ACTIONS ON CLIMATE CHANGE

STEPS TAKEN BY KARNATAKA

Kanwerpal, IFS
Secretary (Ecology & Environment)

R. M. N. Sahai, IFS
Director General

Environmental Management and Policy Research Institute
Coordination Committee for SAPCC was constituted by GO in 2009. Preparation of the Action Plan entrusted to Environment Management & Policy Research Institute (EMPRI).

Karnataka is among the first states to have a “State of Environment Report”.

- State of Environment Report Karnataka 2003
- State of Environment Report Karnataka 2010” currently under preparation

The World Institute of Sustainable Energy (WISE), Pune, with support from the British High Commission prepared the “Clean Energy Technology Action Plan for Karnataka” in 2010.

**Energy Audit** mandatory for utilities consuming above 500 kW energy.

Solar Water Heating mandatory for electricity connection.

**Industrial Policy 2009-14** of the state of Karnataka promotes business and investment by incentivising environmentally friendly practices, subsidy for rainwater harvesting, ETPs.

Consent for operation of industries on pollution loads being framed.

The cleaner you are less regulated you will be”. Accrediting industries

(a) Resource optimization, (b) Reduction in pollution loads, (c) Waste minimization, (d) Minimization of water requirement, recycling & reuse, (e) Greenery developed and (f) Air/water control measures.
Fiscal incentive for voluntary reduction of emissions

TSDF created for Hazardous Waste generated in the State.

Statutory clearance for category ‘B’ projects by the SEIAA.


b) Treatment and recycling of waste water.

c) Rainwater harvesting /Ground water recharge and greenery.

Environment Protection Fee on mining/quarrying in non-forest land.

4-point programme on reduction of pollution

a) Bharat IV norms in metropolitan cities.

b) Greenhouse inventory of vehicular emission conducted in Bangalore.

c) Promotion of mass transport: Bangalore Metro Phase 1 by Dec 2010 & 51 km in Phase 2 (estd. Rs. 14,774 crore)

d) Development of road infrastructure for smooth flow of traffic.
INITIATIVES 4/7

Management of **solid waste**: 189 ULBs of 219 acquired landfill.

**Promotion of Waste to Energy Projects.**

**Capacity building** of urban local bodies/municipalities.

**Bio Fuel Board** is established in 2008.

**Surface water harvesting** (749 crore). 18 works completed in districts.

**Kannada Ganga Scheme** being formulated for supply of safe drinking water in 16 towns in Phase 1.

**Rejuvenation programme** of 36,000 tanks in the state (4,2
Jalasiri scheme construction of 2 lakh check dams/year for recharging of ground water.

Development of lakes in Bangalore – 25 lakes by BDA (200 crore).

Development of tier 2 & 3 cities. Karnataka is the most urbanized state with 34% of the population living in urban areas.

Western Ghats are a biodiversity hotspot. Supports 4,500 plant species, 1,500 animal species and 65% tree species that are endemic. 25% of India’s tiger and elephant population live in Karnataka’s forest.

Karnataka Biodiversity Board in 2003.

Planting of trees on 80,000 ha/annum on government and private land.

Establishment of 5,000 village forest committees.

Establishment of 3,377 Biodiversity Management Committees, and 30 Public Biodiversity Registers.

National Parks (5) and 22 sanctuaries covers 17% of State Forest areas.

Karnataka State Mineral Policy 2008 with thrust on value addition.
Organic farming for sustainable agricultural growth. 52,200 farmers adopted for organic farming in 70,000 hectares of land.

Bhoo-Chethana Scheme launched for promotion of dry land farming. Targeted 2.85 lakhs ha in 43 taluks; 35% to 44% increase in yields. Scheme extended to 12.5 lakhs ha in 15 District, budget of 15 crore earmarked to center for Agricultural Sciences.

Development of drought tolerant paddy varieties.

Awareness programmes on mitigation, adaptation, and capacity building.

Sensitizing students in 7,450 schools and 1,080 Pre-university colleges through Eco-Clubs.
EMPRI has been entrusted with the preparation of the SAPCC.

The preparation commenced with the compilation of inputs received from departments. EMPRI will compile these, assess their relevance and merit and submit a preliminary assessment towards the preparation of the SAPCC to GoK in September 2010.

October 2010 it is expected that EMPRI will commence a judged assessment leading to the preparation of the Action Plan. A draft is expected to be available for review within 6 months. The process will be inclusive and participatory for
THE PROCESS simplified

The workshop with departments provides the starting point and is pivotal to the process. Selected departments will subsequently be followed up with.

- Workshop with concerned departments GoK
- Desk research
- Analysis
- Preperation of Action Plan
- Presentations to GoK and non-state actors
What are the climate change vulnerabilities perceived in Karnataka?

What work is currently undertaken in response to vulnerabilities or other aspects of climate change mitigation and adaptation?

What work is planned in response to vulnerabilities or other aspects of climate change mitigation and adaptation?

What other actions are deemed required in response to vulnerabilities and aspects of climate change mitigation and adaptation?

What constraints exist in respect of initiating these further actions?
Agriculture, Horticulture, Food Science
- Scientific irrigation
- Bio fertilizers and pesticides
- Organic cultivation
- Adaptability of crops
- Crop diversity

Animal husbandry
- Natural/wild breeds
- Management of animal waste

Forestry
- Biodiversity
- Catchment areas and watersheds
- Tackling encroachments
- Afforestation and social forestry

Water resources
- Surface water management
- Ground water recharge
- Rainwater harvesting
Transport
  - cleaner fuels
  - mass transport

Improved combustion technology

Improved road network

Green building technology

Recycling and reuse of building demolition waste and construction material

KSPCB
  - Waste management and recycling
  - Waste to energy options
  - Waster water treatment and reuse

Energy
  - renewable energy
  - energy efficiency & management

Industry
  - energy efficiency
  -leaner and greener technologies

Waste management

Fuel substitution (renewables, PWD)

Education
  - Learning on climate change
  - Learning on environmental management
  - Educational tours and practical train
A comprehensive identification of climate change vulnerabilities in Karnataka.

An assessment of the data on natural disasters that may relate to climate change in line with the logical framework.

A compilation of conclusions for Karnataka from the NAP, especially in respect of emerging intervention areas.

Review of research findings in respect of climate change vulnerabilities and mitigation and adaptation measures in the state.

Review of interventions by non-state actors such as self-
Assessment of climate change vulnerabilities in respect of the different regions of Karnataka and conclusions in respect of climate change mitigation and adaptation.

Assessment of the current level of interventions in relation to emerging needs.

Identification of deficit areas in current interventions and research.

Actions plan addressing relevant points identified.
The reality of climate change is accepted and it is feared that poorer populations are more exposed. Exact assessments for certain geographic region are not available.

Both GoI and GoK rightly attach an increasing priority attached to dealing with climate change. But a knowledge vacuum exists over how climate change affects who, where, when and how.

Taking the SAPCC as a starting point, EMPRI committed to establish a “Centre for Climate Change”. It purpose will be to assist the government in its ability to deal with the practical dimensions of climate change, vulnerabilities, adaptation and mitigation. Its purpose will not be to generate findings that are...