

Climate Change Knowledge Portal – Kerala

Introduction

The Climate Change Cell was constituted in the Directorate of Environment and Climate Change to coordinate and support the climate change related activities in the State. It also mandates to develop a Climate Change Knowledge Management Portal for the State to ensure proper collection, analysis and dissemination of climate change data/information. The Climate Change Knowledge Portal will be an interactive website to meet the needs of different categories of user groups such as policy makers and implementers, practitioners and experts, and civil society. This interactive portal will serve as 'One Stop Store' to provide State specific climate related information/data, including historical and future climate, vulnerabilities and impacts. It will also serve as an online tool for accessing comprehensive district/watershed/regional/local level data on climate change and help in disseminating knowledge among citizens about all the major steps the Government is taking at both state and national levels to address climate change issues.

Objectives:

- An interactive Climate Change Knowledge Portal
- Collect, analyse and disseminate climate change data/ information
- Awareness on state specific climate change related issues
- Increase the knowledge on climate change related actions
- Map, download, and use resourceful data

Scope & Salient Features: The interactive portal will be a single point information repository which provides different climate data/ information and also provide information on the initiatives taken by various stakeholder departments enabling users to access updated status on these initiatives.

Design features: The portal will be content-centric and should be bilingual. The design shall be agile and self-sustaining. The proposed knowledge network while remaining open, free and transparent shall be moderated. Latest and modern open source web-technologies (to make portal for any type of device) shall be used for responsive design. Interactive features will be used to make the knowledge portal attractive for all stakeholders.

Technical Specification

Preferably Open Source Technology

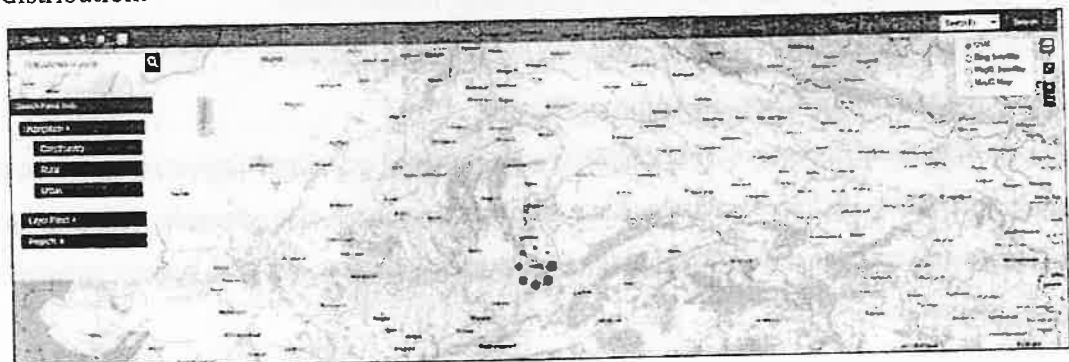
Map- Vector, Raster Google Earth, OSM, Bing

1. Login/Registration

Our MIS software requires login to access. Several roles can be assigned for each login like Admin, Editor, and Viewer etc. For security, user id and password will be encrypted.

2. GIS Dash Board

GIS dashboard can be implemented using OSM, Google Earth and Bing. It shows different type of layers like district, local body, block, village etc according to the data provided by the department. Map will be interactive and can be changed dynamically. It enables users to get information by presenting location-based analytics using intuitive and interactive data visualizations. It is designed to display multiple visualizations that work together on a single screen. They offer a comprehensive view of the data and provide key insights for at-a-glance understanding of spatial distribution.



GIS dashboard will comprise the following elements

1. Tools

It includes the following sub elements

a. Add point b. Draw line c. Draw polygon d. Upload kml e. Advanced search

2. Measurements

3. Go to Location

4. Information
5. Show Base map. and
6. Search Panel Tools

The search panel tools will comprise three sub elements

- a. Navigation
 - i) Constituency
 - ii) Rural
 - iii) Urban
- b. Layer Panel
 - i) Layers- Administrative Boundaries
 - ii) Base maps
- c. Projects

Reference: <https://geoportal.mp.gov.in/skmccc/home.aspx#>

3. Climate Change Overview

This module will have the following elements

1. Facts [Sub elements- Evidence, Causes, Effects, Scientific Consensus, etc.]
2. Articles [Sub elements- News and Features, Recent Questions and Answers]
3. Solutions [Sub elements- Earth Science in Action, Mitigation and Adaptation, Sustainability]
4. Explore [Sub elements- Images of Change, Earth Minute Videos, Interactives, Beautiful Earth Gallery, etc.]
5. Resources [Sub elements- Graphics and Media, For Educators, Global Warming and Climate Change, etc.]
6. Climate Science [Sub elements- History, Earth System Science, Earth Science Missions]

References:

<https://climate.nasa.gov/resources/global-warming-vs-climate-change/>

<https://climate.nasa.gov/causes/>

4. Country Summary

It will include the following elements

1. India's Climate Profile
2. National Policy Framework
3. India's NDC
4. International Climate Negotiations

5. Mitigation Actions
6. Adaptation Actions
7. Bilateral and Multilateral Cooperation

References:

<https://cckpindia.nic.in/about-ministry/>

<https://climate-adapt.eea.europa.eu/countries-regions/countries/united-kingdom>

5. State Climate Profile

The State Climate Profile displays

1. **The Current Weather Data** (Temperature, Rainfall, Humidity, etc.)
Source: IMD, SDMA, IDRIB, KSEB, KAU, ICRI, and other reputed institutions/Agencies.
2. Sectors & Actions
3. Engaging Stakeholders
4. Key Climate Risks & Vulnerable Sectors
5. Climate Change Vulnerability Assessments
6. Carbon Footprint Calculator
<https://www.carbonfootprint.com/calculator.aspx>
7. Mitigation & Adaptation Actions

References:

<https://climatekids.nasa.gov/climate-model/>

<http://www.climatechange.mp.gov.in/en>

6. Kerala State Action Plan on Climate Change (KSAPCC)

7. Climate Change Guide

This module will include the following elements

1. District wise Analytics Base line and Projections (Maps and Charts)
2. District wise Vulnerability Assessment (Maps and Charts)

8. Knowledge Bank

The Knowledge Bank will comprise,

1. Resources – case studies, policy briefs, research reports, publications, proceedings

2. Thematic channels – Major Sectors
 3. Tools and checklist – Tools like check your carbon foot print: checklist provides detailed guidance on Hydropower, Hydrology, Irrigation, Lake conservation in case of water sector.
 4. General Resources- Those who wish to share the scientific documents to consider for inclusion in the portal shall share to a particular e mail address for consideration.
- 9. Data Download** – The Climate Change Knowledge Portal is committed to transparency and data availability. Data presented in the site is freely available for download by completing the request for each download.
- 10. Content Management (Admin Panel)**
- 11. Other dynamic pages** (example: About Climate Change Portal, Rationale behind Climate Change Knowledge Portal, What does the Climate Change Knowledge Portal entails, About the Department, Organization Structure, Contacts, Events, Feedback, Notifications)

