

## sDiv working group meeting report

### “ sTradES - ecosystem services, biodiversity and anthropogenic capital embedded in internationally traded good”

#### General

September 12-16, the sTradES working group met in hybrid mode. With 4 online participants and 11 participants in Leipzig, we discussed embedded ecosystem services in a broad sense and worked towards answering the research question *what are barriers and opportunities for quantifying the contribution of embedded ES in agricultural trade*. We also identified data, knowledge and methodologies, and gaps therein towards robust quantitative assessments of embedded ES.

The hybrid facilities at iDiv are as good as hybrid gets. While joining 11 persons who are in the same room online alone in your office is a surrogate, the excellent video and audio facilities were extremely helpful in involving the online participants in all sessions that fitted their schedule, plenary as well as in breakout groups.

The working group had a nicely varied background and an open and supportive attitude, which greatly helped synthesizing a wide range of perspectives into a consistent draft story of a joint paper.

#### Content

The working group is a follow-up of the sTeleBES working group that worked on operationalization of interregional flows of ecosystem services. From the outputs of sTeleBES, the way in which ES support flows of traded goods remained an open question, which is the focus of sTradES.

The content discussions pivoted around:

- Clarifying and conceptualizing how ecosystem services become embedded in agricultural goods;
  - o Highlighting / disentangling how embedded ES are implicitly included in other conceptual frameworks and in efforts to value ES;
  - o The relevance of embedded ES and the relevance of quantifying them;
  - o Methods for quantifying embedded ES, data required to do so, and the availability of such data.

While the working group meeting managed to make progress in synthesizing the state-of-the-art regarding embedded NCPs, the actual operationalization in a quantitative case study is still an open question that will be addressed in a follow-up workshop.

### *Structure*

The live working group meeting was postponed a few times during and due to the COVID pandemic. However, preparatory online meetings were held. These meetings highlighted that embedded ecosystem services are an important topic, that is so under-researched that a better definition / conceptualization is needed before a proof of concept towards quantitative assessment can be made.

We started the live workshop Monday afternoon with a recap of the sTeleBES work and the findings of the online pre meetings, culminating into a discussion of the proposed output of the week: a conceptual / perspective paper.

The rest of the week was spent with very few presentations but mainly group work, focusing on different parts to be covered in the planned paper, with oral back-reporting. Most of Tuesday-Thursday were spent in breakout groups, that discussed, reviewed, and synthesized how embedding works for different types of ecosystem services (provisioning / regulating / cultural). We also used the central days to discuss and develop a key conceptual figure of the paper and to shape the main messages. We wrapped up the workshop on Friday morning, with agreeing on the follow-up steps for finishing our paper, outlined content for a next workshop, and consolidated paper discussions.

The workshop will be followed up by continued work on and with the completion and submission of our perspective paper with the preliminary title "How embedded ecosystem services sustain interregional agricultural trade".