

Hydrological Regions in Monsoon Asia

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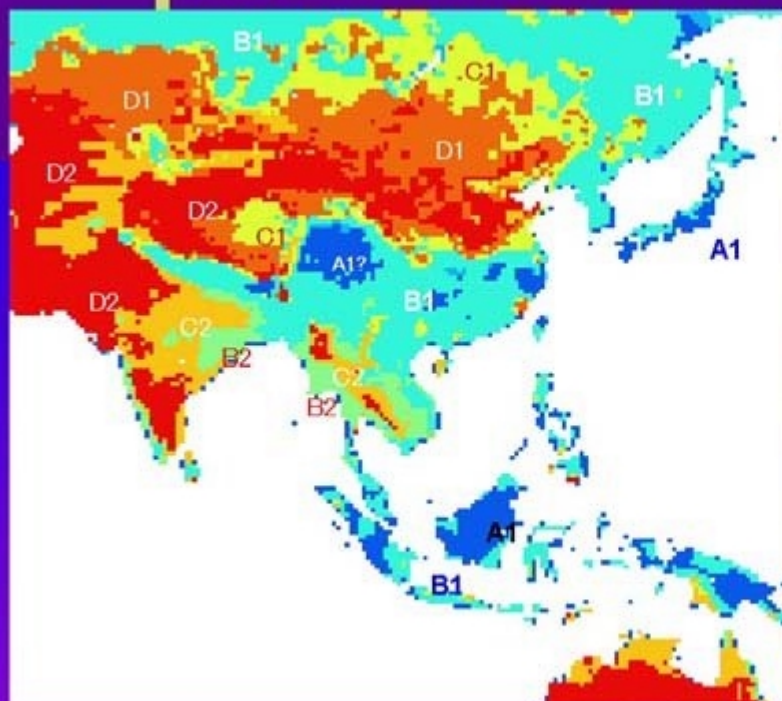
Monsoon Asia is characterized by the variability of natural and social environments. It ranges from humid tropics to arid regions and there are various hydrological phenomena occurring in such diverse regions. This study attempts to characterize hydrological regions of Monsoon Asia based on the water budget by using available global datasets.

Maps of hydrological region using several global datasets are created based on the following criterion:

- Region A1: water surplus all year around with surplus(ATS over 400mm);
- Region A2: water surplus all year around with surplus(ATS under 400mm);
- Region B1: water surplus with some months deficit (ATD under 200 mm);
- Region B2: water surplus with some months deficit (ATD over 200 mm);
- Region C1: water deficit with some months surplus (ATD under 200 mm);
- Region C2: water deficit with some months surplus (ATD over 200 mm);
- Region D1: water deficit all year around (ATD under 200 mm);
- Region D2: water deficit all year around (ATD over 200 mm);

The extents of several large river basins are superimposed on the map, and examined for the flow regimes and water budget. The results well explain the regional characteristics of the river basins. The study shows the importance of spatial framework for the comparative hydrological study of river basins.

Hydrological Region in Monsoon Asia



- **Region A1**: water surplus all year around (ATS > 400 mm);
- **Region A2**: water surplus all year around (ATS < 400 mm);
- **Region B1**: water surplus with some months deficit (ATD < 200 mm);
- **Region B2**: water surplus with some months deficit (ATD > 200 mm);
- **Region C1**: water deficit with some months surplus (ATD < 200 mm);
- **Region C2**: water deficit with some months surplus (ATD > 200 mm);
- **Region D1**: water deficit all year around (ATD < 200 mm);
- **Region D2**: water deficit all year around (ATD > 200 mm);

Precipitation & Air Temperature : Leemans and Cramer IIASA datasets