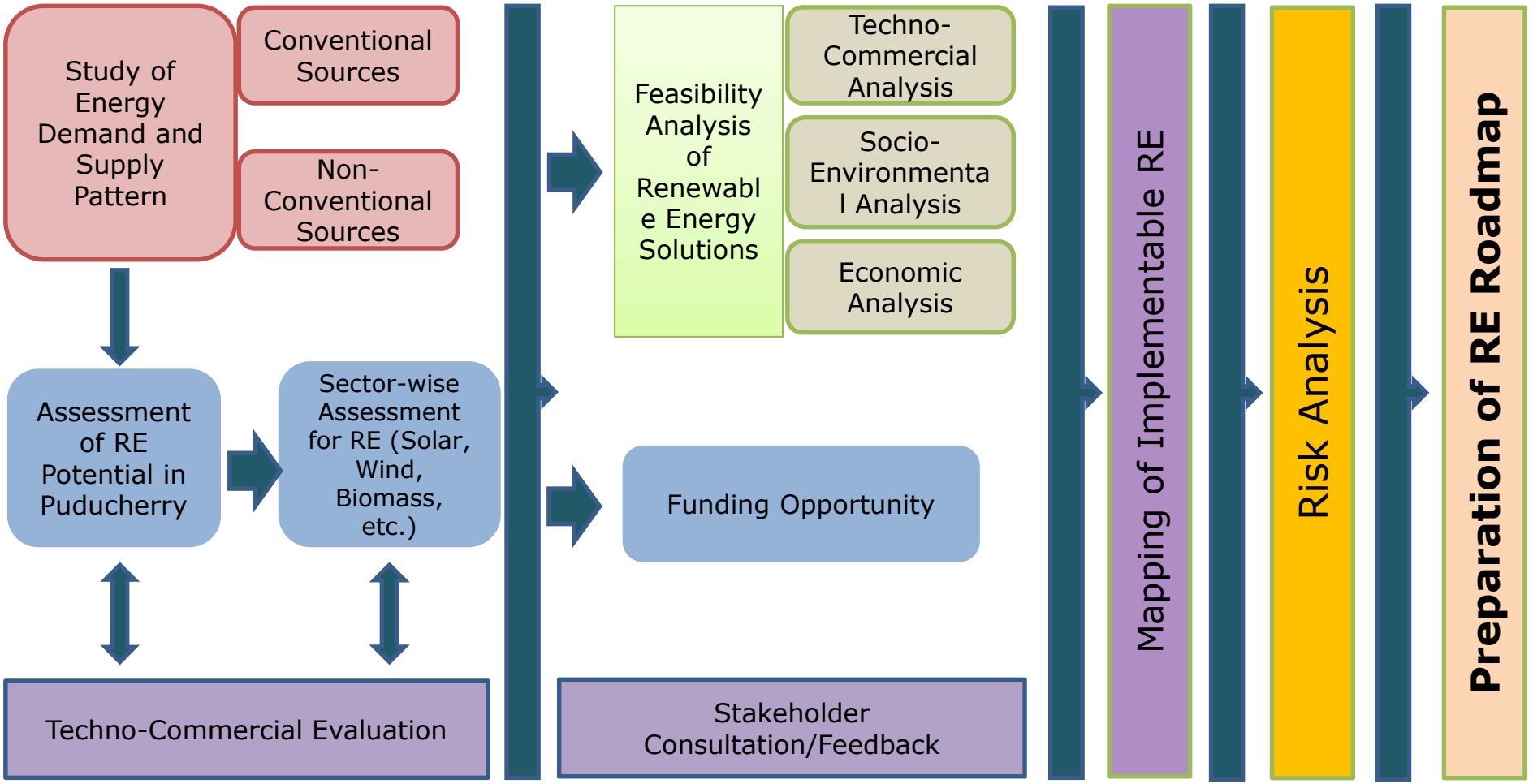
Integrated Catchment Management plan for the city of Puducherry is proposed to ensure better management of the all the resources of the region. An ICM is based on the idea that all resources of a catchment are interlinked and that changes in one inevitably have consequences for the rest.

Roadmap for Renewable Energy



Electrification of Public Transport

- Puducherry is also planning to adopt a more proactive approach of mitigating vehicular emissions, thereby focusing on electrification of public transport.
- The current public transport Scenario in the city of Puducherry; Puducherry Road Transport Corporation (PRTC) operated inter-state and intra-city bus service, privately operated bus services, taxi cabs and auto-rickshaws
- According to the Comprehensive Mobility Plan (CMP)→ need to increase number of buses operating and the areas that are covered by it, enhance the frequency and the comfort of the bus fleet

Plan for Electrification of Public Transport: Way forward

1. Develop State EV policy
2. Provision to be made for charging Infrastructure; Develop guidelines for charging infrastructure, make amendments in the bylaws for installation of the charging infrastructure, make changes in the terminal as per the charging infrastructure requirements
3. Feasibility Study for electric buses, Bid preparation for procurement of electric buses, Agreement with the operators
4. Monitoring the performance of the electric buses and ensuring clean last-mile connectivity

Guiding Questions for Open Discussion

- What actions, programs and policies would you suggest to achieve the GHG emissions reduction in different sectors?
- Do we have institutional capacity to implement these actions or new institutional capacities will be required?
- What will be the implementation challenges? (Lack of funds, policy, implementation actors etc.) How do we address them?

Thank you!

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