

# Earth systems science and applied research for societal benefits



Background: Addressing the unique set of global challenges we are facing and progressing towards a sustainable climate transition, requires more than ever that we advance the understanding of our planet, its processes and its interactions with human activities and ecosystems, and **translate that knowledge into solutions for society**.

Panel discussion: Presentations by DG RTD, DG AGRI, UNEP-IMEO, TNFD and related discussion.

- Translating knowledge into solutions for society requires a **strong scientific and institutional collaboration**, where different organisations bring together **different expertise, data, and knowledge** in a synergistic manner, and with a long-term R&D perspective, ensuring the final result is bigger than the sum of the parts. It also critical that the various **science funding programmes align efforts**.
  - ➔ successful examples EC CAP AMS but also evolution of the policy, UNEP Methane Alert and Response System (MARS) and new elements of wetlands and agri-related, EC-ESA joint Earth System Science Initiative. Also new challenges of completely new applications such as Natural Capital Valuation.
- The time and efforts for a **structured dialogue with end-users** shall be strengthen. Ultimately to increase the **awareness, knowledge and operational capacity** to integrate EO robust solutions and reach the full **empowerment** of the end-user.
- EO alone is not enough... we need in-situ data, advanced models, advances in information technology, and interdisciplinary science and applied research... Also considering the operational needs and constraints of the end-users. This requires an **effective strategy, partnerships and customised mechanisms** addressing the heterogenous user groups. These efforts should also target practical solutions for the citizens and the policy implementer.
- These efforts and synergies by the different organizations shall have a **long-term perspective**, with the ultimate aim to mainstream EO as an operational tool to enable policies and fully accepted by the EU regulations.

