9th World Water Forum

Actions submission format

Action Group 3A "Implement IWRM at all levels"

**ACTION 1: Building a cross-sectoral governance without boundaries at all levels**

Overall Objective: cross sectoral governance without boundaries at all levels, with presentation of handbooks/guidebooks, shared lessons and methodologies about decision process, implementation, good practices and innovative methodology of IWRM

Overall purpose and expected results: involvement and dissemination, water positive impact and multi benefits of IWRM

Overall SDGs Alignment: 3, 5, **6,** 8,9,10,11, 12, 13, 14, 15, 16, 17

Coherence with other Priorities: so far good coherence, at margin with some other priorities

| **PROJECTS INCLUDED** ***In order of priority and level of impact*** | **OBJECTIVE** | **DESCRIPTION AND PURPOSE** | **EXPECTED RESULTS** | **SDGs ALIGNMENT** | **IMPLEMENTATION** | **PARTICIPANTS AND STAKEHOLDERS REPRESENTATIVENESS** | **REPLICABILITY IN OTHER CONTEXTS** | **REGIONAL REPRESENTATIVENESS** | **POTENTIAL OVERLAPPING OR COHERENCE WITH OTHER AGs** |
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| **Project 1 –** Improving IWRM implementation through capacity building of city basins dialogue, how to reconnect cities to their watershed – showcase of new **guidebook with several case studies around the world** [IOWater/IWA, INBO,….] | Present a handbook on "basin connected to cities" produced by IWA and INBO | This guidebook aims to be used as a decision-making tool for cities to implement IWRM and to strengthen their connection to and integration within their river basins. Through practical case studies of exemplary actions, testimonies and recommendations, this guide will illustrate how cities and "urban actors" can and should play an active role in protecting their watersheds. The purpose of this document will be to inform the actors and to feed their reflection to improve practices, based on "success stories" and counter-examples from different contexts. Particular attention will be paid to the issue of megacities, whose characteristics amplify the risks associated with water.<br>14 case studies have already been selected from all continents. | Throughout 2021, the recommendations of the guide are disseminated and a greater number of cities engage in Integrated Water Resources Management (IWRM) to reconnect with their basins and protect their water source. | SDGs 6, 11, 13, 15 | Through a guidebook based on 14 case studies selected from all continents | NGOs, local stakeholders of IWRM in watersheds and cities | World Water Forum stakeholders are of course welcome to share their own case studies to illustrate some challenges and solutions to achieve basin-connected cities! | Worldwide selected case studies | / none at local level, city level |
| **Project 2 - Processes and Benefits of selecting the appropriate method to take decision among all stakeholders** [Gret DGPRE] | Contribute to making visible and understandable the existence of different modalities for collective decision making | The choice of the collective decision-making method should be the first step in the construction of governance in order to avoid subsequently calling into question the decisions already taken. Indeed, the choice of decision-making method determines the | the actors discovered that there were several ways to make decisions collectively ;<br>they questioned their usual decision-making process ;<br>they discussed the nuances between the different systems (advantages and disadvantages) | SDG 6 – target 6.5 : By 2030, implement integrated water resources management at all levels, including through | Concretely, we submit five methods to discuss (there are many others): consensus, first-past-the-post voting (with one or two rounds), approval voting and score voting. Through a single example, the participants test the | Any stakeholder can take part into this project.<br>This process has already been tested with different water users in rural areas in Senegal but the idea here is either to propose it as an animation for a session or simply to show | The process has the advantage of being replicable in other contexts. | The process took place in the Niaye area, in Senegal. However, it may be implemented anywhere | There may be overlapping or coherence (depending on the projects chosen by the other group) with :<br>4.B Implement the principles of good water governance, including participatory decision-making |

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| | | future balance of power between the stakeholders and represents a strategic challenge.<br>Taking into account principle n°2 of the Dublin agreements on IWRM ("Water development and management should be based on a participatory approach, involving users, planners, and policy-makers at all levels"), it seems necessary to specify how the stakeholders can decide together.<br>As it is impossible, in a democratic functioning, to answer in the place of the stakeholders themselves, we propose to present a procedure allowing the stakeholders to explore several options and to choose the one which seems the most appropriate to them. | | transboundary cooperation as appropriate<br><br>Obviously, it also contributes to the SDG 16 – target 16.7 : Ensure responsive, inclusive, participatory and representative decision-making at all levels | different methods. Then, after a comparative analysis of the results and debate, the participants decide which method they wish to use (with a method chosen by the organizer). | the results previously obtained.<br>Moreover, as the objective is to show the sensitivity of different decision-making systems, it would be interesting to test with stakeholders defending divergent interests. | | | |
| **Project 3 – Lessons from Corporate Water Stewardship**<br><br>[France National Committee IHP UNESCO, French Water Partnership, + ***invited to join during the consulting process WWF, CEO Water Mandate, other corporates***] | Sharing lessons learned from implementation of Water Stewardship and Landscape approach | Water Stewardship aims at using water in a way that it is socially equitable, environmentally sustainable and economical beneficial. This is achieved through a stakeholder inclusive process that involves site and basin-based actions, and bankable and non-bankable actions.<br>Important of sharing lessons learned based on implementation the approach, on various issues such as leverage actions, capacity building, multi stakeholder's platform, empowerment of people/actors within the watershed, and so on | Water positive impact and multi benefits on water, environment and social and economy | SDG6, + SDGs 1, 3, 5, 8, 11, 12, 13, 15 | Implemented by various Corporates in various countries namely under high level of water stress and risks<br>In addition, implementation of landscape approach with public private partners and funding | Various stakeholders from small holders, farmers, industries, communities, district authorities in charge of environment, water<br><br>France National Committee IHP UNESCO, French Water Partnership, *+ invited to join during the consulting process WWF, CEO Water Mandate, other corporates*] | Fully replicable, as it is already the case | International representativeness, with some examples in Asia – Indonesia, Africa – South Africa, Latin America Mexico, …. | At margin but probably complementary to 4E Increase water efficiency and sustainable management through science, technology, innovation and education |
| **Project 4 – Good practices and innovative approaches** to implement IWMR at large basin scale, including public participation [ADASA] | To showcase good practices for developing participative IWRM at the basin scale | To present a case of impartial development of a watershed management plan that included the necessary conversation among all parties to achieve good water governance in all levels | Takeaways can be summarized and highlighted for the construction of the "guidelines for building a cross-sectoral governance without boundaries at all levels" | SDGs Alignment: SDG 6 plus SDGs: 5, 10, 11, 12, 16, 17 | The implementation will be through the adoption of the highlighted takeaways from the case study in the construction of the "guidelines for building a cross-sectoral governance without boundaries at all levels" | water users, local communities, academia, industry, government, NGOs | Replicable to any river basin organization willing to develop its watershed management plan | Limited to the river basin geography | At the margin, in function of considered projects and actions in those following WG:<br>2E, 3F, 4B, 4D |

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| **Project 5 – Nonrenewable and transboundary groundwater within IWRM**: insights and perspectives [American Water Resources Association AWRA] | This session will address the following questions: 1) Is IWRM inherently anathema to groundwater? 2) Is the use of nonrenewable/fossil groundwater subsumed by IWRM? 3) Should, and how can, IWRM be modified to accommodate groundwater development and depletion? 4) Can transboundary aquifers be fully integrated into the IWRM concept? If not, what must change? 5) How can we educate the water community on the above? 6) Are there good examples of all of the above? | Groundwater is by far the largest liquid freshwater reservoir. Its importance has been magnified by the desiccation of surface freshwater resources via global warming and its accelerated global depletion. Groundwater quality must also be addressed; considering only groundwater quantity is to deal incompletely with the resource. IWRM is now about 25 years old. Despite global acceptance and implementation, it does not often adequately deal with groundwater, especially non-renewable ('fossil') and transboundary groundwater. IWRM's focus is on river basins, which may be underlain by multiple aquifers or be connected by a single large aquifer underlying several river basins. The river basin approach often does not adequately consider groundwater's properties and dynamic response, which are quite different from those of surface water. | 1) Real-world global examples of IWRM-groundwater compatibility/incompatibility - 9/2021 2) Causes for (1) and pursuit of remedies - 9/2021 & ongoing 3) Formation of a working group to address/develop aforementioned remedies - 5/2021 4) Secure funding for operations/activities of (3) - 4/2022 5) Specification of a path forward to reconcile differences between IWRM approach and non-renewable / transboundary groundwater governance/management - 9/2021 & ongoing | SDG's 6, 2, 5, 7, 11, 13, 14, 15 and 17 | See expected results, implementation of a dedicated working group during 2021, in order to present results at the WWF dedicated session | Various stakeholders from academic, NGOs, administrations, corporates | Concern worldwide issues of aquifer integrated water resource management | Concern worldwide issues of aquifer integrated water resource management | At the margin of 3B, in function of considered projects; focus on IWRM and not on the transboundary cooperation process to foster peace and prevent conflicts; probably complementary |
| **Project 6 – Innovative methodology to align State role on IWRM and SDGs** in Brazil's Federal District with Adasa and IDB [ADASA] | To present an ongoing initiative between ADASA and IDB that links IWRM to SDG achievement | To develop an intersectoral matrix of actors and competencies, through a Public Policies-IWRM-SDGs-Nexus dialogue table, to support decision makers | The project will strengthen and support the role of ADASA and other State institutions related to IWRM in their regulation and decision-making processes, by incorporating social, economic and environmental factors | SDGs Alignment: SDG 6 plus SDGs: 4, 8, 9, 11, 16, 17 | The implementation will be through the development of qualitative and quantitative models, in a participative manner, to support decision makers | BID, ADASA, local State actors | Replicable to other water authorities within their jurisdictions | Limited to the jurisdiction area of the water authority | At the margin, in function of considered projects and actions in those following WG: 1A, 2A, 2B, 2C, 2D, 3F, 4C, 4D, 4E |

**ACTION 2: Building capacity for the design and implementation of development plans for IWRM**

Overall Objective: addressing water uses efficiency through best practices/lessons learnt on IWRM, decision making methodologies and water allocation in the planning process, sharing water resources between territories and users, implementing NBS to reduce watershed erosion,

Overall purpose and expected results: offer methodology on innovative dynamic and planification,

Overall SDGs Alignment: 1,2,3, 6, 8, 11, 12, 13, ,15, 17

Coherence with other Priorities: good coherence with 2D, 4E, 3B, 4C, 1A, 1D namely

| **PROJECTS INCLUDED** ***In order of priority and level of impact*** | **OBJECTIVE** | **DESCRIPTION AND PURPOSE** | **EXPECTED RESULTS** | **SDGs ALIGNMENT** | **IMPLEMENTATION** | **PARTICIPANTS AND STAKEHOLDERS REPRESENTATIVENESS** | **REPLICABILITY IN OTHER CONTEXTS** | **REGIONAL REPRESENTATIVENESS** | **POTENTIAL OVERLAPPING OR COHERENCE WITH OTHER AGs** |
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| **Project 1 - Virtual arena board game to take decision, to regulate groundwater allocation with stakeholders – explain rules, show how it works and benefits** [CIRAD] | Test a playful methodology to concretely design the management of a Common, the groundwater resource used by irrigators | In several areas, population growth, extractive activities and irrigated agriculture, with a background of climate change, lead to the depletion of natural resources on which people depend for their livelihood.<br>To address this issue, public policies are often limited to big ideas at the national level or even general principles that we then do not know how to implement. IWRM is no exception.<br>In order to help decision-makers (whether it is a collective of individuals deciding on their own practices, or authorities deciding on regulation), to dialogue and identify concrete strategies from general action of irrigation water management, we developed a virtual arena (the game board) corresponding to a possible reality, allowing them to freely imagine actions to be implemented. Indeed, by playing they manage to perceive the scarcity of the resource, the influence that each one can have on it and collectively they can find a way out of the tragedy of the Commons.<br>The game board integrates in an original way a representation of the water table containing real water that each player will have to draw from to irrigate their selected crops. The game approach allows them to explore and understand what type of local and/or global regulations they can put in place locally to influence the state of the resource | The proposed methodology offers an innovative dynamic, combining awareness raising and planification, which would deserve to be tested, at different scales and in different places. The urgency and seriousness of the groundwater situation on a global scale call for us to think outside the box and imagine new ways of action. Here is one of them.<br>Hopefully, after the presentation and/or experimentation of this new game at the World Water Forum, several structures will try to test this new tool in their context in order to develop a better governance of water resources. | SDG 6 – target 6.5 : As groundwater is a natural resource, this work also contributes to the SDG 12.<br>Thus, it also contributes to the SDG 13 – target 13.3 | For the World Water Forum, we propose either or both to :<br>- Organise beforehand game sessions to play with different stakeholders (eventually with several boards simultaneously to collectively explore changes of scale in the rules of governance) and present the results during the session.<br>- Present a short video (10') of the experiment conducted in the Niayes area with testimonies and analyse of the results | This serious game was tested with irrigators in the Niayes area in Senegal and then with agents of the ministerial department of water resources management and planning (DGPRE).<br>Thus, although the players play as irrigators, this game is open to anyone likely to impact groundwater through their behaviours or decisions. Therefore, beyond the irrigators, it may also involve authorities or even other types of users. | This game can easily be replicated in all parts of the world, especially where aquifers are overexploited. | The results obtained in the Niayes concerning the strategies to be deployed (rules chosen by the players) are context-specific and cannot be generalized a priori. Hence the importance of replicating this work elsewhere. On the other hand, the awareness raised through this serious game is undoubtedly a result that is independent of geographical location. | There may be overlapping or coherence (depending on the projects chosen by the other groups) with :<br>2.D., and 4.E |
| **Project 2 - Tailor-made methodologies of water sharing – equity, facilitation at local scale of the watershed** [Gret DGPRE] | Question the sharing of water resources between territories and between users | "Governing is choosing", which is also true for the governance of water resources. In a context of overexploitation of (ground)water resources and regarding our objective of sustainable development, it is necessary to share water resources and to clarify how to | The methodology that we propose makes it possible to address a subject that is still too missed, that of equity, which must be dealt with in all its complexity. It is also developed with the sine qua non condition of sustainability, inherent in the SDOs. | SDG 6 – target 6.5 : By 2030, implement integrated water resources management at all levels, | We propose for the World Water Forum to present the facilitation methodology that we have developed and already tested.<br>Through conceptual and practical exercises drawn from the local context, | This process has been tested with local stakeholders in the Niayes area in Senegal. Still, it would be very relevant to use it with decision makers (those who have the legal authority to choose the method of | We propose a path of thought to guide the reflection and of course, at the end, the decision.<br>Given the simplicity of the method, it's easily replicable. | This methodology is not conditioned by regional geography. The results will differ according to the context but the process may be the same everywhere. | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 3B and 4C |

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| | | do it. This therefore implies an agreement on a method of sharing.<br>It may happen that locally or occasionally people affected by a water shortage agree on a sharing of the resource. Otherwise, either the situation degenerates into conflict or the sharing is established according to the balance of power in place, without consensus. In order to avoid this, it seems relevant for local stakeholders or authorities to define beforehand a sharing method.<br>In our project, we therefore proposed to local stakeholders to question this subject which is far from evident. Indeed, it calls first for a broader pondering on the notion of equity. Moreover, it implies starting from the local resource that is sustainably available and not from the needs of users or territories, thus reversing the usual dialectic. | If it is applied in an arena of decision-makers, it can therefore lead to the establishment of a sharing method that will subsequently make it possible to avoid conflicts and preserve the resource.<br>By presenting it at the World Water Forum, we can pave the way for a constructive debate on the need to share water resources and offer a path to those who recognize it and would like to test the methodology in their context. | including through transboundary cooperation as appropriate<br><br>As more and more aquifers over the world are facing depletion, this work also contributes to the SDG 12 – target 12.2 :<br>By 2030, achieve the sustainable management and efficient use of natural resources | we guide the participants to propose a method of sharing that seemed "right" to them (more concrete than a simple prioritization of water uses) but also to begin a reflection on the development of their territory. | allocating resources in their country or area). | | | |
| **Project 3 - Launch of a Guide-book based on simplified access to the IWRM principles and benefits, towards creation of local and higher-level cooperation**<br>[ collective work on voluntarily by group members of Action 3A group] [Resilient G.AP.] | Guide-book based on simplified access to the IWRM principles and benefits, towards creation of local and higher-level cooperation | IWRM is not anymore, a young concept. Water is recognized as a key resource and driver of social and economic development as well as a basic for the environment. Water issues are connected to other natural resources as well, related to soil with food production, to ground related to energy, …Holistic approach of IWRM is accepted and declined at various levels. New recent concepts emerged such as Nature Based Solutions, Water Stewardship, and other are under construction.<br>Review papers, handbook, reports regarding IWRM linked to SDGs or previous UN Water decades do exist. Last Handbook of IWRM published by Global Water Partnership and INBOH (2009) concerns river basins and is made of 100 pages.<br>Purpose is to present a guidebook, highlighting some | Interest and large share of a 2020 numerical brief guidebook with a succession of one pager about principles, cases studies illustrations and integrating new concepts. A guidebook that will not include more than 25-50 pages. With some back up material, link. This numerical material should be available through various platform, WWF 2022, but also from various NGOs, ….<br>Large audience, exchange, and possibly see how it can be updated regularly and/or nourished from various stakeholders. | 1,2,3, 6, 8, 11, 12, 13, ,15, 17 | Implementation through a working group, in 2021 and that may be continue afterwards | Various stakeholders concerned by IWRM at all levels | Fully replicable with some regional additional chapters or specificities | Worldwide representativity | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 3C, 2E, 3B, … |

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| | | key principles/benefits of local and higher level of cooperation, in 2020, based on some diverse case studies around the world, under different climate settings, global changes, …. | | | | | | | |
| **Project 4 - ICIReWaRD Fench Unesco Center and Capacity building on IWRM** [France National Committee IHP Unesco, French Water Partnership, among those Montpellier University and other French scientific organisms, namely IRD] | To present ICIREWARD New Centre on water with UNESCO label in Montpellier University, in France | ICIReWaRD stands for International center for interdisciplinary research on water system dynamics. It has been created on 15th October 2020.<br>ICIReWaRD's main goal, is to focus on the intersection between water and society within complex "socio-hydrosystems", and the fundamental dynamics underpinning them.<br>Purpose is to present how socio hydrosystems and IWRM is tackled from research, innovation to education and capacity building, with some highlights on Africa case studies through long term partnership and network | To strengthen "capacity building in higher education"<br>To contribute towards making in-service training available to engineers and PhD holders working in the Global South in order to develop their skills.<br>To contribute towards developing the professional skills (communicating with a non scientific audience, etc.) students in the Global North and South<br>To make training programmes in the Global North and South more exciting by having participants work on finding solutions to scientific challenges at Hackathon-style or other types of events, depending on the level of training. | SDG 6 plus SDG's 1,2,3,11,13, 14,15 | Launching of the ICIReWaRD center in October 2020, so definitively implemented | Concerned persons are students (international, France, South Mediterranea, Africa, …), Academic university partners,<br>Various stakeholders referring to socio hydrosystems projects and training<br>Montpellier University/ French Water Partnership/France National Committee IHP UNESCO | Such Center based on sciences and education allowing networking,<br>capacity building is replicable for sure | International but with focus on Mediterranean area and South, Africa | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 4.E |
| **Project 5 – Implementing IWRM through Nature Based Solution's on watershed level-showcase** of solutions and impact on water resources in Asia region ien particulier. (and other part of the world) [IUCN] | The main objective of the project is to reduce erosion and implement a holistic IWRM through Natural based solutions. In addition, the project is one of the efforts to highlight the Water Scarcity in west Asia region focusing on renewable water resources below 140 m3/per capita annually, far below the global threshold of severe water scarcity, the countries of the region are one of the most water-scarce countries in the world. | The proposed Project from Jordan where IUCN has used natural based solutions to implement IWRM on Zeglab dam watershed by protecting the infrastructure and enhancing water resources within the project area (Zeglab watershed) taking into consideration the environmental side and the socio-economic of the local residents as a core for designing the proposed solutions.<br>In order to best tailor, the intervention to the local context which compatible with nature-based solutions based IWRM , all soil erosion prevention activities will serve the dual purpose of providing much-needed income to community members through livelihood opportunities [Rehabilitation: cleaning the main wadis in the catchment zone ; Construction and | The main outcomes of the project is more effective and practical implementation of IWRM and WEF Nexus on Zeglab watershed, the projects will increase the infiltration rate and recharging of groundwater, provide an extra water resources for the agricultural, domestic and municipal uses and protect and conserve the nature by using low cost- high effect environmental solutions that integrate the socio-economics and creating livelihood opportunities for the local communities within and around the watershed making the project more sustainable and environmental friendly.<br>The project is planned to deliver its proposed results at the end of December 2020 including a IWRM plan for the watershed in cooperation with Ministry of Water and Irrigation, GIZ, ACTED, local authorities, farmers and IUCN ROWA. | SDGs: 6, 13, 15, 17 | Implementation by IUCN ROWA on Zeglab dam watershed in Jordan | with Ministry of Water and Irrigation of Jordan, GIZ, ACTED, local authorities, farmers and IUCN ROWA. | Fully replicable on other watersheds where erosion is present | Representative of Asia Region, however worldwide issues | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 1.D |

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| | | excavation work: excavating trenches, tunnels and contour bunding; building gabions, tunnel gabions, terraces, and dikes; Forestation and planting: around 2,000 trees on the land around the dam, steep land, and close to the erosion activities along the catchment wades. | | | | | | | |
| **Project 6 – Ground Water allocation from unrestricted access, from State control to collective and sustainable management**: Lessons from the watersheds in France and in Australia<br><br>[France National Committee IHP UNESCO, French Water Partnership, i.e BRGM, plus as partner Sydney University] | Share and compare Water Allocation approaches namely groundwater, the unseen resource with consequences in terms of awareness and sustainability on both actors (farmers) and environment (France, Chile, Australia, ….) | During the last 20 years, groundwater allocation management for agriculture purposes has strongly changed due to several drivers, climate change but also social and economics. From individual volumetric entitlements managed by the State in France to Water users' associations at watershed level. These associations became the recipients of pooled water use entitlements. New rules determined collectively are applied. This reform concerns only agricultural sector, it represents a clear shift towards a common property regime.<br>In Australia and other countries, water use rights behind water allocation management relays more on individual and private basis, with the promotion of the water markets development. Comparison may be inspiration source of solutions to be implemented in countries. | Emerging new ideas, test new approaches based on cross analysis to reach sustainable groundwater management | SDG 6, 8 | Implementation of both approaches in France, Australia at least | Public and Private stakeholders (from State, districts to farmers associations] involved in setting water allocation approaches<br>BRGM France, Sydney University Australia | Replicability of Australian approach already done. Other alternatives are replicable in other countries. | EU, Australia, but also LATAM (Chile), USA | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 1A |

**ACTION 3: Building robust financing mechanisms for IWRM at all levels**

Overall Objective: building robust and various financing mechanisms for IWRM at all levels, with a focus on the basin approach and implementation of IWRM at all levels, including financing of infrastructures, water valuing, polluter-pays / user-pays principle, cost-recovery, economic analysis tools, with potential contributions from bi/multilevel donors, microcredits, upstream / downstream solidarity or compensation schemes.
Overall purpose and expected results: showing tangible example, presenting key financing mechanism applied at various levels, sharing lessons within basins, sharing insights from real cases and learned lessons of contexts
Overall SDGs Alignment: 6, 8, 9, 11, 12, 13, 14, 15, 17
Coherence with other Priorities: good coherence and margin to 2E, 4A, 4B, 1D, 2D, 3F

| **PROJECTS INCLUDED** ***In order of priority and level of impact*** | **OBJECTIVE** | **DESCRIPTION AND PURPOSE** | **EXPECTED RESULTS** | **SDGs ALIGNMENT** | **IMPLEMENTATION** | **PARTICIPANTS AND STAKEHOLDERS REPRESENTATIVENESS** | **REPLICABILITY IN OTHER CONTEXTS** | **REGIONAL REPRESENTATIVENESS** | **POTENTIAL OVERLAPPING OR COHERENCE WITH OTHER AGs** |
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| **Project 1 - Boosting IWRM implementation to achieve water-related SDGs in Senegal**<br><br>[Government of Senegal, GWP, UNEP] | Showing a tangible example of how mainstreaming an integrated approach to water resources management in a Senegal's institutional framework is contributing to its progress on water-related SDGs | The SDG 6 IWRM Support Programme (UNEP, UNEP-DHI, Cap-Net and GWP) is supporting the Senegalese government to bring together public and private stakeholders to operationalise IWRM with a vision until 2030, aiming to make IWRM a cornerstone of the country's efforts to achieve Agenda 2030. The Senegalese authorities and GWP will share the challenges faced in this endeavour and how they were overcome, as well as the opportunity this represents, to promote shared learning. | - Formalised commitment from different stakeholders towards the operationalisation of IWRM in Senegal<br>- Peer-to-peer learning on how to identify and overcome the obstacles around implementing IWRM in the African context.<br>- Shared understanding of how the SDG 6 IWRM Support Programme assists countries. | This presentation will be supported by UNEP as the custodian agency of SDG 6.5.1, which is intended as a crosscutting SDG indicator that supports progress on all other water-related SDGs | The project in Senegal will be finished by the time of the Forum, but its implementation will be ongoing until at least 2030. The Support Programme will continue to support other countries on advancing towards full implementation of IWRM | Ministry of Water and Sanitation of the Republic of Senegal; SDG 6 IWRM Support Programme; international organisations; development agencies; private sector; academia; civil society. | The SDG 6 IWRM Support Programme is available to support UN Member States that request assistance, in particular in the global south | Western Africa to global | none |
| **Project 2 - Improvement of social benefits of communities** within a large African transboundary basin through IWRM and agriculture [OMVS/PGIRE] | Presenting results of a multi sectorial and regional project (2014-2021) of IWRM regarding the Senegal river watershed aiming at improving the concerted management of water resources with a sustainable development both socio economics and environmental. | Water and agriculture development, development of water uses with multiple aims, with promoting activities that generate incomes and improve life conditions of communities.<br>Key performance of various activities in favour of water availability and efficiency, linked to irrigation, channels, land conservation, plus capacity building reinforcement of users.<br>Focus also on beneficiaries' community's organisation in order to ensure investments sustainability | - 5 million of direct beneficiaries, with 51% of women<br>- Rehabilitation of areas suitable for water irrigation 13680ha<br>- Rehabilitation of irrigation infrastructures<br>- Reforestation, agroforestry with impact on water cycle<br>- Min of 25 entities of operational management of irrigation perimeters<br>- | 6<br>2, 12, 13, 15 | The project will be finished in 2021, but it is a long process as it has to be sustainable on long term | Ministry of Water, Agriculture of 4 counties, farmers, … World Bank, | Replicable in other contexts | Western Arica | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 2E |
| **Project 3 – Resilient financing systems as responses to guarantee IWRM at all levels even during sanitary crises** [*contributions based on some responses in Africa, Asia, South America that is taking place and will be ready to share in 2021 in order to built a working project on this topic*] | Presenting lessons learned from impact of major sanitary crisis on resilient financing systems as responses to guarantee IWRM at all levels | Sanitary crisis such as the COVID 19 pandemia has a sever impact on economic situation in various countries. Water is essential for life, health and environment. To guarantee IWRM various resilient financing take place. The purpose is to discuss about the lessons learned based on various examples in different countries. This will be a result of a working group to be set up. Micro loans reinforced at local level, various international funds to support local to regional IWRM initiatives, …. | Highlights of resilient financing systems, conditions of success, failures and explanations, … | 6, 1, 13, 15, 17 | Based on lessons learned in various countries in different continents, working group | Ministry, NGOs, Communities, Industry, … | Can be extended | Global, various continents | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 4.A |

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| **Project 4 - User pays and polluter pays principles**: experience of Brazil`s Federal District i.e., from defining charging mechanisms / monetary values according to socio environmental characteristics of the basin, towards implementing river basin IWRM plans. [ADASA] | To present a key financing mechanism for IWRM applied in Brazil's Federal District: the charging fee for the use of water resources. | The charging mechanisms were approved by the respective river basin committees and are overseen by the National and the Federal District Water Councils. The fees consider the user pays principle for water abstractions, and the polluter pays principle for effluent discharges. | The collected fees are to be invested in the basin where they have been collected. Up to 7,5% of the total collected fees may be used for administrative expenditures of river basin agencies or equivalent entities. The rest of the fund shall be used according to the investment program defined by the respective River Basin Plan | SDGs Alignment: SDG 6 plus SDGs: 8, 9, 11, 12, 14, 17 | Union-owned water bodies uses, in one hand, have been subject to charging fees for three years now. Federal District-owned water bodies uses, on the other hand, will be charged beginning 2021. The collected fees will be used towards the implementation of the local river basin IWRM plans. | River basin committees, water authorities, water councils, water users, local communities, academia, industry, government, NGOs | The proposed mechanisms are replicable to other geographies, since the charges may take into consideration the socio-environmental characteristics of the river basin, the reality of each water use sector, and the financing needs to carry out IWRM actions and to implement studies, programs, projects and works. | Limited to the river basin geography | Overlapping or coherence with AGs: 1D, 2D, 2E, 3F, 4A |
| **Project 5 – Payment for ecosystem services or environmental benefits** – [*French Water Partnership*, …..] | Sharing insights from various implemented PES in different case studies through the world and learned lessons and reco based on sites experiences | examples of implementation of this promising mechanism from financing to return on investment on water resources and on communities | Long term sustainability of water resources<br>Empowerment of actors, small holders such as farmers i.e. | SDG 6, 13, 15 | Various examples of PES implemented in different countries, France, Brazil, Africa, …..<br>Large deployment in France in the 6 main watersheds by water agencies in 2020 | French Water Agencies, French Environment Ministry, Communities, Farmers | Yes, already done | / | There may be overlapping or coherence (depending on the projects chosen by the other groups) with 4.A, 4 B |

**ACTION 4: Strengthening knowledge for information and decision-making**

Overall Objective: strengthening knowledge for information and decision making based on monitoring, participative approach, valorisation of data from in situ to remote data, modelling,…

Overall purpose and expected results: introduce new approaches, be able to compare them, understand new added values, possibility of replicability, ….

Overall SDGs Alignment:6, 2, 11, 13, 14, 15

Coherence with other Priorities: good coherence globally, with possibly overlapping of projects 2 and 5 to 3E and 4E.

| **PROJECTS INCLUDED** ***In order of priority and level of impact*** | **OBJECTIVE** | **DESCRIPTION AND PURPOSE** | **EXPECTED RESULTS** | **SDGs ALIGNMENT** | **IMPLEMENTATION** | **PARTICIPANTS AND STAKEHOLDERS REPRESENTATIVENESS** | **REPLICABILITY IN OTHER CONTEXTS** | **REGIONAL REPRESENTATIVENESS** | **POTENTIAL OVERLAPPING OR COHERENCE WITH OTHER AGs** |
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| **Project 1 - Stakeholders participative approach on water resources monitoring at local scale, benefits in terms of knowledge for IWRM** [Gret DGPRE] | Introduce a new participatory approach for local IWRM, aiming to "craft a common" | Most of the time, IWRM is a top-down process: countries first define their national strategy and then try to translate them into regional and local plans. To do so, they rather call on consulting companies whose participatory approach (when it exists) is most often limited to the validation of local plans already drawn up. As a result, local stakeholders can neither understand nor appropriate the idea of local IWRM, let alone implement it. | By presenting the approach followed and the analysis of the results obtained over time, the participants of the World Water Forum will be able to usefully compare this approach with others usually implemented and discuss the advantages and disadvantages of each approach, according to the contexts. | By renewing the local IWRM approach, we contribute to the SDG 6 – target 6.5 | This project is a research-action conducted in the Niayes area in Senegal in order to define the conditions for setting up an effective local IWRM. It results in water local platforms' creation.<br>For the World Water Forum session, we propose to present and then open to discussion, the methodology followed, some of the participatory tools developed in the framework of this project | As the main stakeholders of this project were on one hand the planning and management of water resources direction of the water ministry in Senegal and on the other hand the local stakeholders gathered in water local platforms in the Niayes area, we may invite them to take part of the session.<br>They will thus represent local water users and national authorities respectively. | The philosophy of the approach can obviously be replicated in other contexts, but the approach itself will have to be adapted: indeed the detailed methodology and tools depends on the initial diagnosis (context of water resources, uses and users, legislative framework in force, etc.). | The context of the Niayes is not representative of the sub-region. However, common points exist in West Africa in the management of water resources and most of the elements of participatory animation could be taken up again. | There may be overlapping or coherence (depending on the projects chosen by the other groups) at margin with 4.B |

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| | | That's why we have tested an approach, which certainly takes more time, but which allows local stakeholders to build their own IWRM, by making their diagnosis, debating the stakes, proposing democratically chosen actions and implementing them. | | | and the results obtained after 4 years, including the difficulties and limitations observed | | | | |
| **Project 2 -** Examples of the benefits of open access **water resources information system** to IWRM in various countries from discharge to groundwater level, to water quality and other information [ADASA, French Water Partnership, Iraqi Water Ministry…], | To present various current Information System on Water Resources (SIRH/DF) operated by ADASA in Brazil, and from Ministry of Iraqi, by BRGM for OFB in France, plus others in Africa | SIRH/DF is an information system established in the Federal District Water Resources Policy Law to support IWRM. It provides information on the quantitative and qualitative aspects of the local water resources. ADES and BDLISA are Information System dedicated to groundwater resources in France, established to support IWRM and Water law aligned with European Water Directive. | Panels, indicators, indices, and other features of the system will be presented as invaluable means of information to support IWRM. | SDGs Alignment: SDG 6 plus SDGs: 11, 13, 14, 15 | The implementation will be through the exchange of knowledge and experience between institutions that have already implemented water resources information systems and institutions that are yet developing their systems | Water authorities, river basin organizations, software developers, gauging station specialists, as well as private sectors, engineers' companies | Replication is dependent on the cost, complexity, and feasibility for implementing the proposed solutions | Open access information systems can be applied to different scales, including national, based on monitoring network density, telemetry, and web-based solutions | There may be overlapping or coherence (depending on the projects chosen by the other groups) at margin with 1B, 1C, 1D, 1E, 1F, 4D, 4E |
| **Project 3 -** Combining **spatial data** with modelling to supplement **in situ hydrometeorological information** *[French Water Partnership /….]* CNES | *To be updated by* CNES from French Water Partnership during the consultation process Show the added value of combining spatial data and in situ hydro meteorological information at national level, with some examples in Africa namely | Combining **spatial data** with modelling to supplement **in situ hydrometeorological information** | *To be updated by FWP/CNES/BRLi during consultation process* | SDG6 | Already implemented in …. (to be updated during consultation process) | CNES, BRLi, and national/regional stakeholders | yes | Africa, South America | There may be overlapping or coherence (depending on the projects chosen by the other groups) at margin with 4.E |
| **Project 4 – From water information data towards water resource forecasting** *[French Water Partnership/ BRGM +….]* | Provide information about water resource status, namely groundwater along the hydrological cycle, in order to increase awareness on resource, and to anticipate decisions of management by stakeholders at various level | examples of regional to national scale of various types of modelling for surface water – hydrology – and for groundwater – hydrogeology, droughts forecasting and anticipating, using various algorithms, some from *Artificial Intelligence*. Ex. of MetéEau des nappes from BRGM, at national scale in France | Showcase of Forecasting of groundwater level for midterm | SDG6, 13 | Implementation started in 2020, will be operational | BRGM /FWP, French Office of Biodiversity, National and regional stakeholders and possibly local one, water catchment multi stakeholder forum | Replicability at various scale, based on hydrogeological observatory monitoring borehole network | France | There may be overlapping or coherence (depending on the projects chosen by the other groups) at margin with 4.E |
| **Project 5 – Water Information system network** WINS IHP (Unesco) – | *To be updated by UNESCO Water Division IHP later on, after consultation* | Status of the platform, feed-back on impact on IWRM and SDG report | *To be updated by UNESCO Water Division IHP later on, after consultation* | SDG6,13, 2 | Already implemented since 2018 | IHP Water Sciences Division, Various stakeholders | Possible at national level | worldwide | There may be overlapping or coherence (depending on the projects chosen by the other groups) at margin with 3E + 4E |

11