National Mission on Strategic Knowledge for Climate Change [NMSKCC]

Akhilesh Gupta
Adviser and Coordinator
Climate Change Programme
Department of Science & Technology
Govt. of India
Email: akhilesh.g@nic.in

NMSKCC - Basic Approach

- Build a Knowledge platform and infrastructure
- A Super highway for Information and data sharing and exchange for climate change agenda setting
- Build excellence through collaborative synergies and activities
- Make viable investment into all existing knowledge capacities of partners and build new capacities for filling gaps

SN	National Data bases	Data Sources/Agency
1	Ocean (SST, salinity, Sea level rise)	MoES
2	**Cryosphere (**Snow Cover, Glacial data)	NRSA, GSI, DRDO, DST
3	**Meteorology (**Precipitation, Humidity, temperature, Evaporation)	IMD/ MoES
4	**Land Surface** (Topography, Erosion, vegetation)	SOI, NRSA
5	**Hydrological** (Ground/river water, Water quality)	CWC, State Departments
6	**Agriculture (**Soil profile, Area under cultivation, Production and Yield)	Ministry of Agriculture
7	**Socio-Economic** (Demography, Economic status)	Census of India
8	**Forests** Forest resources, Plant and animal, Species distribution	FSI, ZSI, BSI, ISRO
9	**Health related**	Ministry of Health

Work Elements of NMSKCC

- Establishment of Networks of Existing Institutions
- Quantum increase in climate science research
- Pulling of relevant/useful data residing in various arms of the Government through data sharing policy
- Strengthening and Building Strategic (Human and institutional) knowledge capacities

Work Elements of NMSKCC

- Filling knowledge gaps in modeling, technology foresight and ranking and strategies for technology led development pathways
- S&T Innovations for climate change responses for adaptation and mitigation of climate change
- Outreach, stakeholder linkages and creation of pubic awareness

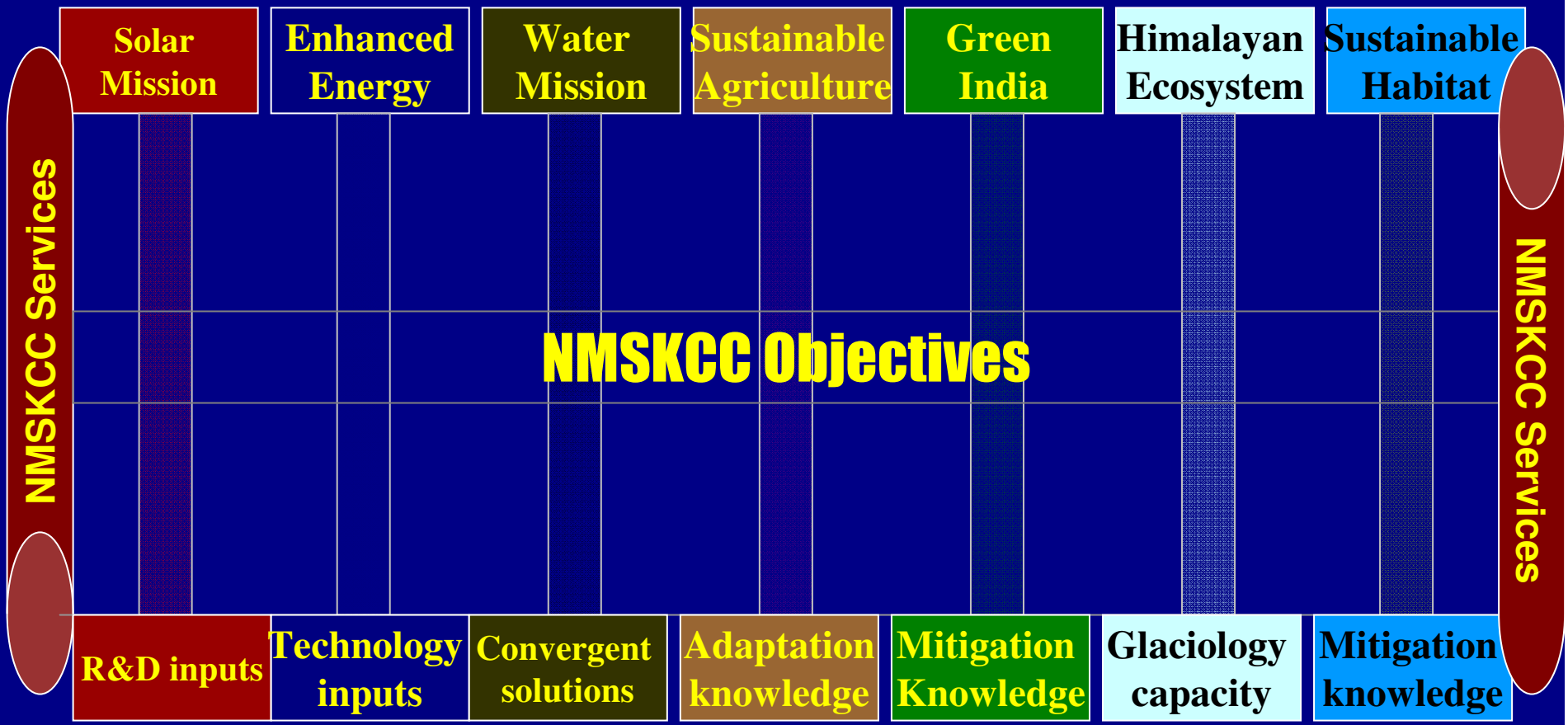
Filling Knowledge gaps
(some lead examples)

- Monsoon dynamics and regional climatic models
- S&T Innovations for Adaptation and Mitigation
- Integrative and time series studies

Strengthening Institutional and Knowledge Capacity : Human Capacity

- A **"Climate Change Research and Fellowship Programme"**
  - at the pre-doctoral and post-doctoral level (starting at about 50 per year, and increasing to about 200 per year over the next 10 years).
- **"Climate Change Professor Chairs"**
  - 50 Chair professorships in Universities and IITs for climate research.
- **"National Research Chairs"**
  - With built-in flexibility for attracting academic leaders from overseas for short durations.
- **"BARC Training School model"**
  - with training linked to a guaranteed employment will be explored for creating and sustaining the demand for quality manpower in climate change related areas

Possible Servicing roles of NMSKCC to NAPCC



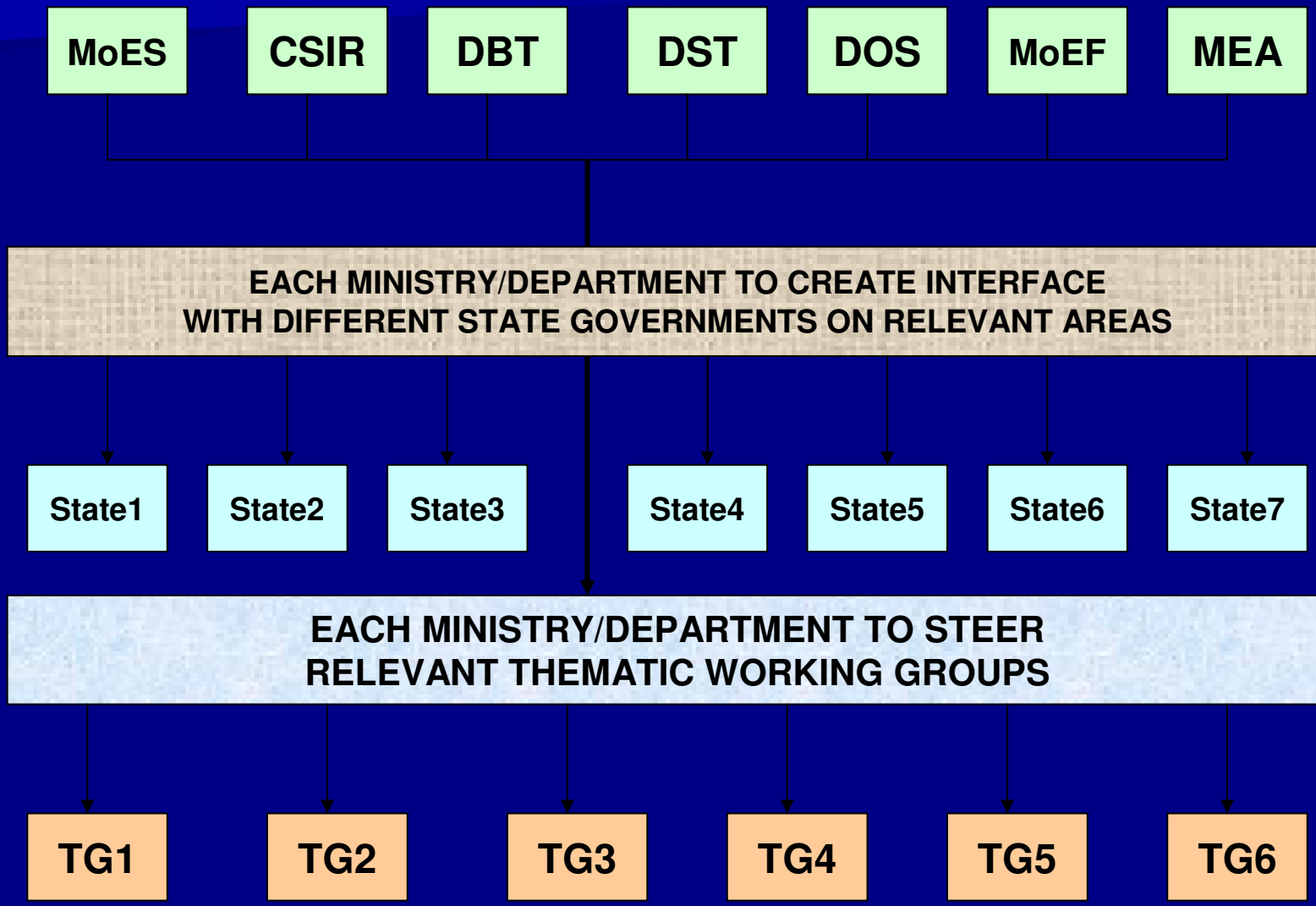
Proposed Sub-Missions on CC impact on Extreme Events

- Monsoon and its variability
- Glaciers- decoupling of factors causing receding of glaciers
- Sea-level rise and storm surges
- Extreme Weather events

Proposed Sub-Missions on CC Impact on Socio-Economic Sectors

- Agriculture-impact on Crop health and productivity
- Water resources, river flow
- Human Health and diseases
- Forests and regions of biodiversity
- Energy including renewable options

Interactive Mechanism Among State and Central Agencies



Mission Deliverables

- A data collection and sharing system
- ~10 thematic knowledge networks
- ~10 technical reports (with annual frequency)
- Regional climate models
- 50 Chair professorships
- ~200 specially trained climate change research professionals

Mission Deliverables

- Public-Private Partnerships
- Technology Watch Groups
- Thematic report on Technology-policy interfaces
- S&T collaborations with other countries
- Outreach and Public Awareness

Role of State Governments in NMSKCC

- Designating a Nodal Office/ Officer for coordinating and initiating actions on NMSKCC
- Enrolment of Institutions/ organizations (including NGOs, Civil Society organizations) working on Climate Change
- Active participation in establishment of observational Network and data sharing system
- Identifying gap areas and working closely with Implementing central ministries to address them
- Participation of State Institutions in Sub-Missions
- Joint implementation of starting new Institutions in key gap areas/Strengthening of existing ones
- Capacity Building programmes
- Enhancing R&D activities on Climate Change

Thank You