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Capacity development for SDG 6.5 on IWRM and transboundary cooperation: opportunities and barriers

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ABSTRACT

Capacity development (CD) is acknowledged as a driver of effective implementation of integrated water resources management (IWRM) (SDG 6.5.1) and transboundary water management (SDG 6.5.2). This paper explores the factors that facilitate or hinder CD for these agendas, to describe the roles water CD organisations play in support of these SDGs at the country level and to suggest potential pathways to leverage their work. A survey was conducted to analyse the perspectives of 41 water CD programme managers on their operational modes, strengths, opportunities and main challenges. Selected key informants were interviewed in depth, and the findings were analysed in the light of the literature on CD. The results highlight (1) an array of good-practice activities currently in progress, which provide potential for scaling up to accelerate progress; (2) wide acceptance of the relevance of the 2030 Agenda, even though this does not always explicitly address specific SDGs and (3) the difficulties in making the 2030 Agenda relevant to local communities. Further research is recommended to understand the context- and culturally-bound specifics of CD, to produce more locally sensitive and effective impact assessment frameworks and to adjust support to leverage CD to accelerate progress on the SDGs.

Key words: Capacity development, Cultural constraints, Integrated water resources management, SDG Implementation, Transboundary water management

HIGHLIGHTS

- Perspectives of capacity developers (CDs).
- Overview of the relevant contributions of CD organisations to SDGs 6.5.1 and 6.5.2.
- Challenges in localising targeted SDGs, often addressed but not explicitly for the sake of getting support from local communities.
- Weight of cultural factors in shaping CD and its impact.
- Need for further research to better understand CD and enhance its contribution to sustainable development.

INTRODUCTION

The 'Water Challenge' is acknowledged as a cornerstone of sustainable development and is reflected in the 2030 Agenda through its Sustainable Development Goal 6 (SDG 6). To address the complexity of such a challenge, agendas are being advocated globally to scale up the implementation of, *inter alia*, target SDG 6.5, which calls for integrated water resources management (IWRM) at all levels, including transboundary cooperation for

water management, where appropriate (specified through two indicators, 6.5.1 and 6.5.2).[1] GWP (2007) defines IWRM as a process that promotes the co-ordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. While necessary, it is an ambitious and often complex task; though countries are making progress, recent reports (UNESCO, 2017; UN Environment, 2018) also show that implementation status varies widely and stress the need to accelerate progress. In this scenario of pressing urgency, underscored by the current pandemic,[2] efforts must become more effective for managing water more sustainably, supported by capacity development (CD). While key elements such as enabling environments, institutions, management instruments and financing are monitored to steer and assess progress, the specific role of CD in achieving SDGs 6.5.1 and 6.5.2 remains less well analysed, although Ibisch *et al.* (2016), among others, have demonstrated the value of aligning IWRM development processes and CD processes.

The UN Environment report (2018) points out that implementing IWRM is very locality- and time-sensitive, and this paper will argue that this applies equally to CD. A consensus has emerged about what IWRM is or should be in general terms, but less clarity exists about how to adjust and adopt it in diverse local settings. GWP's Toolbox (2021) identifies different development pathways, recognising their potentially replicable nature; still, the factors that define why a particular pathway or model is functional in specific circumstances only are not well described. Thus, this area would benefit from further investigation. Some countries are reported to have succeeded in increasing cross-sectoral collaboration, a central feature of IWRM. Others have progressed on more specific scores, such as gender objectives. Others still have been successful in implementing very practical measures of an operational nature. The UN Environment report (2018) screens these diverse achievements but devotes little analysis to how CD has supported these processes. 'Lack of capacity' is typically diagnosed in countries that perform poorly in the introduction of IWRM, and 'capacity development' is then recommended, but overall, the mechanics, role and impact of CD are not addressed beyond the suggestion that 'learning opportunities and potential peer-to-peer capacity building' should exist. Thus, although many policy statements and studies call for CD (e.g. UNDP, 2009; Christoplos *et al.*, 2014; Alaerts & Kaspersma, this Volume), surprisingly little is known about how it can drive transformational change in institutions towards the advancement of sustainable water management. This paper intends to contribute to the understanding of how CD can support IWRM development by studying how organisations developing capacities define their strategies and interventions. This will be based on a survey of their perceptions of challenge and success in this matter, which steer their decisions. Ways forward will be suggested to leverage CD for sustainable water management, particularly with respect to accelerating SDG 6.5.

BACKGROUND

A core concept underpinning IWRM is that sustainable water management requires that water is approached as a hydrologic *system* physically connecting the different supplies and uses, and the land and ecosystem resources. This physical system is complex and managed by institutions, and, thus, it is essential to produce and disseminate knowledge as well as to use this knowledge to build the capacity of water managers. However, knowledge by itself does not ensure institutional capacity to act. The assumption that greater availability of knowledge will result in linearly improved management practices is unrealistic and leads to inefficient deployment of efforts. Thus, to

[1] The SDG 6 IWRM Support Programme assists governments in designing and implementing country-led responses to SDG indicator 6.5.1, the degree of implementation of IWRM. Under the guidance of the UN Environment Programme (UNEP), this programme is co-ordinated by the Global Water Partnership (GWP) in collaboration with UNEP-DHI Centre and Cap-Net UNDP.

[2] For example, https://en.unesco.org/news/covid-19-implication-water-megacities (accessed 25 September 2020).

better understand how CD can assist in strengthening IWRM, the institutional architecture of the latter must be investigated, including its governance, policymaking, management and planning.

Current conceptual and operational approaches to CD come from various fields of social sciences as well as from case studies and field practice; sometimes these contradict one another. The concept of 'capacity' has been developed in different contexts such as organisational development, institutional economics, public administration, pedagogy and sociology (e.g. Alaerts & Kaspersma, 2019). This diversity in origin and application underscores its prevalence but also suggests complexity; however, pedagogical approaches and instruments are a common feature. CD is being increasingly viewed as a complex learning process that involves not only the transfer of knowledge and capacity from one social system to another, but also deliberate efforts by a particular system (such as an organisation) to create, strengthen and maintain its overall capacity over time (Mvulirwenande *et al.*, 2014). Awareness is also growing that in order to enhance CD effectiveness, conceptual and operational frameworks need to be further elaborated, including shifting beyond the linear cause-result understanding that inputs delivered by practitioners will be straightforwardly translated into outputs measurable in terms of key performance indicators (KPIs). This goes in line with the importance of reinterpreting and/or transforming policy and the environment in which the CD is taking place. Knowledge institutions seem to be leading in research aimed at creating such new frameworks (e.g. Pascual Sanz *et al.*, 2013). As pointed out by Scriven (1991, in Maxwell, 2012), applied social research is particularly useful to utilise the *process* through which things are happening in a situation (e.g. learning) and from there help improve existing practice, rather than *ex ante* determine outcomes of the programme or practice studied.

CD is closely related to, but differs from, knowledge acquisition. Christoplos *et al.* (2014) define CD as 'consisting of a range of dimensions, from the knowledge of individuals to that of organisations and the nature of the institutional frameworks and norms in which they operate […] CD is about change. Intended outcomes generally involve the extent to which people perform their jobs differently. In order to enable them to do so they may need greater knowledge, bureaucracies or organisations that encourage them […].' Thus, knowledge acquisition is a necessary but not sufficient condition for CD. Measuring the impact of CD is also challenging because of the multiple dimensions – individuals, organisations and their environments (including the framework conditions, i.e. institutions and policies, values systems and cultural patterns) – in which it operates; also measuring competences through standardised tests is complicated and is the subject of cultural context (e.g. Steiner-Khamsi, 2004; Beech, 2009). Hence, CD is both an end in itself and the means to an end, and indeed, a specific procedure (GTZ, 2003). As a means and a procedure to bring forth change towards sustainability, CD needs to be tailor-made. UNDP (2009) concludes that decades of experimenting with development models has confirmed the value of local ownership and capacity, and that technical assistance, though appropriate sometimes to address short-term needs, tends to be donor-driven, while distorting national priorities. Strong capacity, locally generated, is deemed essential to the success of any development enterprise. This study, therefore, seeks to reflect cultural idiosyncracies and other traits of local identity by exploring the extent to which current practitioners find that they enable or hinder their efforts to promote IWRM and SDG 6.5.

To sum up, 'capacity development' is a rather elusive concept built from the contributions of different fields, and it comprises an array of very diverse strategies with varying purposes; in this sense, this paper intends to illustrate such diversity by collecting examples from water CD practitioners from different organisational, cultural and geographical contexts across the globe. It does not seek to thoroughly map that diversity but rather to provide representative examples reflecting its complexity. As part of this, we shall review context- and culture-specific challenges as an aspect that needs special attention, and we shall also suggest that interdisciplinary approaches to these challenges may be suitable in attempting to address them.

METHODOLOGY

A qualitative survey was conducted with the aim of capturing the perspectives and experiences of practitioners tasked to apply CD for the purpose of developing IWRM approaches. The survey aims to better understand the complexity of CD for IWRM, how culture- and locality-specific challenges arise, and to what extent pedagogical methods prove instrumental. The survey was distributed through the networks of Cap-Net (a globally operating network under the UNDP to develop capacity in the water sector) and the Global Water Partnership (GWP) (a global network with over 3,000 partner organisations to provide knowledge and build capacity on water management at all levels, based in Stockholm). The combined networks are representative of government, non-government and multilateral agencies across the globe that have a relation with water. Of 47 organisations that were approached, 41 responses were received, though not all respondents reflected on all questions; the respondents represent key CD organisations in every major region in the world. The survey comprised 24 questions, of which 11 were open for respondents to develop their ideas, grouped into three parts: (1) personal/organisational information; (2) the CD activities carried out by the respondents' organisation and (3) the demand the respondent's organisation caters for and the partnerships it is involved in. The responses are not a representative sample of the universe of water CD organisations in a statistical sense; forming such a sample would be problematic because of the wide variation in nature, scale and scope of these organisations, in the comparatively small size of this universe. However, they are considered representative of important currents and field experiences as they originate from professional agencies with track records in water CD that are generally highly valued by their peers. Thus, they can be assumed to provide insightful input in a structured way that has thus far not been available. Further to the surveys, nine interviews were conducted in which selected respondents were requested to further elaborate on the opinions they had expressed in the open questions in the survey; this selection sought geographic and organisational representativity. However, gender balance could not be achieved as women were too few among survey respondents. The results presented refer to the survey responses, with the information and qualifications drawn from the interviews used to help interpretation.

RESULTS AND DISCUSSION

CD organisations and activities

The respondents represent 41 organisations[3] that operate at scales ranging from local to global and reside in 28 countries in every major region in the world. They stated to be partners of the Cap-Net network (41%), the GWP network (40%) or of more networks (19%), with 13% not responding. The degree of completeness and coherence of survey responses was assessed to ensure only reliable material was used; this was also considered an indicator of commitment to this study. Most survey respondents (48%) have worked for their current organisations for over 10 years, which suggests that an adequate experiential basis is reflected in responses. The respondents'

[3] ACUMAR, Cátedra UNESCO Agua y Educación para el Desarrollo Sostenible, FICH - UNL (Argentina); Cultura Ambiental, Global Water Partnership (Uruguay); Fundación Futuro Latinoamericano (Ecuador); Universidad Andina del Cusco (Peru); Universidad Externado de Colombia (Colombia); Universidad Autónoma Del Estado De México, Instituto Interamericano de Tecnología y Ciencias del Agua (Mexico); REDICA (Costa Rica); Caribbean WaterNet/CapNet UNDP/UWI (Caribbean); Country Water Partnership (Armenia); National Water Partnership (Georgia); Global Water Partnership (Ukraine); GEF IW:LEARN (France); IHE-Delft (The Netherlands); GWPO, SIWI (Sweden); CSD Center, Regional Water Partnership Central Asia, Caucasus and Mongolia (Kazakhstan); Global Water Partnership Central and Eastern Europe (Slovakia); AGW-Net (Senegal); CB-HYDRONET, CRREBaC (DR Congo); WaterCap (Kenya); Dabane Trust, WaterNet, Zimbabwe Open University (Zimbabwe); Development Workshop (Angola); Polytechnic University of Malawi (Malawi); GWP-CAf (Cameroon); Bangladesh Water Partnership, BRAC (Bangladesh); Jalsrot Vikas Sanstha (Nepal); Global Water Partnership South Asia, University of Peradeniya (Sri Lanka); CKNet (Indonesia); MyCDNet (Malaysia).

distribution by organisational role is as follows (respondents can hold more than one role): leader (senior manager, advisory board member, chair holder, CEO): 19%; coordinator (middle/senior manager, network managers/coordinator, programme leader): 51%; project manager (middle- and/or lower-level manager, administrator, executive in charge of specific projects): 21%; specialist (advisor on specific issues, technical expert): 21%; researcher: 26%; teacher (university or other lecturer, workshop facilitator): 33%.

The gender balance favours men, with about 30% female. Although caution is warranted about representativity of this group for water organisations working on SDG 6.5, this result is noteworthy. In making SDG 6 and IWRM policies, the pivotal role of women in water management is emphasised, and organisations belonging to the CapNet and GWP networks are specifically expected to ensure this. Although the study intended to add a comparison of professional perspectives and opinions of females and males, this ambition was curtailed by the outbreak of the pandemic; however, this subject deserves further attention.

The types of organisations represented in the survey are as follows (out of 45 responses): university/research institution: 33.3%; UN agency/international programme: 3.9%; government agency/ministry: 2%; river basin organisation: 3.9%; civil society organisation/NGO: 43.1%; other (networks of knowledge institutions, regional intergovernmental organisations): 13.7%; private-sector/consulting companies: 0%; utilities: 0%. Although IWRM and transboundary cooperation typically do not, or only rarely, involve utilities or private-sector partners, the absence of these categories may also be due to bias in the composition of the networks or the survey distribution. The target groups of the activities are as follows (as each organisation may have several target groups, respondents can identify more than one category, totalling 224): water professionals: 89%; policymakers/government officials: 76%; community members: 62%; lecturers/researchers: 78%; school principals/teachers: 24%; higher-education students: 70%; school students: 32%; private sector: 57%; UN agencies/international programmes: 35%; NGOs: 65%; other: 16%. Others include river basin organisations, community action groups, worker cooperatives and the civil society at large. Although the salient target group is water professionals, the organisations also offer CD to a pertinent diversity of target groups. This is consistent with the nature of IWRM and transboundary cooperations that call for multi-stakeholder involvement, as well as with the recommendation that for effective CD a multi-level approach is advisable (e.g. Ibisch *et al.*, 2016). Ibisch *et al.* also stress the need for continuous and long-term engagement, particularly in processes of organisational and institutional change where no single set of guidelines or practices can be defined upfront.

The types of CD activities deployed were as follows (out of 37 responses): face-to-face short courses and workshops: 22%; online teaching: 12%; university education (undergraduate, masters, PhD): 12%; schooling: 5%; teaching materials development: 16%; awareness raising: 16%; research: 15%; other: 2%. The other activities concerned, i.e. water-related data management and dissemination, institutional knowledge management, support to local governments and basin projects, and policy briefings.

IWRM and transboundary cooperation in CD

Most respondents confirmed that their organisations' activities focus on IWRM and transboundary cooperation but that these are usually not explicitly framed as SDG 6.5. The way the SDG is addressed is reported to take several forms and rationales (Figure 1). In interviews, the great value of having a global agenda was unanimously recognised, yet it was acknowledged that 'there is less adherence at local levels' as SDGs are often 'perceived as a far-away discourse that interferes with local efforts to work on concrete solutions'. Also, some respondents report that 'national government capacity is supported to track and report on performance indicators for water resources management', 'focus on indicator SDG 6.5.1 (for IWRM) is at country level only', 'most training focuses on transboundary cooperation as a theme, not just in relation to SDG 6.5', 'we deliver activities relevant to SDG

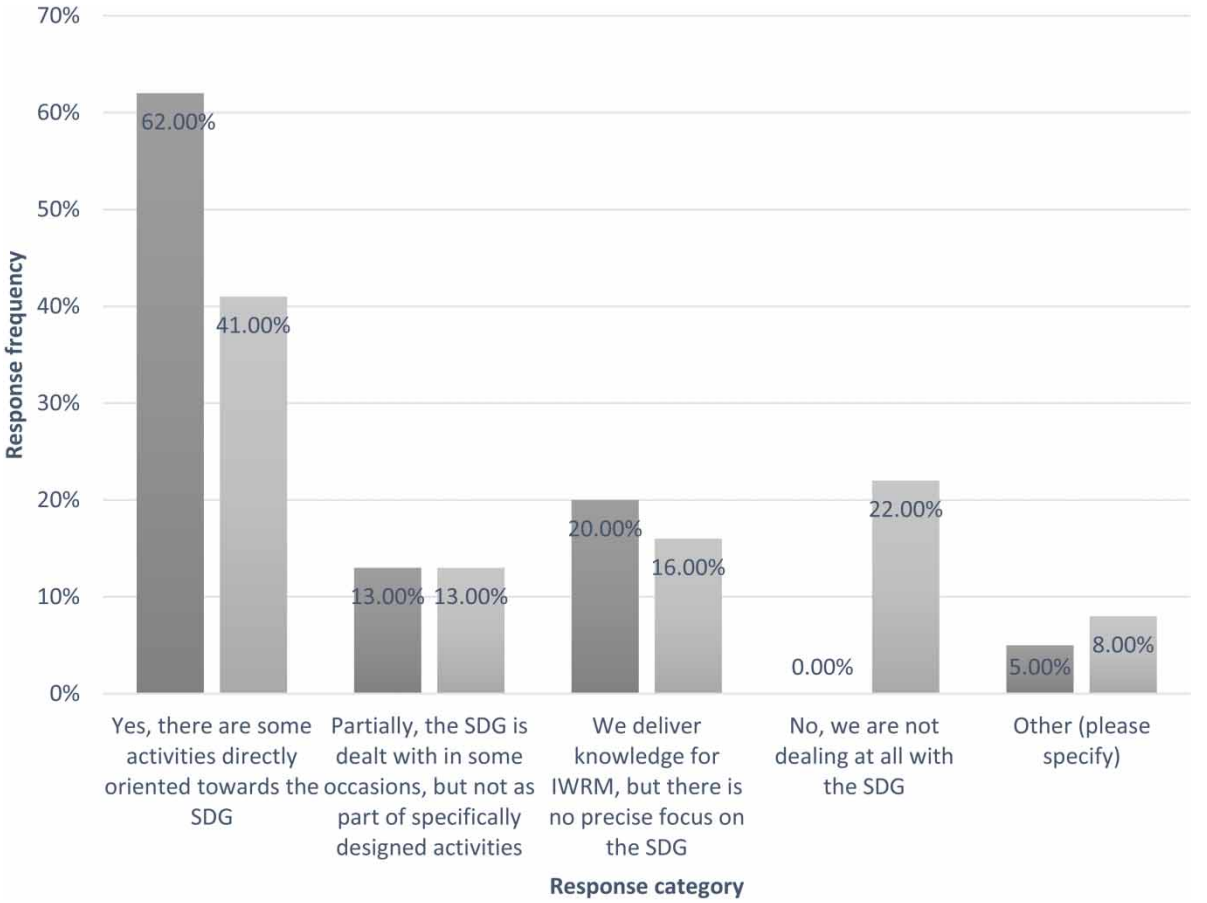

Fig. 1 | Explicit focus of respondents' CD activities to IWRM (SDG 6.5.1) and transboundary cooperation (SDG 6.5.2) (37 respondents) (dark shade: IWRM; light shade: transboundary cooperation).

6.5 but not for transboundary resources or cooperation agreements' and 'activities are joint with UNESCO IHP'. The CD activities are more aligned with IWRM (SDG 6.5.1) than with transboundary cooperation (SDG 6.5.2). Also, 22% of the respondents acknowledged no link with transboundary cooperation, while no such responses were made regarding IWRM. These results may be the consequence of the fact that IWRM is a task that pertains to all river basins in a nation, whereas transboundary cooperation concerns more particular, limited activities. However, it may be helpful to look further into these differences, as UNESCO (2017) points out the importance of SDG indicator 6.5.2.

Interviewees suggested locally specific reasons for this apparent reluctance to explicitly address SDG 6.5.2: transboundary cooperation is less generic than IWRM, fewer resources are deployed for transboundary cooperation; the lack of openness of decision-makers to acknowledge the value of CD hinders developing strategies towards attaining SDGs in general; transboundary cooperation poses more institutional challenges than IWRM; as transboundary cooperation usually involves conflicting interests from two or more jurisdictions or countries, political factors may play a stronger role; and IWRM may be perceived as more urgent/important than transboundary cooperation, and/or the latter may be regarded as a subsidiary to IWRM.

The types of CD activities used are found to be similar for both indicators. Respondents described activities that can be grouped under the following six broad categories: (1) teaching (courses, seminars, training of trainers, workshops and similar face-to-face and/or virtual activities); (2) development of training materials (designing and disseminating training materials for various audiences); (3) research; (4) fieldwork (on-site water management activities involving local communities); (5) networking (forging partnerships, initiating and/or participating in collaborative initiatives) and (6) administrative and policy support (involvement in government planning/decision-making processes, strengthening governance and institutions). Figure 2 describes their relative importance; they may be mutually not exclusive (e.g. research and fieldwork with local communities, alongside teaching and advising in policymaking). The results illustrate the diverse nature of these lines of action. CD seems generally understood as sharing knowledge in the form of teaching (face-to-face courses, lectures, seminars, workshops and virtual courses) and networking (multi-stakeholder partnerships often in platforms for sharing resources, training materials, reports, etc.), although research and policy support seem more pronounced in the transboundary cooperation case.

Although the 'tool kit' of CD appears diverse, less use was made of 'convening activities' aimed for instance at reconciling trade-offs between different competitive water uses or fostering the attitudes and skills for behavioural change to manage water more effectively. Similarly, given the importance of research as input for sustainability-oriented decision-making, more effort could be made to integrate teaching with studies. Recognising that this sample may not be representative enough to cover all ongoing practices, a risk appears that the application of CD is framed too narrowly as forms of formal instruction. Thus, other activity types should be explored (for which dedicated skills must be acquired), such as the convening of locally relevant stakeholders. In any case, CD could be applied more purposely for accurately assessing local needs (e.g. UNDP, 1997, 1998a, 1998b) and design CD activity types optimised for local use. The respondents also qualified the intensity and nature

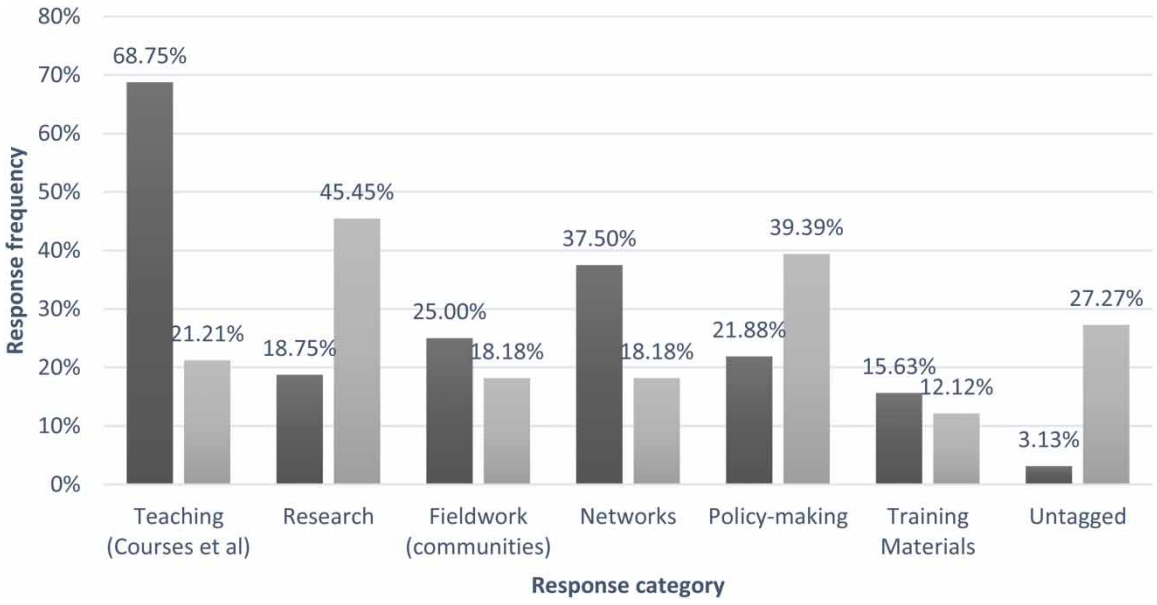

Fig. 2 | CD activities by type, in support of IWRM and transboundary cooperation (from 33 responses) (dark shade: IWRM; light shade: transboundary cooperation).

of their engagement or partnership with government water agencies (36 responses): as fluent and active (36%); with consultations and occasional joint activities (39%); with only formal meetings (3%); with little or no interaction (0%); and depending on the agency (11%). Other responses (11%) were: it is taking more time to build a relationship, or it depends on the country in which we are operating. Thus, clearly CD activities are being valued, and significant investment and long-term engagement are essential to achieve some impact.

Achievements and CD enabling factors

Over past decades, steady but modest progress was made concerning the introduction of IWRM and transboundary cooperation; although much work is yet to be done to accelerate progress, significant achievements have been made. Respondents reported a wide array of substantive contributions that can be grouped in nine categories (the percentage value relates to the number of respondents highlighting this feature):

- studies completed and data collected: 53% (e.g. on baseline indicators, data sets and as responses to policy and management queries);
- teaching: 47% (as courses and others at various levels of formal instruction, workshops, training of trainers, etc.);
- development of training materials: 16% (training/teaching resources, toolkits for various audiences);
- facilitating dialogue: 44% (creating spaces for multi-stakeholder dialogue, facilitating meetings to address sensitive issues and help resolve conflicts);
- managerial support: 31% (on financial and technical support to assist networks, countries and/or local communities);
- increased visibility: 13% (greater public recognition and reaching a wider audience);
- new policies and plans: 31% (fostered or participated in new or revised plans and policies);
- project management: 19% (devised and implemented projects) and
- partnerships: 41%.

Respondents also described key enabling factors in the survey and interviews:

- The transformational impact of IWRM itself, which stresses fundamental good-governance principles such as participation, transparency, integrity and gender balance, e.g. in the statement that 'SDG 6.5 is a natural consequence of sound […] IWRM […]. The SDGs are transient compared to the lasting transformational power of IWRM.'
- Sound scientific knowledge behind IWRM and for effective CD strategies. Knowledge institutions like universities and research centres can be strong enablers thanks to their reputation: 'We only propose activities, but given our reputation, countries trust that we are equipped to lead them in the right direction.'
- The leveraging power of partnerships, as expressed in statements like 'We have a strong network in the global South which allows us to both bring good practices to the fore, but also implement CD tailored to countries' needs' and 'Taking part in knowledge sharing networks such as UNESCO's UNITWIN programme has enhanced our capacity to produce and disseminate reliable knowledge applied to IWRM.' An important partnership form is that of peer-to-peer collaboration (e.g. Beck, 2018) echoed in statements like 'We have achieved more engagement with CD activities that involved local community leaders in sharing good practices, and/or working together to co-create solutions to similar water problems.'
- Increasing ability to adapt IWRM to local contexts. Respondents with a strong understanding of grass-roots, community-based applications of IWRM highlighted that this is a major enabler – even if not explicitly linking this success to the targets: 'It is our deep understanding of the local situation and the dynamics of the place that enables us to move past conflict and find ways to make IWRM principles more practicable […].'

Constraints, barriers and challenges

Respondents reported common findings:

- *Political context can interfere with CD intentions*: This very common observation was articulated, e.g. as follows: 'We support the government but we are not the government, and […] what we provide can be affected by political changes within governments.' And: 'The national political context is what defines the pace of progress in the implementation of IWRM.' They also reported that government adhesion to respondents' work may be on average rather low but is never non-existent and, thus, can be occasionally high.
- *Underappreciated relevance*: Decision-makers, especially at the local level, are often unaware that they need CD to understand IWRM and its benefits. A particularly strong reflection was: 'Working with politicians usually entails engaging in a battle of egos. Decision-makers resent being shown that they "need" CD—nobody likes to be told they do not know enough about their job.'
- *Narrow approach*: The multi-stakeholder nature of IWRM is fundamental, but as it is often not appreciated or is deemed too complicated, CD often reaches a too limited target audience: 'A lack of deep understanding of IWRM leads to poor coordination of water managers with other areas (e.g. in energy, agriculture or industry) which often leads to conflicting agendas.'
- *Underappreciated cultural differences*: As pointed out above, CD organisations that work closely with local communities seem to better appreciate cultural traits, and they turn cultural sensitivity to their advantage. On the other hand, CD organisations that operate more globally seem to find intercultural issues challenging: 'What in one cultural context may be understood as a well-intended gesture to suggest gratitude […], can be regarded in another cultural context as an act of bribery or corruption […].' And: 'What we understand by "water scarcity" is different for different people, and as a result we may need different approaches to solving a seemingly similar problem. Yet, grasping the full implications of this takes a lot of time and effort', and: 'We have to work on a listening mode, always aware that the national partner provides the context for our ideas that were hatched back at our global desks.'

• *Not enough partnerships at the regional level*: Such partnerships and platforms are key to enhance peer learning and create synergy among countries with similar water challenges and cultural identities.

- *Limited resources*: Although the limited resources allocated to CD are a common tenet, this translates specifically as follows:
  - The need to provide short-term accountability to donors often forces them to focus on activities that enable them to 'count heads' (i.e. the number of people reached by their training activities) rather than fostering deeper, longer-term transformational strategies whose impact is, however, more complex to measure. As one respondent noted, 'If we need to design rigorous, interdisciplinary frameworks to measure the extent to which our activities foster learning, we need to divert resources in this direction. […] donors are not willing to support this, as impacts take too long to become accountable for.'
  - *Transient audiences*: Target audiences such as staff of water administrations often quickly rotate between jobs or migrate to other settings, and resources do not allow for any follow-up; this does not allow capacity to root locally, 'and we often have to start all over again from scratch'.
  - *Insufficient or difficult-to-get data*: This hampers reliable information for building, e.g. progress indicators: 'Accessing data to inform decision-making is already difficult, but even more difficult is to gather scattered or non-existing data to establish a baseline to begin with—let alone talk about measuring progress.' While this is found generally for SDG 6.5 (e.g. UN Environment, 2018), regional reports on river basin management

also show that this is particularly relevant for transboundary cooperation, where greater and early involvement of local stakeholders is instrumental in the processes of data collection and their inclusion and validation in national reports.[4]

Looking ahead: respondents' perceptions about what works and new opportunities

A set of open-answer questions in the survey, reviewed separately with each interviewee, sought to document perceptions on which activities currently in place seem to be more effective to promote SDG 6.5:

- Sustain support to CD that has proven the most effective, to achieve a significant contribution at the country level, e.g. by:
  - 'Working directly with mid-level civil servants or technical staff who are unlikely to rotate in political shifts. Also working not just with "water" ministries, but with other ministries that strongly relate to water';
  - 'Supporting strategies for adaptation to impacts of environmental changes';
  - 'Integrating IWRM in educational systems as cross-cutting at all levels of instruction';
  - 'Working with indicators and methodologies not only with the public sector but with civil society (…), using participatory approaches involving all stakeholders' and
  - 'Developing inter-jurisdictional participatory platforms for relevant issues'.
- Strengthen collaboration and global networking with other organisations. This would help scale up CD initiatives to achieve SDG 6.5 goals: 'A shared and consolidated roadmap between different CD organisations harmonising areas of focus, target audiences, etc. […]. Current efforts are dispersed and often ineffective.'
- National adoption of commitments to SDGs opens the possibility to raise awareness on the need for devising CD strategies across several sectors. Respondents pointed out that their countries are 'now engaging more in devising and implementing basin-based IWRM strategic plans applying scientific and technological advances to implement SDGs'. Similarly, local (municipal) levels of management and governance are also increasingly adopting SDGs in their agendas, which is also an opportunity for carrying out CD.

Respondents' perceptions were sought about existing capacity at the country level to implement SDG 6.5, using their professional assessment, as a function of: (1) enabling environments (law, policy, plans); (2) institutions and participation (organisational arrangements, cross-sectoral coordination, river basin organisations, public and business participation, gender objectives); (3) management instruments (water-use management, pollution control, ecosystems management, monitoring, data and information sharing, others) and (4) financial management (budgets for investment and for recurrent expenses). Table 1 shows that capacity developers rate existing capacity as medium to low in nearly all domains for both targets, with occasionally a high or very high rating. No substantive difference is reported between the four criteria, although financial management capacity appears as the most serious deficiency. These findings demonstrate, on the one hand, that more resources need to be allocated towards CD initiatives, but, on the other hand, that progress is being made on several counts, which makes a case for a greater use of peer learning.

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[4] See, for example, Africa https://www.unece.org/fileadmin/DAM/env/documents/2018/WAT/07Jul_4-6_Douala/TDR_Atelier.pdf https://www.unece.org/index.php?id=52765 (accessed 25 September 2020), and for South America cases https://www.gwp.org/globalassets/global/gwp-sam_files/publicaciones/reporte-sdg-652-nov18/report-workshop_652-montevideo-eng-final.pdf (accessed 25 September 2020).

Table 1 | Respondents' assessment about existing capacity at the country level for SDG 6.5 for IWRM and transboundary cooperation.

	Very high capacity		High capacity		Medium capacity		Low capacity	
	IWRM	Transboundary cooperation	IWRM	Transboundary cooperation	IWRM	Transboundary cooperation	IWRM	Transboundary cooperation
1. Enabling environment	12	10	33	17	45	48	9	24
2. Institutions and participation	9	10	24	21	54	31	12	38
3. Management instruments	12	10	9	17	66	41	12	31
4. Financial management	3	4	6	11	28	25	62	61

Values are in percentages; 34 responses on IWRM, 31 on transboundary cooperation.

CONCLUSIONS

A wide range of relevant CD strategies and instruments are reported being in use, stemming from an array of organisational partnerships that each reaches out to a different target audience. This diversity is in itself a positive indicator of the commitment to global agendas like SDG 6.5 and suggests that instruments are available to suit different contexts and purposes. However, more study is warranted to further finetune and enhance the effectiveness of these CD instruments and approaches.

While the relevance of the UN's 2030 Agenda for Sustainable Development is widely acknowledged, the survey demonstrates that this is often not (yet) reflected in CD activities that are able to explicitly address specific SDGs. A general challenge is the difficulty in translating global agendas to local contexts and local communities. Better explicit alignment of CD is reported with regard to IWRM (SDG 6.5.1) than to transboundary cooperation (SDG 6.5.2), possibly because the former entails a larger and more operational agenda than the latter. The survey also suggests that the achievement of SDGs may be enhanced by a deeper understanding of the context-specific and culture-related barriers. Respondents stated that in order to reach out more effectively to local communities, at times they chose not to explicitly align their activities with the general interpretation of SDGs but recast these according to what is locally relevant. The local translation (reterritorialising) of global discourses such as the SDG agenda is actually sometimes met with resistance because of political reasons or simply because of the difficulties entailed in translating those agendas in terms of the communities' immediate needs. Water governance, management and planning are locally among the most sensitive and best-recognised aspects of SDG 6.5. Respondents also highlighted the challenge of engaging with decision-makers and administration staff who rotate between their duties and not always sustain their predecessors' achievements.

However, common 'good practices' have been identified that can be scaled up, notably multi-stakeholder participation and strong partnerships; the combination of a bottom-up community-driven groundwork with top-down governance strengthening; and the understanding of how IWRM approaches in global agendas can also foster a sense of ownership at the local level. These observations concur with recent pedagogical insights that 'educational' experiences and CD should be learner-centred, creating opportunities for peer learning as a pathway for transformational learning.

Finally, more study is required on measuring the impact of CD, distinguishing between shorter- and longer-term effects and applying appropriate frameworks to assess impact at various scales. These distinctions are conceptual and have methodological implications, for which we suggest to seek greater synergy with educational research.

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DATA AVAILABILITY STATEMENT

All relevant data are available from https://drive.google.com/drive/folders/1odUrhb2J0sWAYjz76IPoRCca22uNyNGw.

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