

Global Process on Water and Disasters

- Where we stand and the Role of Global Earth Observation-**

The World is still facing multiple water challenges

SDG Targets on Water

6.1 SAFE DRINKING WATER

EVERY 15 SECONDS A CHILD DIES FROM A PREVENTABLE WATER BORNE DISEASE
200 MILLION HOURS – THE TIME WOMEN & GIRLS SPEND FETCHING WATER EVERY DAY



6.2 SANITATION AND HYGIENE

MORE THAN 1 IN 3 PEOPLE HAVE NO ACCESS TO IMPROVED SANITATION. 1 IN 7 STILL PRACTICE OPEN DEFECATION

SOME COUNTRIES LOSE AS MUCH AS 7% OF GDP BECAUSE OF INADEQUATE SANITATION



6.3 WATER QUALITY

**OVER 80% OF WASTEWATER
WORLDWIDE IS DUMPED — UNTREATED
— INTO WATER SUPPLIES**

2 MILLION TONS = AMOUNT OF HUMAN WASTE DISPOSED IN WATER COURSES EVERY DAY



6.6 WATER-RELATED ECOSYSTEMS

GROUNDWATER PROVIDES DRINKING WATER TO AT LEAST 50% OF THE GLOBAL POPULATION

THE EFFECTS OF CLIMATE CHANGE & URBANIZATION WILL IMPACT THE WATER-CYCLE - INCLUDING VITAL GROUNDWATER RESERVES



6.5 INTEGRATED WATER RESOURCES MANAGEMENT

**2/3 OF THE WORLD'S POPULATION
COULD FACE WATER STRESS BY 2025**

ACCESS TO WATER POSES THE BIGGEST SOCIETAL AND ECONOMIC RISK OVER THE NEXT TEN YEARS



6.4 WATER EFFICIENCY

70% = AMOUNT OF TOTAL WATER CONSUMPTION USED FOR AGRICULTURE

85% = INCREASE IN WATER DEMANDS CAUSED BY RISING ENERGY PRODUCTION BY 2035



11.5 : WATER-RELATED DISASTER RISK REDUCTION

Significantly reduce loss of people and number of affected people and economic loss by disasters including water-related ones

Progress and Forecast of SDG WASH Targets by 2030

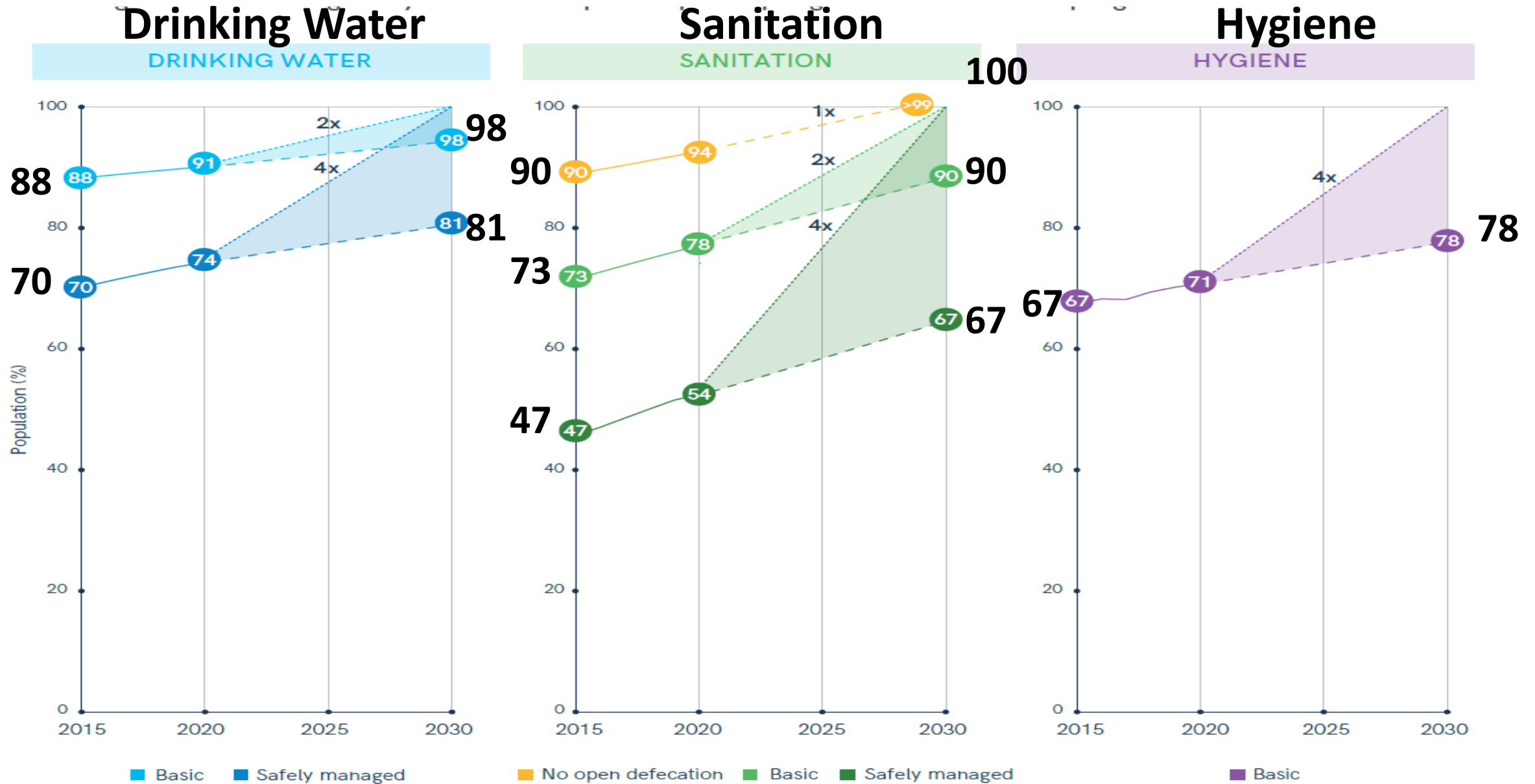


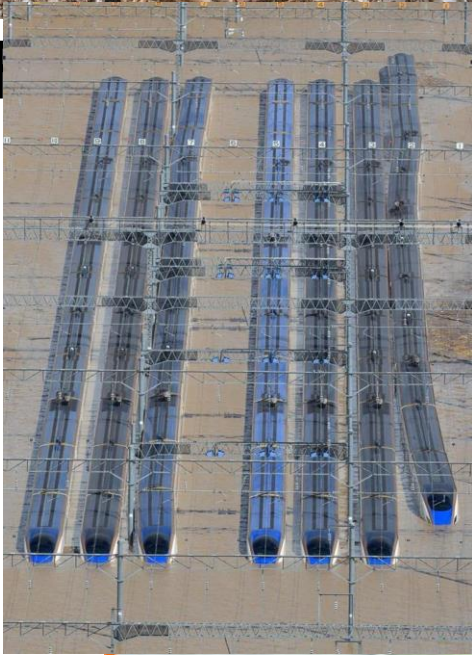
FIGURE 1 Global coverage of WASH services, 2015-2020 (%), and acceleration required to meet targets by 2030

Water-related Disasters Happening in the World



Droughts

Hurricanes

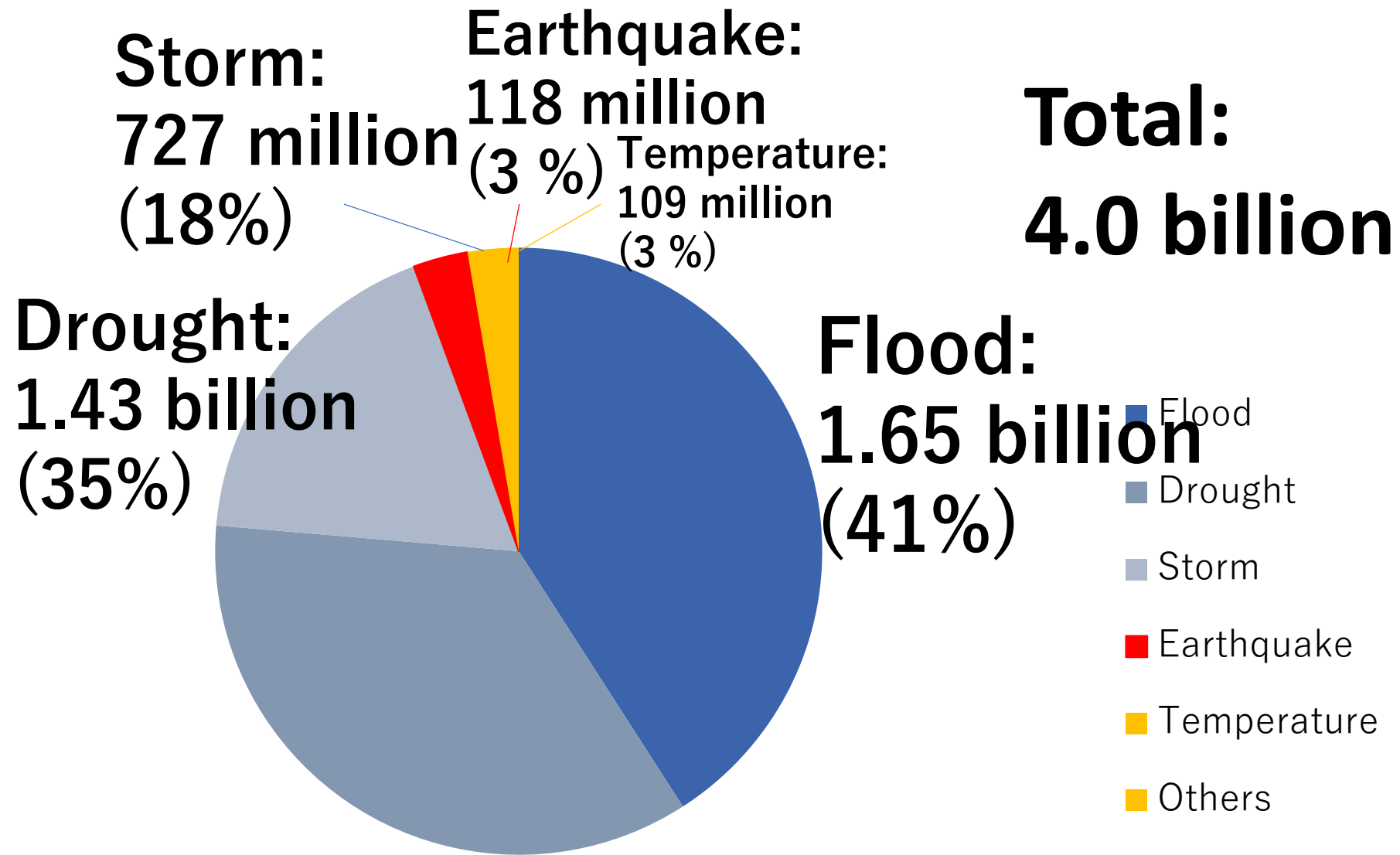


Debris Flow/Slides

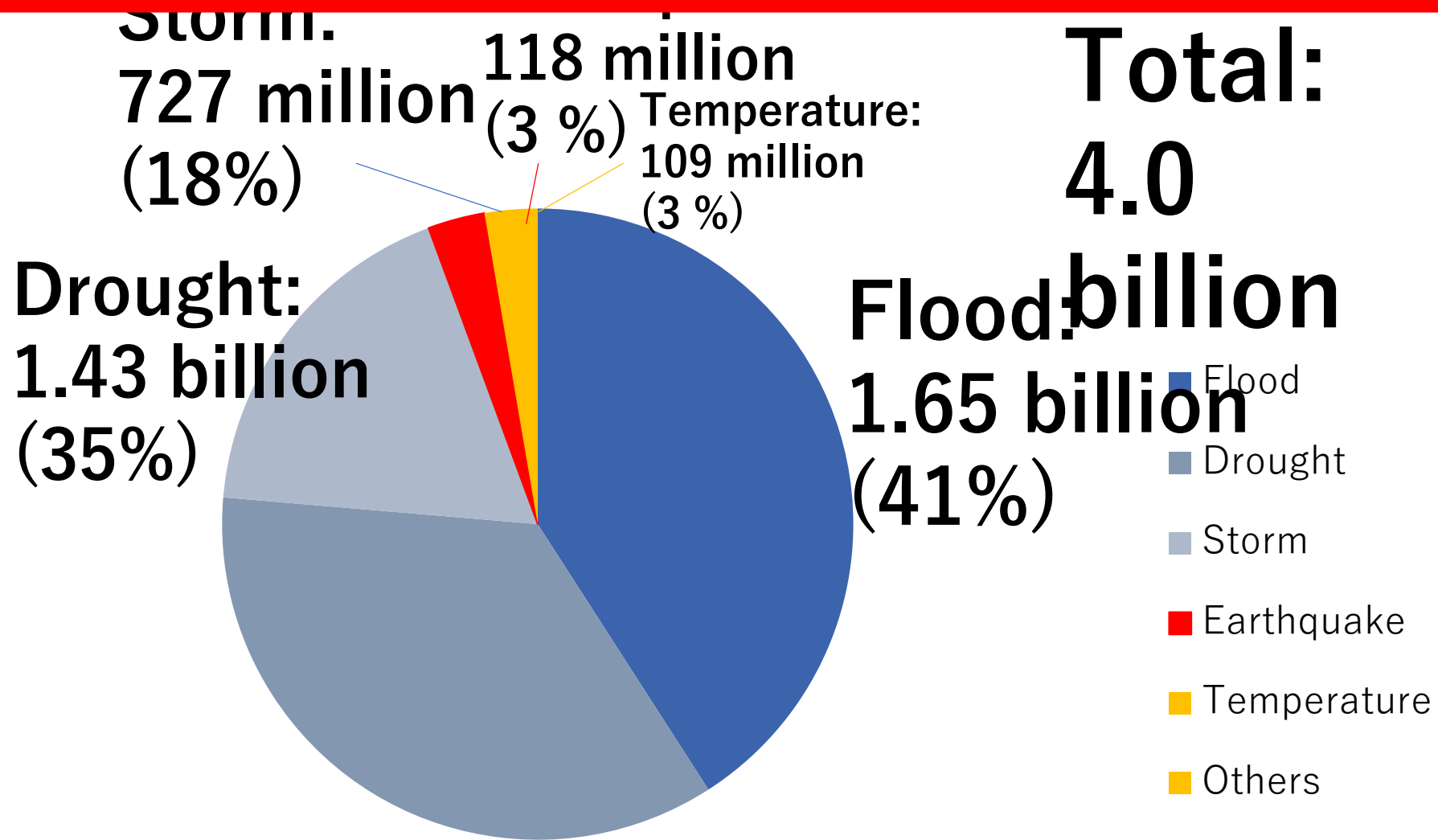


Tsunami/Tidal waves

Number of people affected by disasters (2000-2019)



94% of disasters are water-related ones



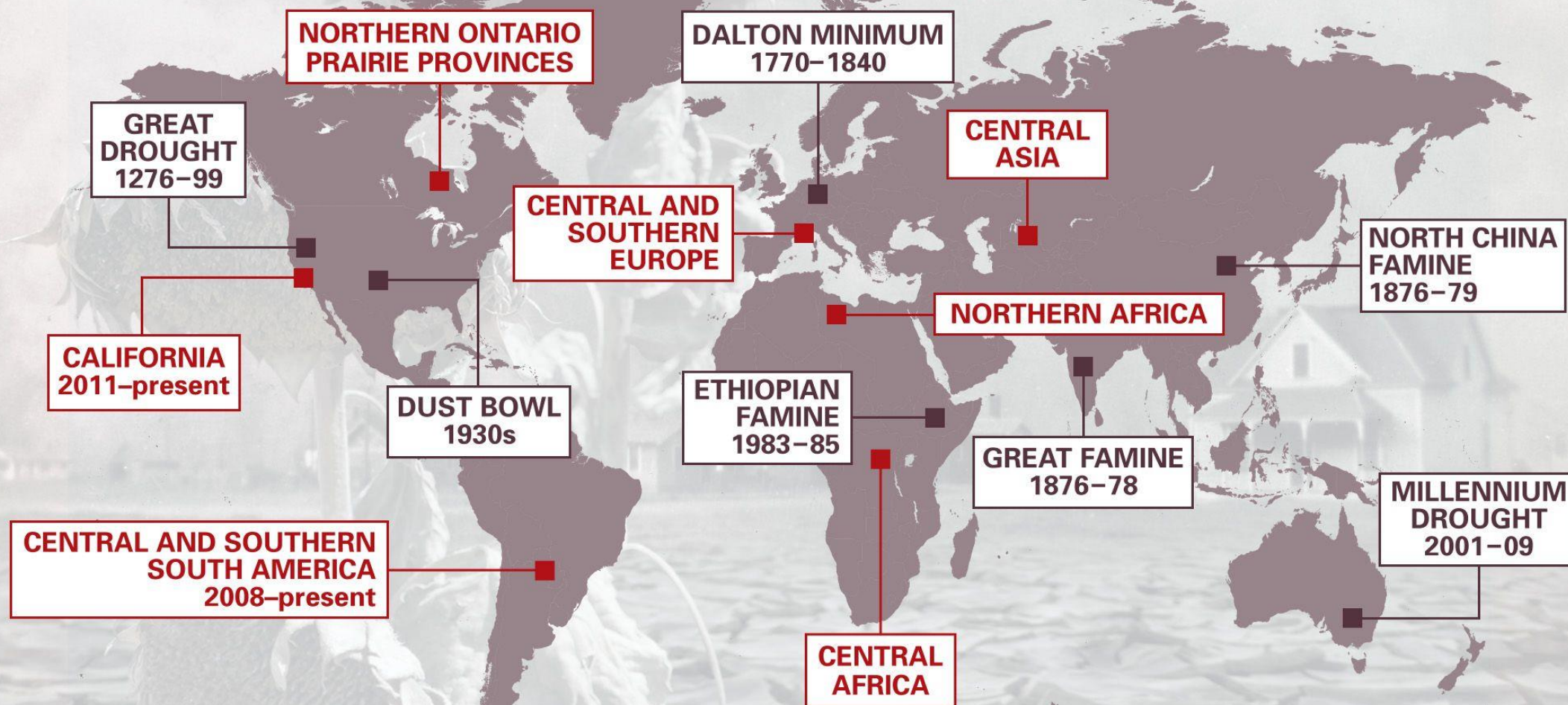
Locations of
ongoing and
historical droughts

■ Ongoing*

■ Historical

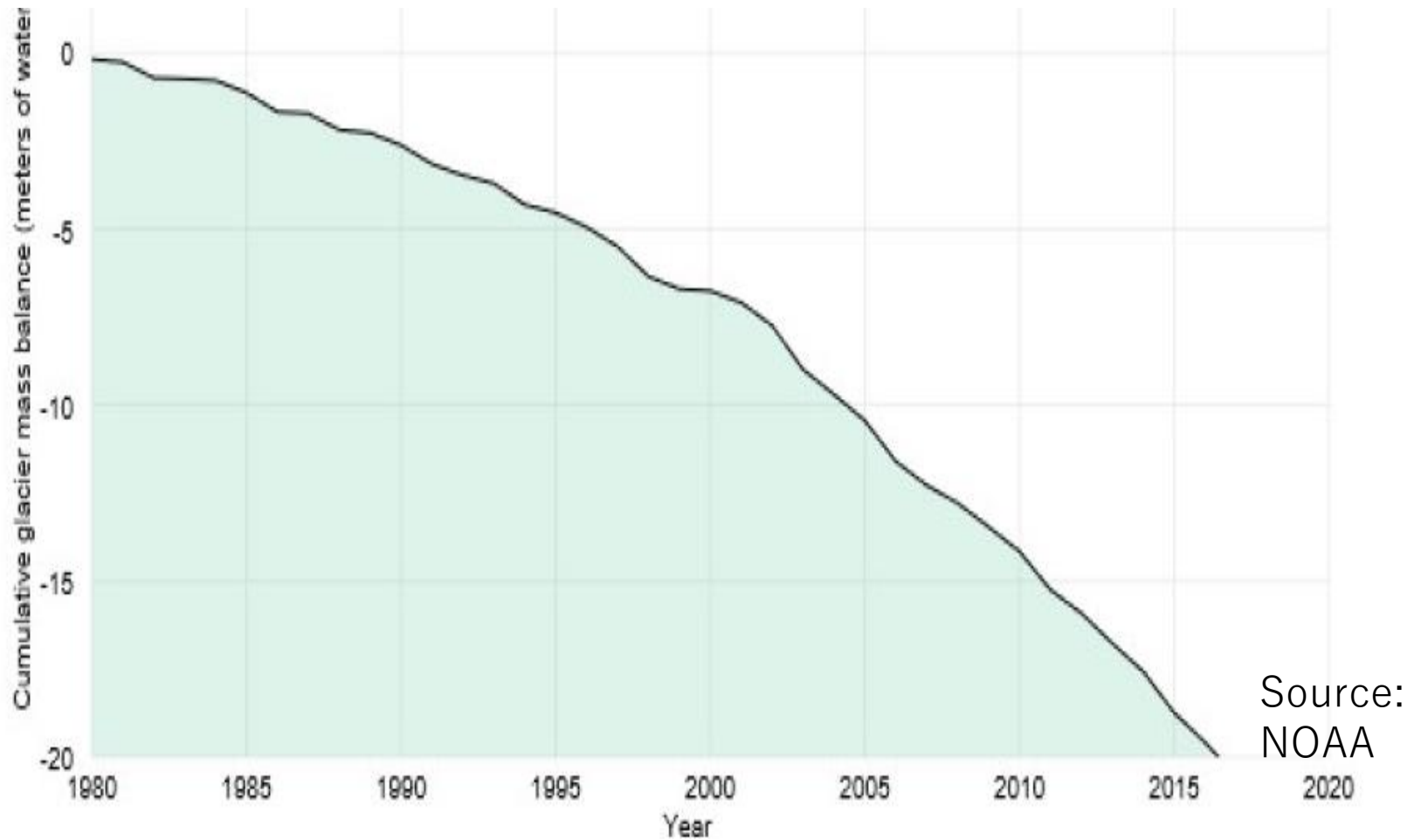
DROUGHT

An extended period of rainless weather that
causes a considerable water imbalance.



Glaciers of the world has become thinner by 20 meters in the recent 35 years.

Cumulative mass balance of glacier in the past 35 years (1980-2016)



Highlight of Water Challenges in Asia

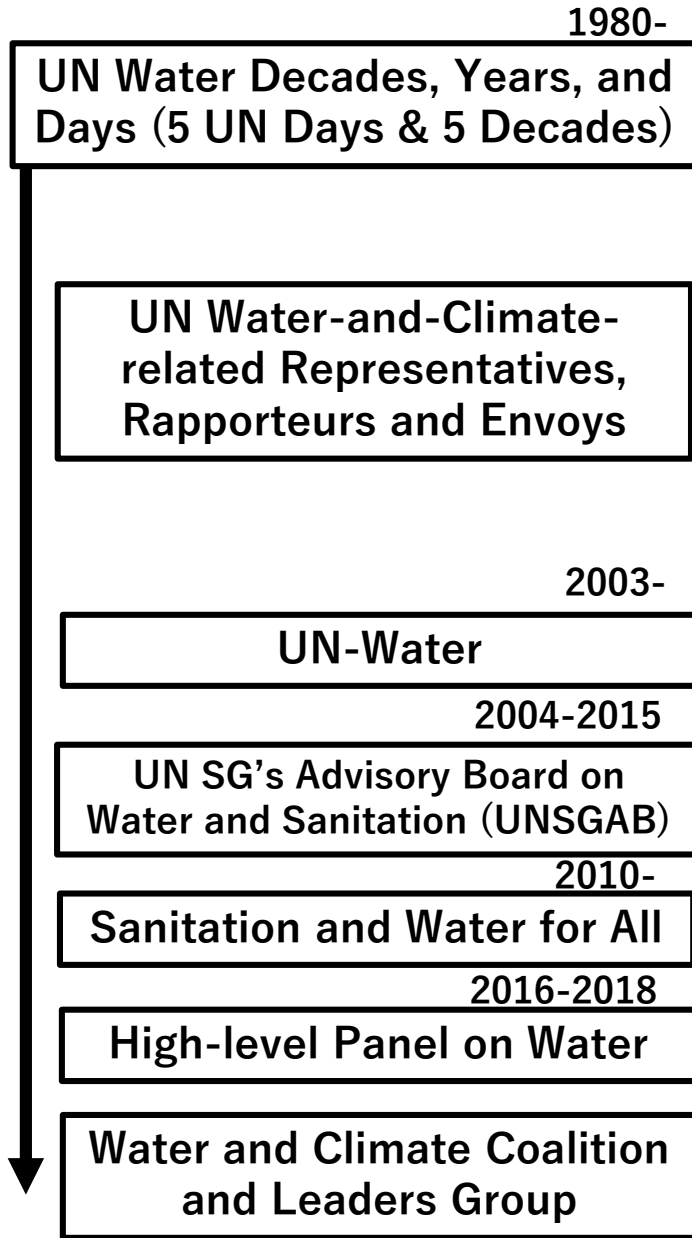
- **500 million people in the Asia and Pacific do not have access to basic water supplies.**
- **1.14 billion people in the Region lack access to basic sanitation. SDG target will not be met if current trend continues.**
- **80% of wastewater by cities is discharged untreated.**
- **Over 80% of water-related disasters occur in Asia and Pacific.**
- **Access for water and sanitation in Small Island Developments States (SIDS) are far below global average.**
- **There are major transboundary water courses in Asia where water cooperation is critical for economic and social growth.**

**We are at the critical juncture of
decision-making**

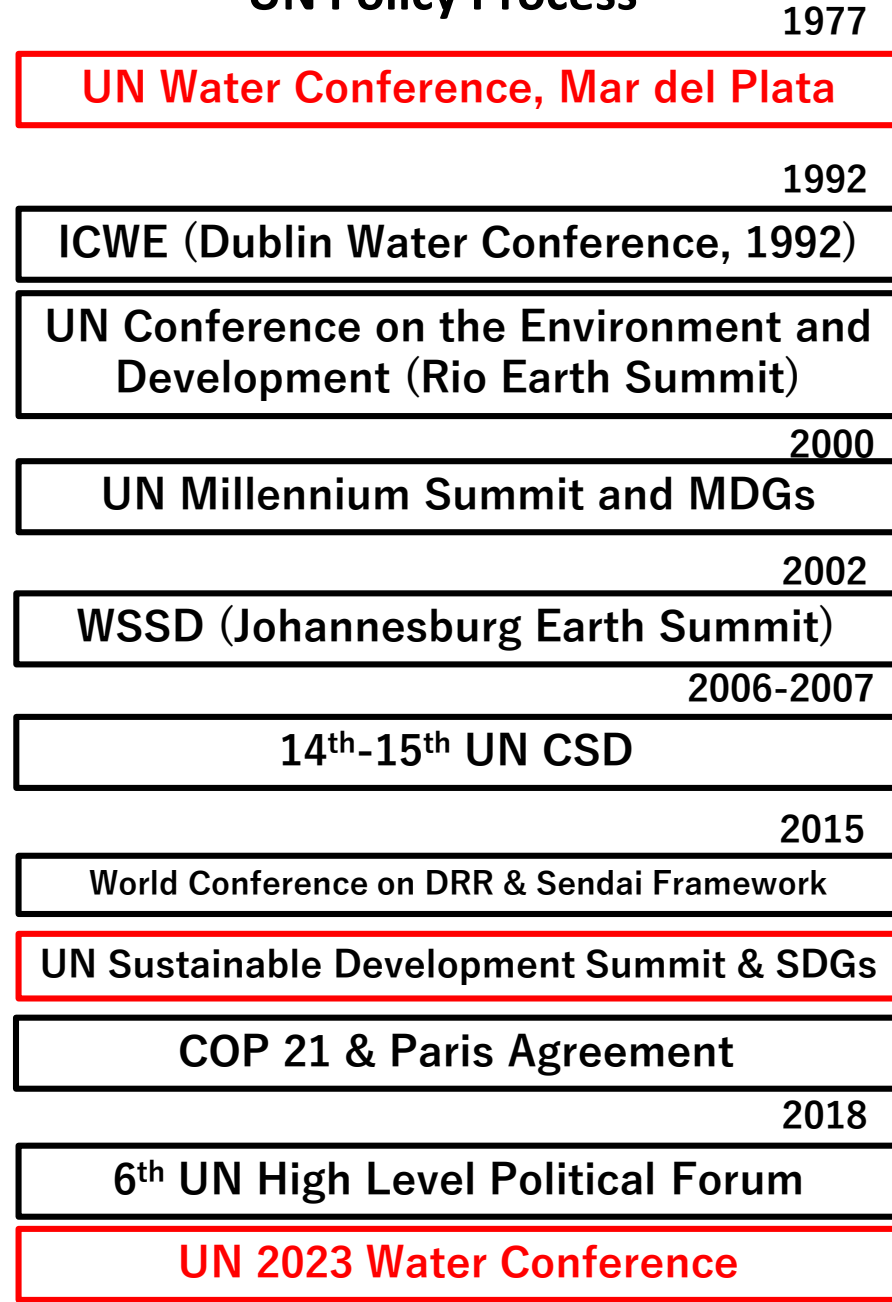
- The UN 2023 Water Conference, after lapse of 46 years, and the Asia Pacific Water Summit-**

Global water policy process and related actions (1970-)

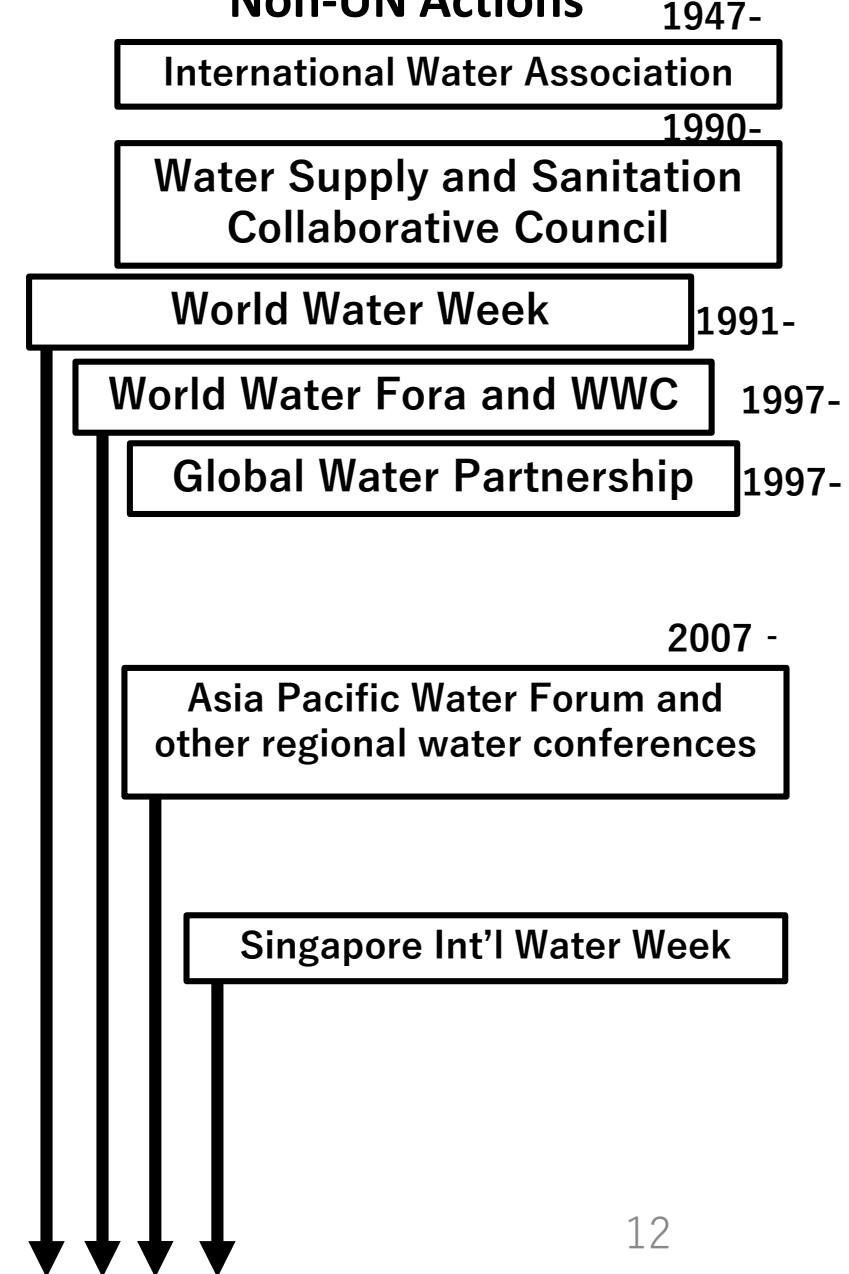
UN-related Actions



UN Policy Process

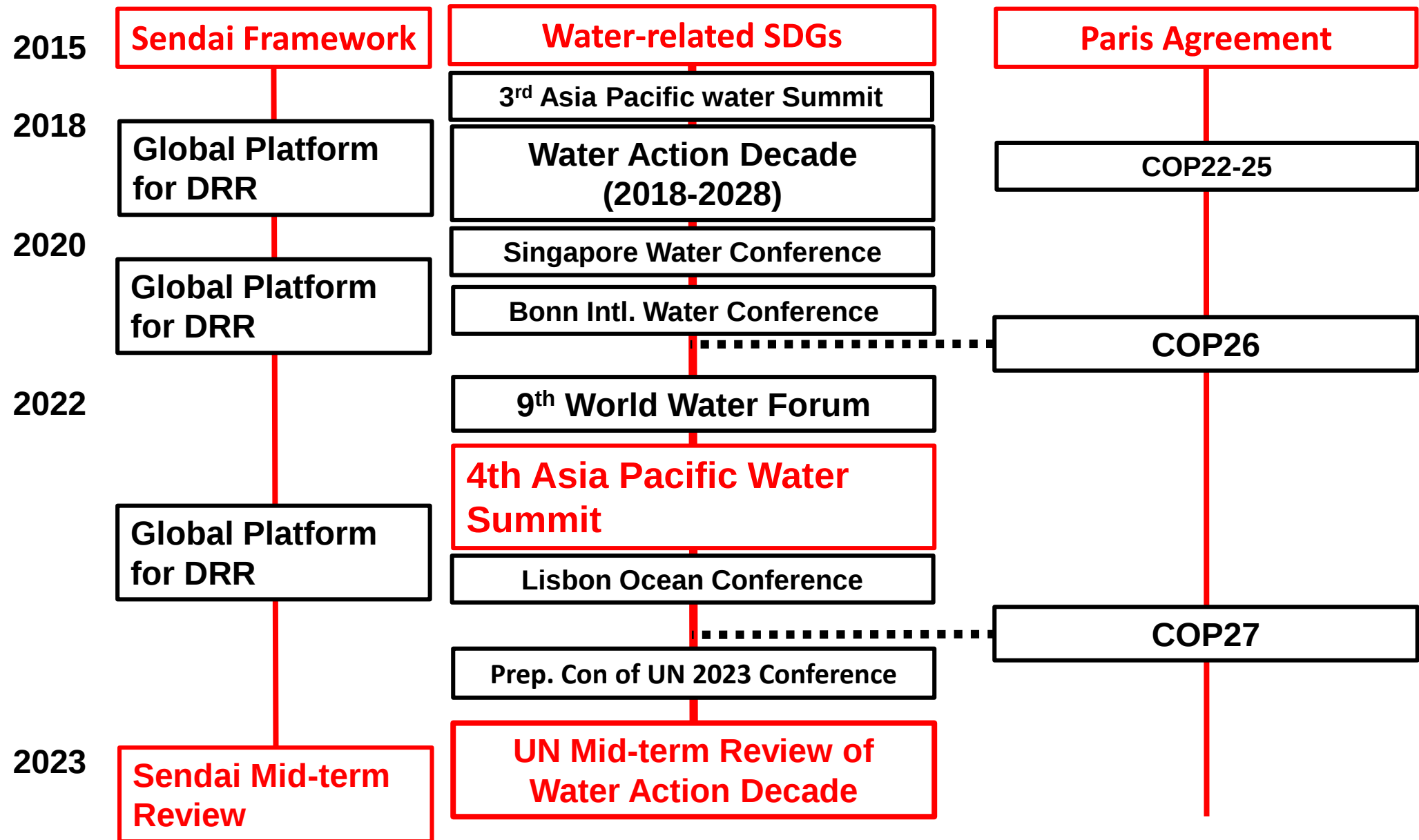


Non-UN Actions



APWS4, a critical step towards UN 2023 Water Conference

Global Process on DRR, Water, and Climate Change



4th Asia Pacific Water Summit (4th APWS)



4th Asia-Pacific Water Summit
Kumamoto Japan 2020

4th Asia-Pacific Water Summit

- Date: 23rd(Sat) – 24th (Sunday) April, 2022
- Venue: Kumamoto Castle Hall, Kumamoto City, Japan in hybrid format
- Organizer: Asia Pacific Water Forum
- Co-host: HELP and Government of Japan
- Countries: 30 countries of Asia and the Pacific
- Participants: **5,500 participants including 18 Heads of State and Government**
- Theme: Water for Sustainable Development
- Structure: Opening, The Summit Meeting by Heads of State and Government, 4 Integrating Sessions, 9 Thematic Sessions, and other sessions and side events
- Outcomes: Kumamoto Declaration, Chair's Summary, and Kumamoto Initiatives



- Asian message to UN 2023 Water Conference -

The Leaders of the Asia and Pacific decided

“We should change our society into quality-oriented ones that are more resilient, sustainable, and inclusive ones.”

Excerpts from Kumamoto Declaration by Heads of State

Transformation towards a quality-oriented society

We have reached a collective understanding that recovery from the pandemic requires transformation into quality-oriented societies that are **resilient, sustainable, and inclusive**.

Resilience involves efforts to reduce water-related disaster risk on a cross-sectoral, whole-of-river basin and aquifer basis. We will also continue improving water security and access to water and sanitation.

Sustainability involves placing water at the center of the political agenda. We will promote climate change mitigation measures while utilizing low-emission energy sources in conjunction with adaptation measures. Also, we will promote green infrastructure that can provide mitigation and adaptation benefits for achieving carbon-neutral societies in harmony with nature and biodiversity conservation.

Inclusiveness involves maintaining the current trend of improvement towards achieving SDGs in the Asia Pacific region. Without waiting until 2030, we will work towards achieving access to safe and affordable drinking water and sanitation facilities for all, including women, youth and elderly persons, ending open defecation. We will rectify inequalities in access to water and sanitation services and protection from disaster risk.

In all water-related sectors, the barriers, breakthroughs, opportunities, and ways forward for reform and improvement in the three areas of governance, finance, and science and technology need to be identified and thoroughly discussed. **We invite all gathered at the 4th APWS to discuss this question, formulate particularly substantive answers, and make this an outcome of the Summit.**

**Recommendation of the Asia Pacific Water Summit
“Governance, Finance, and Science and Technology
are the Keys for Water Sector Transformation”**

APWS Recommendation in Chair's Summary

The following outcomes of the Summit sessions are the answer to the inquiry by Heads of State and Government:

1. Towards a Sustainable Society

Governance: Mainstream integrity and transparency practices across water organizations as a foundation to transform all water subsectors. Invest in human resources, inter alia, to achieve this result. Creating trans-sectoral, stakeholder-inclusive and fully transparent governance is key. The concept of valuing water should be embedded in the minds and actions of all stakeholders

Finance: Given the off-track status of SDGs, drastically increase total investment in the water sector. Direct and indirect benefit of water investment should be numerically articulated to convince finance institutions and taxpayers and attract investors by developing and standardizing the analytic method for this purpose.

Science and Technology: We cannot improve what we cannot measure. The collection, archiving, and sharing of water data and information, including those of water risks, should be promoted through establishing appropriate frameworks and organizations, as well as prioritized investment. Transboundary information sharing is particularly important. Building global observatories should be supported by the Region

2. Towards a Resilient Society

Science and Technology: Position science and technology as “a game changer” towards a fully resilient post-corona society through three actions: Promote water cycle consilience by accelerating the Open Science policy, particularly focusing on observation, modeling and data integration; Foster "Facilitators," that is, catalytic beings who can lead the way toward resolving problems by providing professional advice on-site using a broad range of scientific and indigenous knowledge; and Work together beyond disciplines and sectors among different levels while taking an end-to-end approach... Slow-onset changes should be given special attention.

3. Towards an Inclusive Society

An inclusive society is a must not only for the achievement of SDGs but also as an engine for socio-economic growth. For this purpose: make gender equality and social inclusion a core goal for any institution; to aim all budgets to be at least responsive to gender and vulnerability; carry out gender and inclusivity analysis at all levels as a core component of research; empower youth to provide solutions and demonstrate their expertise in areas of technology, innovation, and data;

4. Towards the UN 2023 Water Conference and Beyond

Connection and linkage of Water, Climate Change, and disaster risk reduction (DRR) were the core focus of the Summit. The Kumamoto Water Initiative announced by the Government of Japan at the Summit focuses on these three issues in an integrated manner. As such, we recommend that Water, Climate Change and DRR are discussed as a key topic for global processes, particularly the UN 2023 Water Conference. It is expected that the Kumamoto Water Initiative will make progress by enlarging the circle of commitments in the Region and beyond.

The Role of Earth Observation

-We cannot improve what we cannot measure-

Global trend to position water data as the top priority issue

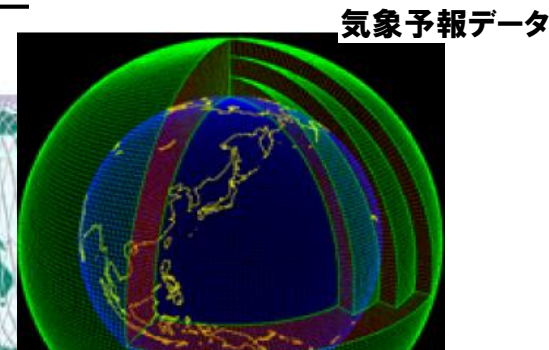
Conferences/Panels in which Water Data was positioned as top priorities issues in their recommendation

- **High-level Experts and Leaders Panel on Water and Disasters (HELP), 2009**
- **High-level Panel on Water by UNSG and World Bank President, 2018**
- **SDG6 Global Acceleration Framework, 2020**
- **UNSGAB+5, 2021**
- **The Bonn Water Conference, 2021**
- **The 4th Asia Pacific Water Summit, 2022**
- **The 2nd Meeting of Dushanbe Water Process, 2022**
- **Water and Climate Leaders, 2022**

Global Earth Observation to improve water policies, practices and their integration



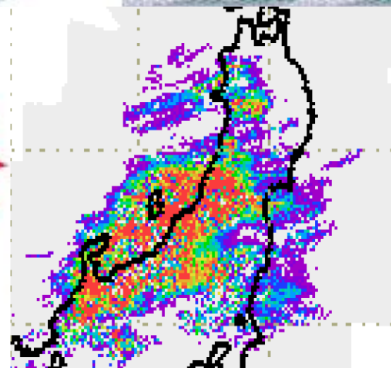
Observation Satellites



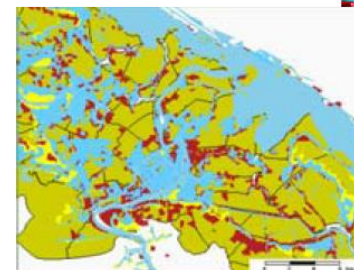
Link to simulation & forecast system



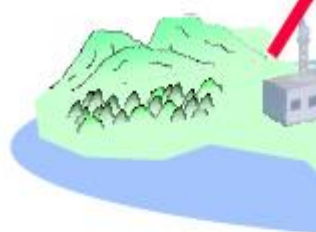
Ground & surface sensors



Ocean and seabed observation



Integration of database on water, air and land



Earth Observation Data is a must to advance Water Policy and Practices

Subject	Users/Drivers	Required EO Data
Water allocation	Industry, farmers, economic planners, finance authorities, water system operators...	GIS-based hydrological data, Land and watershed data, Agricultural & industrial, Climate Change data, Infrastructure data...
Floods and droughts	Risk Managers, local leaders, citizens groups, general public...	GIS-based hydrological data, social and urban status data, Hazard data, Climate Change data, operational status data...
Pollution control	Regulators, Industry, water system operators...	GIS-based water quality data, ecology data, discharge system industrial Municipalities, Industry
Trans-boundary cooperation	Security experts, Diplomats, Politicians...	GIS-based hydrological and land data, statistical data, water simulation output, negotiation archives...

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Earth Observation is the foundation of transformative changes of all water sectors		
droughts	Leaders, citizens groups, general public...	Urban status data, Hazard data, Climate Change data, operational status data...
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Your Participation in Global Process

- Towards UN 2023 Water Conference and beyond -

Water-related Global Events in 2022-2023 and Actions by HELP			
Date	Global Water Event	Events by HELP	Target and Action by HELP
Mar.21-25,2022	9 th World Water Forum	HELP High Session on Water& Disasters	HELP Drought Principles at WWF9
April 23-24, 2022	Asia Pacific Water Summit	APWS Overall Integration Session by HELP	APWS Chair’s Summary compiled by HELP
May 23-28, 2022	DRR Global Platform	HELP Ministerial Roundtable (May 23)	Ministerial Awareness Raising on Water-related DRR
Aug.-Sept. 2022	World Water Week	HELP Water and Disaster Session (Aug. 31)	Consultation for UN2023
October 31, 2022 (tbc)	Prep. Con of UN2023 Water Conf.	Bonn-Kumamoto Joint Statement (Oct. 31)	Joint Proposition by Germany-Japan to UN2023 Water Con.
Nov. 7-18, 2022	COP27, Sharm El-Sheikh	HELP Session on Water& Disasters (Nov. 7)	New Position paper
Nov.15-16, 2022	G20, Bali, Indonesia	G20 Special Event on Water & DRR (Nov.11)	Direct input to G20 Leaders
Feb. 18, 2022	The 9 th International Conference on Flood Management (ICFM9)	ICFM9 Symposium	Input of Researchers/practitioners in UN 2023 Water Conference
March 22-24, 2022	UN2023 Water Conference	The 6 th UN Special Thematic Session on Water and Disasters (March 21)	Direct Input on DRR and Climate Change to UN 2023 Water Conf.
May, 2023	Mid-term Review of DRR Sendai Framework	HELP Special Event at Sendai Review	Bridging UN2023Water Conf. and Sendai Midterm-Review
May 19,, 2023	G7, Hiroshima, Japan	G7 Summit Water and Disaster Dialogue	Direct input to G7 Leaders
Autumn, 2023	G20, India	G20 Special Event on Water and Disasters	Direct input to G20 Leaders

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Autumn, 2023	G20, India	G20 Special Event on Water and Disasters	Direct input to G20 Leaders

The 9th International Conference on Flood Management (ICFM9)

February 18th-22nd, 2023 in Tsukuba, Japan

**“A major step to carry voices of flood practitioners/scientists/
stakeholders to the UN 2023 Water Conference – ”**

ICFM9 High-level Symposium at in GRIPS, Tokyo, Japan on February 18th, 2023

Draft Agenda (speakers tbc)

1) Opening remarks by Chair: Dr. Han Seung-soo, Former Prime Minister of the Republic of Korea and Chair of HELP

2) Keynote speeches

- H.E. Ambassador Csaba Kőrösi, President of the 77th Session of the UNGA**
- H.E. Basuki Hadimuljono, Minister of Public Works and Housing, Indonesia**
- Prof. Petteri Taalas, Secretary-General, World Meteorological Organization (WMO - tbc)**

3) High-level Panel Discussion: “Integrated Flood Management in the post-COVID-19 era”

Panelists

- High-level representatives of the national government, UN/International organizations, academia and CSOs**

4) Closing by the symposium chair

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The Sixth UN Special Thematic Session on Water and Disasters
“Connecting Midterm Reviews of Water and DRR under Climate Change”
The United Nations Headquarters, New York, the U.S.A., March 21st, 2023

(1) Opening Plenary (10:00-11:30)

- Opening Remarks: Dr. Han Seung-Soo, Former Prime Minister of the Republic of Korea and Chair of the High-level Experts and Leaders Panel on Water and Disasters (HELP); H.E. Ambassador Dr. Csaba Kőrösi, President of the 77th Session of the United Nations General Assembly ; H.E. Mr. Antonio Guterres, Secretary-General of the United Nations
- Keynote Speeches by Dignitaries and Heads of State and Government:

(2) High Level Panel Discussion (11:30-13:00) - Connecting Midterm Reviews of Water Action Decade and DRR under Climate Change:

- High-level Panel discussion by Ministers and Heads of UN/International Agencies

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(3) Science and Technology Panel (15:00-16:30) -Science and Technology connecting, Water, DRR, and climate change-

➡ Global/Country Show Cases of Science and Technology Applications/ Practices to connect Water, DRR, and Climate Change including Global Earth Observation



UN
2023 WATER
CONFERENCE

NEW YORK
22-24
MARCH
2023

JN 2023 Water Conference

March 22-24, 2023 at UNHQ in New York

1. Three Principles

- 1) Inclusive: both in terms of (a) the Conference process (ensure vertical and horizontal inclusiveness) and in terms of (b) the results (leaving no-one behind).**
- 2) Action-oriented: the Conference aims to lead to concrete results through concrete actions and plans on the ground.**
- 3) Cross-sectoral: the Conference should mobilise all other sectors to improve the way they manage and utilize water resources. These sectors need to bring their plans and actions to the Conference.**

2. Format

6 Plenaries / 5 Interactive Dialogues / Special Events / Side Events / Cultural elements and more

3. Conference Summary and Proceedings

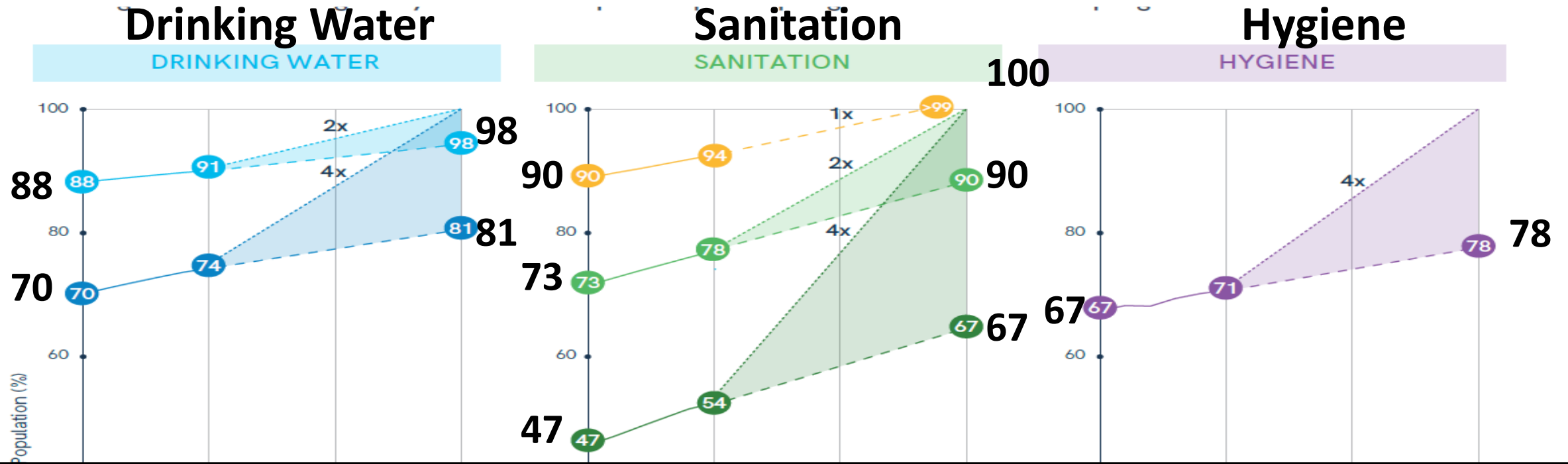
- Summary of the proceedings**
- Thematic Interactive Dialogues outcomes**
- Special Events outcomes**
- Side Events outcomes**
- Recommendations from the above feeding into the Roadmap**
- Commitments from the above feeding into the Global Water Pact**

- **We can transform all water sectors from global policies to field practices by Earth Observation.**
- **Let us join hands towards the end.**

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Thank you

Progress and Forecast of SDG WASH Targets by 2030



- Rate of improvement needs to be doubled to achieve targets of basic drinking water and sanitation
- The rate needs to be quadrupled to achieve safely managed water and sanitation and basic hygiene

■ Basic ■ Safely managed

■ No open defecation ■ Basic ■ Safely managed

■ Basic