

First exploratory steps on setting a cross-cut action about
the determination of evapotranspiration

*Report on the side meeting at the Canmore
conference and actions afterwards.*

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GHP meeting, 25-26 october 2018
Universidad de Chile, Santiago

List of questions on LE (or Q') that set the meeting in place:

- 1: As a PBL modeller: a boundary condition that «somebody» provides.
2. As a data analyst: data provided, usually given without uncertainties
3. As an experimentalist: self-generated, uncertainties play a non-minor role (calibration, location/heterogeneities, buoyancy and tilting corrections, non-stationarity)
4. In the frame of the SEB: Imbalance unavoidable (10-30% of R_n)
5. Interaction with others shows two facts:
 - lysimeters, sap flows... may take EC as a reference value (and the other way around)
 - In Remote Sensing, LE is often taken as the SEB residual, (implying that either there is no imbalance, or that all the imbalance is due to LE).
6. As a member of the GEWEX community: ET is a branch of the hydrological cycle not so extensively studied (compared to precipitation or hydrology).
7. As a physicist: there is always room for improvement of theories and methods.

A list of relevant issues concerning ET was produced (list still open) :

1) Instrumentalists: EC, lysimeters, sap flow, scintillometers...

2) Process understanding: soil + plant + atmosphere

3) Remote Sensing methodologies

4) Model/parameterization development

5) Networks (FLUXNET and more)

6) Interaction with hydrologists, agronomists, ecologists ...

7) Sublimation

8) ET across scales

9) Nocturnal ET

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List of attendees (Canmore, May 10 2018, 19h):

Sonia Seneviratne (ETHZ), Jan Polcher (LMD), Aaron Boone (CNRM), John Edwards (UKMO), Toby Marthews (CEH), Eleanor Blyth (CEH), Alberto Martínez (CEH), Souhail Boussetta (ECMWF), Joan Cuxart (UIB), Bob Su (U. Twente), Anne Verhoef (U. Reading), Ryan Teuling (WUR), Bart van der Hurk (KNMI), Peter Greve (IIASA), Ailikun (CAS), Li Jia (CAS), Qingyun Duan (BNU), Sujay Kumar (NASA), Thomas Holmes (NASA), Jingfeng Wang (GIT), Jason Evans (UNSW), Sara Vallejo (UNC)

About half of the attendees did send a comment by e-mail.

Some other interested people not attending the side Canmore meeting also contributed when the word reached them: Jordi Vila and C van Heerwaarden(WUR), Vincent Vionnet (USASK), R. Padron and L. Gudmundsson (ETHZ), Jannis Groh (Jülich), Henk de Bruin (WUR), P. Gentine (UC), A. Beljaars (ECMWF), F. Beyrich (DWD), ...

Actions:

- 1) A request was made to send thoughts on actions to take, some sent e-mails with ideas other sent relevant literature of their own or of others. This compilation took place before the NH summer break.
- 2) With this information a summary document has to be produced, I am the compiler with the help/guidance of Anne Verhoef and Toby Marthews. Henk de Bruin will advise us in this initiative. Once the first version of the document is ready after the internal revision of all participants, it will be made available for further contributions to the interested community.
- 3) A scientific workshop on this issue was considered necessary. It was initially thought for May 2019 but most likely it will take place combined with the next GHP meeting in Oct 2019. That workshop should see if a crosscut action within GEWEX is put in place or not.