

HS1.2.4 - Panta Rhei (hydrology, society, environmental change) and Unsolved Problems in Hydrology (UPH)

Transboundary Human-Water Systems

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Panta Rhei Synthesis Book – Chapter 9

Title: Transboundary Human-Water Systems

Lead Author: Amin Elshorbagy, Jing Wei

Authors: David Grey, Josiah Heyman, Jonathan Lautze, Alex Mayer, Veena Srinivasan, Ashok Swain, Sumit Vij

Bibliography lead: Jing Wei

General Outline: the goal of this chapter aims to adopt a specifically spatial perspective where upstream-downstream contingencies are explored, both across national and regional boundaries



Panta Rhei Synthesis Book – Chapter 9

9.1 Introduction

Understanding of the transboundary human-water systems, characteristics and existing challenges;

9.2 Common Phenomena and Key concepts

Common Phenomena: Link to Chapter 3: “Coevolution and emergent phenomena”

Key concepts: Link to Chapter 2 “Theoretical framework for understanding and prediction of changes in hydrology and society”

9.3 Existing Frameworks/Models Developed to Understand the Dynamics

Link to Chapter 4: “Methodologies for the study of change in hydrology and society”

9.4 Empirical and scenario analysis

9.5 Benchmark Datasets

Transboundary Freshwater Dispute Database

Global Transboundary River Database (Guo, Tian and Wei)

9.6 Summary

