

The Asian River Restoration Network (ARRN) is an Asian-based network supporting the exchange of information related to environmental restoration of rivers and watersheds, through the promotion of collaboration between participants of the world. The network aims to contribute to the development of technology and knowledge for environmental restoration through its activities.

Message from the Chairperson

One and half years have passed since Asian River Restoration Network (ARRN) established.

It is my pleasure to announce that we publish ARRN Newsletter. Enclosed please find out the first issue.

We would like to express our sincere gratitude to all members and collaborators who have supported ARRN activities.

ARRN was jointly established by voluntary organizations in Japan, Korea and China with an aim to exchange knowledge and technical information on river restoration as well as to provide opportunities for groups and individuals to share and exchange their knowledge and experience in the field, which would enable the participants to improve their knowledge and technique through interaction. In the past year, ARRN has provided and transferred relevant information through website as well as international forums and workshops. In doing so, we provided up-to-date topics and the latest achievements from wide variety of sources. We

believe that ARRN can contribute to the progress of river restoration techniques particularly suitable for Asia by collecting substantial information on natural conditions and functions of rivers and the relation between rivers and cities.

We plan to continuously move forward for dissemination of information on river restoration techniques in Asian area. For this, we would greatly appreciate your continued supports.

Dr. Nobuyuki TAMAI
Chairperson of ARRN

Professor, Kanazawa Gakuin University
Professor Emeritus, University of Tokyo
President of the International Association of Hydraulic Engineering and Research (IAHR)

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Introduction of ARRN

OBJECTIVE

ARRN is a non political network for exchanging knowledge and technological information on the restoration of rivers and watersheds in Asia. One of the objectives is to provide various opportunities and venues for river restoration related organizations and individuals to share and exchange knowledge and experiences related to the restoration of rivers and watersheds through the network.

ARRN aims to enrich the participants' knowledge and scientific technology through mutual and multilateral cooperation, and ARRN also contributes to creation of rich river environment in Asia.

ORGANIZATION

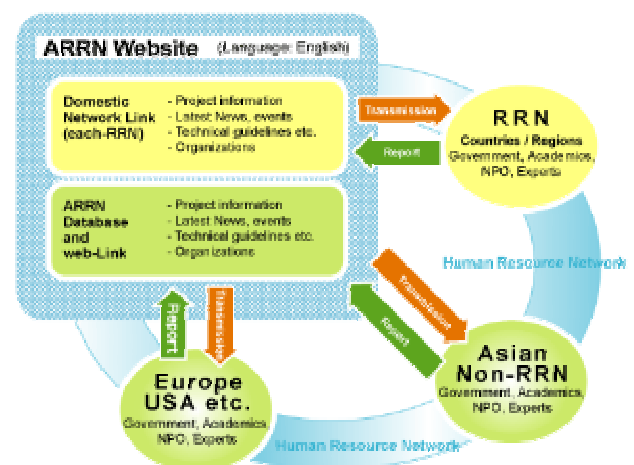
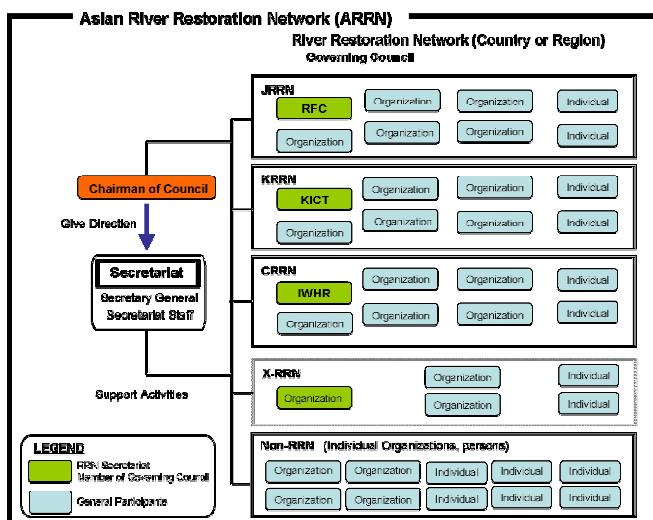
ARRN is organized with cooperation of each domestic network of participating countries / regions, and each network is called as "River Restoration Network (hereafter, RRN) " generically. As for RRN, a free activity in home countries or in local regions is encouraged.

and uses profit of Web site. General participants need to register participation according to the rule that ARRN or domestic RRN organization provides and assumes the generic name of the person who declares participation in ARRN.

The operating policy of ARRN is decided by "Governing Council" that consists by the representative of the Council in each RRN organization. The Council is summarized by the chairman approved in the Council, and resolves the activity plan and the budget planning, etc. of the year.

ACTIVITIES

ARRN provides relevant information through website and newsletter as well as on the occasions of international forum, workshop and academic conference to exchange knowledge and technical information on river restoration. ARRN also aims to provide opportunities for groups and individuals to share and exchange their knowledge and experiences in the field, which would enable the participants to improve their knowledge and techniques through interaction.



General participants are individuals or groups, who or which participate in event such as forums

More details (visit to ARRN website):

<http://www.a-r-r.net/jp/en/arn/about.html>

River Restoration Projects and Trend in Asia

Many projects related to urban waterfront restoration as well as eco-friendly nature restoration have been implemented in Asia. For example, advanced efforts of urban renaissance through waterfront restoration such as the restoration projects of the Cheonggye River (Seoul, Korea) by expressway demolition, the banks of the Singapore River (Singapore), Suzhou Creek (Shanghai, China) have been conducted and become widely known. Thus, Asia has been accumulating a rich experience in river restoration as well as the revitalization of the relation among people, river and city in urban areas.

Based on the presentation contents of past ARRN international forums, this article introduces several recent cases and trend of river restoration in Asia.

1. Korea

In Korea, since the first restoration project was implemented in the Osan River in the suburbs of Seoul City in 1998 responding to the public's growing demand for the restoration of river environment, a number of pilot projects by the Ministry of Construction & Transportation (MOCT) and the restoration projects of urban rivers covered with structures such as elevated expressway by local governments have been performed.



Before (1999)



After (2001)

Osan River

With an aim to promote river restoration projects systematically, the MOCT amended the River Law in 2004, by which the policy of "Close-to Nature River Improvement" was established. Simultaneously, the MOCT issued a guideline for river restoration that introduced a river management method based on the zoning of river regions into the categories such as conservation zone, restoration zone and leisure zone.

As for the categories, conservation zone refers to where consistent maintenance rather than artificial improvement is required for its rich ecosystem, history, culture and landscape. Restoration zone is where its ecosystem or landscape has been deteriorated due to the straightening or modification of a river by covering with concrete. Leisure zone is where waterfront parks are required for urban residents' recreation and relaxation.

For instance, in the Yangje River that flows through the city of Seoul, a restoration project was initiated in 1998 and the periodical monitoring since then has proved an improved water quality and biodiversity. Other examples include the efforts to recover ecosystem and landscape of the Anyang River and the Hagi River located in the western part of the Seoul metropolitan district by dismantling drop structures and concrete revetments once constructed for the purpose of flood control.



Before (1996)



After (1998)

Yangje River

Although some long-standing challenges including the aggravation of water quality and extreme stream flow change are still to be solved, it should be noted that the projects aimed at the recovery of rivers' original values such as ecosystem, history and culture have been vigorously implemented recently, which have replaced the past trend of river development mostly focused on disaster prevention.

2. China

In about 2000, China commenced its full-scale river restoration project with the launching of the 10th Five-Year Plan. However, so far, most of the projects have been focused on the improvement of water quality and waterfront landscape, hence the efforts to restore rivers' multiple functions such as the harmony among river ecosystem, flood control, water utilization and natural environment have been limited.

As for the practices that restored the relation among river, people and city, one example is the Han River Riverfront Restoration Project in Wuhan, located in the mid-Yangtze River area. In this river development project initiated in 2001, "harmonious coexistence of people and nature" was set as the basic principle and the 5 functions of "flood prevention", "improved drainage in urban area", "landscape creation", "sound-and-light effect" and "health promotion" were introduced. By 2005, the project was completed for a total length of 7 km and the area of 1,500,000 m² and the expansion work is carried out currently.



Before

After

In China, there are also the cases of urban river restoration, one of which is the project for the "Zhuanhe River", which flows through Beijing. The Zhuanhe River used to have functions such as controlling of flood and conducting water to outer moat of the Beijing Castle. However, it was filled in for the urbanization between 1975 and 1982, and factories and many houses were constructed on the reclaimed area. Subsequently, in 2002, considering the increased significance of waterfront environment in urban area, a project aimed at the recovery of the Zhuanhe River was initiated in Beijing City. The project was conducted under the principle of "a river oriented toward both human and nature as well as their coexistence", and it has been recovered to become a river that integrates local history and urban life.



Recovery of the Zhuanhe River

At present, it can be said that the central challenge for China's river restoration is water quality improvement. Nonetheless, many river restoration projects in urban areas aimed at enhanced water amenity and landscape toward the Beijing Olympic Games and the World Expo Shanghai have been reported. Moreover, considering the fact that the 11th Five-Year Development Guidelines by the Chinese government not only refers to water quality improvement but also introduces "ecologic restoration", it is expected that more projects aimed at the restoration of river ecosystem such as the pilot project currently undertaken for the Three Gorges Dam will be implemented around the country in the future.

3. Thailand

In Thailand, a national policy on water resources restoration was established in 2001, which determined the tasks such as the formation of a guideline concerning water resources management, conservation of natural environment, cultural heritage and traditional communities, rehabilitation of water quality, promotion of stakeholders' knowledge level and improvement of relevant legal system.

Moreover, the government of Thailand announced the National Water Agenda in May 2007, which introduced a new action plan directly related to river restoration including the establishment of a committee for each prominent river, formation of guidelines concerning river conservation, restoration and utilization. However, river restoration in the country is still in a preparatory stage such as the improvement of relevant legal system, hence the number of reported projects aimed at the restoration of rivers' multiple functions similar to the Nature Oriented River Works has been limited.



Festival related to water

One of the major characteristics of Thailand is a strong bond between its culture and water. Therefore, as a method to raise public interest in river restoration, campaigns such as the "National Day of River Rehabilitation" are included in the national water policy, while the enlightenment activities on the restoration of water environment such as the visit of Royal Family of Thailand to rivers are actively conducted.

4. Japan

In Japan, there have been the long-term projects of the Sumida River and the Tama River whose aims gradually developed from water quality improvement to water amenity enhancement and finally to a more comprehensive eco-friendly river restoration as well as the nature restoration projects of the Kushiro River and the Shibetsu River. As for more information on river restoration projects in Japan, please refer to JRRN website. (<http://www.a-rr.net/jp/en/waterside/domestic/index.html>)

Previous trends of river restoration efforts in Japan can be summarized as: initiation of water quality survey in the 1950s, improvement of sewage systems in the 1960s, improvement of water amenity since the 1980s, consideration for ecosystems since the 1990s and restoration of the nature itself since 2000s. In terms of the future direction of river environment improvement, the "Committee for Policy Review concerning River Environment Improvement and Conservation" established in 2007 employs a slogan "Regain Japanese Rivers" and aims not only at the restoration of original river environment but also at the restoration of river-human relation that has been fostered together with history and culture.

It is important for Asian countries and regions to advance their river restoration efforts effectively and swiftly by applying the lessons learnt from the advanced cases and good practices of other countries and regions. To realize this, there is a growing demand for frameworks for sharing and exchanging techniques, information and experiences that are beneficial to each country and region. Asian River Restoration Network (ARRN) takes the role aiming at creation of Asian better river environment.

(by ARRN Secretariat)

News and Events

JRRN joined NARBO as one of the knowledge partners in Feb. 2008

The 3rd General Meeting of NARBO was held on 20-22, February 2008 in Solo/Surakarta, Indonesia with approximately 100 participants from 17 countries, and JRRN officially joined NARBO as one of new 9 members.

As an Interregional Knowledge Partner, JRRN will contribute to the NARBO activities, and those profits will be plowed back into ARRN members.



"Department of Water Resources, THAILAND" joined ARRN as a new non-RRN member in April 2008



Mr. Surapol Pattanee, Director of Bureau of Water Resources Policy and Planning, Department of Water Resources, Ministry of Natural Resources and Environment, Thailand, gave a lecture in the 4th ARRN International Forum on Waterfront and Watershed Restoration held in Nov. 2007 in Tokyo. After this event, "Department of Water Resources, Thailand" joined ARRN formally in April 2008.

JRRN English website was renewed in April 2008

JRRN, current ARRN secretariat, aims to establish a mechanism that enables people concerned with river and waterfront restoration to provide and exchange information of their common interests as one of local member of ARRN.

As a way of achieving this, we work on the enhancement of our website content. The website is designed to promote information circulation and links between people concerning the restoration of river and water environment and it is targeted at civic groups, administrators, private practitioners, researchers and so on. It covers an extensive range of information such as domestic and international river restoration projects, local activities, technical guidelines, news, etc. Please expect substantiality of the further information.



5th ARRN International Forum will be held in November in Beijing, China

The 5th ARRN International Forum will be held in Beijing during 3-5 November 2008 as a special session of the 4th APHW Conference. Detailed information will be appeared on ARRN website.

ARNN Information committee and Technical committee have been launched

ARNN Information committee and Technical committee were launched in July 2008 for activation of the further information circulation in ARRN members and the accumulation of the technical information.

<ARNN Information Committee members>

- China-RRN: Prof. Liao Wengen
- Korea-RRN: Dr. Hong Koo Yeo
- Japan-RRN: Dr. Kazumasa Ito

<ARNN Technical Committee members>

- China-RRN: Prof. Wang Hao
- Korea-RRN: Dr. Kyu Chang Oh
- Japan-RRN: Dr. Keigo Nakamura

Membership Benefits (How to become an ARRn member)

Joining the ARRn is Free!

To become member of ARRn, please contact to secre@arrn.net by email.

Membership Benefits

- Easy obtaining of domestic and foreign information on river restoration through website, email, and direct contact to ARRn secretariat or other ARRn members as following;
 - ✓ Latest news, topics, projects, experiences, lessons, case studies
 - ✓ International and domestic events such as seminar and workshops
 - ✓ Standard books, technical guidelines, video images, etc.
- Holding opportunity to introduce member's organization and their activities to other ARRn members
- A coordinated business with various foreign countries or organizations
- Holding management support such as international seminar, workshops and establishment of regional river restoration network by ARRn secretariat

Possible Tasks

- (1)Members will participate in ARRn with commitment to use their own resources and to work effectively in partnership with other members that are collaborating in the network. Members will support the objectives of ARRn described in the charter. (<http://www.a-rr.net/charter.html>)
- (2)Members can freely inspect the Web site, and moreover, useful information on river restoration in your organization and your region can be freely sent through the Web site for other members.
- (3)Members positively join for ARRn events such as international forum and the workshop by each ARRn sponsoring. Also, every member can hold original workshop by receiving the backup of ARRn or RRN.
- (4)Members cooperate positively when the specialist's technical advice is required or the advanced case investigation committee is sent to another region.
- (5)Members share the information sent by ARRn with related persons in your organization.

Member Registration URL: <http://www.a-rr.net/jp/en/arrn/member.html>



Asian River Restoration Network (Secretariat)

Technical Coordination & Cooperation Division
Foundation for Riverfront Improvement and Restoration (RFC)

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Japan River Restoration Network (JRRN) has a role of ARRn Secretariat. JRRN Secretariat is managed by Foundation for Riverfront Improvement and Restoration of JAPAN (RFC). <http://www.a-rr.net/jp/en/>