International Institute for Applied Systems Analysis
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science for global insight

Water Statistics and Indicators Efforts

Water Indicators for Sustainable Development

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Workshop on Mainstreaming and Implementing the Water-Energy Nexus for Sustainable Development in the African Region
4-6 September 2018, Addis Ababa, Ethiopia


1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS


GOAL 6
ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL
SUSTAINABLE DEVELOPMENT GOALS
More at sustainabledevelopment.un.org/sdgsproposal


PEOPLE
End poverty and hunger in all forms and ensure dignity and equality
PLANET
Protect our planet's natural resources and climate for future generations
PROSPERITY
Ensure prosperous and fulfilling lives in harmony with nature
Sustainable Development
PARTNERSHIP
Implement the agenda through a solid global partnership
PEACE
Foster peaceful, just and inclusive societies


6.1 SAFE DRINKING WATER FOR ALL
6.2 SANITATION FOR ALL
6.B MORE LOCAL PARTICIPATION
6 CLEAN WATER AND SANITATION
6.3 BETTER WATER QUALITY
6.A INTERNATIONAL COOPERATION
6.4 MORE EFFICIENT WATER USE
6.6 HEALTHIER ECOSYSTEMS
6.5 INTEGRATED WATER MANAGEMENT

SDG6: Targets & Indicators

6.1:

By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.1.1: Proportion of population using safely managed drinking water services

6.2

By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water

6.3

By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.3.1: Proportion of wastewater safely treated

6.3.2: Proportion of bodies of water with good ambient water quality

SDG6: Targets & Indicators

6.4

By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.4.1: Change in water-use efficiency over time

6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

6.5

By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.5.1: Degree of integrated water resources management implementation (0-100)

6.5.2: Proportion of transboundary basin area with an operational arrangement for water cooperation

SDG6: Targets & Indicators

6.6

By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

6.6.1: Change in the extent of water-related ecosystems over time

6.a

By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.a.1: Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan

6.b

Support and strengthen the participation of local communities in improving water and sanitation management

6.b.1: Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management

SDG6: Targets, Indicators & Monitoring Efforts

- **WHO/UNICEF JMP is the custodian of global data on drinking water, sanitation and hygiene (WASH).**
- **The JMP is responsible for reporting on SDG targets and indicators related to WASH.**
- **It has been monitoring global progress since 1990**
- **https://washdata.org/**

SDG6: Targets, Indicators & Monitoring Efforts

- JMP is part of the UN-Water Integrated Monitoring Initiative for SDG 6, reporting on progress towards SDG targets 6.1 and 6.2.

- JMP builds on earlier monitoring activities carried out by WHO since the 1960s.

- JMP is the only drinking water and sanitation monitoring mechanism that provides information allowing comparison between countries and over time.

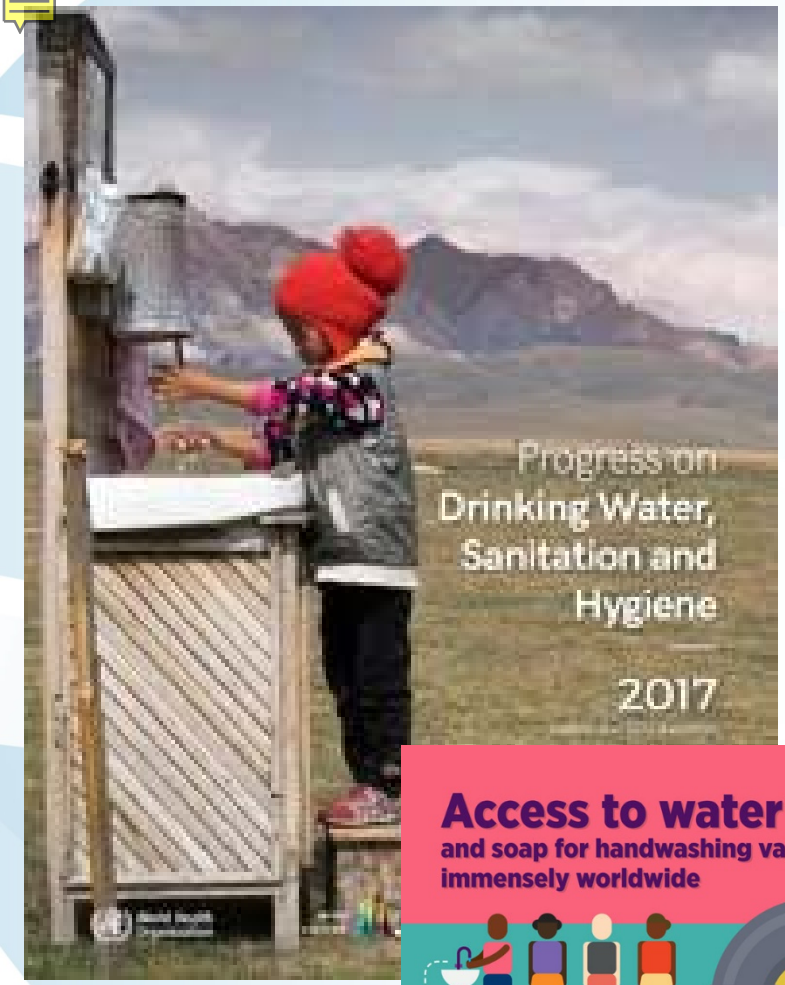
- Provides regular global reports on drinking-water and sanitation coverage to:
  i) facilitate sector planning and management,
  ii) support countries in their efforts to improve their monitoring systems, and
  iii) provide information for advocacy.

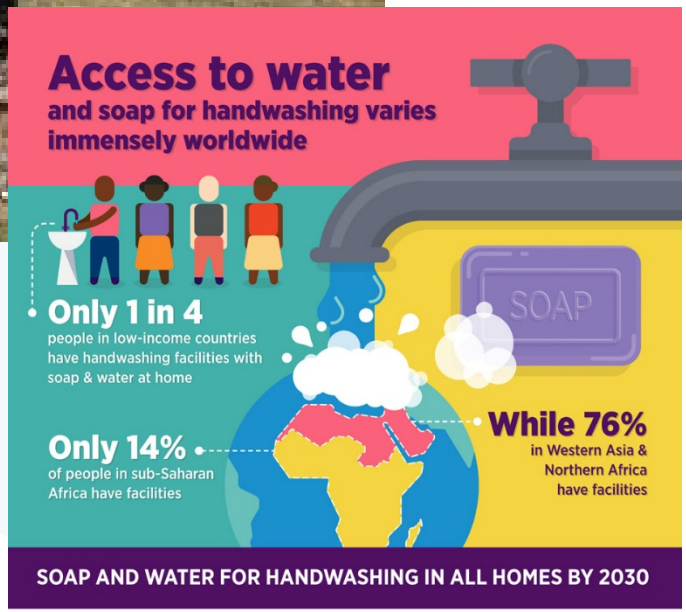
- During the MDG period, the JMP reported every two years on progress against the indicators on drinking water and sanitation:

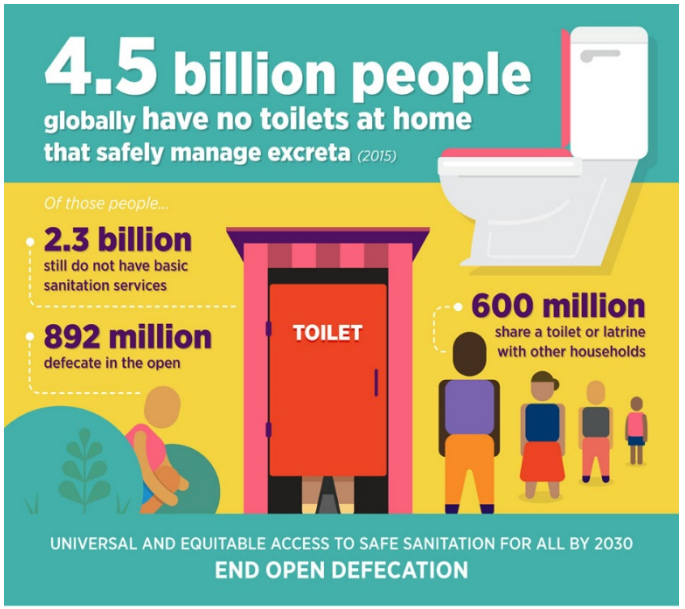
- "The proportion of population using an improved drinking water source" and "The proportion of population using an improved sanitation facility", separately for rural and urban areas.

SDG6: Targets, Indicators & Monitoring Efforts

- For the SDGs, the JMP uses its 25 years of experience, and focuses on WASH targets: drinking water, sanitation and hygiene (SDG targets 6.1 and 6.2).
- In 2016 JMP focused on communicating with countries about the implications moving from MDGs to SDGs, and worked towards a global baseline on indicators 6.1.1 and 6.2.1
- JMP report, Progress on drinking water, sanitation and hygiene: 2017 update and Sustainable Development Goal baselines, presents the first global assessment of **"safely managed" drinking water and sanitation services**.







World Health Organization unicef

World Health Organization unicef

JMP LADDERS

Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs and packaged or delivered water

Note: Improved facilities include: flush/pour flush to piped sewer system, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs

Note: Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.
Household surveys increasingly include a section on hygiene practices where the surveyor visits the handwashing facility and observes if water and soap are present. Observation of handwashing materials by surveyors represents a more reliable proxy for handwashing behaviour than asking individuals whether they wash their hands. The small number of cases where households refuse to give enumerators permission to observe their facilities are excluded from JMP estimates.

Integrated Monitoring Guide for Sustainable Development Goal 6 on Water and Sanitation

Targets and global indicators

This publication will be continually updated throughout the duration of the 2030 Agenda for Sustainable Development, to incorporate new developments and lessons learned.

Version: 14 July 2017

UN WATER

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Integrated Monitoring Guide for Sustainable Development Goal 6 on Water and Sanitation

Good practices for country monitoring systems

Photo credit: Georgina Smith, Creative Commons Attribution

This publication will be continually updated throughout the duration of the 2030 Agenda for Sustainable Development, to incorporate new developments and lessons learned.
Version: 12 July 2017

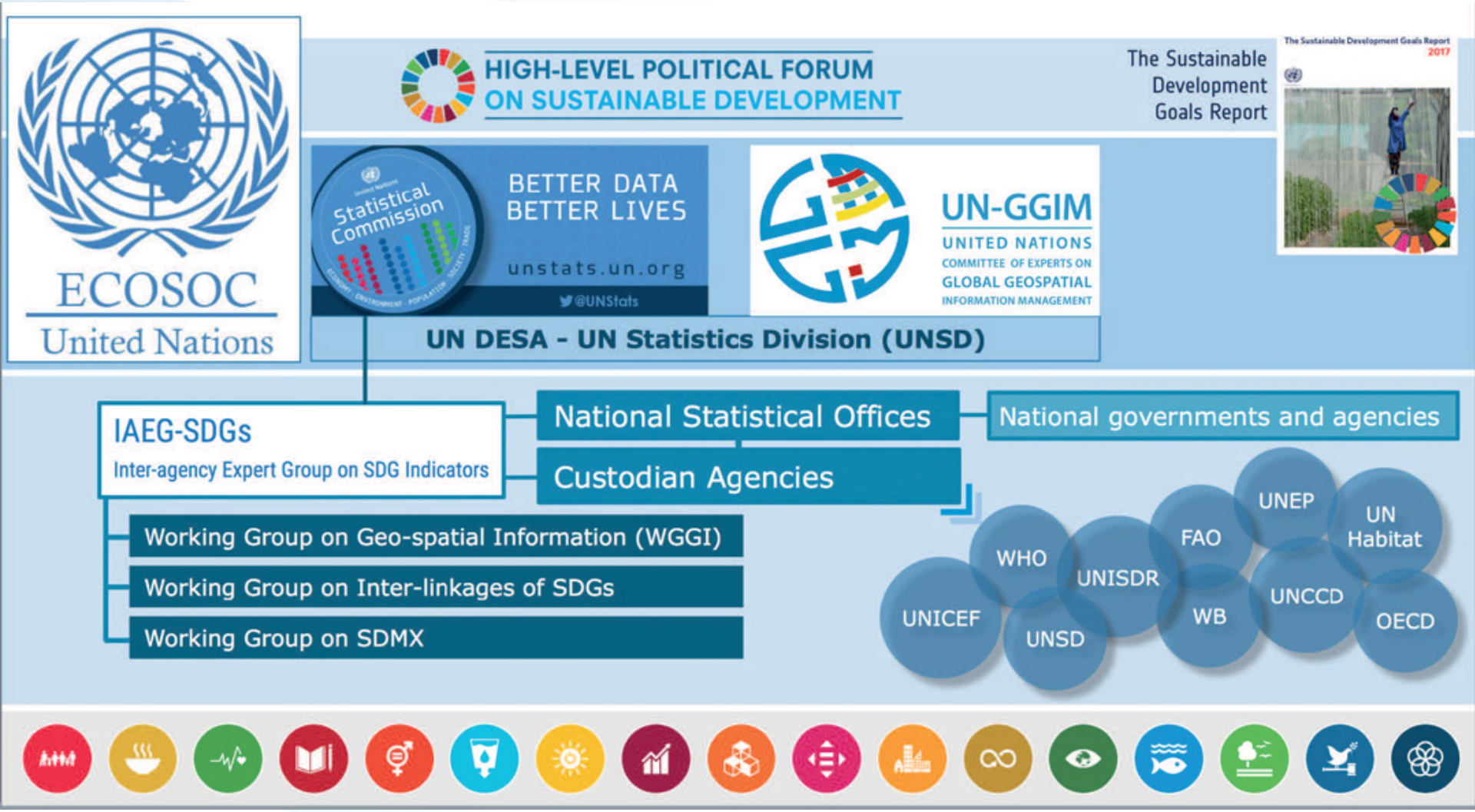
UN WATER

IIASA

Step-by-step methodology for monitoring drinking water and sanitation (6.1.1 & 6.2.1)

- Methodology for global indicators 6.1.1 and 6.2.1: Explains how to monitor the "proportion of population using safely managed drinking water services" and the "proportion of population using safely managed sanitation services, including a handwashing facility with soap and water".

IAEG-SDGs
Inter-agency & Expert Group on SDG Indicators



IAEG-SDGs
Inter-agency & Expert Group on SDG Indicators

Mandate and Membership

- On 6 March 2015, at its forty-sixth session, the United Nations Statistical Commission created the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs),
- composed of Member States and including regional and international agencies as observers.
- The IAEG-SDGs was tasked to develop and implement the global indicator framework for the Goals and targets of the 2030 Agenda.
- The global indicator framework was developed by the IAEG-SDGs and agreed upon, including refinements on several indicators, at the 48th session of the United Nations Statistical Commission held in March 2017.
- The global indicator framework was subsequently adopted by the General Assembly on 6 July 2017 and is contained in the Resolution adopted by the General Assembly on Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313).

IAEG-SDGs
Inter-agency & Expert Group on SDG Indicators

Working Groups

- At its third meeting, the IAEG-SDGs formed three working groups to address specific areas relevant to SDG indicator implementation. The three working groups:

  i) Working Group on Geo-spatial Information;
  ii) Working Group on Inter-linkages of SDG Statistics to allow for Integrated Analyses in the Monitoring;
  iii) Working Group on Statistical Data and Metadata Exchange (SDMX)

- Working Groups are responsible for their own detailed work plans, methods of work, and communication and coordination mechanisms with other partners.

- Countries that are not members of the IAEG-SDGs, international organizations, civil society, academia and the private sector were invited to participate in these groups subject to criteria established by each working group.

- Each of the three working groups reports on its progress at each of the meetings of the IAEG-SDGs.

IAEG-SDGs
Inter-agency & Expert Group on SDG Indicators

As of May 2017, the following United Nations Member States are currently members of IAEG-SDGs Indicators:

Eastern Africa: Ethiopia, Tanzania

Middle and Southern Africa: Botswana, Cameroon

Western Africa: Ghana, Niger

Northern Africa: Algeria, Egypt

Chair of UN Statistical Commission: Kenya (ex-officio member)

Western Asia: Bahrain; Central, Eastern, Southern, and South-Eastern Asia: China, India, Tajikistan, The Philippines;
Oceania: Fiji, Samoa; The Caribbean: Grenada, Trinidad and Tobago; Central and South America: Brazil, Colombia, Mexico; Eastern Europe: Belarus, Russian Federation; North America and Northern, Southern and Western Europe: Canada, France, Germany, The Netherlands, Sweden

Tier 1

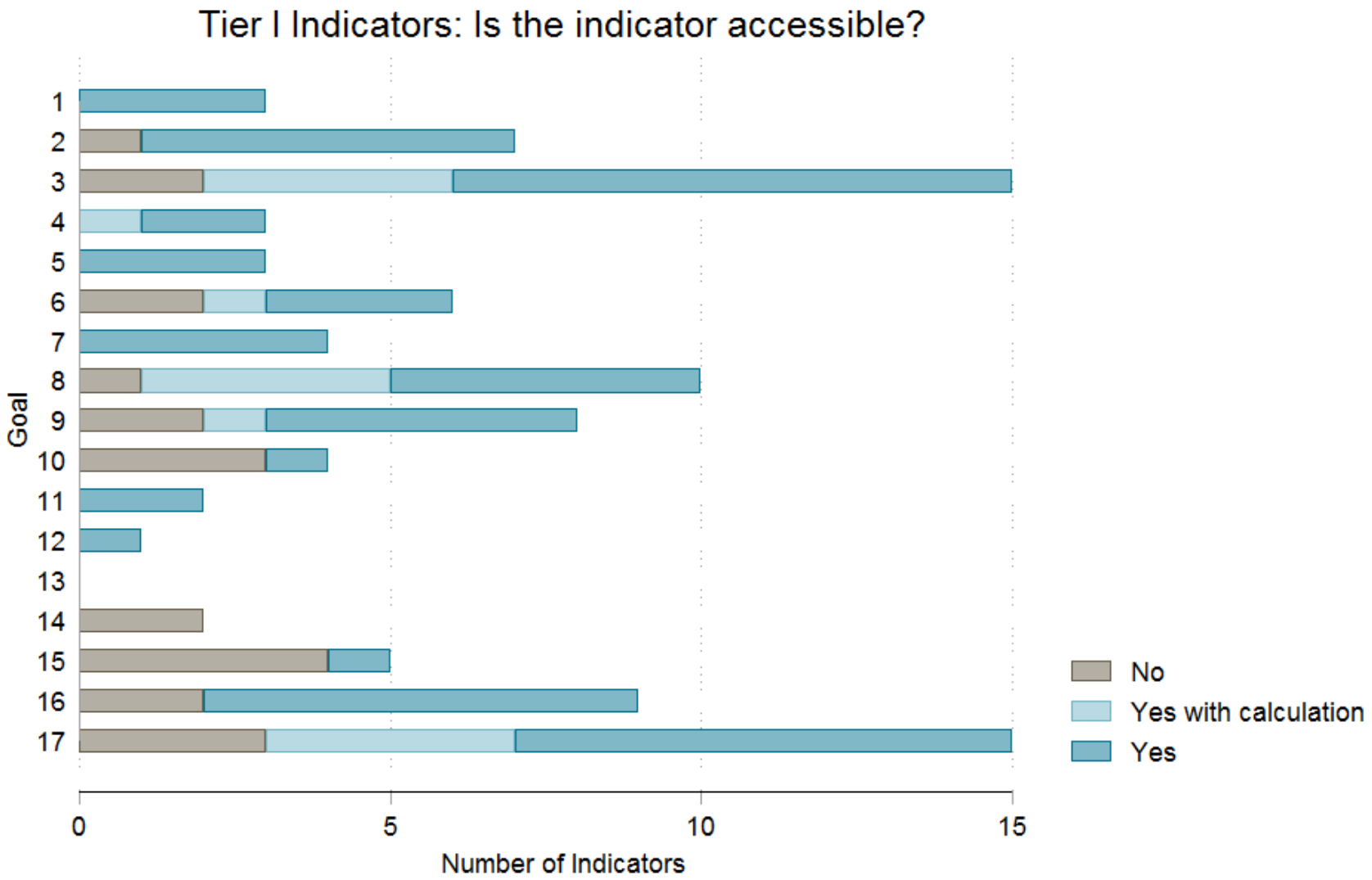
- Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50% of countries and of the population in every region where the indicator is relevant.

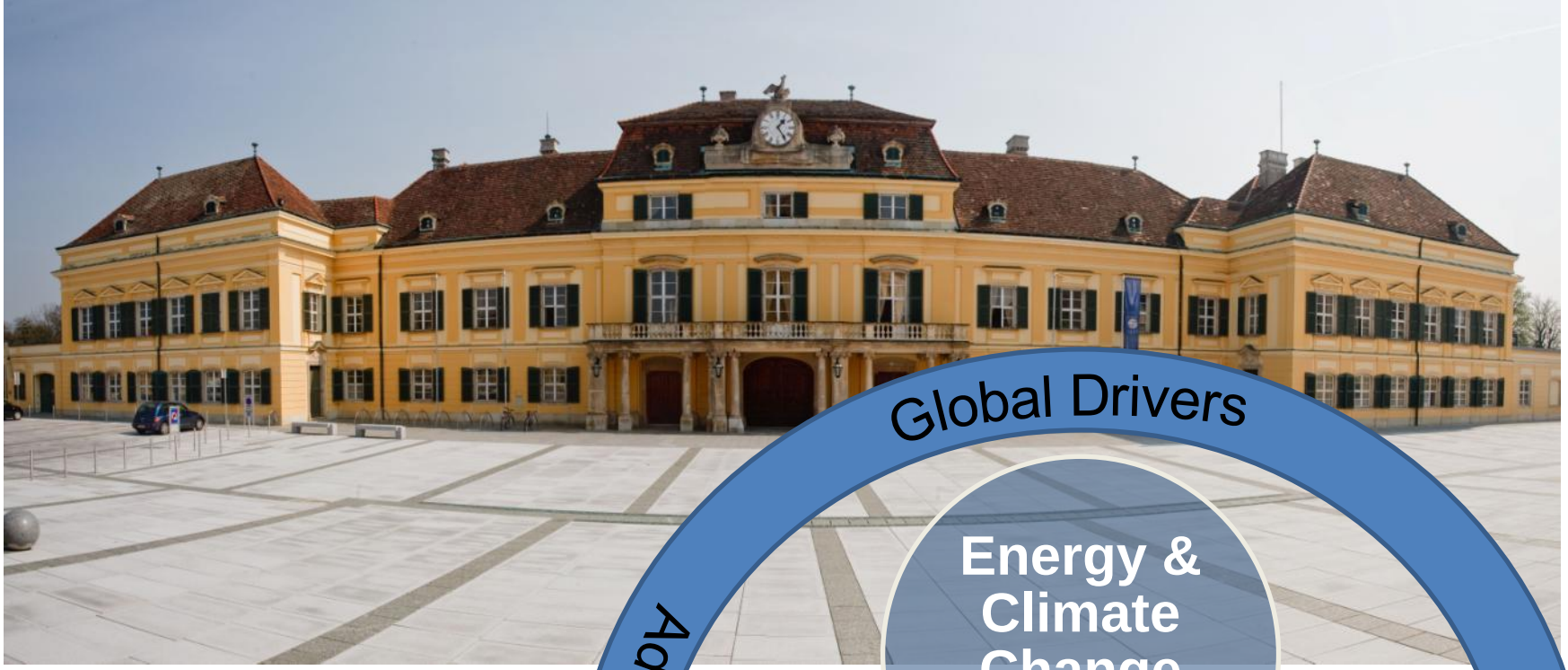
Tier 2

- Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.

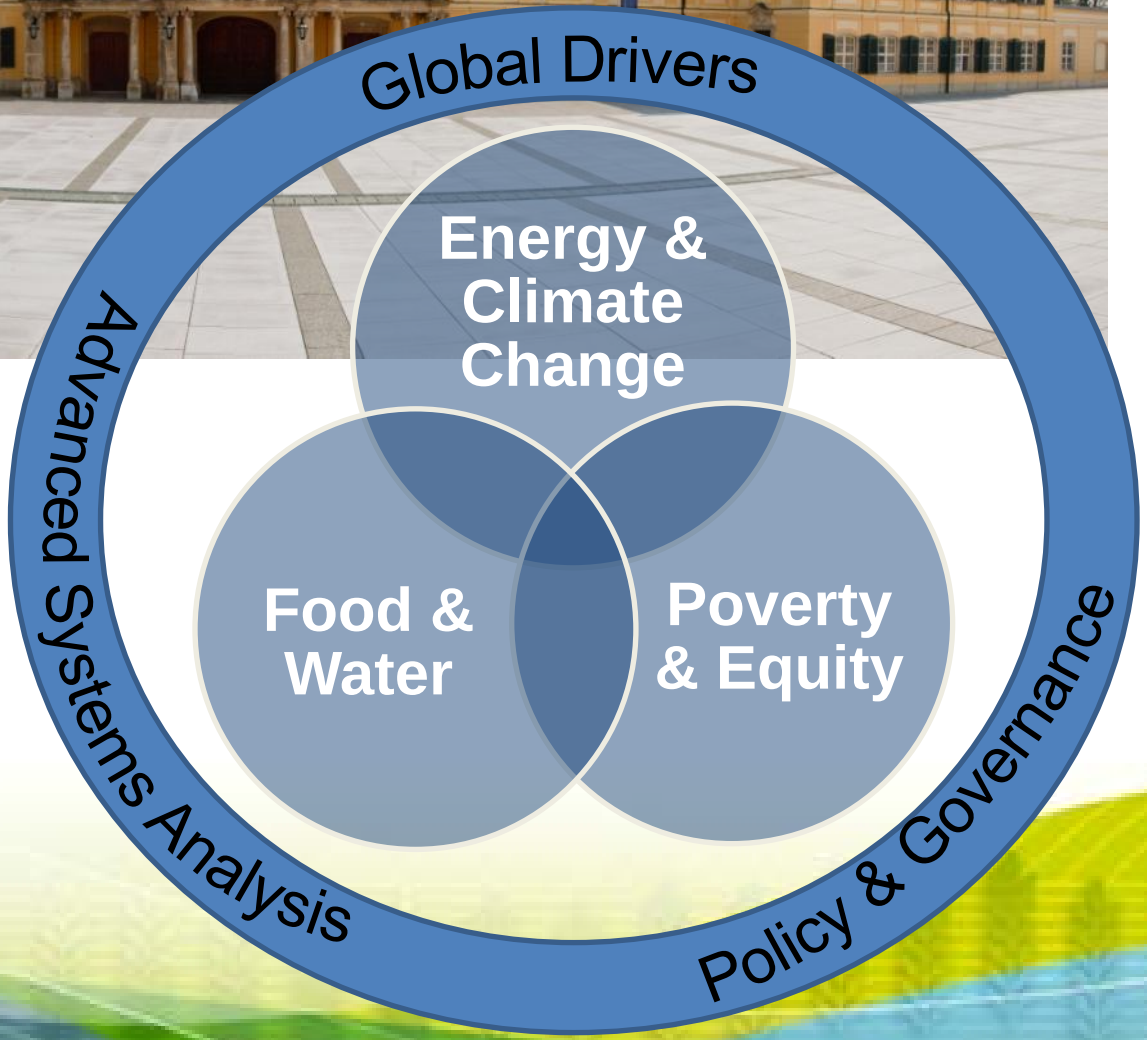
Tier 3

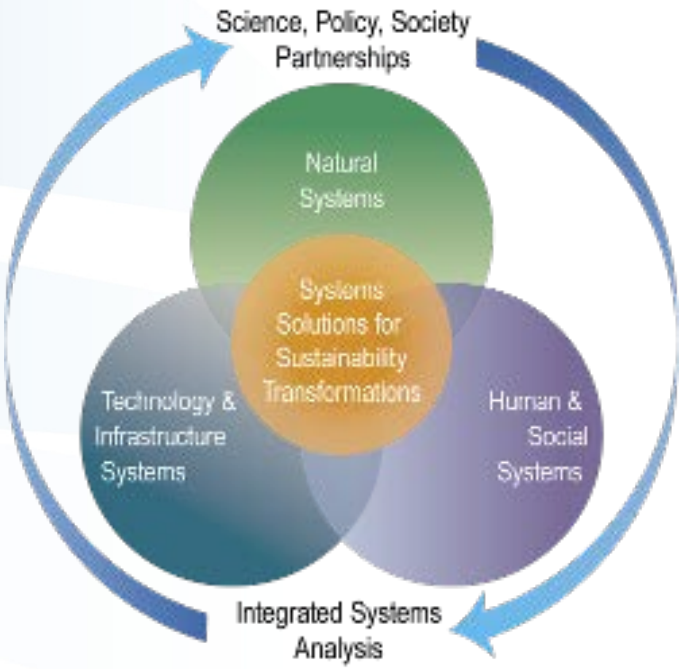
- No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.


Tier I Indicators: Is the indicator accessible?
Goal
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
0
5
10
15
Number of Indicators
No
Yes with calculation
Yes

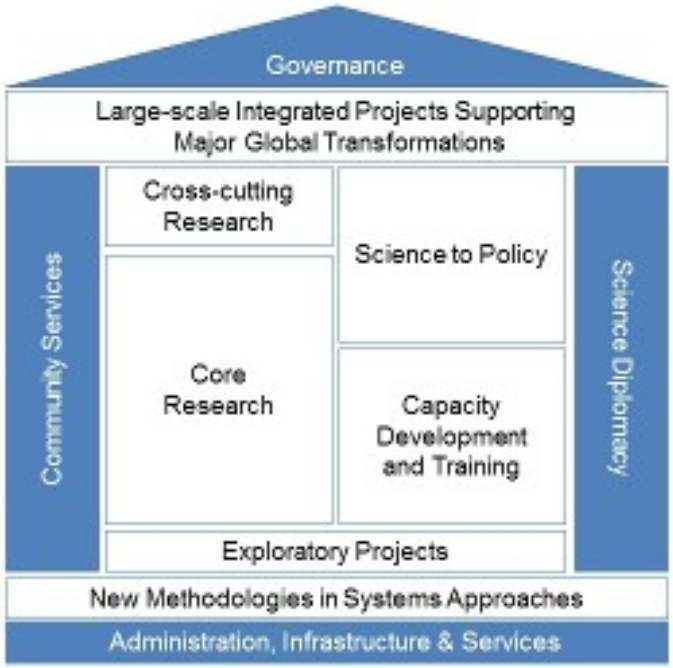


IIASA - RESEARCH FOR A CHANGING WORLD

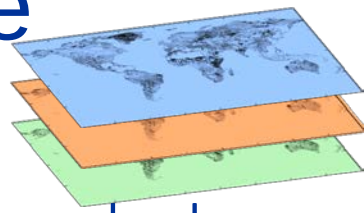



Science, Policy, Society Partnerships
Natural Systems
Systems Solutions for Sustainability Transformations
Technology & Infrastructure Systems
Human & Social Systems
Integrated Systems Analysis


World Population (POP)
Water (WAT)
Energy (ENE)
Ecosystem Services & Management (ESM)
Air Quality & Greenhouse Gases (AIR)
Systems Approaches in Support of Sustainability
Advanced Systems Analysis (ASA)
Transitions to New Technologies (TNT)
Evolution & Ecology (EEP)
Global Health
Risk & Resilience (RISK)

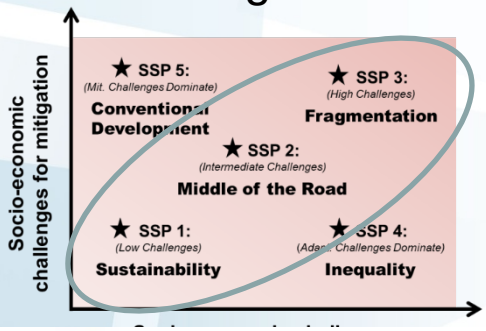

Governance
Large-scale Integrated Projects Supporting Major Global Transformations
Community Services
Cross-cutting Research
Science to Policy
Core Research
Capacity Development and Training
Science Diplomacy
Exploratory Projects
New Methodologies in Systems Approaches
Administration, Infrastructure & Services

Global assessment: identifying the challenges

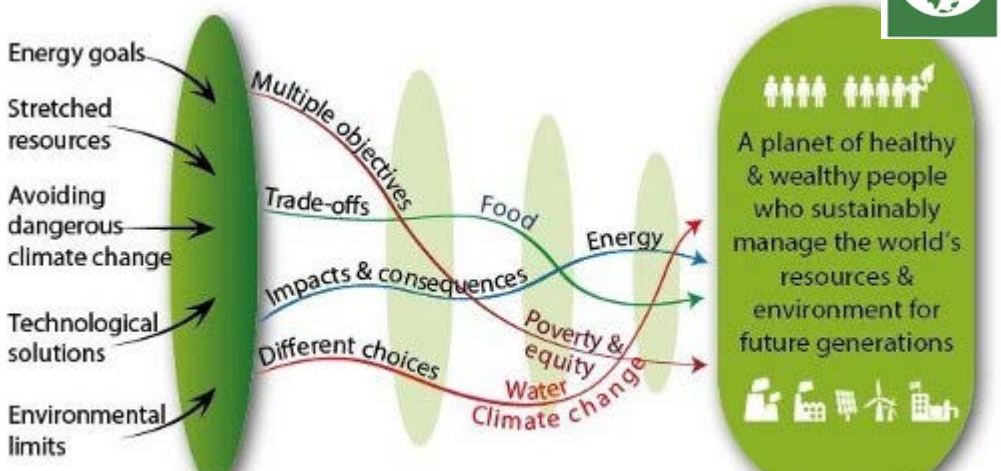


- Development of high resolution global projections for water, energy, land and socioeconomic challenges
- 3 climate change and 3 socioeconomic scenarios used
- Identification of multi-sector exposure and vulnerability hotspots

Paris Agreement

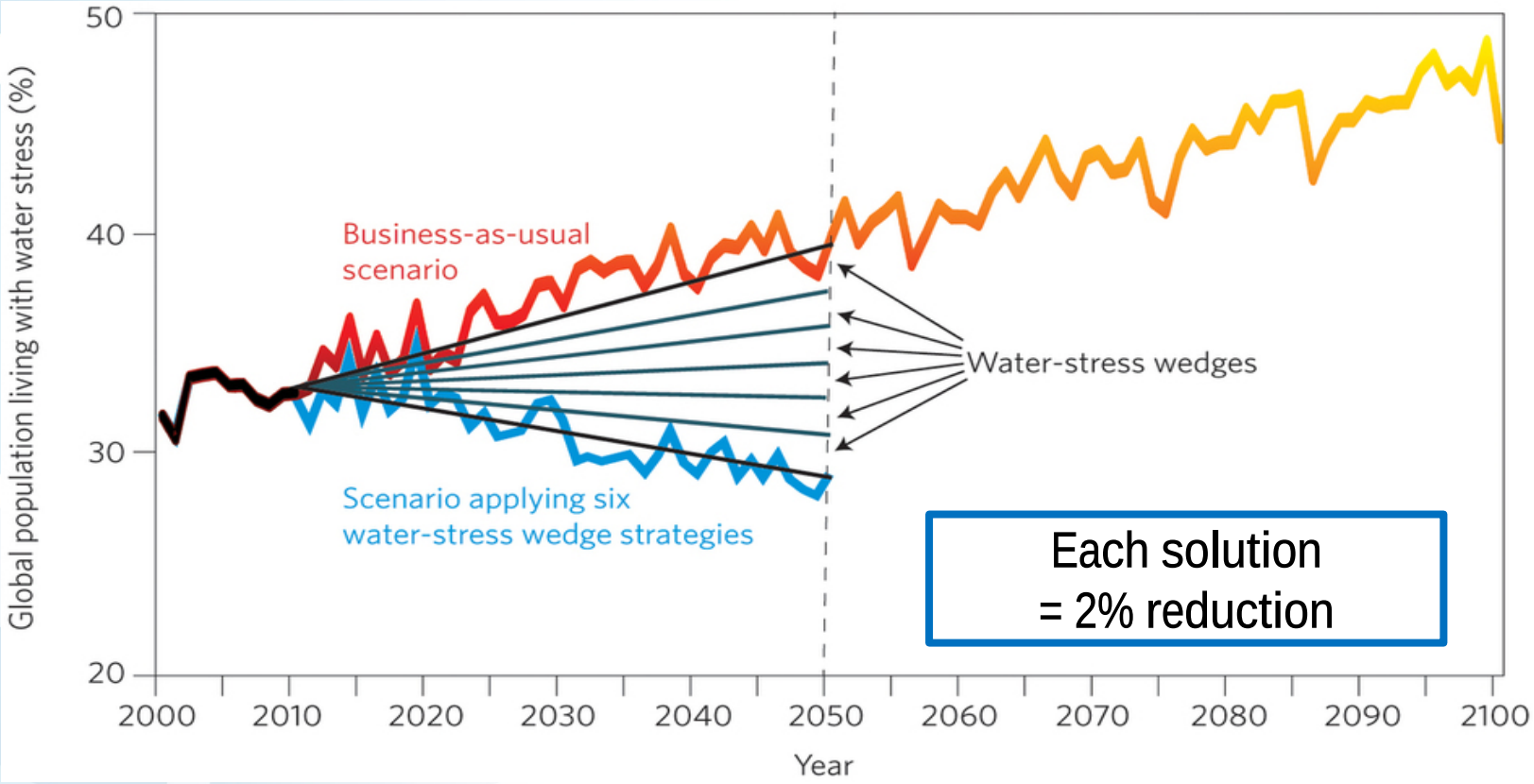


Agenda 2030



Development of scenarios and PATHWAYS needs to be interactive between science, policy, investors and others to establish

Is it possible to reduce water scarcity by 2050?



We present six strategies (planned, not autonomous), or water-stress wedges, that collectively lead to a reduction in the population affected by water stress by 2050.

- **Water productivity – crop per drop**
- **Irrigation efficiency – decrease losses**
- **Water use intensity – industry and domestic**
- **Population growth**
- **Reservoir storage**
- **Desalination**

Soft path vs. Hard path

Source: Wada et al. 2014