

Urban Climate

Session highlights and recommendations

Highlights, Urban climate

- Innovate ideas for EO exploitation in the context of Urban Climate (monitoring and assessment)
- Importance of urban energy budget and the robust estimation of anthropogenic heat flux.
- EO can be used as a tool to evaluate the implementation of climate change mitigation technologies.
- Important urban morphological parameters can be retrieved, e.g. sky view factor, plan area index, canyon aspect ratio.
- Local Climate Zones are important for urban climate community and can be supported by EO.
- Downscaling methodologies can be used to generate a high spatiotemporal resolution dataset, not available before.
- Operational applications for authorities and citizens related to the urban thermal environment can be supported by fast provision of real time data for cities at continental scales (and global).

Recommendations, Urban Climate

- Any advancement in Urban EO products and systems will have a large impact as it affects half of the global population
- Quality of life: support activities related with air quality, thermal comfort, urban environmental security towards resilient cities in the context of climate change. Relevant applications include infrastructure, health, emergency response, energy demand and more.
- Urban policy: bridge the gap between EO scientists and urban planners, policy makers, authorities, and citizens
- Support transferability of existing methodologies to developing countries
- Development of synergies between EO and Urban climate communities
- New urban-related HR TIR sensor, 100m, 4 times daily
- Hyperspectral mapping to map the construction materials, 10 days, <10m, reasonable swath / Multi-angle high resolution albedo (Pan or MS)
- Support integration of various products in the Urban TEP
- Support synergies between sensors, products, services, platforms, scales