

## Session 2 Working Group1

**Most relevant topics and challenges: Systematic Observation and Monitoring for Climate Change a mitigation**

### **Problems to Be solved**

1. Relationship between Land Use Land Cover and Urban Heat Island
2. Analysis of Surface Energy Balance in each Land Cover category
3. Drought Monitoring-using evaporative fraction and SEB High SEB indicates drought and low evaporative fraction indicates drought
4. Design of Surface Energy Balance Interface using software- SEBALIS- using VB and GIS
5. Urban Climate monitoring using Weather Research Forecast model for Sustainable Development.- using scenario analysis

### **Demonstrate:**

Ease of data access, integration of different datasets in solving climate issues.

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Topic / Challenge	Description (key questions, requirements, identified groups working on that)	Potential follow up activities (e.g. joint projects, informal exchange)
1. Essential Climate Variables	What ecvs should be considered in observation and monitoring for climate change mitigation	-From space we can get about 2/3 of ECVs -Integrated Carbon Observation System (ICOS)- European focused, Carbon Observations -Biodiversity -Habitat Measurement Most of these cannot be observed directly but can be deduced -Evapotranspiration to be included as an ecv

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2. Data gap Identification when dealing with Climate Change		<ul style="list-style-type: none"><li>-Data availability is no longer considered to be an issue</li><li>-However, It's difficult to get data for large scale areas (villages) Climatological.</li><li>-Consistency in Satellite data Characteristics of Satellites should be maintained to ensure consistency in data continuity (Spatial Resolution, Swath, spectral resolution)</li></ul> <p>Note:-Avoid too much dependency on science as an early warning in order to react to disasters</p>

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3. Sensors to be included on the Internation Space Station (ISS)	What can be included in the ISS to ensure more variables are available	-Technical Obstacles to inclusion - Most important sensor to have ambassadors of space (astronauts) perspective in consideration

# Summary

What is required

- ✓ Right data at the right place at the right time.
- ✓ Coordination is key to avoid duplication of efforts
- ✓ Communication, Cooperation, Coordination

If there is need for new variables: GCOS is willing to make considerations for future and can be contacted.