

Comparative understanding of runoff generation processes from global experimental watersheds



Fuqiang Tian
Tsinghua University, Beijing, China

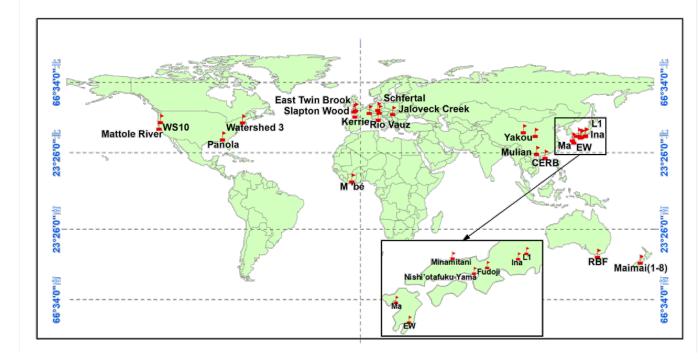
November 9, 2023

Process Comparison Working Group

Describe the work and how your suggested working group will contribute to the goal:

- ✓ Invite research groups running experimental watersheds worldwide to participate in the working group.
- ✓ To formulate challenging research questions, better understand the diversity of hydrological processes, and try to find deep similarities.

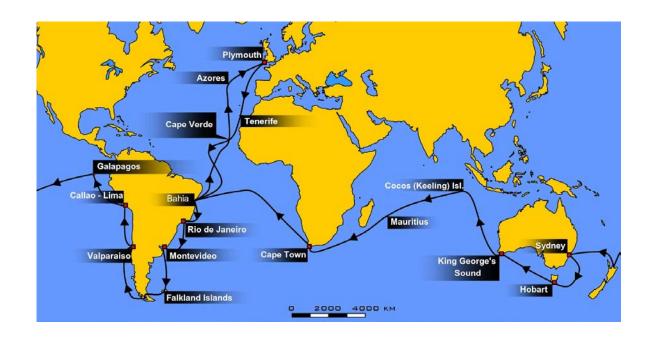
A Partial List of Hydrological Experimental Watersheds



Process Comparison Working Group

Describe the methods you will use to achieve the goal:

✓ Comparative studies among different research groups running experimental watersheds.

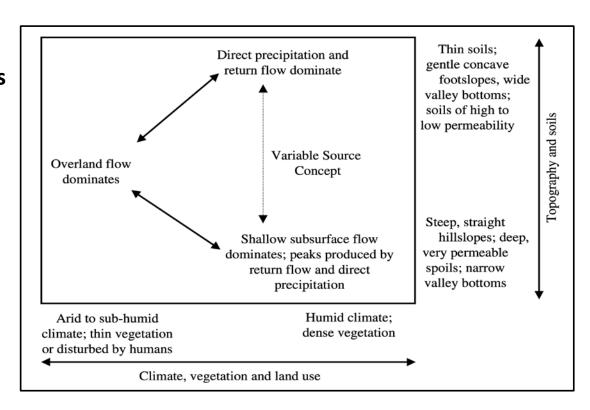


Mapping Darwin's Journey

Process Comparison Working Group

Describe the (a) short-term, (b) the long-term and (c) the ultimate results you hope to achieve:

- (a) short-term: to compile datasets for experimental watersheds as many as possible,
- (b) long-term: to identify similarities and differences of watershed characteristics and processes of experimental sites,
- (c) ultimate results: to develop a more quantitative framework to identify dominant processes in a specific watershed.



Schematic illustration of the occurrence of various runoff processes in relation to their major controls (Dunne, 1978. in Hillslope Hydrology, edit by Kirkby)

Open Issues for Discussions

- 1) List of experimental watersheds the participants are working on
- 2) State-of-the-art knowledge of hydrological processes
- 3) Knowledge gaps in process understanding
- 4) Key questions the participants are interested in