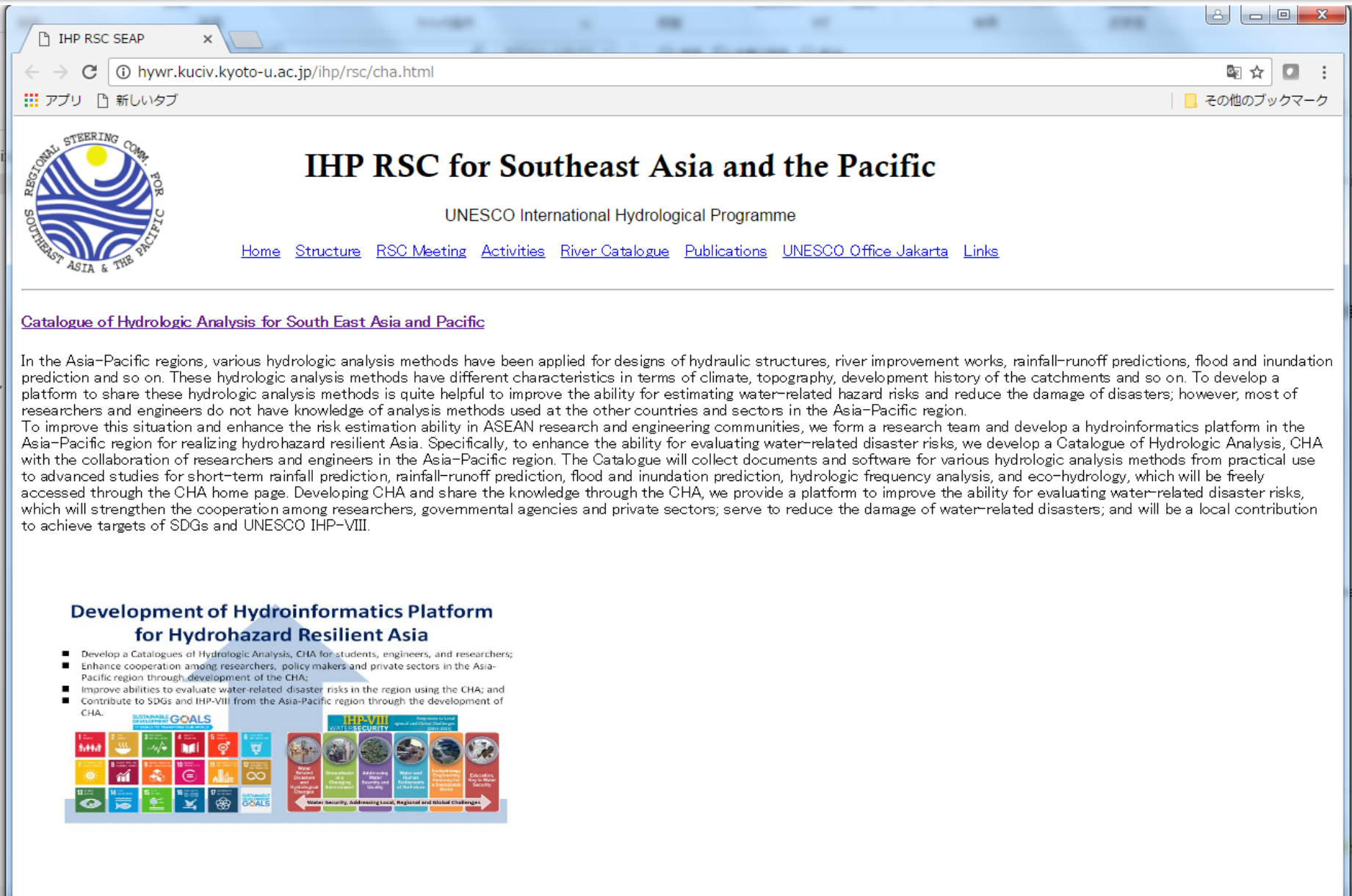


Catalogues of Hydrologic Analysis (CHA)

Tachikawa, Y., Kobayahi, K.
and Sayama, T. (IHP Japan)

[A Homepage was made by Prof. Tachikawa](http://hywr.kuciv.kyoto-u.ac.jp/ihp/rsc/cha.html) <http://hywr.kuciv.kyoto-u.ac.jp/ihp/rsc/cha.html>



The screenshot shows a web browser window with the address bar displaying hywr.kuciv.kyoto-u.ac.jp/ihp/rsc/cha.html. The page title is "IHP RSC for Southeast Asia and the Pacific" and the subtitle is "UNESCO International Hydrological Programme". The page features a navigation menu with links for Home, Structure, RSC Meeting, Activities, River Catalogue, Publications, UNESCO Office Jakarta, and Links. The main content area is titled "Catalogue of Hydrologic Analysis for South East Asia and Pacific" and contains a detailed introduction to the project. Below the text is a section titled "Development of Hydroinformatics Platform for Hydrohazard Resilient Asia" with a bulleted list of objectives. At the bottom, there are two infographics: one for Sustainable Development Goals (SDGs) and one for IHP-VIII Water Security.

IHP RSC for Southeast Asia and the Pacific
UNESCO International Hydrological Programme

[Home](#) [Structure](#) [RSC Meeting](#) [Activities](#) [River Catalogue](#) [Publications](#) [UNESCO Office Jakarta](#) [Links](#)

[Catalogue of Hydrologic Analysis for South East Asia and Pacific](#)

In the Asia-Pacific regions, various hydrologic analysis methods have been applied for designs of hydraulic structures, river improvement works, rainfall-runoff predictions, flood and inundation prediction and so on. These hydrologic analysis methods have different characteristics in terms of climate, topography, development history of the catchments and so on. To develop a platform to share these hydrologic analysis methods is quite helpful to improve the ability for estimating water-related hazard risks and reduce the damage of disasters; however, most of researchers and engineers do not have knowledge of analysis methods used at the other countries and sectors in the Asia-Pacific region. To improve this situation and enhance the risk estimation ability in ASEAN research and engineering communities, we form a research team and develop a hydroinformatics platform in the Asia-Pacific region for realizing hydrohazard resilient Asia. Specifically, to enhance the ability for evaluating water-related disaster risks, we develop a Catalogue of Hydrologic Analysis, CHA with the collaboration of researchers and engineers in the Asia-Pacific region. The Catalogue will collect documents and software for various hydrologic analysis methods from practical use to advanced studies for short-term rainfall prediction, rainfall-runoff prediction, flood and inundation prediction, hydrologic frequency analysis, and eco-hydrology, which will be freely accessed through the CHA home page. Developing CHA and share the knowledge through the CHA, we provide a platform to improve the ability for evaluating water-related disaster risks, which will strengthen the cooperation among researchers, governmental agencies and private sectors; serve to reduce the damage of water-related disasters; and will be a local contribution to achieve targets of SDGs and UNESCO IHP-VIII.

Development of Hydroinformatics Platform for Hydrohazard Resilient Asia

- Develop a Catalogues of Hydrologic Analysis, CHA for students, engineers, and researchers;
- Enhance cooperation among researchers, policy makers and private sectors in the Asia-Pacific region through development of the CHA;
- Improve abilities to evaluate water-related disaster risks in the region using the CHA; and
- Contribute to SDGs and IHP-VIII from the Asia-Pacific region through the development of CHA.

Sustainable Development Goals

IHP-VIII Water Security

Water Security, addressing Local, Regional and Global Challenges

A Homepage was made by Prof. Tachikawa

<http://hywr.kuciv.kyoto-u.ac.jp/ihp/rsc/cha.html>

CATALOGUE OF RIVER x

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アプリ 新しいタブ | その他のブックマーク

CATALOGUE OF HYDROLOGIC ANALYSIS

[Table of Contents](#)

[Theme 1: Water-Related Disasters and Hydrological Change](#)

- Flood runoff analysis
- Hydrologic frequency analysis
- Water and heat balance analysis

Theme 2: Groundwater in a Changing Environment

- Groundwater analysis
- Infiltration analysis
- Subsurface runoff analysis



Theme 3: Addressing Water Scarcity and Quality

- Water quality modeling


Theme 4: Water and Human Settlements of the Future

Theme 5: Ecohydrology, Engineering Harmony for a Sustainable World

[How to contribute CHA?](#)

 
United Nations
Educational, Scientific and
Cultural Organization

**The UNESCO-IHP Regional Steering Committee
for Southeast Asia and the Pacific**


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Science, Technology and
Innovation Platform

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[Table of Contents](#)

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**The UNESCO-IHP Regional Steering Committee
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CATALOGUE OF HYDROLOGIC ANALYSIS

October 22, 2016

Theme 1: Water-Related Disasters and Hydrological Change

Flood runoff analysis

- Flood prediction using a distributed flow routing model, 1K-FRM (Y. Tachikawa and T. Tanaka, Japan)
 - [document](#)
 - [related information](#)
- Rainfall-runoff and flood inundation predictions using RRI model (T. Sayama and Y. Iwami, Japan)
 - [document](#)
 - [related information](#)

Water and heat balance analysis

- Estimation of monthly potential evapotranspiration using Thornthwaite method (K. Kobayashi, Japan)
 - document
 - Excell sheet for calculation

Hydrologic frequency analysis

New proposal (by Tachikawa, Kobayashi and Sayama) this year!

- Title: CHA
- Contents : Water related disaster (forecasting, hazard map), Water resources management (drought, groundwater use), eco-hydrology (water quality, water environment preservation) etc. which are related with IPH 8th Phase.
- Editorial board: RSC chairperson, secretary and appointed persons (according to the theme) × 3 = approx. 5 persons) which will be requested to all the countries.
- Schedule: Publication at every 2 years
- 2017: Proposal of the revised plan
- 2018: Decision of the proposal (e.g. hazard map). The due date is 2019
- 2019: Start editorial process after the collection of the hazard map manuscripts. To be completed by 2020.
- 2020: Discussion of the 2nd phase plan, decision and request of the 2nd phase

Contents examples

Water related hazard (flood forecasting)

Title: Flood forecasting in the Yodo River basin

- (1) (Yodo river basin overview) : The citation from River Catalogue is expected.
- (2) (System) : flood warning system including meteorological warning system; System and legal framework; and information dissemination to the public (e.g. evacuation information) will be described.
- (3) (Technology) : Introduction of meteorological forecast and flood forecast.
(Theory) Theory of the analysis, basic equation
(Tool) e.g. RRI.
- (4) (Example) Good practice. When the warning was made and how the reaction was etc.
- (5) (References) if possible

Contents examples

Water related hazard (hazard map)

Title: Flood hazard mapping in the Yodo River basin

- (1) (Yodo river basin overview) : The citation from River Catalogue is expected.
- (2) (System) : How to use hazard map; System and legal framework; and information dissemination to the public (e.g. the relation with the evacuation information) will be described.
- (3) (Technology) : How to make hazard map.
(Theory) Theory of the analysis, basic equation
(Tool) e.g. RRI.
- (4) (Example) Good practice. How it is actually used.
- (5) (References) if possible

Contents examples

Water resources management (Draught management)

Title : Draught management in the Yodo River basin

- (1) (Yodo river basin overview) : The citation from River Catalogue is expected.
- (2) (System) : How to manage drought in the catchment; System and legal framework; and information dissemination to the public will be described.
- (3) (Technology) : Draught forecasting, draught monitoring.
(Theory) Theory of the analysis, basic equation
(Tool) e.g. RRI.
- (4) (Example) Good practice. Past examples.
- (5) (References) if possible

Contents examples

Water resources management (Groundwater use)

Title: Groundwater management in the Yodo River basin

- (1) (Yodo river basin overview) : The citation from River Catalogue is expected.
- (2) (System) : System and legal framework for the groundwater use
- (3) (Technology) : Groundwater monitoring, forecasting
(Theory) Theory of the analysis, basic equation
(Tool) e.g. MODFLOW
- (4) (Example) Good practice. Past examples.
- (5) (References) if possible

Contents examples

Ecohydrology (Water quality, eco-system preservation)

Title: Environmental management in the Yodo River basin

- (1) (Yodo river basin overview) : The citation from River Catalogue is expected.
- (2) (System) : How to manage water quality and eco-system preservation; System and legal framework for the eco-system preservation; and information dissemination to the public will be described.
- (3) (Technology) : Water quality, eco-system monitoring and forecasting
(Theory) Theory of the analysis, basic equation
(Tool) e.g. RRI
- (4) (Example) Good practice. Past examples.
- (5) (References) if possible

Thank you very much