

About the New Basic Plan on Water Cycle

The secretariat of the Headquarters for Water Cycle
Policy of the Cabinet Secretariat
June 2020



Water Cycle logo

Basic Plan on Water Cycle

- ❑ A basic plan on the water cycle, established by the Japanese government pursuant to the Basic Act on the Water Cycle.
- ❑ As of July 2020, five years have passed since the previous Basic Plan on Water Cycle was decided on by the Cabinet in July 2015.
- ❑ The Basic Act on the Water Cycle calls for the Basic Plan on Water Cycle to be reviewed and, as necessary, modified roughly every five years.

Basic Act on the Water Cycle (excerpts) [Enacted July 1, 2014]

Article 13: The government must formulate a basic plan on the water cycle (“Basic Plan on Water Cycle” hereinafter) to promote measures related to the water cycle in a comprehensive and systematic manner.

Article 13. 5: The government shall review and, as necessary, revise the Basic Plan on Water Cycle roughly every five years, based on consideration of changes in conditions related to the water cycle and assessment of the results of measures related to the water cycle.

Basic Act on the Water Cycle

(Promulgated April 2, 2014; enacted July 1, 2014)

Basic Plan on the Water Cycle (July 2015 Headquarters*/Cabinet decision)

- Assessment (review) of the results of water cycle measures
- Multifaceted collection of opinions from experts, local public agencies, etc.
- Public comment on the (draft) new Basic Plan on Water Cycle

New Basic Plan on Water Cycle

(July 2020 Headquarters*/Cabinet decision)

Reviewed roughly every five years

* Headquarters for Water-Cycle Policy Directed by the Prime Minister, with the Chief Cabinet Secretary and the Minister Responsible for Water-Cycle Policy serving as Deputy Directors and all other ministers of state aside from the Director and the Deputy Directors serving as the members of the headquarters

Basic thinking on review of the Basic Plan on Water Cycle

A new water strategy for the Reiwa* Period *the current Japanese era name

- **Nationwide deployment and quality improvement of river basin management** to promote maintenance and recovery of a sound water cycle, by formulating river basin water cycle plans through cooperation and coordination among various actors in river basins
- **Accelerating measures toward realization of a safe and secure society** capable of responding to risks such as those of climate change, in response to factors such as the increasing risks of water-related disasters, which could become **more frequent and severe due to the impacts of climate change and other factors**
- **Passing along a sound water cycle to future generations** through strategic efforts in the areas of raising awareness, publicity, education, and human-resources development, through **an industry-academy-government-resident alliance**.
- **Japan taking a leading role in solutions to global water-related challenges**, by utilizing its experiences, lessons, and outstanding technologies and expertise in the water field

Three main priorities of the new Basic Plan on Water Cycle

i. Water-cycle innovation through river basin management — Further deployment of river basin management and improvements in its quality —

ii. Realization of a safe and secure society through sound water cycle initiatives — Responding to risks of climate change, large-scale natural disasters, etc. —

iii. Passing on an abundant society to future generations through a sound water cycle — Awareness raising, publicity, education, and international contributions regarding a sound water cycle —

Introduction

- 1 Our relationship to the water cycle
- 2 Positioning of this Plan and its subject period
- 3 Ideal vision of the water cycle
- 4 Current conditions of the water cycle and related topics
- 5 Main details of priority initiatives under this Plan
 - (1) **Water-cycle innovation through river basin management**
— Further deployment of river basin management and improvements in its quality —
 - (2) **Realization of a safe and secure society through sound water cycle initiatives**
— Responding to risks of climate change, large-scale natural disasters, etc. —
 - (3) **Passing on an abundant society to future generations through a sound water cycle**
— Awareness raising, publicity, education, and international contributions regarding a sound water cycle —
- 6 Structure of this Plan

- 2 Maintenance and improvement of storage and recharge functions
 - (1) Forests and woods
 - (2) Rivers etc.
 - (3) Farmland
 - (4) Urban areas
- 3 Promoting appropriate and effective water use etc.
 - (1) Securing stable water supplies and drainage etc.
 - (2) Responding to disasters
 - (3) Securing and promoting use of groundwater sustainably
 - (4) Strategic maintenance, management, and updating of water infrastructure
 - (5) Efficient and effective use of water
 - (6) Water environment
 - (7) Water cycle and ecosystems
 - (8) Waterside spaces preservation, rehabilitation, and creation
 - (9) Passing along, rehabilitation, and creation of water culture
 - (10) Responding to global warming

4 Promoting education concerning a sound water cycle etc.

- (1) Promoting education on the water cycle
 - (2) Promoting awareness raising activities related to water cycle
- 5 Measures to promote autonomous activities by private organizations and others
 - 6 Conducting research necessary to formulate and implement water cycle policies
 - (1) Survey of current conditions of river basin water cycle
 - (2) Survey of the impacts of climate change on the water cycle and adaptation thereto
 - 7 Promotion of science and technology
 - 8 Securing continued international collaboration and promoting international cooperation
 - (1) International collaboration
 - (2) International cooperation
 - (3) Overseas deployment of water businesses
 - 9 Water-cycle-related human-resources development
 - (1) Human-resource development and international interpersonal exchange through industry-academy-government-resident alliances

Part 3. What is needed to promote water-cycle-related measures comprehensively and systematically

- 1 Effective implementation of water-cycle-related measures
- 2 Duties of related parties and mutual collaboration and cooperation
- 3 Publication of measures implemented in connection with the water cycle

Part 1. Basic policies on measures related to the water cycle

- 1 Comprehensive and integrated river basin management
- 2 Proactively promoting initiatives to maintain or recover a sound water cycle
- 3 Ensuring proper use of water and enjoyment of its benefits
- 4 Maintaining a sound water cycle in use of water
- 5 Promoting water-cycle-related initiatives through international cooperation

Part 2. Water-cycle-related measures to be taken comprehensively and systematically by the Japanese government

- 1 Promoting cooperation across river basins etc. — Framework of comprehensive and integrated river basin management —
 - (1) Scope of river basin
 - (2) Thinking on comprehensive and integrated river basin management
 - (3) Establishment of a river basin water cycle council and formulation of a river basin water cycle plan
 - (4) Content of the river basin water cycle plan
 - (5) Formulation process and evaluation of the river basin water cycle plan
 - (6) Formulation/promotion measures of the river basin water cycle plan



1. Water-cycle innovation through river basin management

— Further deployment of river basin management and improvements in its quality —

[Current state]

- Through now, efforts have focused on promotion of river basin management, with 44 river basin water cycle plans announced nationwide.
- From now on, it will be necessary to further improve the quality of river basin management in order to maintain and recover a sound water cycle, together with broadening the base of planning organizations.

[Subject fields in the new Basic Plan]

- Promoting cooperation across river basins etc.
- Measures to promote autonomous activities by private organizations and others
- Conducting research necessary to formulate and implement water cycle policies
- Promotion of science and technology

[Examples of initiatives in the new plan]

- Further deployment** Supporting river basin planning and promotion nationwide through measures such as dispatch of water cycle advisors and collecting together compilations of case studies on related expertise (e.g., a compilation of cooperation structures among diverse actors and a compilation of measures to secure funding for related activities), to serve as keys for successful river basin management
- Quality improvements** Making the actual conditions of the water cycle and the results of measures conducted through river basin management visible, through means such as establishing simple methods for assessing the soundness of the water cycle and developing technologies for analysis of the water cycle, including groundwater

Published in FY2016	Published in FY2017	Published in FY2018	Published in FY2019																																																																																																
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44 plans in total (As of January 2020)

企業等 地下水保全への参画・貢献
行政(県・11市町村) 地下水保全の計画・調整
各種団体・住民 地下水保全への参画・貢献
大学・研究機関 地下水保全の研究・調査
民間機関 くまもと地下水会議

協働の地下水保全の推進・取組の実践

くまもとの地下水を次世代につなぐ

熊本地域の地下水を次世代につなぐ。農林・企業・大学・行政などさまざまな主体の連携・協働で取り組んでいる。

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2004年に開始された「白川中流域地下水保全」と呼ばれる地下水保全事業は、熊本市での企業、市民、行政、住民の協働によるものであり、関係市町村の行政、土地改良、JA、農業関係の連携、調整を行い、農業事業を推進しています。

地下水保全の推進は、農林・企業・大学・行政などさまざまな主体の連携・協働で取り組んでいる。

熊本県11市町村は、地下水を共有し、生活用水はほぼ100%を地下水でまかなっており、工業、農業などの産業用水としても地下水を利用するなど、清れた豊富な地下水の恵みを受けてきました。しかし、地下水の低下、湧き水の減少、地表水質の悪化、将来的な持続可能な地下水利用への不安が広がっています。

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River basin water cycle plans formulated through now (44 plans in total)

(Data) Secretariat of the Headquarters for Water-Cycle Policy, Cabinet Secretariat

Overview of preparation of case studies on expertise (compilation of cooperation structures among diverse actors)

(Data) Secretariat of the Headquarters for Water-Cycle Policy, Cabinet Secretariat

2. Realization of a safe and secure society through sound water cycle initiatives

— Responding to risks of climate change, large-scale natural disasters, etc.—

[Current state]

- There are concerns about risks such as those of water disasters and droughts due to global warming and other effects of climate change.
- To build resilient infrastructure, communities, and economies resistant to disaster, it is necessary to prevent and minimize damage to people and property, and to key water infrastructure, even in the event of a large-scale natural disaster.

[Subject fields in the new Basic Plan]

2. Maintenance and improvement of storage and recharge functions

- 3.(1).a. Responding to critical droughts
- 3.(2) Responding to disasters
- 3.(3) Securing and promoting use of groundwater sustainably
- 3.(4) Strategic maintenance, management, and updating of water infrastructure
- 3.(5) Efficient and effective use of water
- 3.(10) Responding to global warming

[Examples of initiatives in the new plan]

- **Responding to large-scale natural disasters** To prevent and minimize damage due to large-scale water disasters, earthquakes, and other natural disasters, measures will be implemented to prevent and mitigate disasters affecting key water infrastructure (e.g., rivers, waterworks/sewer systems, and irrigation facilities) and to strengthen national resilience, in terms of both tangibles and intangibles together.
- **Responding to critical droughts** In anticipation of critical droughts due to climate change, in addition to research on drought risk assessment, drought adaptation measures will be promoted, such as securing of stable water supplies based on risk management and preparation of drought timelines.
- **Strategic maintenance, management, and updating of water infrastructure** Strategic maintenance, management, and updating will be promoted for aged water infrastructures, to extend their lifespan and update and seismic retrofit infrastructure appropriately.
- **Maintenance, improvement, etc. of water storage and recharge functions** Together with promoting comprehensive initiatives such as green-infrastructure improvements in areas including forests, rivers, farmland, and urban areas, measures will be promoted to preserve and use groundwater sustainably.



Damage by Typhoon Hagibis in east Japan, 2019 (Chikuma River)

(Data) Ministry of Land, Infrastructure, Transport and Tourism



Lifespan extension through renovation (sewer system)

(Data) Tokyo Metropolitan Government



Flooded rice fields (Ono, Fukui Prefecture)

(Data) Ono City

3. Passing on an abundant society to future generations through a sound water cycle

— Awareness raising, publicity, education, and international contributions regarding a sound water cycle —

[Current state]

- To pass along a sound water cycle to future generations, it is necessary to foster awareness concerning water, through creating opportunities for hands-on learning about water.
- In addition, to deploy internationally Japan's outstanding experience, knowledge, and technologies related to the water cycle, global contributions must be made through international cooperation as well as promoting cooperation with various governments, international agencies, and other partners.

[Examples of initiatives in the new plan]

- **Awareness raising, publicity, education** Supporting awareness raising, publicity, education, and human-resources development related to a sound water cycle, and fostering water awareness among the public, from young to old, through raising awareness of Water Day (August 1) and communicating information on water-cycle initiatives, through public-private partnership.
- **International contributions** Through international communication and application of Japan's experiences, knowledge, and technologies via international conferences such as the Asia-Pacific Water Summit and infrastructure development overseas, Japan will take leadership on solutions to global water challenges and achievement of the Sustainable Development Goals (SDGs).

[Subject fields in the new Basic Plan]

- | | |
|--|---|
| 3.(6) Water environment | 4. Promoting education concerning a sound water cycle etc. |
| 3.(7) Water cycle and ecosystems | 8. Securing continued international collaboration and promoting international cooperation |
| 3.(8) Waterside spaces preservation, rehabilitation, and creation | 9. Water-cycle-related human-resources development |
| 3.(9) Passing along, rehabilitation, and creation of water culture | |



2019 Water Day poster

Data) Secretariat of the Headquarters for Water-Cycle Policy, Cabinet Secretariat



Water-tasting event (Gunma Water Fair)

Data) Gunma Prefecture



High-level Experts and Leaders Panel on Water and Disasters (HELP)

Data) Ministry of Land, Infrastructure, Transport and Tourism

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- 5 Main details of priority initiatives under this Plan

(1) Water-cycle innovation through river basin management

— Further deployment of river basin management and improvements in its quality —

- Further deployment: Supporting the formulation of river basin water cycle plans nationwide
- Quality improvements: Making the soundness of the water cycle and the results of river basin management measures visible

(2) Realization of a safe and secure society through sound water cycle initiatives

— Responding to risks of climate change, large-scale natural disasters, etc. —

- Responding to large-scale natural disasters: Enhancing disaster prevention/mitigation and national resilience measures
- Responding to critical droughts: Promoting adaptation measures for critical droughts due to climate change
- Strategic maintenance, management, and updating of water infrastructure
- Maintaining and improving storage and recharge functions, and sustainable preservation and use of groundwater

(3) Passing on an abundant society to future generations through a sound water cycle

— Awareness raising, publicity, education, and international contributions regarding a sound water cycle —

- Awareness raising, publicity, education: Fostering an understanding and awareness of the water cycle among members of the public of all generations
- International contributions: Japan taking leadership on contributing to solutions to global water challenges and achievement of the Sustainable Development Goals (SDGs).

6 Structure of this Plan

Part 1. Basic policies on measures related to the water cycle

(Related to Article 13, Paragraph 2, Subparagraph 1 of the Basic Act on the Water Cycle ["Act" hereinafter])

1. Comprehensive and integrated river basin management (Related to Article 3, Paragraph 4 of the Act)
2. Proactively promoting initiatives to maintain or recover a sound water cycle (Related to Article 3, Paragraph 1 of the Act)
3. Ensuring proper use of water and enjoyment of its benefits (Related to Article 3, Paragraph 2 of the Act)
4. Maintaining a sound water cycle in use of water (Related to Article 3, Paragraph 3 of the Act)
5. Promoting water-cycle-related initiatives through international cooperation (Related to Article 3, Paragraph 4 of the Act)

Part 2. Water-cycle-related measures to be taken comprehensively and systematically by the Japanese government

(Related to Article 13, Paragraph 2, Subparagraph 2 of the Act)

[Nine Fields Targeted by Measures]

Promoting cooperation across river basins etc. / Maintenance and improvement of storage and recharge functions / Promoting appropriate and effective water use etc. / Promoting education concerning a sound water cycle etc. / Measures to promote autonomous activities by private organizations and others / Conducting research necessary to formulate and implement water cycle policies / Promotion of science and technology / Securing continued international collaboration and promoting international cooperation / Water-cycle-related human-resources development

1 Promoting cooperation across river basins etc.

(Related to Article 16 of the Act)

— Framework of comprehensive and integrated river basin management —

- As comprehensive and integrated river basin management, implementing **river basin management** in which various related actors in the river basin act in collaboration to maintain or improve sound and good conditions with regard to people's livelihoods, water volume, water quality, and natural environment engaged with water, in forests and woods, rivers, farmland, urban areas, lakes and marshes, coastal areas, etc.
- **The river basin water cycle council** shares various types of information concerning the water cycle and formulates **river basin water cycle plans**.
- The national government provides support through means including preparation and updating of **guides** and **compiled case studies**; enhancement of **support liaisons**; establishment of **evaluation indicators and methods** to make visible matters such as the soundness of the water cycle and the results of river-basin management methods; holding **training and seminars**; providing support as necessary in areas such as **raising awareness** and **publicity activities**; and dispatching water cycle advisors

etc.

2 Maintenance and improvement of storage and recharge functions

(Related to Article 14 of the Act)

- Promoting throughout the river basin initiatives to maintain and improve storage and recharge functions, such as **green infrastructure improvement**
- Promoting planned and systematic **forest improvement and preservation** initiatives based on the Forest Planning System
- Promoting **comprehensive river improvement measures** to respond to increasingly frequent and severe water disasters in recent years in addition to expanding flows of water to rivers during floods
- Promoting measures to **secure farmland** and **appropriate management and improvement of drainage canal networks for agriculture**
- Promoting **preserving and creating green areas etc.**, and **greening of private and public facilities**, with the participation of diverse actors

6

etc.



3. Promoting appropriate and effective water use etc. (Related to Article 15 of the Act)

- Promoting **comprehensive water quality** management including risk assessment, management, etc. from water sources through taps
- Preparing **drought timelines** through cooperation among related parties, to promote initiatives to address critical droughts
- Further promotion of **disaster prevention and mitigation measures through appropriate combination of tangibles and intangibles** to realize national resilience
- Considering initiatives through cooperation among not only national and local public agencies but also enterprises and residents, in areas such as conversion to **river improvement plans that take into account the impacts of climate change** and promotion of **disaster prevention and mitigation measures focusing on the entire river basin**
- Promoting improvements to the **seismic and waterproof performance of water infrastructure**, installation of private power generation equipment, etc.
- Promotion by the national government of **development of a shared groundwater database**; ascertaining of groundwater intake and output, behavior related to groundwater volume and quality, and ground deformation; development of related survey and analysis technologies; etc.
- Implementation by national and local public agencies and others of **strategic maintenance, management, and updating (countermeasures against aging) of facilities**
- Promoting use of **rainwater** and systematic utilization of **recycled water**
- Enhancement of **water quality preservation measures for lakes and marshes, closed coastal seas, etc.**
- Preservation and recovery of water-cycle-related **ecosystem**
- Preservation, rehabilitation, and creation of **waterside spaces** in urban and rural areas and along rivers
- Transmission, rehabilitation, and creation of **water culture** in water source areas etc.
- Promoting **adaptation and mitigation measures** for the impacts of **climate change** on the water cycle etc.

4 Promoting education concerning a sound water cycle etc. (Related to Article 17 of the Act)

- Preparing and updating **teaching materials** and **supplementary teaching materials** concerning the water cycle, as educational tools
- Promoting projects suited to the aims of **Water Day (August 1)** and **Water Week (August 1-7)**, so that citizens of all ages can more deeply understand and take an interest in the importance of a sound water cycle
- Communicating information through means such as **multilingual** informational activities and **international conferences**, to raise awareness broadly around the world etc.

5 Measures to promote autonomous activities by private organizations and others (Related to Article 18 of the Act)

- Promoting activities to carry out continual advancement of **water reservoir areas**
- Communicating information in the **green-infrastructure public-private partnership platform** etc.

6 Conducting research necessary to formulate and implement water cycle policies (Related to Article 19 of the Act)

- Continual collection and organization of **information concerning groundwater**, including groundwater basin structures, actual conditions of use of groundwater, groundwater levels, groundwater quality, groundwater temperatures, and other matters, by national and prefecture governments (and municipal governments as necessary)
- Surveying and analyzing the **impacts of climate change on the water cycle** etc.

7 Promotion of science and technology (Related to Article 20 of the Act)

- Promoting research concerning the **evaluation methods** of the water cycle **soundness**
- Implementing research and development on **"emergency groundwater use systems"**
- Promoting efforts in areas such as development of a **global environmental information platform**, advancement of **technologies for forecasting climate change**, and **organizing of data** for assessing future impacts on water resources etc.

8 Securing continued international collaboration and promoting international cooperation (Related to Article 21 of the Act)

- Through **international collaboration** and **international cooperation** in international conferences and other opportunities, putting to use Japan's experiences and knowledge to contribute to **solutions to global water challenges** and **achievement of the Sustainable Development Goals (SDGs)**
- Promoting **overseas deployment** of Japan's outstanding state-of-the-art water technologies and related systems etc., through **public-private partnership** etc.

9 Water-cycle-related human-resources development

- Promoting the **securing and development of specialized and general human resources** through training, seminars, etc. etc.

Part 3. What is needed to promote water-cycle-related measures comprehensively and systematically (Related to Article 13, Paragraph 2, Subparagraph 3 of the Act)

- 1 Effective implementation of water-cycle-related measures
- 2 Duties of related parties and mutual collaboration and cooperation
- 3 Publication of measures implemented in connection with the water cycle

- Water cycle: The cycle of water through the process of evaporation, precipitation, flowing, or filtration until reaching the sea or elsewhere, centered on water in river basins in the forms of surface water or ground water
- A sound water cycle: A water cycle in which the functions of water, in human activities and environmental preservation, are maintained appropriately

The form of a sound water cycle

