2ND THINK-TANK MEETING REPORT

WG2: MEASUREMENT APPROACHES

16-17TH OF APRIL 2016, VIENNA, AUSTRIA

This document summarises the main outcomes of the second WG2 Think Tank meeting organised at the University of Wien in April 2016. The meeting had 16 participants. The participants represented five different countries, including Australia and the United States of America. In the following sections we provide general details of the activities accomplished.

HOW CAN WE INCORPORATE OR ESTIMATE ERRORS AND UNCERTAINTIES IN OUR MEASUREMENTS OF CONNECTIVITY?

In the first part of the meeting Joe Wheaton (Utah State University) gave a keynote on Errors & Uncertainty: How can we incorporate or estimate errors and uncertainties in our measurements of Connectivity? His presentation is available here.

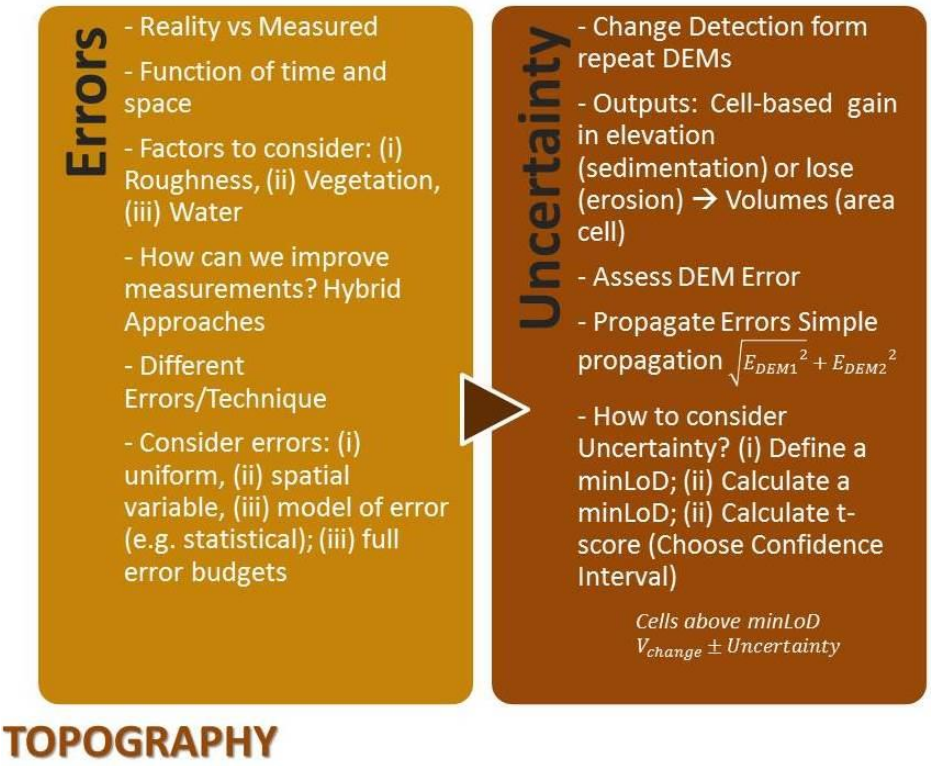
In the second part of the meeting the group was divided in 3 sub-groups based on different types of measurements: (i) structural (topography); (ii) functional (water and sediment), and (iii) tracing (linking source to sinks). Each group discussed the ways to consider (a) Errors and (b) Uncertainties in each type of measurement.

KEY OPEN DISCUSSIONS

The main discussed topics were:

- Define what an error is: systematic, random, accuracy, precision.
- Define what uncertainty is: complexity, variability.
- Establishing the differences between aleatory and epistemic uncertainty
- Can we estimate errors and uncertainties in existing data sets?
- Can we incorporate these terms in our future designs?

In the following diagram we summarises some of the outcomes obtained during the discussions:



OUTCOMES

Outcomes are being compiled in a single document in order to:

- Develop a manual containing key messages to take into account or consider errors and uncertainties in connectivity measurements (Deliverable WG2)
- Review Paper