

## Report 2

# Introduction of Water Right System in Japan

Michitaro NAKAI  
NARBO Associate, Asian Development Bank Institute  
mnakai@adbi.org

The views expressed in this paper are the views of the authors and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Directors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

## Contents

1. Background
2. Legal Framework of Water Right System
  - 2.1 Basic water legislation
  - 2.2 Ownership of river water
  - 2.3 Character of water right
  - 2.4 Contents of water right
  - 2.5 Classification of water right
  - 2.6 Permitter for river water use
  - 2.7 Charges for use of river water
  - 2.8 Permitted period
  - 2.9 Transferability
  - 2.10 River Ledgers (Registration book)
3. Procedure
  - 3.1 Introduction
  - 3.2 Application
  - 3.3 Investigation
  - 3.4 Consultation
  - 3.5 Coordination among concerned river users
  - 3.6 Compensation
4. Criteria for water permission
  - 4.1 Introduction
  - 4.2 Purpose of planned water use
  - 4.3 Practicability of the applied water use
  - 4.4 Security of water intake
  - 4.5 Detriment of public benefit
5. Customary (Existing) Water Right
6. Water Uses Conciliation During Drought
7. Issues
  - 7.1 Introduction
  - 7.2 Issues on customary water rights
  - 7.3 Issues on transferability of water rights
8. Conclusion
9. Remarks

## **1. Background**

Japan is located in the East End of monsoon Asia region with area of about 378,000km<sup>2</sup>. The population is approximately 128 million. Japan had experienced large growth in population since the end of WWII. Recently, however, the rate of population increase has been gradually decreasing, and the population is expected to take a downward turn in near future.

The amount of total water resources (AWR) is about 420km<sup>3</sup>, and AWR per capita is about 3,300m<sup>3</sup>, which is smaller than global average (7,800m<sup>3</sup>). The specific amount of water uses is as follows (2002):

- Agricultural water: 56.6km<sup>3</sup>/year
- Water for water supply: 16.3km<sup>3</sup>/year
- Industrial water: 12.3km<sup>3</sup>/year

In Japan, agricultural water use occupies a large portion, which is same as other countries in monsoon Asia.

Eighty-seven percent of water use in Japan depends on river water, and the remaining 13 percent on ground water. Therefore, river water use occupies a more important part in Japan, and water right system for water use is implemented under the River Law. In Japan, main part of water use administration is to grant permission to person who intends to use river water from river administrator. Also, the purposes of water use administration are

- To ensure the beneficial use of river water
- To coordinate the multiple water uses in a river basin
- To maintain the order of water use

On the other hand, ground water abstraction is regulated by other legislations aimed for landslide prevention or saline contamination. However, no regulations of water right system for ground water is established. Therefore, ground water issues are out of subject in this paper.

In this paper, water right system in Japan is introduced. First, the outline of water right system in the River Law is explained. Next, the procedural flow and the criteria for permission for river water use are commented. Then, customary water right, which is granted to water users who had existed before the enactment of the River Law, is referred. After that, institutional framework of drought management in the River Law is mentioned. Finally, issues on water right system in Japan related to customary water right and transferability, are stated.

## **2. The outline of water right system**

### **2.1 Basic water legislation**

The River Law regulates the water right system, and this law itself was first established in 1896, but it was revised in 1964. Also, this law is the basic legal framework for river water utilization. In addition, there are some government ordinances with regard to water utilization.

## 2.2 Ownership of river water

Article 2 stipulates the principal of river administration and the ownership of rivers and river water. According to this article, river water is public property (of the people of Japan) and cannot be made the subject of a private right.

### Article 2

A river is public property and its conservation, utilization, and other forms of administration shall be properly performed so as to attain the purposes stated in the preceding article.

2 The water of river cannot be made the subject of private rights.

Therefore, Government implements management of rivers, and Government has the responsibility for allocating river water including grant for water permission.

## 2.3 Character of water right

In Japan, water right is defined, as “Right to use river water” under the River Law or other legislature does not provide the explicit definition of water right. The effects of water right are;

- Water right holders can use a definite amount of water exclusively in line with the purpose of use approved by river administrator, and
- Water right holders protected from other water use which prejudice their water rights.

Basically, in order to acquire the water right, we have to obtain the permission from river administrator. This is called “permitted water right”. However, as mentioned after, it is not necessary to obtain the permission with regard to customary water right. The contents of water rights are decided on the basis of:

- As to permitted water right, the conditions added by river administrator with the water permission, and
- As to customary water right, the customs approved by societies.

Water right is not a credit for river administrator to abstract a definite amount of water. Therefore, water right holders cannot claim their water abstraction to river administrator when they cannot abstract water because of drought. Also, water uses of water right holders are restricted by the conditions attached on the permission for river water use i.e. the purpose, the venue or the amount of water abstraction.

Article 23 provides the permission of river water use.

Article 23

Any person who intends to use the water of a river shall obtain the permission of the river administrator as may be provided for in detail by Ministry of Land, Infrastructure and Transportation (MLIT).

## **2.4 Contents of water right**

In general, contents of water right are as follows.

- Purpose of water use
- Venue of water intake
- The way of water intake
- The amount of water intake
- Drop regarding hydropower generation
- The amount of storage in a reservoir
- Permitted period

These contents of permitted water right are decided by the river administrator, and those of customary water right are decided by generally-accepted, traditional and local institutions. Therefore, the contents of customary water right have been often obscure.

## **2.5 Classification of water right**

### **2.5.1 From the viewpoint of purposes**

As mentioned later, the purpose of river water use has to be rational and it has to contribute to public welfare because river water is a limited resource. In Japan, as the purpose of river water use, the followings can be usually listed.

- Irrigation use
- Power generation use
- Domestic use
- Industrial use
- Other use (Use for fish culture, use for melting, clearing and clearing snow)

### **2.5.2 From the viewpoint of stability**

From the viewpoint of stability, we can list 3 types of water rights, “Stable water right”, “Affluent water right” and “provisional affluent water right”. As for 3 types of water rights, it is necessary to know the criteria for permission. Therefore, this matter will be explained in the chapter 4.4.3.

### 2.5.3 Permitted water right and customary water right

As mentioned above, there are two types of water rights, permitted water right and customary water right. The former is based on the permission of government; the latter is based on generally-accepted, traditional and local institutions.

### 2.6 Permitter for river water use

According to article 23, permitter for river water use is river administrator. Decision of river administrator depends on the classification of river: Class A River or Class B River. The definitions are as follows:

- Class A River  
A river designated by the Minister of MLIT, which belongs to such a water system especially important from the view of land conservation and/or national economy as is designated by Government Ordinance (Paragraph 1 of Article 4)
- Class B River  
A river designated by the prefectural governor concerned, which belongs to such a water system other than Class A river (Paragraph 1 of Article 5)

Basically, river administrator of Class A River is the Minister of Land, Infrastructure and Transport, and that of Class B River is concerned prefectural governor. Accordingly, with regard to Class A River, permitter of river water use is basically the Minister of MLIT. On the contrary, with regard to Class B River, permitter of river water use is concerned prefectural governor. The detail will be mentioned in [Attachment 1](#).

With regard to permitter of river water use, the principle “**One basin, One permitter**” is very important. In order to implement a consistent management of river water use, permissions for river water use of one river basin have to be granted from one permitter, and water uses in one river basin have to be grasped and managed in an integrated manner by one permitter.

### 2.7 Charges for the use of river water

Article 32 provides Charges for the use of river water. It is characteristic that prefectural governor collect water fee from water right holders who obtained water permission from MLIT.

#### Article 32

The prefectural governor may collect charges for use of river water, (snip), from the persons who have received the permission of Article 23, Article 24 or Article 25 with respect to the rivers located in the area of the prefecture concerned.

2 (snip)

3 The charges for use of river water etc. shall be made revenue of the prefecture concerned.

However, charges for most of the uses of river water in agriculture (including customary water use), which account for a considerable percentage of river water and river land uses are now exempted or reduced. In practice, a large proportion of the revenue for use of river water, etc. come from charges for use of the hydropower generation.

## 2.8 Permitted period

With regard to permitted water right, permitted period is as follows.

- Water use related to power generation: **30 years**
- Other water uses: **10 years.**

However, this permitted period doesn't mean that water right loses effect when the period expires. That is to say, river administrator has to grant the renewal of permission for river water use unless there are some special reasons for withdrawal of permission from the viewpoint of public interest.

On the other hand, the permitted period of customary water rights are not stipulated, so it is uncertain. In practice, customary water right is treated as a permanent right.

## 2.9 Transferability

In the River Law, article 34 provides the transfer of water rights.

### Article 34

No right based on the permission of Article 23, Article 24 or Article 25 shall be transferred without obtaining the approval of the river administrator.

In Japan, it is possible to transfer water rights. However, if we want to transfer water rights, we have to obtain the approval of the river administrator. It is not allowed to buy and sell water rights without government approval. In Japan, river water is regarded as public property, so it is natural that we can't buy and sell water rights freely. Also, when we transfer our water right, the purpose of water right can't be changed. That is to say, we can't transfer water rights to another whose purpose of water use is different from the former purpose according to Article 34. For example, it is not allowed to transfer from irrigation use to domestic use according to this provision.

In practice, there have been some examples which excessive water was transferred from a certain water sector to other sector (For example, from irrigation to water supply). However,

article 34 has not been applied to almost all such examples of transfer, and article 23 has been usually applied to. That is to say, if we want to transfer a water right to another whose purpose is different, a new grant for permission is needed in almost all cases. Accordingly, it is necessary to follow complex administrative procedures for obtaining new permission in order to receive water transfer. Therefore, **transfers of water rights are extremely restricted in Japan legally.**

## 2.10 River ledgers (Registration book)

River administrator has to grasp the river conditions including the status of river water use. Especially, with regard to river water use, river administrator can't appropriate granting of permission of water right. For that purpose, river ledgers are needed. Art 12 provides river ledgers.

### Article 12

A river administrator shall prepare a set of river ledgers he administers, and keep it in custody.

2 The set of river ledgers shall comprise a register of present river conditions and a register of water utilization.

3,4 (Snip)

## 3. Procedure

### 3.1 Introduction

Procedures for permission for river water use from application to permission consist of

- **Application** from applicants of water use
- **Investigation** for the application by river administrator
- **Consultation** with the concerned administrative organizations, the Prefectures and Municipalities
- **Coordination among concerned river users**
- **Compensation**
- **Issuance** of water permission

Also, procedural flow of permission for river water use is showed in **Attachment 2**.

### 3.2 Application

Applicants have to submit an application form for water permission. Also, MLIT Ordinance provides accompanying document with the application.

MLIT Ordinance Article 11 Paragraph 2

2 The application (snip) shall be accompanied by the following documents:

(1) Documents describing the following information:

(a) Outline of the plan for the project involving the water use

(b) Basis of calculation of water usage

(c) Calculation clarifying the relationship of discharge, the rate of intake corresponding to the applications and the rates of intake by the river users concerned

(d) Effects of the water use concerning the items listed below and measures to be taken in connection with those effects.

(i) Flood Control

(ii) Use of rivers by the river users concerned

(iii) Floating down of logs and bamboos or traffic of boats and rafts

(iv) Fishery

(v) Places of historic interests, scenic spots and natural monuments

(e) In the case where a dam defined in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law is constructed, outline of the present condition of the site of the planned reservoir and measures taken in connection with persons who suffer losses due to the impoundment of river water by the dam.

(2)~(7) (snip)

Applications for permission should be submitted to the branch office of MLIT or Prefecture Government which exercises the venue of water intake.

### 3.3 Investigation

River administrator investigates the application for water permission to decide whether water permission should be issued or not. The detail of the criteria for the investigation will be mentioned in the next chapter.

### 3.4 Consultation

#### 3.4.1 Consultation with the concerned administrative organization

Water use is closely connected with electric power services, industrial water supply services (both under the jurisdiction of the Ministry of Economy, Trade and Industry - METI), water supply services (Ministry of Health, Labor and Welfare - MHLW) and irrigation water services (Ministry of Agriculture, Forestry and Fisheries - MAFF). In implementing its projects involving water use, which is under the jurisdiction of more than one ministry, MLIT is placed under the supervision of the competent ministry. When taking actions such as granting permission for a

large-scale water use project, therefore, MLIT is required to consult with the head of the administrative organization responsible for the project.

For that purpose, Article 35 provides Consultation with the Concerned Administrative Organization.

Article 35

In the case where there is an application for approval as stipulated in Article 23, (snip), the Minister of Land, Infrastructure and Transportation must consult with the head of concerned administrative organizations (snip).

### 3.4.2 Consultation with the Prefectures and Municipalities

A river basin usually locates across multiple local authorities (prefectures or municipalities). In Japan, Class A rivers usually locate across multiple prefectures, and Class B rivers usually locate across multiple municipalities. On the other hand, new water uses may affect on other existing uses in a river basin. For example, it is probable that a new water use in a certain prefecture gives a bad effect on other existing water uses in other prefectures. Therefore, in order to grant water rights for new water users, it is necessary for permitter to consult with concerned prefectures or municipalities.

For that purpose, Article 36 provides consultation with the Prefectures and Municipalities.

Article 36

While dealing with an application for approval as stipulated in Article 23, (snip), the Minister of Land, Infrastructure and Transportation must consult with the concerned prefectural governor (snip).

2 When giving approval under Article 23 (snip) for water use regarding class B rivers stipulated in Governance Ordinances, prefectural governors must first consult with heads of concerned municipalities.

### 3.5 Coordination among concerned river users

Decisions as to the granting new water right has to be made after giving consideration to protection of existing river users and to ensuring effective and appropriate use of river. Therefore, when granting new permission, it is necessary to make coordination between existing river users, who have been using rivers over the years, and persons who are applying for permission for river water use.

“The concerned river users” include the followings in the river basin.

- Permittee for river water use (Article 23)

- Permittee for land occupancy (Article 24)
- Permittee for taking earth, stone, etc. (Article 25)
- Permittee for construction of structures (Article 26)
- Permittee for land excavation (Article 27)
- Permittee for floating down trees/bamboo and navigation of boat/ships (Article 28)
- Permittee for Act likely to hinder river administration (Article 29)
- Holder of fishery right or common of piscary

#### Article 38

In the case where there is an application for approval as stipulated in Article 23 (snip) with regard to water use, the river administrator must, in accordance with the provisions in MLIT Ordinances, give notification to persons who have obtained approval under the provisions of Article 23 through to Article 29 and persons who hold rights with regard to the rivers as stipulated in Government Ordinances (hereinafter referred to as concerned river user) of the name of the applicant, the purpose of water use and other items stipulated in MLIT Ordinances, except in the case where the application is to be rejected. (Snip)

Article 39 provides the submission of opinion by concerned river users.

#### Article 39

When a concerned river user has received the notification of the Article 38, he may submit to the river administrator his opinion concerning the water utilization by making clear the loss he would incur owing to the water utilization, as may be provided for in detail by MLIT Ordinance.

If concerned river users submit opinions according to Article 39, additional criteria have to be required with regard to the permission for water use. Article 40 provides these additional criteria. In the River Law, permission for new water uses requires the consent of existing river users concerned. This provision stipulates that permission for new water uses may be granted under certain circumstances.

#### Article 40

In the case where a river administrator seeks to grant permission as stipulated in Article 23 (snip) and in the event that concerned river users who will suffer loss as a result of the water use related to the said permission lodge an objection as stipulated in the Article 39, the river administrator must not grant permission unless one of the following items is applicable, except in the case where all concerned river users assent to the said water use.

(1) When the public benefit from the undertaking related to the said water use is significantly greater than the benefit from the undertaking related to the river use by the concerned river users.

(2) When it is judged that there will be no hindrance to the undertaking related to the river use by the concerned river users if the necessary facilities to prevent loss are established.

2 In the case where a river administrator judges that Item (1) of the preceding paragraphs is applicable and seeks to grant permission as stipulated in article 23 (snip), the Minister of Land, Infrastructure and Transportation must first consult with the River Council.

### **3.6 Compensation**

Article 41 provides compensation for loss related to water use.

#### **Article 41**

In the event that a person suffers loss as a result of permission as a stipulated in Article 23 (snip) with regard to water use, the person who received the said permission for water use must pay compensation for the loss.

## **4. Criteria for Water Permission**

### **4.1 Introduction**

Decisions as to the granting of permission for water use must be made after giving considerations to various factors including the followings:

- (1) Purpose of planned water use
- (2) Practicability of the planned water use
- (3) Security of water intake
- (4) Detriment to public benefit

### **4.2 Purpose of planned water use**

In this criterion, it is investigated whether the purpose of planned water use is rational and it contributes to public welfare or not. They need to contribute to development of national economy, advancement of life of the people and enhancement of common welfare.

### **4.3 Practicability of the applied water use**

In this criterion, the followings are investigated.

- Appropriateness of project plans related to the water use
- Capacity for the implementation of the project plans
- Estimation of the amount of necessary water intake
- Coordination between planned water use and other water use or fishery

The way to estimate the amount of water intake will be indicated in **Attachment 3**.

#### 4.4 Security of water intake

##### 4.4.1 Condition

In this criterion, it is investigated whether or not the planned quantity of river water can be withdrawn in a stable manner in view of the river regime. Here, it is necessary to fulfill the condition below.

**Condition:**

**[The amount of planned water use]  $\leq$  [The amount of standard drought water discharge] – [The amount of normal discharge]**

In the following, the meanings of “Standard Drought Water Discharge” and “Normal Discharge” will be explained.

##### **What is Standard Drought Water Discharge?**

“Drought Water Discharge” is **the 11<sup>th</sup> smallest amount of discharge** in a certain year. In other words, this is the amount of discharge which is sure to flow for **355 days** in a year. Therefore, “Drought Water Discharge” is called “355-day discharge” in Japan. Also, “Standard Drought Water Discharge” is **the least “Drought Discharge” during the recent 10 years**. A year in which “Standard Drought Water Discharge” is gauged is called “Standard Drought Year” in Japan.

##### **What is Normal Discharge?**

In order “**to utilize rivers properly and to maintain the normal functions of the river water** (quoted from Article 1, the River Law)”, a necessary amount of discharge in river has to be ensured. Here,

- “Discharge in order to utilize rivers properly” is the sum of the amount of other users’ water intake including **customary water use**. In Japan, this is called “**Discharge for vested water rights**”
- “Discharge in order to maintain the normal functions of the river water” is so-called environmental flow. The purpose of this discharge is transportation, fishery, tourism, preservation of cleanliness of water, prevention of salt damage, prevention of occlusion of estuary, protection of river administration facility, maintenance of ground water level, scenery, the situation of inhabitation/habitats of animals and plants etc. In Japan, this is called “**Discharge for maintenance**”.

Also, the sum of 2 kind of discharge “**Discharge for vested water rights**” and “**Discharge for maintenance**” is called “**Normal Discharge**” in Japan.

#### **4.4.2 Permission for river water use and water resources development**

Permission for river water use is granted on the condition that “the amount of planned water use” is smaller than the remainder of subtracting “the amount of normal discharge (the sum of existed water use and environmental flow)” from “the amount of standard drought water discharge (355-days discharge)”. This condition was provided on the basis of our experiences in order to preserve the order of river water uses and to conserve the river environment.

However, at the point of enactment of the River Law (1896), there had been usually so many existed irrigation water uses in main rivers in Japan. As a result, it was usual that there was so little room in “the standard drought water discharge” that new water rights couldn’t be granted in Japan. In that case, we have to take measures to increase “the amount of standard drought water discharge (355-days discharge)” artificially in order to obtain new water rights. Therefore, water users who want to obtain new water rights often had to participate in dam projects with beneficiary payments. As a result, water resources have been developed with dam construction significantly in Japan.

#### **4.4.3 “Stable Water right”, “Affluent Water Right” and “Provisional Affluent Water right”**

##### **Stable water right**

Basically, water rights are granted under the condition mentioned in the chapter 4.4.1. Such water rights are called “Stable Water Right” because it is expected that water right holders can continue to intake water stably from river.

##### **Affluent water right**

Affluent water right is a right to intake river water as long as river discharge exceeds a definite amount. Therefore, affluent water right holder cannot always intake water from river especially in a severe drought year. This affluent water right is regarded as exceptional right because basically water right should be a right to make a continuous water use. River administrator may grant this affluent water right to water user for hydropower generation.

##### **Provisional affluent water right**

We cannot always advance dam projects within the planned period because of technical issues or the issues on land acquisition. Even if water users participate in dam projects to obtain new water rights, they cannot implement stable water intake unless the dam projects finished. However, urgent water demand may come into being during the extended period of dam construction. Under such conditions, there are cases which river administrator grants water right though the dam projects have not finished yet. In this case, stricter conditions are attached to this water right compared with stable water right. That is to say, this water right loses effect when the permitted period expires and water right holder can intake water as long

as there is affluent discharge in the river. Such water right is called “Provisional affluent water right”. This water right is also regarded as an exceptional right.

With regard to the matter in this chapter, please see [the table 1](#).

#### **4.5 Detriment to public benefit**

In this criterion, it is investigated whether or not the use of water must not compromise flood control or be injurious to the public benefit in any other respect.

### **5. Customary (Existing) Water Right**

The River Law was established in 1896, but in Japan, irrigated agriculture had been implemented since ancient times, so a lot of water abstractions of irrigation water existed at the time of 1896. In general, “Right “ is effected not only by explicit legislations, but also by customs which have lasted for a long time and have been approved socially. Therefore, if existing water use had lasted for a long time and had been approved socially, this water use can be regarded as “Right”.

“Customary water use” is defined as “The river water use which had been existing at the time of 1896, when the old River Law was enacted”. It is deemed that a person who was already using river water in 1896 obtained permission without application of water permission. Also, the water right on the basis of the deemed permission is called “ Customary Water Right”. Also, in order to obtain this deemed permission, it is necessary to notify the river administrator of the necessary matters as may be provided for in detail by Government Ordinance. The necessary matters are

- (1) Name of the river concerned with use of river water;
- (2) Name and address of the person who is using river water:
- (3) Purpose of the use of river water:
- (4) Quantity of water being used:
- (5) Conditions for the use of river water:
- (6) Location of intake or outlet and other place of use of river water:
- (7) Facilities for use of river water, and:
- (8) Brief description of the project involving the use of river water and other relevant information

Customary water right was established as a social convention right and was approved on the basis of traditional and local institutions. Also, almost all of water use customary water rights are irrigation water in Japan.

### **6. Water Uses Conciliation During Droughts**

As mentioned earlier, water right holders cannot claim their water abstraction to river administrator when they cannot abstract water because of a drought. On the other hand, multiple water users usually abstract water from a sole water resource. Therefore, conciliation among such water users is needed when a severe drought happens.

Article 53 provides water uses conciliation during droughts.

Article 53

In case an unusual drought makes it difficult to adequately use the river water for the permitted utilization purposes or when such a situation is expected, the persons who have obtained permissions to use water (hereinafter, permitted water users in this subsection) shall make effort to consult with one another. In this case, river administrators shall exert himself/herself to provide necessary information for water use conciliation to achieve a smooth consultation.

2 In making consultation according to the preceding paragraph, permitted water users shall respect the uses of the others.

3 In case no agreement is reached in consultation according to Paragraph 1, the river administrator may, when it is requested by permitted water users or when he deems it would seriously harm the public benefit unless an urgent coordination of the uses of waters is effected, he may make necessary intermediation or arbitration with respect to the coordination among the water uses.

The River Law stipulates that in the event of a drought, which is usually not so urgent as a flood, the river users concerned first try voluntarily to adjust their water uses. On the other hand, the law seeks to make river administrators to be essentially involved in water use adjustment from the early stages of a drought by requiring river administrators to provide necessary information.

Furthermore, MLIT has been working to establish a "Drought Conciliation Council" composed of the river administrator, water users, local government, and administrative agencies concerned for the each river as a forum for mutual consultation among the water users concerned. As of the end of June 1996, a total of 86 Drought Conciliation Councils have been established for class A river areas. It is a good example of participation among stakeholders in a river basin in Japan.

In addition, Article 53-2 provides "Exceptional Arrangements for Water Utilization During Droughts".

Article 53-2

Permitted water users may, after obtaining the approval of the river administrator, let other permitted water users whose water use has been made difficult by an unusual drought,

for the duration of the said unusual drought, use all or part of the water that the water user himself has been permitted to use under Article 23 or Article 24.  
(Paragraph 2 and 3 are abbreviated.)

Uses of river water can affect the quality and quantity of river water available to the areas downstream, so the quantity of water, the purpose of use and the point of diversion are strictly stipulated as conditions for granting water rights, and it is not easy to alter those conditions. However, it is necessary to provide water in a water shortage area in the severe drought term. This article gives flexibility to water use adjustment at times of drought by stipulating that in the event of an unusual drought the point of diversion may be temporarily changed, after obtaining the approval of the river administrator, without altering the conditions for granting the water rights concerned.

## 7. Some discussion about water right system

Recently, serious conflicts over water uses have not often happened. Therefore, it is said that water right system has been well-functioned in Japan. On the contrary, some discussions about water right system have made in Japan. In this chapter, 2 kinds of discussions are introduced.

First, discussions about customary water right are pointed out. As mentioned before, the contents of customary water right including the amount of water intake are often uncertain. In addition, most of customary water rights are not monitored, and there is enough data regarding customary water right. Some people indicate that those may be disincentive for effective river water use.

Second, discussions about transferability of water right are pointed out. As mentioned before, water right transfer is quite restricted in Japan. Some people indicate that this restriction has been too tight to transfer excessive water especially from irrigation sector to other water deficit sectors and effective water use has been inhibited as a result. Therefore, an alleviation of the water transfer restriction has been sometimes argued.

Some of main backgrounds of such discussions are that

- **It has been difficult to construct water infrastructures** including dams to develop water resources because suitable sites of dams have decreased and opposition against dam construction has often arisen from the environmental views.
- On the contrary, the agricultural population and the areas of agricultural land tend to decrease these several decades.

That is to say, it is our challenge that we have to allocate water resources appropriately without constructing water infrastructures. For that purpose, it will be necessary to manage water resources more efficiently. Therefore, such discussions have been made from the viewpoint of efficient use of water resources.

## **8. Conclusion**

The advantages of water right system in Japan are as follows.

- Water right system itself are provided in the River Law explicitly.
- “One basin, One permitter” principle is applied.
- Procedures and criteria for permission are provided in legislations explicitly.
- Criteria for permission are designed to conserve the river environment and other river users’ interest.
- Stakeholders’ interests are considered in granting permission with consulting other concerned administrative organizations, prefectures, municipalities and other concerned river users.
- Existing water uses (customary water right) have been protected.
- Drought conciliation is institutionalized in the River Law
- River administrator grasps the status of river basins through the river lodgers.
- Data and information of rivers are adequate to implement river management including permission for water use.

In practice, water conflicts have decreased, so an orderly water right system has been maintained in Japan. That owes to the advantages of water right system as mentioned above.

On the other hand, we have recognized issues related to customary right and transferability of water right in our system. They will be a challenge for the future.

## **9. Remarks**

The views expressed in this paper don’t reflect the official views of any government organization including the Ministry of Land, Infrastructure and Transport (MLIT), or Japan Water Agency (JWA).

## References

The Infrastructure Development Institute-Japan, (supervised by Ministry of land, Infrastructure and Transport) The River Law with commentary by article

Masahiko, Murase. National Institute for Land and Infrastructure Management, Ministry of Land, Infrastructure and Transport. A review of Water Right in Japan (2003), NILIM SPECIAL SESSION IN THE FIRST INTERNATIONAL CONFERENCE ON HYDROLOGY LAND AND WATER RESOURCES IN ASIA PACIFIC REGION (APHW 2003)