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Public Governance and Territorial Development Directorate
Regional Development Policy Committee

Water Governance Initiative

SCOPING NOTE: OECD WATER GOVERNANCE INDICATORS

2-5 November 2015
OECD Conference Centre
2, rue André Pascal, 75016 Paris

Delegates are invited to provide written comments by 20 November 2015.

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SCOPING NOTE: OECD WATER GOVERNANCE INDICATORS

Kindly send your written comments by **20 November 2015** to Aziza.Akhmouch@oecd.org and Oriana.Romano@oecd.org

This note aims to set the scene for the preparation of indicators on water governance under the umbrella and guidance of the Regional Development Policy Committee (RDPC), which can support the implementation of OECD Principles on Water Governance welcomed by OECD Ministers on 4 June 2016.

The note builds on discussions held at the 3rd, 4th and 5th meetings of the OECD Water Governance Initiative (WGI)[1] as well as during the session "Counting what counts: getting indicators right" held at the 7th World Water Forum (15 April 2015, Korea).

The note will be briefly presented at the 6th meeting of the WGI (2-3 November 2015, Paris) and at the 4th meeting of the RDPC (4-5 November 215, Paris).

The Secretariat is thankful to the members of the WGI who provided written comments on earlier versions of this document[2].

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1. For the *Highlights* of WGI meetings see http://www.oecd.org/gov/regional-policy/water-governance-initiative.htm.

2. Prof Stephen Foster (GWP), Ambassador Rende (Turkey), Gerard Payen (UNSGAB), Rob Uijterlinde (Regional Water Authorities), Neil Dhot (EurEau), Ellen Van Lindert (Netherlands), Gari Villa-Landa Sokolova (AEAS), Sophie Richard (AgroParisTech), Ian Barker (Water Policy International Ltd), Josefina Maestu (UN Decade Water Programme), Chris Seijger (Deltares), Dr. Hans Bressers (University of Twente), Arwin van Buuren (Erasmus University Rotterdam), and Teun Bastemeijer (WIN).

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Acronyms

GDP: Gross Domestic Product

ILO: International Labour Office

ODA: Official development assistance

OECD: Organisation for Economic Co-operation and Development

RDPC: Regional Development Policy Committee

SWOT: Strengths, Weaknesses, Opportunities and Threats

UNEP: United Nations Environment Programme

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNICEF: United Nations Children's Fund

WASH: Water Sanitation and Hygiene

WGI: Water Governance Initiate

WHO: World Health Organization

Setting the scene

OECD Principles on Water Governance

After two years of a bottom-up and multi-stakeholder process within the Water Governance Initiative, the OECD Regional Development Policy Committee (RDPC) approved as set of *Principles on Water Governance* that set standards for governments to reap the economic, social and environmental benefits of good[3] water governance through effective, efficient and inclusive design and implementation of water policies. The Principles were then endorsed by the 34 OECD Ministers at the 3-4 June 2015 Ministerial Council Meeting, which gives them a strong political impetus.

Figure 1. OECD Principles on Water Governance

Source: http://www.oecd.org/gov/regional-policy/OECD-Principles-on-Water-Governance-brochure.pdf

The Principles provide a framework to understand whether water governance systems are performing optimally and help to adjust them where necessary. They consider water governance as the range of political, institutional and administrative rules, practices and processes (formal and informal) through which decisions are taken and implemented, stakeholders can articulate their interests and have their concerns considered, and decision-makers are held accountable for water management (OECD, 2015a). The 12 Principles apply to all levels of government, all water management functions, all water uses, and regardless of ownership models. They are clustered around three main dimensions (Figure 1).

- *Effectiveness* of water governance relates to the contribution of governance to define clear sustainable water policy goals and targets at different levels of government, to implement those policy goals, and to meet expected objectives or targets.

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3. The OECD Principles on Water Governance consider that governance is *good* if it can help to solve key water challenges, using a combination of bottom-up and top-down processes while fostering constructive state-society relations. It is *bad* if it generates undue transaction costs and does not respond to place-based needs (OECD, 2015a).

- *Efficiency* of water governance relates to the contribution of governance to maximise the benefits of sustainable water management and welfare at the least cost to society.

- *Trust and Engagement* in water governance relate to the contribution of governance to building public confidence and ensuring inclusiveness of stakeholders through democratic legitimacy and fairness for society at large.

A range of options for using the OECD Principles

The Principles seek to catalyse efforts for making good practices more visible, learning from international experience, and setting reform processes into motion at all levels of government to facilitate change where and when needed. They can also help avoid traps and pitfalls, learning from international experience (OECD 2015a).

Following a case by case and voluntary approach, the Principles can be used in different ways by interested countries and stakeholders as they consider governance as a *means* to an *end* and primarily seek to encourage a *process* that can trigger improvements of the water governance cycle (Figure 2) through monitoring and evaluation to assess the gaps, and/if new instruments are needed to bridge the gaps for better formulation of policies and strategies that can foster greater implementation.

Figure 2. The Water Governance cycle

Source: http://www.oecd.org/gov/regional-policy/OECD-Principles-on-Water-Governance-brochure.pdf
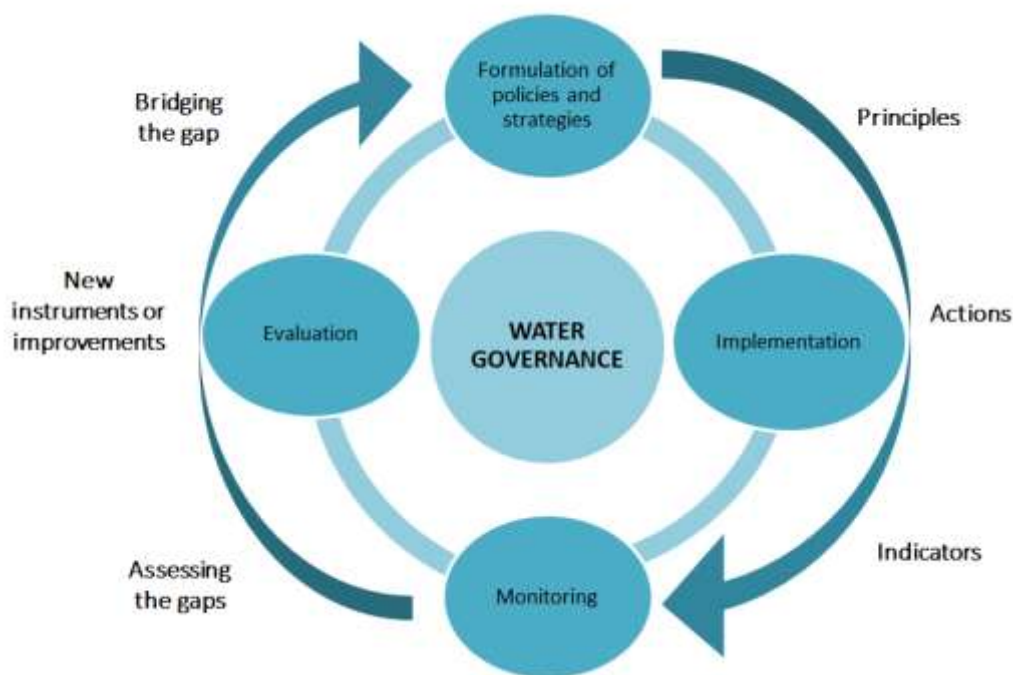
- The Principles can be used as a **tool for policy dialogue** at local, basin and national levels and build consensus across a range of public authorities and stakeholders on the strengths and weaknesses of water governance systems, and the ways forward in particular to better manage too much, too little and too polluted water now and in the future.

- The Principles can be a **vehicle for greater transparency** on the performance of water-related institutions, while enhancing the availability of data and accountability of governments and stakeholders on how they deliver intended outcomes, while shedding light on whether institutional and regulatory arrangements are fit-for-purpose and fit for the future.

- The Principles can be used as a **mechanism for inclusiveness** whereby stakeholders, including at operational level, can discuss and agree on the role they can play to contribute to positive spillovers on water governance, alongside policymakers. This can be achieved through in-depth consultations across public, private and non-profit institutions on the *who* can do *what* to improve water governance as a shared responsibility.

- The 12 Principles provide a reading template to **foster bench-learning and scale-up best practices** across public, private and non-profit institutions, different levels of government, developed and developing countries, and across stakeholder groups. The Water Governance Initiative will develop and host a database/clearing house where such experience can be shared and disseminated for cross-fertilisation and replication where appropriate. There is a strong relationship between *assessing* practices and *learning* about them, as there is between capacity *assessment* and capacity *building*. The Principles provide a framework to identify what works well at local, basin and national level, and also to learn from less successful experiences.

- The Principles can provide a **baseline for measuring** whether we are "fixing the institutions" that ultimately help "fix the pipes" while encouraging the evaluation of water governance against the overall sector's performance given that they advocate for place-based policies and consider that water governance systems (more or less formal, complex, and costly) should be designed according to the challenges they are required to address.

The proposed development of water governance indicators intends to contribute to all above-listed objectives and is conceived as one element of the package needed to implement the 12 Principles. Indeed, while the indicators can be helpful in tracking and measuring relevant water governance variables, OECD experience in assessing water governance systems suggests that only in-depth and comprehensive analyses at local, basin and/or national levels can really provide a compelling evaluation and tailored policy recommendations. Therefore, the ultimate objective is to support bench-learning among cities, basins and countries that face similar types of challenges and want to learn from successful examples, taking account of the diversity of situations across and within countries. Such indicators would be applicable to countries and stakeholders on a voluntary basis, while keeping reporting burden low and at least cost for the recipients.

**Gaps and challenges to measure water governance**

The desk research that led to the *OECD Inventory on Water Governance Indicators and Measurement Frameworks*[4] (OECD 2015 b)suggests that while there have been efforts to measure *specific* parts of water governance (e.g. integrity, river basin management, stakeholder engagement), there is currently **no systemic and "universal" framework** to assess the performance of the overall water governance cycle from the allocation of roles and responsibilities, to the monitoring and evaluation to adjust when and where need be. There is therefore a rationale and added-value to this undertaking, which seeks to bridge this gap while providing a **common frame of reference that can be tailored to local contexts** in order to assess whether water governance systems are performing optimally in terms of managing water-related risks now and in the future. This also requires discussing the role of authorities across levels of government as well as stakeholders (alongside policymakers) in building and using such indicators.

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4. The OECD Inventory can be accessed at http://www.oecd.org/gov/regional-policy/Inventory_Indicators.pdf (last updated on 28 October 2015).

Building up water governance indicators is a highly daunting and challenging task. A series of issues have to be taken into account (Figure 3).

- A number of **technical** issues arise from indicators' construction such as measurement errors, coherence of measurements, biases in expert assessments.

- Water governance is a **complex** concept, which encompasses multiple dimensions not easy to measure, especially given the high degree of fragmentation and messiness of the water sector compared to other natural resources of infrastructure sectors

- The context of water governance is **uncertain**, as policy makers have limited control on factors that might affect the effectiveness of water governance.

- **Continuity** may be challenging if the scarce availability of data hinders the measurement of progress year after year.

- **Completeness** can also be a concern since when focused on specific items of water governance, indicators fail to capture the whole picture.

- **Comparability** is often at stake, as indicators are not necessarily standardized measures applicable to all contexts unconditionally and given the diversity of situations including in terms of data quality across and within countries.

- Last but not least, the difficulty in establishing **causality** between instruments and results should not be underestimated as an established indicator system might not be able to assess whether or not benefits are the results of certain actions implemented to achieve effective water governance.

Figure 3. Challenges in building an indicator system
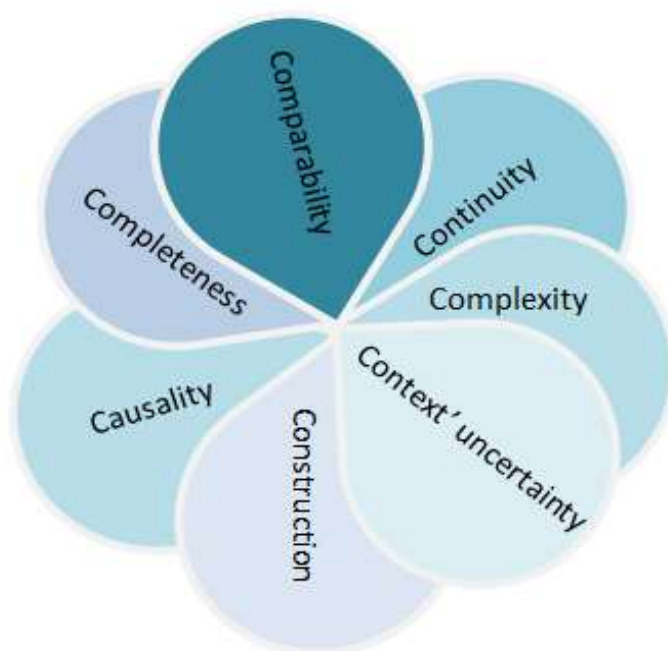
Given that the OECD Principles consider that water governance is a *means* to an *end*, it is important to link the effectiveness, efficiency and inclusiveness of water governance to the overall performance of the water sector. OECD studies on water show that significant improvement has been made in OECD and non-OECD countries in terms of evaluating the *outcomes* of water policies, but much remains to be done to assess the *governance* of water policies. Indeed, a number of indicators spurred by international regulations and standards such as those developed by the EU Water Framework Directive, amongst others, have

enabled the measurement of the ecological status of water bodies for instance, or water quality standards. However, the measurement of the performance of *institutions* and *processes* and their contribution to the overall sector's performance is lagging much behind.

For instance, some dreaded questions include:

- What are the costs (monetary or not) of fragmentation across multiple authorities and grey areas in the *who does what* across the water policy cycle? (Principle 1)

- To what extent does the creation of river basin organisations or water information systems ultimately contributes to better water resources management? (Principles 2 and 5)

- How effective are inter-municipal arrangements in terms of pooling resources and capacity at the relevant scale and what are related agglomeration costs and benefits? (Principles 2, 4, 6)

- What are the distributional impacts of poor policy coherence between water, energy, agriculture, spatial planning and the environment? (Principle 3)

- What is the impact of corruption and malpractices on the overall economic, social and environmental performance? (Principle 9)

- To what extent does stakeholder engagement contribute to better implementation of water policies and greater awareness of water risks? (Principle 10)

- What is the cost of inaction related to the poor management of trade-offs across rural-urban areas, current-future generations, and water users? (Principle 11)

- How to measure whether the level of capacity fit for the intended responsibilities at the local, basin and national levels? (Principe 4)

- Are regulatory arrangements, including dedicated regulatory agencies where they exist, performing at the best level to discharge key functions such as setting tariffs, supervising operators or ensuring compliance? (Principle 7).

A momentum with water-related SDGs

As the new Sustainable Development Goals were adopted at the UN Summit in September 2015, there is now a unique momentum to move forward the measurement agenda, especially given the prominence of water-related goals and governance-related goals in the overall framework (Table 1). Ongoing reflections on the SDG monitoring framework provide a window to contribute to the broader agenda and maximise synergies with current efforts in terms of water-related data collection and analyses. In addition to the new "dedicated" goal on water (n°6), which itself includes governance-related targets (IWRM and local participation), a number of other sustainable development goals include water-related dimensions (e.g. goals on poverty, cities, energy, well-being, etc.) and/or governance-related dimensions (e.g. inclusiveness, gender equality, capacity building, policy coherence, multi-stakeholder partnerships, data, monitoring and accountability)

Table 1. Water-related and governance-related goals and indicators within the 2015 UN SDGs framework

Goals, targets and suggested indicators

Goal 1 End poverty in all its forms everywhere
 	
• Target 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
 	
    o *Suggested indicator: Proportion of population living below national poverty line, disaggregated by sex and age group.*
 	
    o *Indicator 1.2.1.: Proportion of children living in multidimensional poverty. This indicator is expressed as a percentage. Deprivation dimensions and indicators should be based on internationally agreed standards and definitions. Deprivation dimensions include inter alia: nutrition, education, health, housing , water and sanitation (UNICEF)*
 	
• Target 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.
 	
    o *Suggested indicator: Proportion of the population living in households with **access to basic services**.*

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
 	
• Target 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
 	
    o *Suggested indicator: Value of production per labour unit (measured in constant USD), by classes farming/pastoral/forestry enterprise size*
 	
• Target 2.4 By 2030, ensure sustainable foo production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, **drought, flooding** and other disasters and that progressively improve l and soil quality
 	
    o *Suggested indicator: Percentage of agricultural area under sustainable agricultural practices*

Goal 3 Ensure healthy lives and promote well-being for all at all ages
 	
• Target 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, **water-borne diseases** and other communicable diseases.
 	
    o *Suggested indicator: Number of new HIV infections per 1,000 susceptible population (by age, sex, and key populations)*
 	
    o *Suggested indicator: TB incidence per 1,000 persons per year*
 	
    o *Suggested indicator: Malaria incident cases per 1,000 person per year*
 	
    o *Suggested indicator: Estimated number of new hepatitis B infections per 100,000 population in a given year*
 	
• Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, **water** and soil pollution and contamination
 	
    o *Suggested indicator: Population in urban areas exposed to outdoor air pollution levels above WHO guideline values*
 	
    o *Alternative: [Death and disability (disaggregated by sex and age) from indoor and outdoor air quality, water/sanitation, and contaminated sites] (UNEP)*

Table 1. Water-related and governance-related goals and indicators within the 2015 UN SDGs framework *(cont.)*

Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- Target 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
    - *Suggested indicator: Percentage of schools with access to (i) electricity; (ii) Internet for pedagogical purposes (iii)* **basic drinking water and (iv) basic sanitation facilities; and (v) basic handwashing** *facilities (as per the WASH indicator definitions)*
    - *Indicator 4.a.1 Percentage of schools with access to (i) electricity; (ii) drinking water; and (iii) single-sex sanitation facilities (as per the WASH indicator definitions) (UNESCO)*

Goal 5 Achieve gender equality and empower all women and girls

- Target 5.4 Recognize and value unpaid care and domestic work through the provision of **public services**, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.
    - *Suggested indicator: Average daily (24 hours) spent on unpaid domestic and care work, by sex, age and location (for individuals five 5 and above)*
    - *Indicator 5.4.2 Proportion of households within 15 minutes of nearest water source (UNWOMEN)*

Goal 6 Ensure availability and sustainable management of water and sanitation for all

- Target 6.1 By 2030, achieve universal and equitable access to safe and affordable **drinking water** for all.
    - *Suggested indicator: Percentage of population using safely managed drinking water services and Average weekly time spent in* **water** *collection (including waiting time at public supply points), by sex, age, location and income.*
- Target 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.
    - *Suggested indicator: Percentage of population using safely managed* **sanitation services**
- Target 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.
    - *Suggested indicator: Percentage of* **wastewater** *safely treated , disaggregated by economic activity and Percentage of receiving* **water bodies with ambient water quality** *not presenting risk to the environment or human health*
- Target 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.
    - *Suggested indicator: Percentage change in* **water use efficiency** *over time and Percentage of total available* **water resources** *used, taking environmental water requirements into account (Level of Water Stress)*
- Target 6.5 By 2030, implement **integrated water resources management** at all levels, including through transboundary cooperation as appropriate
    - *Suggested indicator: Degree of* **integrated water resources management (IWRM) implementation (0-100)**
- Target 6.6 By 2020, protect and restore **water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes
    - *Suggested indicator: Percentage of change in* **wetlands** *extent over time*
- Target 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
    - *Suggested indicator: Amount of* **water and sanitation related ODA** *that is part of a government coordinated spending plan*
- Target 6.b Support and strengthen the participation of local communities in improving **water and sanitation management**.

Table 1. Water-related and governance-related goals and indicators within the 2015 UN SDGs framework *(cont.)*

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

- Target 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

    o *Suggested indicator: Renewable energy share in the total final energy consumption (%)*

Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

- Target 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including **water-related disasters**, with a focus on protecting the poor and people in vulnerable situations

    o *Suggested indicator: Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people*.

Goal 12 Ensure sustainable consumption and production patterns

- Target 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, **water** and soil in order to minimize their adverse impacts on human health and the environment

    o *Suggested indicator: Number of Parties to international multilateral environmental agreements on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement*

    o *Indicator 12.4.2 Annual average levels of selected contaminants in air, water and soil from industrial sources, energy generation, agriculture, transport and wastewater and waste treatment plants*

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland **freshwater ecosystems** and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

    o *Suggested indicator: Forest area as a percentage of total land area*

- Target 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and **water ecosystems** and control or eradicate the priority species

    o *Suggested indicator: Adoption of national legislation relevant to the prevention or control of invasive alien species*

Table 1. Water-related and governance-related goals and indicators within the 2015 UN SDGs framework *(cont.)*

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Capacity-building

- 17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation

  - *Suggested indicator: The dollar value of financial and technical assistance, including through North-South, South-South, and triangular cooperation, committed to developing countries' designing and implementing a holistic policy mix that aim at sustainable development in three dimensions (including elements such as reducing inequality within a country and governance).*

Policy and institutional coherence

- 17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence

  - *Suggested indicator: Number of countries that have ratified and implemented relevant international instruments including environmental, human rights, and labour instruments*

- 17.14 Enhance policy coherence for sustainable development

  - *Suggested indicator: Numbers of constraints that are embodied in ODA or loan agreements, IIAs. RTAs etc.*

- 17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

  - *Suggested indicator: Indicator 7 from Global Partnership Monitoring Exercise: Mutual accountability among development co-operation actors is strengthened through inclusive reviews*

Multi-stakeholder partnerships

- 17.16 Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries

  - *Suggested indicator: Amount of US$ committed to public-private partnerships*

- 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

  - *Suggested indicator: Proportion of sustainable development indicators with full disaggregation produced at the national level*

Data, monitoring and accountability

- 17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

  - *Suggested indicator: Financial and other resources made available to strengthen the statistical capacity in developing countries*

- 17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

  - *Suggested indicator: Inclusive Wealth Index*

Source: UN General Assembly (2015), Transforming our world: the 2030 Agenda for Sustainable Development. available at http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1&Lang=E ; Compilation of Metadata Received on Suggested Indicators for Global Monitoring of the Sustainable Development Goals and Targets (2 October 2015), List of Indicator Proposals of 11 August 2015 from members and observers of the Inter-agency and Expert group on Sustainable Development Goal Indicators, available at: http://unstats.un.org/sdgs/files/List%20of%20Indicator%20Proposals%2011-8-2015.pdf.

10 guiding questions for water governance indicator systems

Indicators to measure what?

Indicators can follow a *static* and/or *dynamic* approach depending whether the aim is to assess whether framework conditions for good water governance are in place or measure progress of actions taken to improve water governance. In this particular case, the answer is both:

- For water governance, measuring whether or not certain conditions are in place is the first crucial step to identify what can hinder effective water policy design and implementation (e.g. roles and responsibilities are unclear or overlapping), what is missing (e.g. lack or insufficient coordination across policies) and what can be improved (e.g. tools for stakeholders engagement). This "**static assessment**" can be carried out in the short term.

- In the medium term, a "**dynamic assessment**" can consist in **monitoring progress.** In the case of water management, this can be carried out through a variety of indicators that are straightforward, accessible and easy to understand (e.g. indicators on water quality showing improvements over time). The difficulty lays "behind the scene", in defining the determinants of such a change and whether there is a causality link with policies (e.g. water quality improvement). On the other hand, changes in water governance might consist in re-allocation of roles and responsibilities; setting up of capacity building instruments; introduction of innovative tools for stakeholders engagement. A range of examples exist for measuring framework conditions in place, progress and effectiveness of policies and instruments.[5] These changes tend to be slower than changes in water management, and can be equivocally accounted.

- Evidence that countries are doing *more (or differently)* in water governance does not necessarily entail that they are doing *better.* For example a re-allocation of roles and responsibilities, while aiming at deliver better services or protect against water-related risks, may lead to increased institutional fragmentation. Additional trainings might not be effective in improving capacity or, stakeholder engagement may be relevant only to certain categories and not contributing to decision-making. In order to assess whether changes correspond to "progress", **impact evaluation** on whether particular objectives have been achieved needs to be carried out on a case-by-case and often requires a **middle or long term timeframe**.

Proposal to the WGI/RDPC: Measuring what needs to be improved is essential to provide a tangible, consensual and objective base that can trigger collective action. This is why it is proposed to develop a set of practical, simple and agreed-upon indicators that can adapt to local circumstances and help strengthen water governance in assessing i) framework conditions; ii) water governance performance and iii) impact of water governance

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5. For example, for the first category the *Water Management Transparency Index* (Transparency International) assesses the extent to which a water agency makes relevant information available on the website; the *Asia Water Governance Index* compares water governance in Asia, in terms of water laws, policies and administration; and a number of databases (e.g. FAO Water Lex, Water Lex Legal database), maps and report cards (e.g. Basin Report Cards, WWF) also provide information on framework conditions. Regarding the second category for example, *UN-Water GLAAS Global Analysis and Assessment of Sanitation and Drinking-Water* (WHO) assesses progress towards the Millennium development Goals, The *Pacific IWRM Project* (GEF) monitors progress towards Integrated Water Resources Management (IWRM). For the third category, the *Water Security Index* (ADB) indicates how the legislative and regulatory framework is more or less conducive to water security, also linking to non-sector specific indicators on governance

- The first endeavour should seek to assess whether **conditions are in place** across levels of government but also across public, private and non-profit sectors to implement the 12 OECD Principles in practice. This "static assessment" could be prioritised in the short term, in the form of a traffic light system for example, to support the use of the Principles as a tool for dialogue among policymakers and stakeholders.

- The second endeavour should seek to measure **progress** in water governance, through more precise evaluation of the distance from the baseline situation. This undertaking could be a more medium-term approach, building on consensus among stakeholders in a given city, basin or country on the metrics to use, the ideal scenario to achieve, and required efforts to do so.

- Finally, a third stage (long term) will attempt to **evaluate impacts** of the water governance system on the overall sector (i.e. if "governance" objectives have been achieved, and if "management" objectives have been achieved and what is the link with governance). This stage approach underlines the multidimensional applicability of water governance indicators and may require more time. (Figure 4).

Figure 4. Proposed steps of the evaluation framework
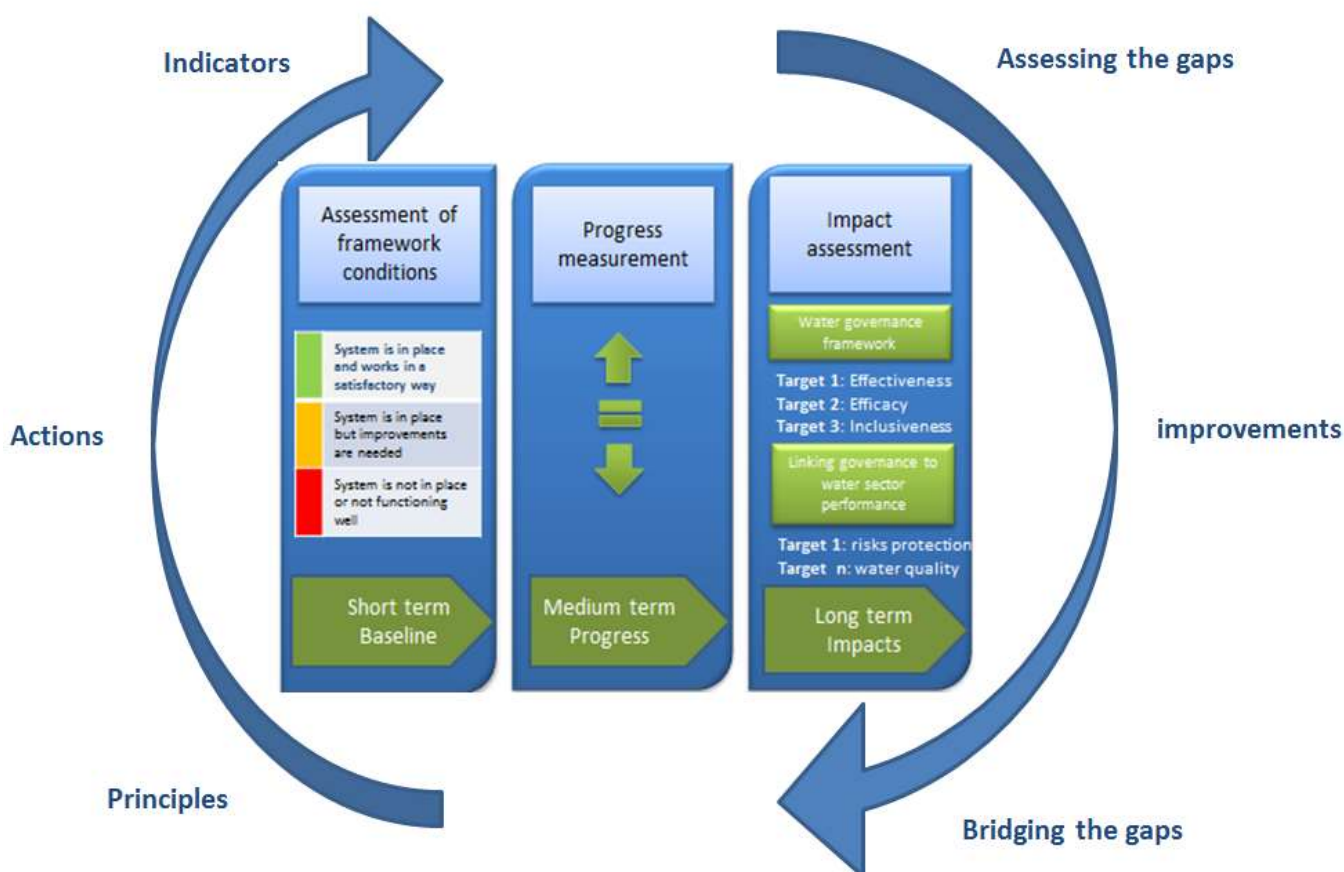
Which type of indicators?

Indicators can take the form of measurements of an objective to be met, resources to be mobilised or effects to be obtained, a gauge of quality or a context variable (European Commission, 2006). Depending on *what* they measure and *when*, indicators can be distinguished in i) input and process indicators to measure how water governance is implemented; or ii) output, outcome and impact indicators when looking at the results in the short, medium and long term. More specifically:

- **input indicators**, measure the presence of legislation and policy instruments or track human/financial resources (e.g. resources for water functions). In particular, when used to codify details of the constitutional, legal, or regulatory environment, as well as the existence or absence of specific agencies, such as river basin commissions or water agencies, such indicators are de jure (rules-based) ones;

- **process indicators** monitor actions contributing to the achievement of outcomes (e.g. public consultation in planning and budgeting);**output indicators** monitor results in terms of quality or quantity of tangible assets (e.g. number of wastewater treatment plants built, volume of water produced, indicators on water quality and water risks);

- **outcome indicators** measure short-medium term results out of such outputs (e.g. % of people with access to water services). When the outcomes indicators measure the result from the application of the rules, they are *de facto* indicators. For example, a rules-based indicator of corruption might measure whether countries have legislation prohibiting corruption or have an anticorruption agency. An outcome-based measure could assess whether the laws are enforced or the anticorruption agency is undermined by political interference (Kaufmann and Kray, 2008).

- **impact indicators** measure usually long-term results (e.g. improved health).

As explained in the setting the scene section of this scoping note, the intended objective of the development of indicators on water governance is two-fold : measure whether the framework conditions are in place to actually achieve the standards set by the 12 OECD Principles; and ii) assess the performance of water-related institutions and governance arrangements vis-à-vis intended outcomes. A range of experiences exist in terms of using such indicators[6], and choice of the *type* of indicators is crucial to meet expected objectives:

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6. For example, the UN- *HABITAT project on "urban water and sanitation governance index"* identified a number of **process indicators** to measure governance conditions for adequate water and sanitation delivery such as, for example: percentage of departments establishing programme monitoring and percentage of local governments using Citizen Score Cards. Among the **impact indicators** of this project are: percentage of households with metered water connections and percentage of departments with improved Citizen Score Card results. The *Equity index in water and sanitation* (Luh et al. 2013) is composed by structural (e.g. existing laws that recognize the need for disadvantaged groups to be treated differently), **process** (e.g. estimated percentage of the drinking water budget dedicated for the poor) and **outcome** index (e.g. rate of decrease of the proportion of the population using an unimproved water source compared to the rate of decrease of the proportion of the population using a non-piped improved source). The *Governance Benchmarking Project* (Svendsen et al. 2010) uses **input indicators** for governance capacity (e.g. policy, legal, and organizational framework) and **outcome indicators** for measuring performance (e.g. results from the decisions taken within the governance framework).

Figure 5. Types of indicators and their aims
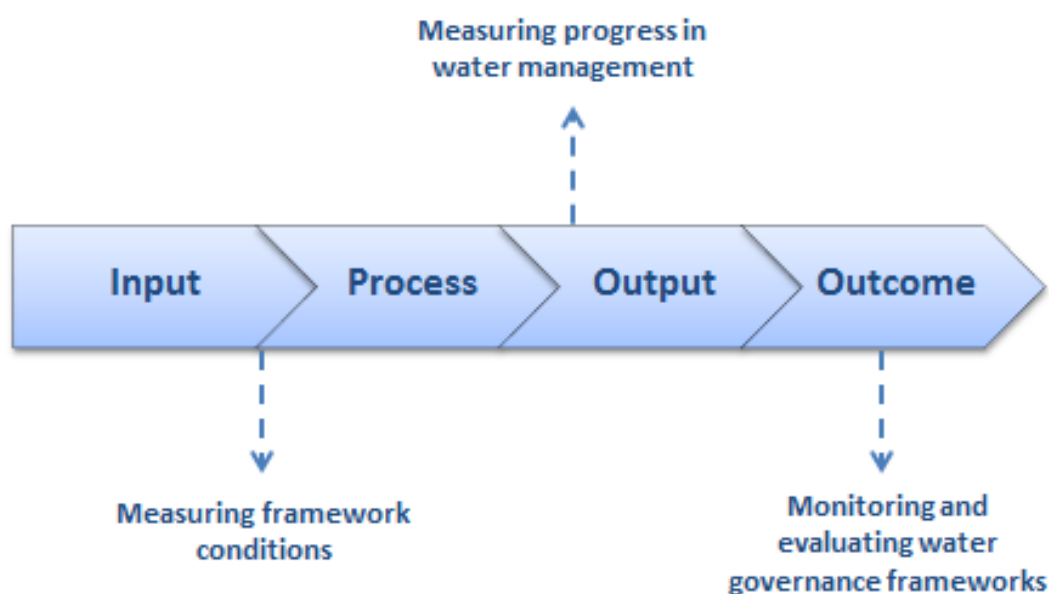
Proposal to the WGI/RDPC: It is suggested to focus on *input* indicators to determine whether **framework conditions** are in place and *process* indicators to measure the **actions in place** to reach certain objectives (e.g. vertical, horizontal coordination, stakeholder engagement). It is also proposed to use to the extent possible, *outcome* indicators in order to **measure progress** in water management (operational indicators) and ultimately be employed to assess the linkage between changes in output indicators over time and governance frameworks (governance indicators). Finally , *output* indicators would help to link the **evaluation of governance** systems to the overall sector performance. It is also proposed that the framework of indicators takes into consideration the diversity of situations and needs by water management function (drinking water, wastewater treatment, sewage collection, drainage, flood protection, drought management, water quality etc.).

Whose views?

The condition sine qua non for measurements to take place is the availability of data. However indicators should be **objective-driven** rather than data-driven in order to avoid the risk of obtaining data-rich, but information-poor indicators. Some countries have open data systems at central level regarding water governance aspects (e.g. Netherlands, Australia, United Kingdom, United States, France, Italy, Canada). In some cases, the challenge is not necessary to define new indicators, but adapt those which already exist, coordinating across agencies and minimizing the administrative costs of producing data. There is a wide range of data producers when it comes to measuring several aspects of water governance:

- civil society, regulators and supreme audit Institutions possess data that can be helpful in measuring transparency, stakeholder engagement and regulatory frameworks;

- national governments can shed light on the framework conditions, regional and local authorities can help setting indicators for accounting the above gaps at sub-national level;

- river basin organizations can provide inputs on water resource management, while service providers have the information at hand on drinking water supply and sanitation;

- international organisations provide a data concerning their member states, as in the case of information on legal frameworks or the implementation of economic instruments.

Depending on the objective, indicators are **perception-based**, when based on the view of experts or various types of stakeholders, or **fact-based**, when built on available data and information. Perceptions and fact-based indicators can be either quantitative and/or qualitative and can be collected through *questionnaires, interviews and meetings* (Figure 4): The establishment of a sound quality control for data in different countries is ultimately necessary for both factual and perception-based indicators.

- **Factual data** can be widely used to obtain input, process and output indicators, but they are sometimes insufficient and not always meaningful. For example input indicators using the factual data concerning the presence of environmental laws, say little about the actual implementation of the laws or governance gaps.

- **Perception-based data** stemming from interviews with distinguished and independent experts can be complementary, as common practice for building governance indicators shows.[7] The subjectivity of respondents can be reduced through: i) clear indications on how to respond to the questionnaire in order to avoid misinterpretation; ii) validation of scores by other experts review and feedback; peer-review teams; iii) different statistical analysis for fact and perception-based data (e.g. perception-based data might be counted in the final score/ composite indicator, but represent a qualitative complement to obtain further information on certain aspects)

- **Figure 6. Factual and perception based indicators**
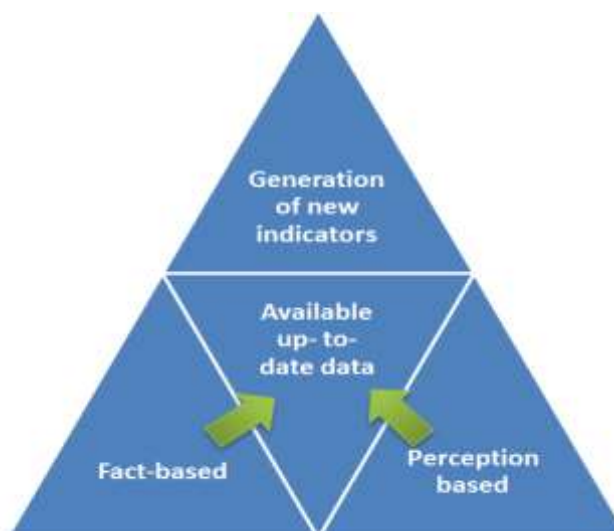
Proposal to the WGI/RDPC: It is suggested to develop water governance indicators that combine both *factual data* (available in countries' reviews, reports, national databases, international organisation's databases, other institutions, such as regulators, supreme courts) and *perception-based data* to be collected through questionnaires/ interviews (experts judgement, stakeholders' surveys etc.). Once indicators are

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7. For example, "**The institutional Economics of Water: A cross-country analysis of institutions and performance**" (Saleth, Dinar 2010) provides a cross-country analysis of institutional arrangements and initiatives in the water sector, drawing from the results of a perception-based international survey of water experts. The **UN-Water GLASS report** requires, amongst others, a self-evaluation from countries, which is based on a subjective judgment. In the case of the **Environmental Democracy Index** (WRI 2015) for each participating country, one environmental lawyer provides indicator scores.

agreed upon, the first step of the analysis will be to look for available and up-to date data through desk research within each interested/volunteering city, basin or country, as data production and collection should come at the least cost for society. The second step will consist in filling the gaps through multi-stakeholder policy dialogues and consultations with policymakers and practitioners to build consensus, bearing in mind that indicators should be simple, affordable and manageable for governments and stakeholders.

At which scale?

Water is managed at multiple scales and coordination among these scales is essential. As in most countries, water is essentially managed locally, sub-national data is essential to reveal regional disparities in access, quality and performance. In decentralised contexts and federal countries data can be available at sub-national level and be also more relevant than the central level; river basin organisations in certain countries possess information relevant both at national and sub-national level. In the case of international regulations (e.g. EU Water Framework Directive), indicators at supranational level influence national practices. Indicators can therefore be built at different scale: international, macro-regional, national, state/provincial, basin, sub-basin and local level.[8]

The question of scale raises important issues when it comes to measurement. First, the **dispersion of data** across levels of government and agencies. Second, the **availability** and the **capacity to collect data** vary across and within countries; therefore coordination is needed for obtaining a compelling picture of the water governance system. Third, different water functions can be "measured" at **different scales**: water policies are effectively implemented when policy responses are set at the scale that better fit with functions and place-based needs (e.g. for service delivery: critical mass achievement, economy of scale; for resources management: hydrological logics to address linkages between water demand and water supply). Fourth, the mismatch between administrative zones and hydrological boundaries generates governance gaps, thus measuring the quality of the governance put in place by river basin organisations is of crucial importance in order to ensure water is managed at the relevant scale and through a coordinated approach.

Proposal to the WGI/RDPC: It is suggested to that the indicators to be developed reflect the multi-scale dynamics of water governance. When appropriate, it is suggested to collect data and information from sources at different scales. Issues of treatment (aggregation, disaggregation), comparability and accuracy of data will be subject to extensive discussions among Members throughout the project.

Which process?

OECD best practice suggest that indicators should be developed in a collaborative effort across levels of government, and in consultation with the broad range of stakeholders not only to build consensus, but also to minimise the risk of "too safe" indicators or "too poorly" measurable ones. In practice, those responsible for implementing the activities might be tempted to construct "easy-to-get" indicators (mainly

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8. Some indicators can **benchmark countries** of a given region in terms of governance conditions and progress towards specific objectives (e.g. *Asia Water Governance Index; MENA-USAID Regional Water Governance Benchmarking Project*). At national and sub-national level, indicators can **investigate on gaps** and help setting priorities, as in the case of the *OECD Multi-level Governance Framework* and related proxies/indicators. At basin level, the NARBO's *Performance Benchmarking of River Basin Organizations* is based on the **assessment of five critical performance areas** (mission, stakeholders, learning and growth, internal business processes and financing measured) over a set of 14 indicators. INBO's Performance Indicators for African Basin Organizations (2010) consists in a **self-evaluation** of organizations on their operation and achievement of their missions. Selected US basins have been monitored by a set of **key performance indicators** (Hooper B. 2006), including coordinated decision-making, accountability, training, information and research, among others.

data-driven) and "easy-to-meet" targets. However, when indicators are built by those who are not in charge of monitoring them, they might be too ambitious and less realistic. Input-based and bottom-up processes are important to take stock of what exists and ensure collective action, where appropriate, in the production, collection, use and dissemination of data to guide public action.

The development of indicators for measuring the implementation of the OECD Water Governance Principles is a complex task, requiring time and major efforts in streamlining effective measurements, while reducing the burden of countries in collecting and providing data. This is the reason why such indicators are expected to have certain characteristics: be practical (in the production and collection), relevant (according to the purpose of the measurement) and real (considering resources and time constraints) (Figure 5).

Figure 7. Expected characteristics of indicators[9]
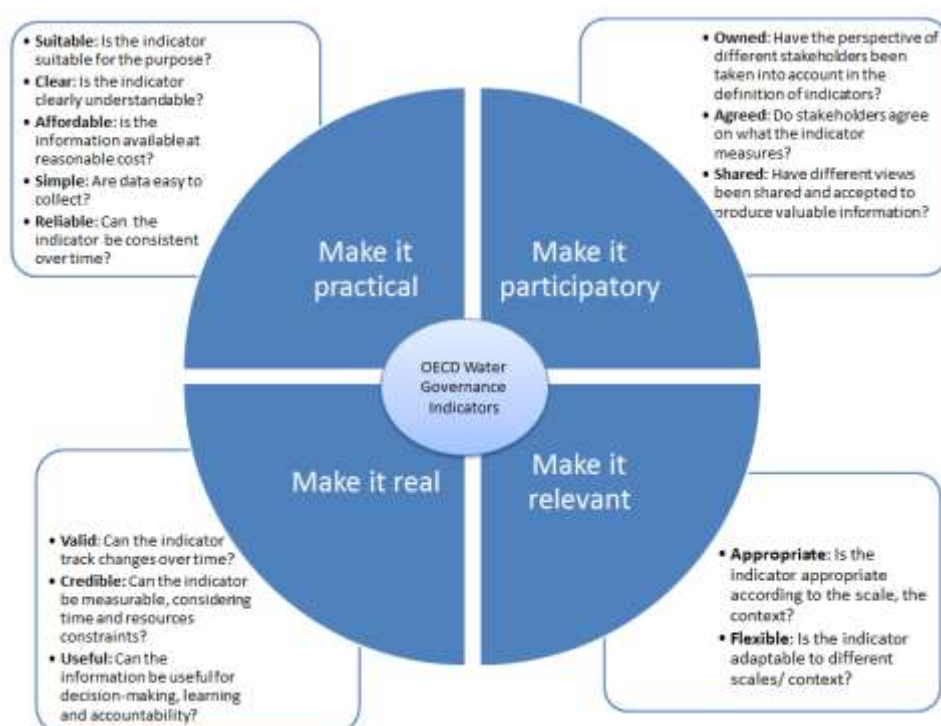
Proposal to the WGI/RDPC: It is suggested to draw from the range of expertise and knowledge available across public, private and non-profit sectors represented within the WGI to foster discussions at *technical* level and experience-sharing between experts and practitioners, under the oversight of the RDPC.

- The **knowledge and practical experience** with indicator of service providers, basin organisations, scientists, donors, civil society, business and other players can help scale up best practice based on what has proven successful, but also anticipate pitfalls to avoid, by pilot-testing indicators.

- The input-based and bottom-up process underpinning the **consultations** throughout the project is an instrumental way to learn from international experience and to enhance communication

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9. Based on the set of criteria for the selection of indicators identified in: SMART (Specific, Measurable, Achievable, Relevant and Time-bound) and RACER (Relevant, Accepted, Credible, Easy, Robust).

between the scientists who often develop indicators and the policy-makers who should use them to take informed decisions and guide public action.

- In practice a **dedicated working group** of the WGI will be devoted to this undertaking over 2016-2018.10 In particular, the working group will i) contribute to developing the **draft systemic** framework of water governance indicators, including a taxonomy of impact, outcome and output indicators, based on policy, practical and/or academic experience; ii) help to **pilot-test** the tentative indicators at different levels of government and in different contexts, to provide "reality-checks" on data applicability/ availability; and iii) provide a **list of self-assessment questions** for policymakers and stakeholders to assess their own systems and for different authorities to map their respective roles in terms of improving water governance.

Figure 8. The WGI structure and purposes (2016-2018)
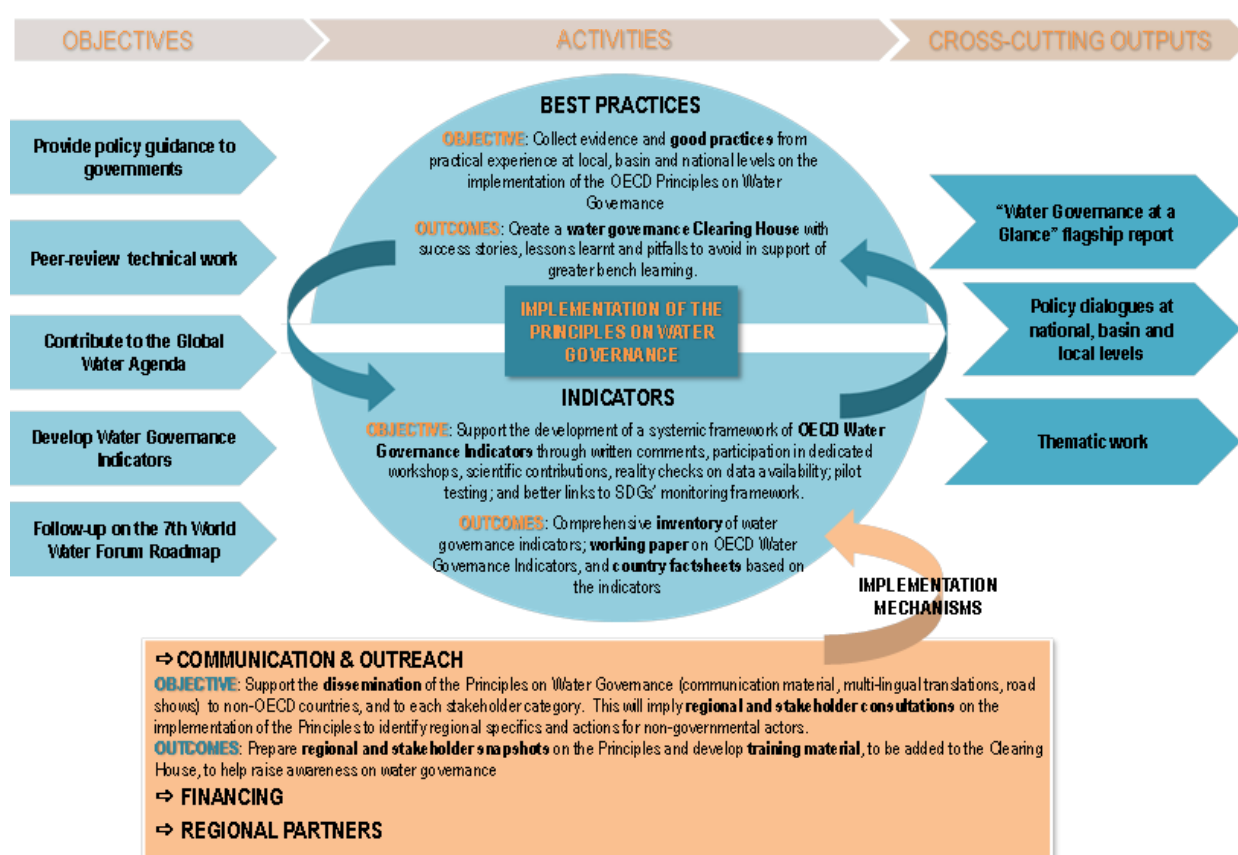
Source: Strategic Paper, OECD Water Governance Initiative: Achievements and Ways forward, October 2015

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10. As explained in the strategic paper of the WGI (2016-2018) « The working group will support the development of water governance indicators to help governments and stakeholders understand whether governance systems are well-performing and delivering expected outcomes, and if not, what needs to be fixed. The indicators will provide key metrics and data needed to foster peer-to-peer dialogue on water governance. The project will be based on iterative discussions with members of the WGI and overseen by the RDPC, in cooperation with relevant subsidiary bodies".

Who are the beneficiaries?

In the water sector, several categories of beneficiaries can be distinguished when it comes to measuring aspects of water governance; e.g.

- **governments** at different scales, from community level to national or supranational, to guide their public action;

- **river basin organisations** and their constituencies, to shed light on their results;

- **service providers**, whether public or private, to improve their performance;

- **donor agencies** to guide their strategic investments and technical assistance;

- **NGOs** on ecosystems at large and various water uses, as well as citizens' well-being;

- **civil society**, which can trigger greater transparency through accessible and relevant data and information that can enhance participation water-related decisions

- **emerging actors**: beyond the "traditional" actors, other stakeholders have gained increasing influence in the decision-making and implementation processes related to water. Some of which are long-term institutional investors, companies using water in their supply chain and property developers (OECD 2015c)

Figure 9. Ultimate beneficiaries of indicators
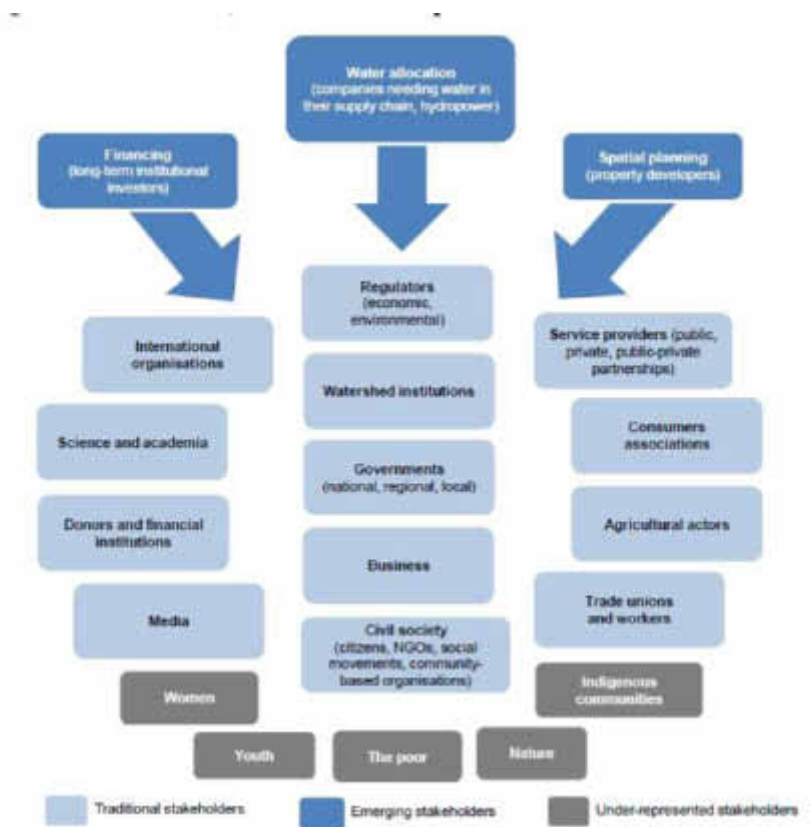
Source: OECD (2015), Stakeholder Engagement for Inclusive Water Governance, OECD Publishing Paris.

Proposal to the WGI/RDPC: The OECD Principles acknowledge that water governance is a **shared responsibility** across levels of government and the broader range of stakeholders from public, private and non-profit sectors who have a role to play alongside policymakers. Therefore, the water governance indicators should help **all the above-listed recipients**, mainstream good governance into their daily practices and individually and collectively contribute to better governance as emphasised in the Daegu Declaration on OECD Principles signed during the 7th World Water Forum.[11]

How will indicators be used?

Indicators should inform the state of play of interested cities, basins and countries regarding the implementation of OECD Principles on Water Governance, and favour bench-learning and capacity building following a voluntary approach. Indicators on water governance can be used to meet a wide range of objectives, and a range of options can help doing so:[12]

- **raise awareness** and protect from current and future water-related risks, indicating whether governance systems are properly equipped to deal with them;

- build the case for greater attention to water governance in of the **overall strategic agenda** (e.g. shedding light on poor or good performance to set policy priorities) and link water to broader economic, social and environmental priorities;

- foster **better spending** (e.g. provide trustable information to donors for targeted investments) and help foster value for money through more efficient governance;

- enhance **cost-saving** (e.g. improving governance can generate economic benefits, reduce bureaucratic burdens and result in efficiency gains.) through economies of scale and scope where appropriate;

- support **financial sustainability** (e.g. more predictable and stable environment to mobilise/disperse needed resources) while helping catalyse needed investments and disperse funding with parsimony and transparency.

- enhance **inclusiveness** through building consensus on actions needed to bridge gaps in water governance.

Proposal to the WGI/RDPC: it is proposed to develop indicators that will be used to measure progress over time and assist the above-listed recipients in improving the water policy cycle (e.g. through datasets, best practices, clusters of countries facing similar types of challenges) and to provide them with an indication of the role they can play to contribute to positive spillovers on water governance, be they practitioners, civil society or policymakers. In order to do that, in addition to the regional consultations in specific countries, cities, basins of different continents, a number of stakeholder consultations can be carried out to figure the role, for each constituency, in making the Principles happen on the ground (e.g.

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11. See the declaration and signatories at http://www.oecd.org/gov/regional-policy/world-water-forum-7.htm.

12. For instance, in the case of utilities, the *IWA Performance Indicator System* for water services is used for internal performance assessment and metric benchmarking, while the *Turin Index* (Turin School of Local Regulation) can allow local operators to identify vulnerable groups of users facing a higher risk of delaying payments. Indicators can be used by governments for prioritising funding and investments and identifying areas for research, such as in the case of the *Canadian Water Sustainability Index* (Policy Research Initiative); they can also be used by companies to prioritize actions; by investors to leverage financial interest to improve water management (*Aqueduct Water Risk Framework*, WRI); by stakeholders to assess their governments' performance in ensuring adequate access to resources, such as in the case of the *Access initiative,* and by users to track progress in protecting the public's rights to information, participation, and justice in environmental decision-making, as in the case of the *Environmental Democracy Index* (WRI).

utilities, regulatory agencies, river basin organisations, donor agencies, local authorities etc.). Peer-to-peer dialogue and multi-stakeholder approaches are important not only in designing indicator frameworks, but also in engaging from different spheres to use them with a view to foster transparency and accountability at all levels. At some point of the process, a SWOT analysis of the indicators according to different policy needs and data situations may be worthwhile.

Figure 10.The use of indicators and outcomes
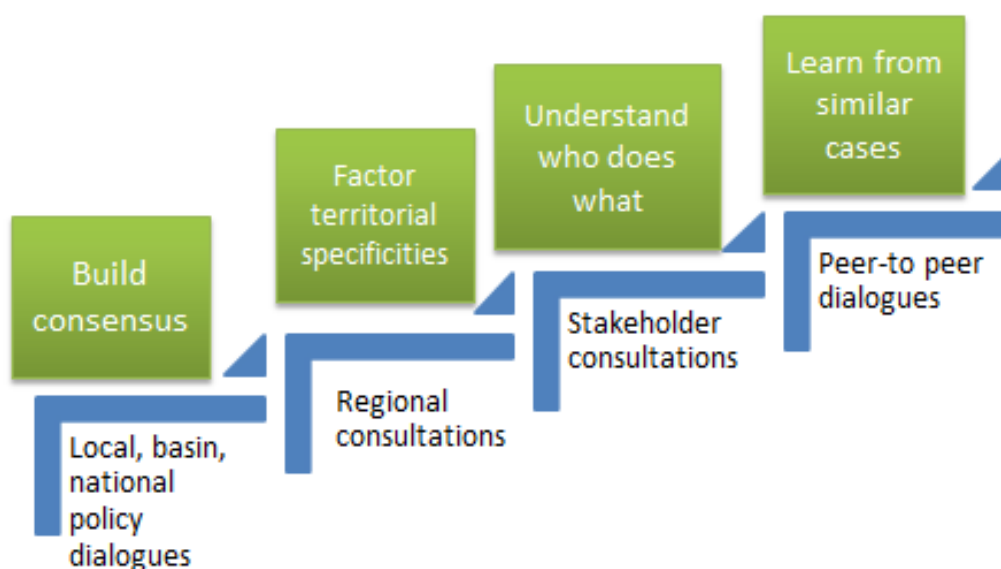
Who will collect and produce the data?

A range of international organisations are currently collecting data and monitoring the progress in the water sector[13], especially in the current context of developing a monitoring framework for the SDGs following their adoption on 25 September 2015. The OECD Inventory of Water Governance Indicators and Measurement Frameworks lists no less than 60 of these initiatives, carried out at different levels and across public, private and non-profit sectors. The overall ambition of the project for developing indicators on water governance is to **build on what exists and fill in the gaps to suggest a systemic framework** of indicators that encompasses the 12 dimensions of water governance covered by the OECD Principles. This endeavour therefore requires synergetic and collaborative efforts between policymakers, practitioners and other stakeholders to make the most of the best practices identified and concentrate further efforts in bridging identified gaps.

There is an essential role for national statistical offices, but also for other data producers at sub-national levels. A range of public agencies and ministries can contribute to the provision and monitoring of data, as the Ministry of Finance and Ministry of Environment, in the case of the OECD Database on instruments used for environmental policy.

Proposal to the WGI/RDPC: it is proposed to follow a voluntary approach with interested cities, basins and countries willing to pilot-test or use the to-be-developed indicators. There is a range of options

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13. For instance, UN-Water Taskforce for IWRM or the UN WWAP Working Group on Gender-Disaggregated Indicators. Partnerships between research centre and international organisations are in place for the *Basin Report Cards* (e.g. between WWF-Colombia and the University of Maryland), etc.

for collecting and producing data in a way that is cost-effective, place-based, and outcome-oriented and it is expected that the ultimate recipients use the indicators for their own purposes considering the wide range of underlying objectives. A specific contribution of the WGI could consist in providing a bridge to identify data producers at local, basin and national levels, following a voluntary approach to exchange experience among their peers facing similar types of challenges to seek common solutions. The **RDPC** could carry out such an effort in consultation with the WGI with a view to provide a snapshot every three years about the state of play of water governance at different levels, taking into account the particular needs of interested countries in terms of capacity building, technical assistance or financial support to provide such data and information if they volunteer.

How to ensure replicability?

When aiming at capturing the evolution in time of specific variables, indicators should be monitored throughout the years. However, variables originally measured cannot always be replicable in *time*, as they might not be relevant or useful in tracking governance dimensions. This has been the case of indicators for the *UN World Water Development Reports* (WWDRs), which decreased from 160 indicators in the 1st edition to 58 indicators in the 3rd one, either because there was no systematic process for updating the data used for most of the indicators presented in the first report or because they were identified as not useful by the source agency[14].

Another concern is the replicability in *space*. Usually, replicating indicators originally developed for certain context and scales requires some adaptation: for example, the *Water Management Transparency index* is not a universal set of indicators and requires adaptation to the local context, which is a task of an expert local technical team. Araral and Yu (2013) tested and replicated their water governance framework and methodology to compare countries overtime, finding significant variations in water laws, policies and administration among high, middle and low income countries.

Proposal to the WGI/RDPC: it is proposed that the OECD Water governance indicators will be pilot-tested at different levels of government and in different contexts, to provide "reality-checks" on data applicability, availability and replicability. This will also help track redundancy, incompleteness and inconsistency and signal possible difficulties in specific countries due to their current information infrastructure or "maturity" of water governance arrangements. Umbrella organisations and stakeholders represented in the WGI could provide useful bridges to their constituencies, based on a voluntary approach, to carry out such pilot tests where appropriate.

How to disclose results?

The results from the indicators should be available in a cost-effective and user-friendly format both online and in printing. The information could be shared through **interactive platforms and databases** organised **around the 12 OECD Principles** in synergy with the "best practice" pillar of the WGI activities over 2016-2018. They should feature score-cards, city/basin/country profiles and other formats that would enable to foster experience-sharing among recipients facing the same challenges and looking for common solutions.

It is expected that such an information base, to be collected through a voluntary approach, would help **scale-up good practice**, enhance **self-assessment approaches**, and foster policy dialogue across levels of governments and between public, private and non-profit players with a view to improve the formulation of objectives and enhance the effectiveness of strategies. This implies making data available to different

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14. http://webworld.unesco.org/water/wwap/wwdr/indicators/.

categories of authorities and stakeholders, such as governments, science and academia, regulators, donor agencies, basin organisations, service providers and civil society at large.

Figure 11 Timeline for information disclosure
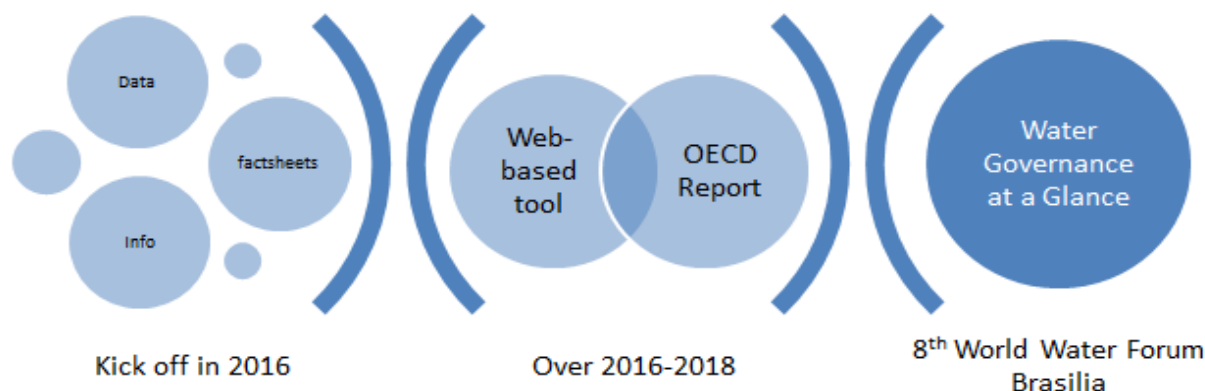
Proposal to the WGI/RDPC: It is proposed to reflect the results in the **OECD Clearing House/Database** on Water Governance to be set up over 2016-2018, as well as in a dedicated **publication on "Water Governance at a Glance"** to be launched at the 8th World Water Forum in Brasilia (March 2018). The clearing house/database would consist in a web-based instrument, supported by open data, visualisation tools and consultation platforms as well as city, basin or country "factsheets" or "snapshots" Further technical discussion is needed as to whether to use disaggregated or aggregated indicators (e.g. one for each principle) and find the best way to easily communicate the results while avoiding missing relevant information due to the methodology chosen. There are advantages and drawbacks of both approaches: the first dilutes information, the second is more difficult to communicate (OECD 2014a). To the extent possible, parallels with the current structure of water-related and governance-related goals and targets of the SDG framework should be made to facilitate the broader uptake of such indicators by other institutions.

Figure 12. Tentative calendar for the WGI working group on indicators (2016-2018)
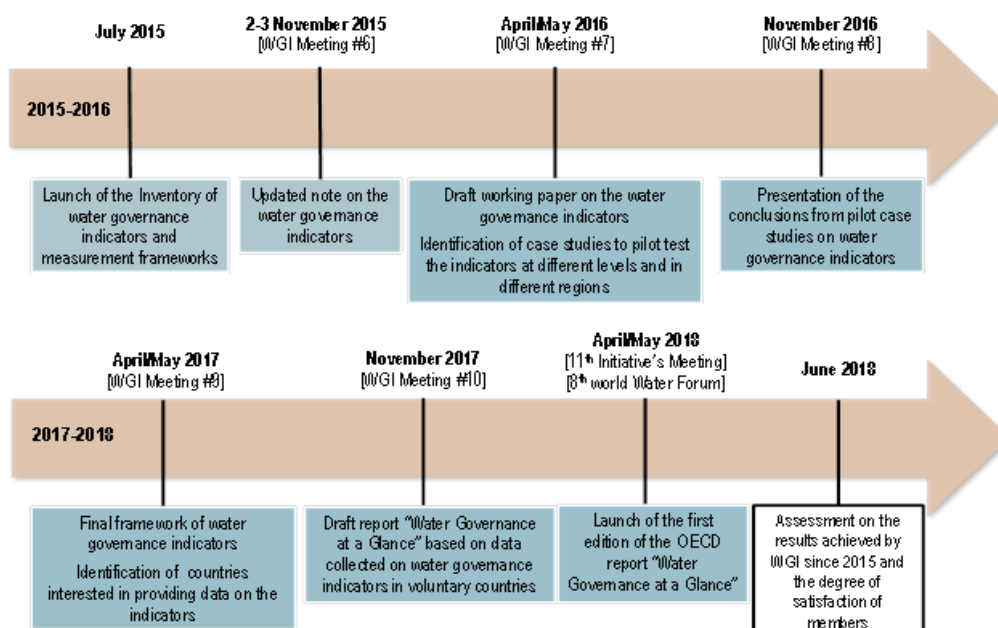
Source: Strategic Paper, OECD Water Governance Initiative: Achievements and Ways forward, October 2015

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