


Session 3

Mapping and assessment of ecosystem services - Biophysical perspective

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- ▶ In the session 3, various developments were reported, total 11 - 9 presentations and 2 posters.
 - ▶ The total across all developments is the use and adaptation of different models for various services assessment.
 - ▶ The main topics:

1. Pollination: Application of ESTIMAP and spatial models for assessment and mapping of pollination services in urban areas, rural areas and mosaic landscapes (3 presentations).

► Progress:

- The diversity of pollinators (not only managed bee) in urban areas were studied and mapped (t. Oslo)
- The capacity of ecosystems to support pollinators (bees) across the mosaic landscapes of Bulgaria was mapped using 5 parameters and applying ESTIMAP model.
- The proxy assessment of bee pollination in urban systems in Bulgaria was reported.

► Challenges:

- The diversity of pollinators can serve as an indicator of biodiversity in cities.
- The diversity of pollinators associated with the quality of habitats.
- Assessment and mapping of the connections between the biodiversity of pollinators and habitat quality will contribute for the improving of habitats quality in urban planning and for the increasing of biodiversity.

2. Ecosystem services of herb- and agro-ecosystems.

► Progress:

- The wide assessment of Ecosystem services with key grass ecosystems - sensitive to climate change and provisioning fresh water to the region (ThreeRiver Headwaters, Qing-Tibet Plateau, China) with NPP categorization as the key indicator. Application of GLOPEM-CEVSA model.
- Spatial proxy method application for mapping the capacity of urban ecosystems to provide crop in Pleven district with using the indicators for soil productivity, hydro-climatic and ecosystem conditions.

► Challenges:

- These pilot developments need to be widely applied.

3. Decision Making System.

► Progress:

- The DSS for Forest Services Assessment and Smart Management was reported.
- In the system three models were implemented: Ecosystem unit valuation (EUV) - for the ecosystem services assessment; Value based model (VBM) - for the decision making and SPPAM - model for biophysical assessment of forest state.

► Challenges:

- Application of DSS for grass and cultural ecosystems.

4. Assessment and mapping of material, regulating and supporting services in Urban Ecosystems and regions.

► **Progress:**

- Animal based energy in Bulgaria
- Climate Regulation Services in Bulgaria
- Soil-related ecosystem services in Bulgaria
- The flooding risk for ecosystem services supply in Blagoevgrad district, Bulgaria.

□ **Challenges:**

- All developments are pilot and need to be implement of decision makers in Bulgaria.

5. Discussion on the national implementation of ecosystem services assessment and methodological issues of ES mapping

► Progress:

- The overview of the ecosystem services assessment in Greece;
- Discussion of the biophysical perspectives of ecosystem services mapping, their improvement and integration.

► Challenges:

- The proposed steps for ecosystem services assessment in Greece need to be implemented in Greece national assessment.
- The biophysical perspectives of ecosystem services mapping need to be widely considered between different specialists in ecological, botanical, zoological science, forestry, specialists in management, decision makers and others.

Thank you for all developments!



We still have a lot of hard work to do!

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