

**Texas A & M University and U.S. Bureau of Reclamation
Hydrologic Modeling Inventory
Model Description Form
June 2007**

Name of Model:

I did not mention the name of model in the text. If it must be named, I want to name it HIAS model, because I studied the model in the Institute for Hydrospheric-Atmospheric Sciences (IHAS), Nagoya University

Model Type:

Numerical hydrological model

Model Objective(s):

To understand the basin scale heat and water regimes through hydrological modeling

Agency and Office:

Institute for Global Change Research

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Model Structure or Mathematical Basis:

This is a combined model which is composed of a simple SVAT (Soil-Vegetation-Atmosphere Transfer) model, runoff model and river routing model explain snowmelt, evapotranspiration, thawing and freezing of permafrost and river flow

Model Parameters:

Index of vegetation condition, thermal conductivity of soil and water flow velocity in the river

Spatial Scale Employed in the Model:

The maximum is 10,000 km² for a grid

Temporal Scale Employed in the Model:

One hour

Input Data Requirements:

Daily routine meteorological data

Computer Requirements:

Personal computer or workstation

Model Output:

Evapotranspiration and runoff for grid level and discharge for watershed scale

Parameter Estimation/ Model Calibration:

Need

Model Testing and Verification:

Need

Model Sensitivity:

Model Reliability:

Model Application/ Case Studies:

Small mountainous watershed of Japan and Lena River basin of Siberia

Documentation:

Other Comments: