

Mdee, A.; Ofori, A.D.; Cohen, J.; Kjellén, M.; Rooney, E.; Singhal, S.; Amezaga, J.; Ankush; Figueroa-Benítez, A.; Gupta, S.; Tamiru Haile, A.; Hailelassie, A.; Kongo, V.; Kumar, A.; Mafla Noguera, S.A.; Nagheeby, M.; Noor, Z.Z.; Polaine, X.; Singh, N.; Sylvester, R.; Wan Ahmad Tajuddin, W.A.N.; Bin Yusop, Z. and Zúñiga-Barragán, J. 2024. Obscuring complexity and performing progress: Unpacking SDG Indicator 6.5.1 and the implementation of IWRM. *Water Alternatives* 17(2): 391-414



Obscuring Complexity and Performing Progress: Unpacking SDG Indicator 6.5.1 and the Implementation of IWRM

Anna Mdee

School of Politics and International Studies, University of Leeds, Leeds, UK; a.l.mdee@leeds.ac.uk

Alesia D. Ofori

Centre for Water, Environment and Development, School of Water, Energy and Environment, Cranfield University, Cranfield, UK; alesia.ofori@cranfield.ac.uk

Joshua Cohen

School of Earth and Environment, University of Leeds, Leeds, UK; j.b.cohen@leeds.ac.uk

Marianne Kjellén

Independent Technical Advisory Panel, Green Climate Fund, Stockholm, Sweden; kjellenmarianne@gmail.com

Elliot Rooney

UKRI–GCRF Water Security and Sustainable Development Hub, Newcastle University, UK; e.rooney2@newcastle.ac.uk

Shivani Singhal

School of Politics and International Studies, University of Leeds, Leeds, UK; ipissi@leeds.ac.uk

Jaime Amezaga

Centre for Water, Newcastle University, School of Engineering, Newcastle University, Newcastle upon Tyne, UK; jaime.amezaga@newcastle.ac.uk

Ankush

Department of Physical Planning, School of Planning and Architecture, New Delhi, India; ankush.ra@spa.ac.in

Alejandro Figueroa-Benítez

Universidad del Cauca, Doctorado Interinstitucional en Ciencias Ambientales, Popayán, Colombia; alemagnoprimer@unicauca.edu.co

Shambavi Gupta

Department of Physical Planning, School of Planning and Architecture, New Delhi, India; guptashambhavi5@gmail.com

Alemseged Tamiru Haile

International Water Management Institute (IWMI), Addis Ababa, Ethiopia; a.t.haile@cgiar.org

Amare Hailelassie

Water and Land Resource Centre, Addis Ababa University; and College of Development Studies, Addis Ababa University, Addis Ababa, Ethiopia; amare.b@wlrc-eth.org

Victor Kongo

Africa Environmental Solutions, Dar es Salaam, Tanzania; victor.kongo@gwpsaf.org

Ashok Kumar

Department of Physical Planning, School of Planning and Architecture, New Delhi, India; a.kumar@spa.ac.in

Samy Andrés Mafla Noguera

CINARA Institute, Universidad del Valle, Calle, Colombia; samy.mafla@correounivalle.edu.co

Mohsen Nagheeb

UKRI–GCRF Water Security and Sustainable Development Hub, Newcastle University, Centre for Water, Newcastle University, Newcastle upon Tyne, UK; mohsen.nagheeb@newcastle.ac.uk

Zainura Zainon Noor

Center for Environmental Sustainability and Water Security (IPASA), Universiti Teknologi Malaysia (UTM), 81310 Skudai, Johor, Malaysia; zainurazn@utm.my

Xanthe Polaine

UKRI–GCRF Water Security and Sustainable Development Hub, Newcastle University, UK; x.polaine1@newcastle.ac.uk

Nitin Singh

Department of Physical Planning, School of Planning and Architecture, New Delhi, India; urnitin@gmail.com

Ruth Sylvester

School of Civil Engineering, University of Leeds, Leeds, UK; cnres@leeds.ac.uk

Wan Asiah Nurjannah Wan Ahmad Tajuddin

Centre for Environmental Sustainability and Water Security (IPASA), Universiti Teknologi Malaysia (UTM), 81310 Skudai, Johor, Malaysia; wanasiahnurjannah@graduate.utm.my

Zulkifli Bin Yusop

Centre for Environmental Sustainability and Water Security (IPASA), Faculty of Engineering, Universiti Teknologi Malaysia (UTM), 81310, Skudai, Johor, Malaysia; zulyusop@utm.my

Julián Zúñiga-Barragán

Universidad del Valle, Colombia; julian.zuniga@correounivalle.edu.co

ABSTRACT: At a rhetorical level, the SDGs provide a unified global agenda, and their targets and indicators are believed to drive action for social and environmental transformation. However, what if the SDGs (and their specific goals and indicators) are more of a problem than a solution? What if they create the illusion of action through a depoliticised and technical approach that fails to address fundamental dilemmas of politics and power? What if this illusion continues to reproduce poverty, inequality, and environmental degradation? This paper addresses these questions through a focus on SDG 6.5.1 – the implementation of integrated water resources management (IWRM),

measured on a 0-100 scale through a composite indicator. The paper presents an empirical analysis of SDG 6.5.1 reporting in Colombia, Ethiopia, India, Malaysia, and the UK, drawing on research from the Water Security and Sustainable Development Hub.¹ An evidence review and series of expert interviews are used to interrogate the local politics of IWRM measurement, specifically three dilemmas of global composite indicator construction: (1) reductive quantification of normative and contested processes; (2) weak analysis of actually existing institutional capability, politics, and power; and (3) distracting performativity dynamics in reporting. The paper concludes that SDG 6.5.1 is an example of a 'fantasy artefact', and that in all countries in this study, IWRM institutions are failing to address fundamental and 'wicked' problems in water resources management. We find little evidence that these numbers, or the survey that gives rise to them, drive meaningful reflection on the aims or outcomes of IWRM. Instead, they tend to hide the actually-existing political and institutional dynamics that sit behind the complexity of the global water crisis.

KEYWORDS: IWRM, indicators, politics of data, SDG 6.5.1, Colombia, Ethiopia, India, Malaysia, UK

INTRODUCTION

The wide range of participants involved in the formulation of the Sustainable Development Goals (SDGs) implies a significant consensus on their framing of international development. Adopted by all 193 member states at the UN by unanimous vote, the SDGs operate as a unifying framework and language, not only for national governments but also for international organisations (Dang and Serajuddin, 2020). The SDGs comprise 17 overarching goals, and progress towards them is understood through 167 targets, including not only specific outcomes but also the means of achieving them (United Nations, 2015).

At a rhetorical and ideological level, the SDGs are argued to act as a means of normative signalling by a range of private and public actors (Larsen et al., 2022). The water and sanitation SDG, Goal 6, is as follows: "Ensure availability and sustainable management of water and sanitation for all". Through its eight targets, it promotes a holistic approach to water and sanitation governance (Sadoff et al., 2020). Target 6.5 reads, "By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate".

The achievement of the eight targets² is monitored using eleven indicators. Target 6.5 includes two indicators, of which the first monitors the implementation of integrated water resources management (IWRM), principally at the national level, using a 0-100 scale: *6.5.1: Degree of integrated water resources management*.

In this paper, we critique indicator 6.5.1 through engagement with five country-level case studies, with the aim of exploring the contested process by which it is quantified. Whilst the SDG framework depicts Target 6.5 as an outcome, it is in fact a means of implementation (UN-Water, 2017; Bartram et al., 2018). Measuring the quality of governance processes is particularly challenging (Bhaduri et al., 2016; Bertule et al., 2018) and can risk skewing priorities towards indicator achievement at the expense of broader policy objectives (Kjellén and Liss Lymer, 2017; Sadoff et al., 2020).

We build on these critiques to unpack the process by which SDG indicator 6.5.1 is produced, considering the everyday politics of data production and outcome quantification. Whilst we recognise the good intentions behind the indicator, we argue that it falls into a classic trap of technocratic wishful thinking. From our thematic analysis of the political economy of SDG 6.5.1 reporting in five countries, we

¹ This work was supported by the Water Security and Sustainable Development Hub, funded by the UK Research and Innovation's Global Challenges Research Fund (GCRF) 2019-2024 (Grant Number: ES/S008179/1) <https://www.watersecurityhub.org/our-research>.

² The targets focus on safe and affordable drinking water; access to adequate and equitable sanitation and ending open defecation; water quality; water-use efficiency; implementing IWRM; water-related ecosystems; international cooperation and capacity-building; and local participation in water management. See https://sdgs.un.org/goals/goal6#targets_and_indicators

suggest three chronic weaknesses: (1) reductive quantification of normative and contested processes; (2) weak analysis of actually-existing institutional capability, power, and politics; and (3) distracting performativity dynamics in number selection and reporting.

The paper is structured as follows: We first examine the tensions between quantification in the SDGs and new public management in general, and then we relate these to wider debates on the meaning and practice of integrated water resources management (IWRM). We further detail the evolution of the global monitoring processes that produced the current SDG 6.5.1 monitoring methodology. Finally, we outline the methodology for this study. The results of our analysis are split: We focus first on the country-level data on the 'institutions and participation' component of the SDG.6.5.1³ indicator as an illustration of the complex and arbitrary nature of the numbers chosen for reporting; and secondly, we draw on evidence from published research and from country-based expert interviews to identify and explain the three weaknesses.

SDG 6.5.1 UNPACKING THE POLITICS BEHIND AN INDICATOR

The idea of integrated water resources management (IWRM) appears to offer a logical solution to the wicked resource and governance problem of how to share water (in all its forms) equitably, sustainably, and efficiently. The Global Water Partnership (GWP) defines IWRM as

a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems (<https://iwrmaactionhub.org/about/iwrm-explained>)

The GWP was established in 1996 with the support of the UN and other development agencies to facilitate the domestication of IWRM. IWRM is drawn from the Dublin Principles formulated in 1992, establishing a basin-level, process-oriented and participatory approach to water management. The GWP created an IWRM toolbox in 2001, and by 2005 it had succeeded in establishing global targets for the national IWRM plans. As a powerful actor with global convening power, the definitions and assumptions of the GWP's IWRM are thus embedded in mainstream rhetoric and practice and fully reflect the era of neoliberal governance and new public management in which they were formulated (Kashwan et al., 2019).

In this paper, we add to the extensive literature that both critiques the assumptions of IWRM but also reveals the power and politics of its application as a concept and indicator (Rogers et al., 2003; Molle, 2008; Allouche, 2016; Petit, 2016; Woodhouse and Muller, 2017; Bertule et al., 2018; Swatuk and Qadar, 2023).

IWRM as a 'nirvana concept' offers an attractive 'fuzziness' (Molle, 2008). It can be all things to all people. It can easily be used to cover differential power and discrimination in a language of inclusion and participation. We do not need to look far to find multiple examples of how power and politics subvert and co-opt the institutions of governance (e.g. Cleaver and Franks, 2008; Mehta et al., 2016; Mdee, 2017), but mainstream water narratives remain remarkably resistant to such observations from critical social science (Venot et al., 2022; Martin-Ortega, 2023).

The incorporation of IWRM as a quantifiable proposition in the SDGs is a significant success for proponents of the concept. It cements the concept with the power of an ideological agenda that is difficult to resist (Kashwan et al., 2019), and in doing so, it obscures messy and complex realities. We argue that this is not a problem of the SDG 6.5.1 indicator specifically, but rather of the new public management (NPM) assumptions of good governance which are embedded throughout the SDGs. These

³ We acknowledge that this component is also linked to SDG 6.B.1, but this is monitored and measured through a different instrument: <https://glaas.who.int/>.

reward form over function and encourage copy-and-paste policy proclamations, such as the inclusion of gender mainstreaming without the specifics of implementation (Andrews et al., 2017; Mdee and Harrison, 2019; Mdee and Mushi, 2021; Smith et al., 2023). They further function to silence the political nature of resource-sharing arrangements, acting as an engine of the 'anti-politics machine' (Ferguson, 1994; Sanchez, 2019; Gerber and Haller, 2021; Goodwin et al., 2022; Larsen et al., 2022; Venugopal, 2022).

A core belief of the agendas that drove the Millennium Development Goals (MDGs) is that quantitative targets are effective tools for driving performance and creating incentives for action (Fukuda-Parr and Yamin, 2013). This belief that quantitative targets and their indicators can act as both drivers and measures of progress is also integral to the assumptions, discourse, and reforms of the good governance agenda (Mdee and Mushi, 2020). For Alexis and Vähämäki (2024), this has become an 'obsessive measurement disorder', which has reached a nadir in the SDG era by acting as a disciplining tyranny (Bell and Morse, 2011). It is a driver of an entire industry of indicator creation, beset with political bureaucracy (Langford, 2016) and empowering an elite cadre of 'statistical entrepreneurs' who enable the indicator production machine (Broome et al., 2021; Bandola-Gill, 2022). Increasing global and corporate co-opting of SDG branding has led to concerns about superficial 'SDG-washing' in place of meaningful engagement and shifts in practices (Saizarbitoria et al., 2021). Specifically in relation to SDG 6, concerns have been raised that the global indicators obscure the local governance processes where implementation happens (Herrera, 2019) and that complex, burdensome data collection and reporting processes will shift resources away from actual implementation (Guppy et al., 2019).

Indicators are tools of management and discipline. They are laden with power and built on simplifications shaped by the interests of those who construct them (Kashwan et al., 2019; Di Fiore et al., 2023). Indicators, by their very nature, present an illusion of neutrality by masking the choices and data that underpin their construction (Porter, 1995; Saltelli, 2020; Saltelli and Di Fiore, 2020; Iversen, 2023). In doing so, they become key components of reductive simplification, 'technical rendering', and the hiding of politics and power (Ferguson, 1994; Zeitoun et al., 2016; Venugopal, 2022). Technocrats and politicians tend to value this opacity, keeping the focus on the indicator, for which blame and responsibility can be deflected, rather than the structural underpinnings of the issue at hand (Hood, 2007; Mdee and Mushi, 2020).

Drawing on Clarke (1999), we further contend that SDG indicators function as 'fantasy artefacts': they are numbers produced to 'perform progress' but are not necessarily reflective of the actual conditions. Clarke argues that, in situations of complex and uncertain governance, the creation of plans, policies, and strategies often form an illusion of control over the future. Associated indicators then become the symbolic markers of imagined reality.

Fundamental problems in the sharing of natural resources – for example, water access and management – are both 'wicked' in nature (Rittel and Webber, 1973; Mdee et al., 2022a) and characterised by high levels of uncertainty. Rational and technocratic planning fails to deal with a lack of certainty and control, yet the first line of response to natural resource-sharing problems is currently constituted by the tools of human bureaucratic governance systems: policies, programmes, plans, and indicators. A critical question thus arises as to whether these have any real function, or whether they are more symbolic than instrumental. Weinstein et al. (2019) apply Clarke's theoretical lens to climate resilience and flood planning in Kolkata and Mumbai, India, drawing insights from critical urban studies. They identify a gap between the 'fantasy plans' of government authorities and the 'actually existing' practices and outcomes of city development. In doing so they draw attention to the power dynamics embedded in the production of fantasy plans and artefacts and how they are used to control agendas and problem framing. Powerful actors are very reluctant to acknowledge the performativity of planning and the production of objects, such as quantitative indicators, that perform the illusion of control (Ross et al., 2016; Wilshusen, 2019; Mdee and Mushi, 2020).

Whilst we can label plans and indicators as fantasy artefacts, they have very material impacts. They shape discourse, individual and organisational behaviour, and resource flows, and they are used to restrict debate and constrain the contestation of power (Kashwan et al., 2019). The production of the data that underpins an indicator, whether fallible or useful, is also costly in terms of human and institutional resources – something which has pronounced impacts in resource-constrained contexts (Weinstein et al., 2019; Mdee and Mushi, 2020; Mdee et al., 2022a).

This paper is not the first to question the validity of the SDG 6.5.1 indicator. Some question how a process, IWRM, which in principle encourages the adoption of locally appropriate modes of sustainable water management, has come to be treated as a quantifiable global target (Bhaduri et al., 2016; Swatuk and Qadar, 2023). Sadoff et al. (2020) argue that the indicator ignores variable political economies and implementation processes in favour of technocratic and managerial values. Petit (2016) suggests that the search for IWRM is 'pointless' given its inherent conceptual malleability.

It should be noted that there are attempts to improve the indicator. For example, Benson et al. (2020) argue for an even more complex, composite IWRM indicator. This article adds to this debate.

The current construction of the SDG 6.5.1 indicator has an evolutionary history. Contestations over the credibility of targets and indicators in global water governance extend back almost fifty years. In 1977, the UN Water Conference in Mar del Plata, Argentina, was the first global conference on water management and supply, organised on the premise of avoiding a future water crisis (Falkenmark, 1977; Rahaman and Varis, 2005). The resulting 'Action Plan' foregrounded the role of legal frameworks, national policies, and institutional arrangements in ensuring the coordination, development, and management of water resources (Clausen and Smith, 2015) and incorporated a monitoring survey, an approach that was observed to be limited when it came to reviewing actual implementation (Biswas, 1981).

The 1992 Dublin Principles and the related prescription of IWRM further extended this approach. Critics argued that, in addition to the controversial assertion of water as an economic good, the Principles also ignored the varying degrees of complexity affecting water management in different contexts (Biswas, 2004).

In 2000, the UN General Assembly adopted the Millennium Declaration, which launched the Millennium Development Goals (MDGs) (UN General Assembly, 2000). MDG target 7c aimed to halve the 'proportion' of people without access to safe drinking water within fifteen years.⁴ The Millennium Declaration also included a resolve "to stop the unsustainable exploitation of water resources by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies" (UN General Assembly, 2000: 6), but the MDG framework did not seek to monitor individual country action on water resources management. To rectify this perceived gap, two years later at the World Summit on Sustainable Development, the Johannesburg Plan of Implementation set an aim to "develop integrated water resources management and water efficiency plans by 2005" (United Nations, 2002: 15).

Reporting back on its progress, UN-Water presented a Status Report on IWRM and Water Efficiency Plans in 2008. The report combined findings from a number of surveys administered through UN-DESA, UNEP, and the Global Water Partnership (GWP) (UN-Water, 2008). These surveys gathered responses from 77 countries but did not use a consistent methodology. The next report, in 2012, was more focussed on the application of integrated approaches to the development, management, and use of water resources, and it combined disparate monitoring surveys that gathered responses from over 130 countries (UNEP, 2012). This exercise introduced four dimensions, scored on a 0-100 scale – all of which would later be transplanted into SDG 6.5.1 monitoring. These were: an enabling environment, institutional frameworks, management instruments, as well as [the development of infrastructure and] financing.

⁴ <https://www.un.org/millenniumgoals/environ.shtml>

The achievement of Target 6.5 is monitored using two indicators: the first, 6.5.1, measures the extent to which a country is implementing IWRM, and the second, 6.5.2, measures the operational levels of transboundary cooperation between overlapping water basins between two or more states. A separate national survey is used for each indicator, although there is a great deal of overlap between them (Bertule et al., 2018). We focus here on the monitoring of 6.5.1, using the 2018 and 2021 datasets globally reported in the UNEP (2018, 2021) progress reports. SDG 6.5.1 indicator metadata is available on the IWRM Data Portal, which is maintained by UNEP-DHI, UNEP, and the GWP. The monitoring results of all the SDG6 indicators are presented on the UN-Water SDG6 Data Portal.

National governments are responsible for the production of data using a self-assessment survey that comprises 33 questions structured by four dimensions of IWRM (UNEP-DHI, 2020):

- a) 'the enabling environment' measures strategic planning, legal, and policy tools
- b) 'institutions and participation' measures cross-sectoral coordination, public-private partnerships, participation, and gender objectives.
- c) 'management instruments and programmes' measures frameworks which assist decision-making and making rational choices, and
- d) 'financing for investments' measures investment in infrastructure, the raising of revenue, and recurring costs.

The survey is further divided into two sections, representing 'National' and 'Other'. Each question has six defining thresholds, with an assigned score: Very High (100), High (80), Medium-high (60), Medium-low (40), Low (20) and Very Low (0). Each threshold also has a description to guide the scoring (see Table 1). The overall score is generated by calculating the average score of each section, and the final SDG indicator 6.5.1 score is calculated by averaging the scores of all four sections. The scores for each country thus fall on a scale of 1-100. The 2017 and 2020 surveys were available in 7 languages – Arabic, Chinese, English, French, Russian, Portuguese, and Spanish – and there has recently been a 2023 update (see <http://iwrmdataportal.unepdhi.org/>).

Table 1. Thresholds provided for scoring question 2.1, "What is the status of institutions for IWRM implementation at the national level?" part b, "Coordination..." (UNEP, 2020)

	0 (very low)	20 (Low)	40 (Medium-low)	60 (Medium-high)	80 (High)	100 (Very High)
<i>b. Coordination between national government authorities representing different sectors on water resources, policy, planning and management</i>	<i>No information is shared between different government sectors on policy, planning and management</i>	<i>Information on water resources, policy, planning and management is made available between different sectors</i>	<i>Communication: Information, experiences and opinions are shared between different sectors</i>	<i>Consultation: Opportunities for different sectors to take part in policy, planning and management</i>	<i>Collaboration: Formal arrangements between different government sectors with the objective of agreeing on collective decisions on important issues and activities</i>	<i>Co-decisions and coproduction: Shared power between different sectors on joint policy, planning and management activities</i>

Source: United Nations Environment Programme (UNEP)-DHI. 2020. *Country Survey Instrument for SDG Indicator 6.5.1*. SDG 6.5.1 Survey Instrument, 2020 and Supporting Materials. <http://iwrmdataportal.unepdhi.org/country-reports>.

The four dimensions of the survey aim to capture a self-assessment of the presence of a policy, institution, or funding stream, with functionality expressed in neutral managerial language. They encompass the normative assumptions of IWRM (the GWP version) as a managerial negotiation between

equal and rational stakeholders; they offer little insight into the outcomes or actual capacities of governance arrangements.

The first phase of SDG 6.5.1 data collection was a baseline study in 2017-2018, with 172 countries participating. As a starting point, a singular national focal point (FP) had to be identified in order to submit results on behalf of the country. The focal points were advised to participatorily engage other national stakeholders in filling out the questionnaire, but the primary responsibility of filling and final submission rested on them. These FPs tend to be national ministries responsible for water management or other organisations such as other state water offices or national statistics offices (Bertule et al., 2018). There is no independent assessment of the reporting data.

Subsequent stages included the rollout of surveys, data collection, and validation. Training sessions were held in different time zones to provide support to countries participating in the process. To include viewpoints from various sectors and users, stakeholder participation in the data collection was encouraged (Bertule et al., 2018). Between 2017 and 2020, 186 countries participated in the process.

Criticisms of the SDG 6.5.1 baseline study include the way the survey thresholds portray a fixed situation, rather than a system in a state of flux, and their lack of attention to context. If the thresholds happened to diverge from the country's own description of their processes, there was little room for explanation, nor was there scope to identify barriers or enablers in implementing IWRM. Bertule et al. (2018) note a lack of focus on improvement since the last assessment or on future actions and recommendations.

To account for these issues, the 2020 survey was amended to include narrative responses with the labels "status descriptions" and "way forward". In the 2023 survey instrument, another free text field, "climate change considerations", was included in 5 of the 33 questions asked (UNEP-DHI, 2023).

What we seek to do in this paper, then, is to peel back the layers from the numbers that are produced in the global reports and infographics. In doing so, we reveal tensions that question the validity and functionality of these numbers on a fundamental level.

METHOD: A FIVE-COUNTRY EXAMINATION OF SDG 6.5.1 REPORTING

We use political economy analysis to explore discrepancies between official reporting on SDG 6.5.1 in different contexts, and 'actually existing' water governance dynamics evidenced through a literature review and expert interviews (Kashwan et al., 2019). The purpose of this analysis is to shed light on the process of producing a number for an indicator and to think through what it reveals and what it conceals. We are interested in what the imposition of a universalising global indicator does to water governance at a national level. We take numbers generated through the survey as a starting point to interrogate how particular numbers are produced, who produces them, and what they signify.

This research is an emergent co-production from a large-scale research project: the Water Security and Sustainable Development Hub, funded by the UK government, which includes researchers from Colombia, Ethiopia, India, Malaysia, and the UK and runs from 2019 to 2024. Such broad international collaboration offers a unique opportunity to examine how SDG 6.5.1 reporting operates in practice, drawing on expertise from across disciplines and geographies.

Whilst the primary focus of the Hub is on the countries in the Global South, the UK-based authors found it increasingly difficult to justify this and therefore chose to expressly include the UK in the analysis – especially given that, as discussed above, the SDGs are framed with a global mandate.

Data collection sequence

Our empirical data collection had two phases:

Phase 1: Official SDG 6.5.1 reporting across the five countries

Given that our critical point of analysis was to explore how a given number is produced, it was not necessary to analyse every component of the questionnaire. We wanted to take a deep dive into one element, to interrogate and elucidate the dynamics and politics embedded in the quantification process. We thus selected the 'institutions and participation' section of the survey.

We downloaded SDG 6.5.1 indicator data from the IWRM data portal, including free-text data (e.g.; rationale for the scores, way forward, narrative responses and status descriptions) broadly related to SDG 6 (UNEP-DHI, 2020). We did this for all of Colombia, Ethiopia, India, Malaysia, and the UK. This section sets out an essentially mechanical presentation of how each country presents itself through the formulation of the global survey.

Phase 2: Deconstructing the survey data with informed critical reflection and local evidence

The numbers produced in the UN SDG 6.5.1 survey for each country were then cross-examined through a process of key expert interviews. Some of these interviewees are project collaborators and authors of this paper; they are recognised national experts on the water sector in their respective countries. Other interviewees are external to the project, and some were directly involved in the SDG 6.5.1 reporting process in their countries. The process of analysing the data and formulating this paper was undertaken as a form of expert-based critical reflection (see also Mdee et al., 2022a). The author group is large and incredibly diverse, and therefore contains multiple perspectives and positionalities. This paper emerges from that interaction.

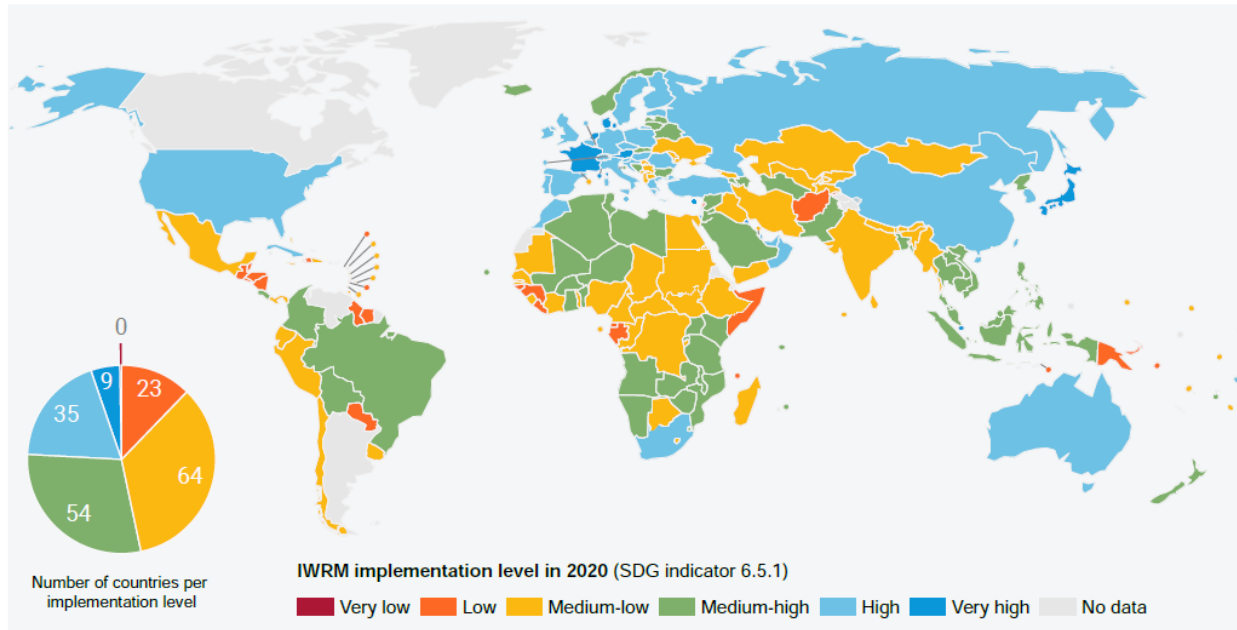
All interviewees, except where they are also co-authors, remain anonymous. (Several individuals spoke to us under the condition that their words would not be quoted, as there was concern about the intensely political context of generating these numbers.) The interviews were designed as a reflective conversation on the nature of the indicator, the production of the reported number, and the value of this number and process in relation to the wider context and practice of water governance in the five countries. Interviewees were invited to support their views through reference to published research and evidence. The purpose of the interviews was to interrogate the process of survey completion and to understand the processes used by national focal points to quantify performance. Interviews were transcribed and analysed thematically, and a long list of emerging findings was produced. A process of triangulation was then undertaken through a further round of discursive interviewing with co-authors and collaborators. The three core tensions discussed below were identified and refined during this process. The process was designed not to be directly comparative but to identify the specific contextual politics and dynamics behind each number.

SDG 6.5.1 – WHAT DO THE NUMBERS SAY AND DO?

According to UN monitoring data, the global score for SDG 6.5.1 increased from 49-54% in the three years between 2017 and 2020. Figure 1 shows the aggregate SDG 6.5.1 scores for each country. France and Japan are among the outstanding performers on this measure. The United States and India did not participate in the 2017 iteration of the survey, while Canada and Argentina choose not to submit data in 2020, without explanation. It would require further interrogation to ascertain the exact reasons, but it seems that progressively, countries work out how to fit their existing institutions and laws to the IWRM SDG 6.5.1 survey discipline. The claimed level of integration appears to be relatively high (scored medium low), even in countries with ongoing conflicts such as the Democratic Republic of the Congo and the Central African Republic, where resources and governance are extremely challenged. This potentially suggests that the measure reflects the degree to which the language of IWRM is asserted by those national representatives who complete the survey.

It should be noted that UNEP (2021) reports that progress on SDG 6.5.1 is off-track, and the rate of global progress should be doubled in order to meet the target by 2030.

Figure 1. Degree of integrated water resources management implementation (0-100).



Source: UNEP, 2021: 12

Results from Phase 1: Unpacking SDG 6.5.1 reporting in five countries

We focus our analysis on the 2020 data, since India was not part of the 2017 pilot process, meaning there is no earlier available data for that country. Table 2 shows the aggregate scores for each sub-component of the indicator. In this paper, we unpack one sub-component: institutions and participation.

Table 2. IWRM dimension scores under SDG 6.5.1, 2020.

	Malaysia	Ethiopia	India	Colombia	UK
Institutions and Participation	65	45	39	70	85
Enabling Environment	76	41	41	57	86
Management Instruments	58	39	63	57	76
Financing	52	37	37	42	68

Source: Country reports (<https://iwrmdataportal.unepdhi.org/country-reports>)

Each of these aggregate scores is produced by averaging individual scores from component survey question responses, of which those for "Institutions and Participation" are shown in Table 3. Though the number of questions was reduced from 12 in 2017 to 11 in 2020, some of the remaining questions had changed; there were additional questions on topics such as "participation of vulnerable groups". This makes the longitudinal comparison of scoring problematic. Countries can also choose to ignore questions that they believe do not apply to them. For example, whilst the UK scores itself a full 100 on "participation of vulnerable groups", it ignores the question of "gender inclusion in water resources management plans"

(UK SDG 6.5.1. country survey, 2020). No reason is given for this exclusion, and this question more than others is notable for its frequent dodging by respondent countries.

Table 3. Country scores to thematic questions under Institutions and Participation.⁵

Survey question	Ethiopia	Colombia	UK	Malaysia	India
Cross-sector coordination	50	80	80	80	80
Public participation – national	40	80	90	80	60
Public participation – local	50	80	80	80	60
Organisational framework for transboundary management	40	60	60	90	90
National institutions implementing IWRM	40	80	100	60	20
Participation of vulnerable groups	40	60	100	40	60
Private sector participation	30	90	80	60	20
Implementation of IWRM by sub-national authorities	40	80	100	60	0
IWRM capacity building	60	60	80	40	20
Basin/aquifer institutions	50	80	80	40	0
Gender inclusion in laws and policies	50	20	n/a	80	20

Source: Country reports (<https://iwrmdataportal.unepdhi.org/country-reports>)

Once a number is produced by a survey, it takes on a life of its own and is quoted as truth. We are interested in where each of these numbers comes from. Whose data and whose judgement shapes the selection of a particular score?

Question 2.1b, "Coordination between national government authorities representing different sectors on water resources, policy, planning and management", saw the highest mean score for our five countries of all the eleven survey questions. All countries except Ethiopia scored themselves 80, which is classified as 'high' (Table 3). For Ethiopia, the score of 50 nevertheless represented one of its highest-scored questions throughout the survey.⁶

Countries provided further information alongside the scores, including the current 'status' of the dimension in question. Details provided under 'status' also include what countries will do to improve or maintain the score; Table 4 sets out the free-text responses given alongside the scores. The UK was the only country to withhold further details on how to improve their threshold in terms of national coordination on water resources policy and management, despite assigning the same score value as three other countries.

⁵ All 2020 country reports are available at <http://iwrmdataportal.unepdhi.org/country-reports>

⁶ Ethiopia's scoring of SDG 6.5.1 ranged from 30-60. The threshold of 50 thus superficially indicated a good score for the country

These processes reflect the mechanisms in place during the 2020 survey period. There are no significant differences in the mechanisms by which countries achieved national coordination for IWRM, as detailed in Table 4.

Table 4. Free-text responses provided by each country on i) the status and ii) the way forward regarding cross-sector coordination (question 2.1b).

Free text explanations for each country under cross-sector coordination	
United Kingdom (High)	<ul style="list-style-type: none"> • There are formal links and consultations across departments on all policy initiatives, facilitated by the UK government's established write-round process.
India (High)	<ul style="list-style-type: none"> • As per Indian Constitution, role of Central and State Governments in respect of management of water resources is well defined. • Way Forward: Two bills based on IWRM i.e.; National Water Framework Bill, 2016 and River Basin Management Bill, 2018 are in the process of becoming laws.
Malaysia (High)	<ul style="list-style-type: none"> • Status: There is a National Water Council, chaired by the then Prime Minister of Malaysia, held in 2019, chaired by the then Prime Minister Tun Dr. Mahathir Mohamed. Previously the meeting was chaired by the Deputy Prime Minister, for example as reported here in 2017.⁷ With the shift in portfolio to the present Ministry of Water and Environment⁸ initiatives are underway to review existing policies, and move towards formulating a comprehensive policy on water, that encompasses water resources and services⁹. Coordination between Federal Ministries that hold a mandate over aspects related to water governance is conducted through various mechanisms, such as the National Water Resources Council, previously chaired by the then Deputy Prime Minister, and the most recent National Water Council meeting of, 2019, that was chaired by the then Prime Minister (see 2.1.a above). • Way forward: Transforming the Water Sector: National Integrated Water Resources Management Plan – Strategies and Road Map¹⁰ has set a set of strategies to help translate IWRM approaches extensively throughout the country, and it is expected that during the Twelfth Malaysia Plan period of, 2021-2025, steps will be taken to translate the IWRM strategies into action (see item, 11, environmental sustainability.¹¹)
Colombia (High) ¹²	<ul style="list-style-type: none"> • Status: For the coordination of environmental protection and conservation actions, inter-ministerial agendas are agreed at the national level, which are partially fulfilled, and the desired progress is not obtained. • Way forward: Consolidate a <i>state policy</i> for the cooperation of the different Ministries, especially those that are in charge of sectors that require a significant amount of water for productive activities, where coordination and cooperation are mandatory for effective IWRM in the country.
Ethiopia (Medium low/high)	<ul style="list-style-type: none"> • Status: There is consultation among different sectors involved in water resources management through Water Sector Working Group (WSWG), the National WASH Coordination Office (NWCO) and the Basin High Council (BHC). The Water Resources Management (WRM) Working Group under WSWG brings key stakeholders including relevant Federal level Institutions like Ministry of Agriculture (MoA), and Environment, Forest and Climate Change

⁷ www.nst.com.my/news/government-publicpolicy/2017/08/263365/msan-identifies-five-key-areas-better-manage-water.

⁸ www.ukas.gov.my/my/maklumat-ukas/profil/perintah-menteri-menteri-kerajaan-persekutuan-2020, see p.137 of the Gazette

⁹ <https://www.theedgemarkets.com/article/putrajayadrafting-new-national-water-policy-address-existing-weaknesses>

¹⁰ https://issuu.com/asmpub/docs/web_vol2_gf

¹¹ <http://rmke12.epu.gov.my/about-us>.

¹² Columbia's text was in Spanish and has been translated into English via Google translate. Translations were verified by a native Spanish speaker.

Commission (EFCCC). Similarly, the WASH Working Group under the WSWG brings key WASH stakeholders including three relevant ministries. In addition, NWCO engages MoWIE, Ministry of Education and Ministry of Finance to improve WASH planning and implementation. In the MoA there is Agricultural Water Management working group that brings MoA and MoWIE together in relation to irrigation water management. In 2020 in-depth review of National Water Policy and Strategy documents was undertaken with an active involvement of Federal and regional relevant institutions. Despite these efforts existing coordination mechanisms are weak, not exclusive to government institutions and most inter-sectoral communications and decision are not formalized.

- Way forward: Formal inter-sector coordination mechanism should be strengthened under the BHC or separately to improve coordination among government institutions at all levels. The mechanism should be formal, regular and should be guided with a clear Terms of Reference (ToR) and leadership from BDA. In addition, the WSWG secretariat and NWCO should be strengthened to enhance coordination among national government authorities. A working paper assessing various options for institutionalizing the inter-sectoral coordination with recommendations and TOR should be prepared for consultation and decision making.

In the UK, there is a 'write-round' process. According to the UK guidelines on 'Navigating Whitehall and Collective Agreement', a write-round process is required for all policies that require a collective agreement. This process mostly takes place through correspondence, although it may also include meetings in 'difficult cases'. The written strategy by the required ministry is shared amongst the interested parties, who are then allowed to comment on that strategy. All points of disagreement, according to the process guidelines, should be resolved. The accepted policy or proposal is then shared around again for final acceptance.

In Malaysia, this deliberation takes place through the National Water Council (NWC), which meets annually and is chaired by the Prime Minister. The membership comprises all the states' chief ministers. The main functions of the NWC are to formulate policies and strategies and to coordinate the management and development of water resources between states.

India, on the other hand, emphasises the power of the nation's constitution to drive coordination and collaboration among water and water-related sectors. The definition of the roles and responsibilities of all the sectors are argued to be sufficient in guiding all terms of coordination and collaboration in water resources policy, planning, and management. Further on in the SDG 6.5.1 report, India explains that

water is a state subject as per the Indian Constitution and development of water resources thus falls in the ambit of respective State Governments and as such the planning, execution, operation and maintenance of water resource projects are to be carried out by the States from their own resources as per their priorities.
(page A-4)

Colombia sets inter-ministerial agendas aimed at promoting institutional coordination and achieving IWRM goals at the national level, according to the nation's SDG 6.5.1, 2020 report (see, for instance, pages 8 and 9). Colombia ranks itself 'High', with a score of 80. This suggests strong collaboration, in the form of a formal arrangement that leads to collective decisions on water management issues. In practice, however, the report acknowledges that this formal agreement is inadequate, constrained by "unequal institutional conditions in administrative terms and availability of resources at the territorial level" (page 8; Spanish translation by authors).

Gauging the exact threshold for Ethiopia is challenging. Considering that there are similar mechanisms in place as in the four other countries and imagining challenges in coordination like those seen in Colombia, the country nevertheless gives itself a score of 50. Ethiopia indicates that all the elements that the other four countries have instituted in ensuring coordination are in place: consultation groups (inter-ministerial and councils) and a write-round process for policy formulation and review. Ethiopia's

justification for its lower score is that these efforts are not 'formal', meetings are not 'regular', and terms of engagement are not 'clearly defined'.

A reporting sheet at the end of the 6.5.1 indicator survey gives space for countries to provide further details on the reporting process. All countries provided more details on the scoring and review process during the COVID-19 pandemic. Ethiopia and the UK also used this space to provide additional justification for their scores. For example, the UK highlighted an insignificant change in their scores since it already indicated a 'highly developed score' in the 2017 pilot (Table 5). Colombia (despite giving itself a high score) and Ethiopia provided further details on the weaknesses undermining the implementation of IWRM in their respective countries. Malaysia highlighted the vagueness of the scoring process, the conflicting interpretation of the questions and the lack of context in the process.

Table 5. Additional information (free text) provided by countries on the overall SDG, 2020 6.5.1 scoring

United Kingdom	<ul style="list-style-type: none"> The return was based on reviewing the initial submission in the baseline survey. We are confident in the data provided in the baseline survey, and do not have any major changes as the UK was already starting from a highly-developed score. Feedback from recent and on-going consultations with water stakeholders (e.g. statutory consultations built into river basin management plans) were used to inform in this survey (UK Survey Instrument, 2020 page A-6).
India	<ul style="list-style-type: none"> IWRM is in nascent phase in India, therefore, an elaborate capacity building and training on its various dimensions is required. In this regard, a request for conducting a workshop involving international experts as resource persons has already been made (India Survey Instrument, 2020 Annex C, page a-6).
Colombia	<ul style="list-style-type: none"> Obstacles that hinder the implementation of IWRM in the country include [politicking (bad politics) in the administration of resources for the environment], individual interest over collective interest and economic interests over protection of water resources (Colombia Survey Instrument, 2020 Annex C).
Ethiopia	<ul style="list-style-type: none"> Some questions were interpreted differently by different stakeholders, inadequate information on what is going on at the basin level, particularly, for answering finance related questions (Ethiopia Survey Instrument, 2020, page A-4).
Malaysia	<ul style="list-style-type: none"> The questionnaire is too rigid, it does not allow for flexibility, particularly in Malaysia where different management approaches have been put into place, and although IWRM is not mentioned it is embedded in existing water governance measures. This based on the weightage or statements in the score band/boxes, would render scores that were low, when in reality, though not explicit, the implicitness of IWRM in the water governance framework indicates that integration is in place, but not flagged as IWRM. In addition, it assumes that most countries would adopt a similar system of government, when each country has a unique and specific legislative and administrative arrangement that has facilitated the implementation of IWRM, but <i>the questionnaire seems to lean or favour a specific approach or framework that must be followed in order for IWRM to be successful</i>. What would be useful is for countries to actually know how the scoring rubric was developed, the involvement of stakeholders in framing the questionnaire, and the intent or purpose of the scores. The main feedback received in relation to the forms was that it was complicated and required a lot of detailed evidence, which under present circumstances, was found to be rather taxing (Malaysia Survey Instrument, 2020, Annex C, page A-4).

Source: Country reports (<https://iwrmdataportal.unepdhi.org/country-reports>)

Each of these statements offers an insight into the drivers and interests of the country's focal points. The UK's focal point appears to find the exercise trifling and irrelevant compared to ongoing national actions; India's seeks international expertise in workshops; Colombia's suggests that politics is a barrier to implementation; Ethiopia's suggests conflicting politics but cast in a language of differential stakeholder understandings; and Malaysia's pushes back against the disciplining and distracting nature of the survey.

What this analysis illustrates is that each element of the overall aggregate score is underpinned by subjective judgement: on the part of those who design the survey, by those who complete the survey, and by those who give credibility to such measurement. The survey is itself designed to bake in the foundational assumptions of the technocratic managerial function of IWRM (Allouche, 2016) and is representative of a much wider dominant approach to development. The numerical score for each of the 33 questions in the survey hides a set of variegated institutional arrangements and judgements, and each number is essentially and inherently 'fuzzy'. Therefore, the aggregate overall number produced can be little more than 'fuzziness multiplied by fuzziness', 33 times.

Results from Phase 2: The three core tensions of the SDG 6.5.1 indicator

Reviewing the survey data is insufficient to fully understand the subjective and political process of quantification in SDG 6.5.1. Qualitative analysis of expert interviews with individuals engaged in IWRM policy or practice in each of the five countries takes this interrogation further, especially in conversation with recent water governance literature. This produced an extensive, country-specific dataset that cannot be fully captured in this section (more details can be found in Nagheeb et al., 2023). Rather, in this section we observe three inherent tensions that are revealed by the juxtaposition of the process in different contexts.

Reductive quantification of normative and contested processes

Interviewees consistently raised concerns about using subjective and selective quantification of IWRM through a survey. Based on this, we argue that the reduction of a complex and contested space to a set of numbers hides complexity through simplification. Proponents of indicators as tools of accountability argue that they are public signifiers of change. On the contrary, we found that in most countries, outside of the SDG reporting focal points, there is little awareness of what SDG 6.5.1 reporting entails and how numbers are constituted and generated. The numbers are produced only for the reporting process, as this quotation illustrates:

Most scholars (in our country) know nothing about the process of measuring performance generally on the SDGs. How then do we work towards it, when we don't know how it is assessed? It then appears that monitoring of the goals is limited to a small group of officials and elites.

In the previous section, we alluded to the criticism made by the Malaysian focal point of the survey as rigid and trying to force diverse contexts and institutional mechanisms into universalising categories, reflective of particular ideas of how IWRM should be done. The interviews expand on this tension, for example, highlighting how the survey and aggregate scoring act to hide different scales of action within a country:

If we're talking about the regional coordination even between Addis Ababa City State and Oromia, both of which have IWRM plans, there's no coordination between those two regions. I imagine it's pretty similar where basins cross regions and the regions don't cooperate. So, I think it's really difficult to capture, and this just reemphasizes the problem of applying quite a broad countrywide score across these scales.

These examples highlight some of the many weaknesses of IWRM quantification. Not only is it an attempt to quantify a contested concept, but it aggregates and hides sub-national and river basin-level

differences. Furthermore, it is of little value or consequence outside of those involved in the direct process of generating the number. This is a fantasy artefact in operation.

In the interviews, such critiques were common. One Colombian interviewee suggested that "IWRM is like a dirty word for academics here" and that the quantification of SDG 6.5.1 hides the complexity of multiple geographic, hydrological, demographic, political, and post-conflict dynamics.

Weak analysis of actually existing institutional capability, power, and politics

From the perspective of UN-Water (2017: 23), monitoring of 6.5.1 calls for a participatory approach, in which stakeholders are brought together to discuss and validate the questionnaire responses, in theory paving the way for coordination and collaboration beyond monitoring.

The most significant finding from our interviews, however, relates to how the SDG 6.5.1 quantification process distracts from the analysis of existing institutional effectiveness. It also fails to capture resourcing constraints and the dynamics of politics and power in the assemblages of stakeholder relationships. Whilst some hints of these factors are present in the free-text data submitted with the survey, the primary currency – the IWRM headline score – distracts from further interrogation.

In every country under study, interviewees reported situations of unclear institutional responsibilities and overlapping mandates. This seems to be consistent for all countries irrespective of how they have scored themselves (i.e. it doesn't make a difference whether the country scored 40 or 80). For instance, in Ethiopia:

There's a real overlapping mandate situation. People that want permission to drill the water or people that want to use water from instream flows have a real challenge in terms of maybe having to get a permit from several institutions, sort of government institutions or negotiate these different things.

Similarly, in Colombia, India, and Malaysia there are significant tensions between different levels of government. Even the UK data submitted in fact relates to England only, given that Northern Ireland, Scotland, and Wales have devolved powers in relation to water.

The UK scores itself very highly across all elements of SDG 6.5.1, but at the same time refuses to respond to some elements or awards itself a 100% score that appears unjustified. Gender inclusion is considered 'not applicable' because "this is not specifically addressed in the UK (through gender-specific WRM policies), but broader laws and duties mean there is gender parity" (DEFRA, 2020: 9). Not only is the assertion that there is in fact gender parity in the UK widely refuted by interviewees and literature, but the response also overtly sidesteps a key IWRM requirement and a core Dublin Principle. This is indicative of the UK government's attitudes towards, and perceptions of, SDG reporting. Gender parity is perhaps something seen as a necessity for 'less-developed' countries to consider in relation to water, but not something to bother a nation like the UK. At the very least this requires further interrogation.

UK interviewees took issue with the high self-scoring, arguing that a lack of coordination between stakeholders was recognised in national reports (e.g. *The Pitt Review*, 2008), but recommendations for coordination were never actioned and that

we can talk about integrated water and catchment management from a technical viewpoint, but how about talking about it again from a human viewpoint? We know we should do it, but we don't know how to do it.

A 2013 paper that tests the application of IWRM in England and Wales argues that, despite quite extensive efforts towards integration, outcomes were disappointing:

One of the reasons why the British approach towards IWRM has underachieved so far is the fact that, ultimately, IWRM is not a British product. IWRM is a key discourse of the GWP and similar globally emerging initiatives, which certainly found support within the British policy-making community but is neither the result of genuinely British experiences nor particularly compatible with British regulatory culture (Fritsch and Benson, 2013: 278).

To make matters more complex, we could argue there is no such thing as a 'British' regulatory culture, given the nature of devolved powers to the constituent countries of the UK.

The UK rates itself very highly in the scoring of SDG 6.5.1. Indeed, it has the policy and institutional architecture to mimic functionality, yet outcomes analysis suggests a deeper malaise. Two examples illustrate this. The UK scores itself 100 on "participation of minority and vulnerable groups", citing the fact that household customers are protected by law from disconnection if they are unable to pay their bills. Yet, a recent study finds vulnerable households are trapped in cycles of unaffordability and debt, often with insufficient support structures, let alone routes for meaningful participation (Sylvester et al., 2023). The UK also scores itself 'High' in the dimension of "private sector participation", given the high degree of privatisation in the water sector and among other IWRM stakeholders. This misrepresents institutional capacity, as England's water companies have recently been exposed for chronic underinvestment, profiteering, and indebtedness. These problems have been permitted by weak regulation and blame avoidance (Bayliss et al., 2023).

This same analysis can easily be applied to all the other national and local contexts in our study and illustrates a fundamental problem inherent to the SDG's universalising and reductionist tendency. Whilst plans and policies can appear as fantasy artefacts, offering an illusion of capacity and control that is rewarded in SDG 6.5.1 scoring, actual examples of fully integrated water resources management are rare. Rather, interviews and recent empirical evidence in all five countries evidence 'problemscapes' (Polaine et al., 2022) of contested water use, where the interests of the most powerful stakeholders shape outcomes detrimental to environmental and social justice. One of the Water Security and Sustainable Development Hub's project reports offers case studies that consider power and institutional capability in the water sector for each of the project's five countries (Nagheeby et al., 2023), which illustrate these examples in more detail.

The following quotations from Ethiopia illustrate the commonly asserted position that national focal point scoring is politically unable to provide an independent assessment of functionality and capability and is necessarily incentivised to ignore politically sensitive issues for the interests of powerful stakeholders.

Those doing the SDG reporting of course will be politically sensitive and unlikely to want to make internationally public sensitive issues like the GERD.¹³

The framework for water management and water resource management is actually quite thin – and very rarely sees judicial execution. There is a water resource policy, there's different laws and so on, but they've almost never really been tried in court, or in any kind of implementation-type way. There's no regulator, for example, for local water services, there's no regulator at the national level either, so the legislation really struggles to have any kind of agency for holding people to account.

Table 6 highlights the strength of evidence that corroborates these findings by summarising very recent empirical findings of studies on institutional capability and power as it relates to actually existing IWRM implementation in each country. The table shows a consistent trend across each of the national contexts: fragmentation of responsibility, limited regulatory capability, and the privileging of powerful interests.

¹³ Grand Ethiopian Renaissance Dam.

Table 6. Summary of SDG 6.5.1 scores against actually existing political contexts identified in recent empirical evidence.

Country	SDG 6.5.1 score, 2020	IWRM – the 'actually existing' political context	Evidence
India	45	Fragmentation of responsibilities. Colonial legacy of extreme inequality. Powerful actors work informally.	Weinstein et al., 2019; Kumar et al., 2021; Mehta et al., 2022; Boelens et al., 2023; Kaur Bains, 2023
Malaysia	63	Tension between state and federal authorities. Powerful commercial interests e.g. sand mining, plantations.	Goodson et al., 2023; Wan Ahmad Tajuddin et al., 2023
Ethiopia	41	Tensions between state and federal authority, powerful actors. Weak state capability, but also big investment in mega dam (GERD); powerful actors dominate water demand/use and narratives.	Polaine et al., 2022; Bantider et al., 2023
Colombia	57	Fragmented authority and political contestation. History of conflict, colonialism and extreme inequality e.g Afro-Colombian and indigenous peoples. Powerful actors work informally.	Goodwin et al., 2022; Kauffer and Maganda, 2022; Boelens et al., 2023; Figueroa-Benitez et al., 2023; Salamanca-Cano and Durán-Díaz, 2023
United Kingdom	79	Constituent countries of UK have different structures. Can't talk about UK IWRM in reality. Authority and responsibility are fragmented across agencies. Local government and regulators have weak capability. Powerful landowner and capital interests dominate e.g. private water companies in foreign ownership.	Anderson et al., 2023; Cohen et al., 2023; Sylvester et al., 2023

Distracting performativity dynamics in reporting

Bertule et al. (2018: 17) argue that the SDG 6.5.1 country reporting is designed to be useful to the countries themselves in furthering IWRM implementation. However, our interviews suggest that monitoring and producing a number to signify IWRM implementation becomes, then, a form of performative signalling of progress, regardless of whether it really exists or not (see Mukhtarov and Gerlak, 2014). This performance is also materially costly in terms of human resources and in the redistribution of existing institutional capacity.

Interviewees on the inside of the process of completing the SDG 6.5.1 survey reflected on the political dimensions of choosing numbers for the survey; they gave little evidence of the monitoring being a useful driver of national reflection on implementation. Other countries have their own national water programmes with a monitoring process that is not necessarily aligned to SDG 6.5.1 indicators; such

countries have most often given the SDG reporting the least attention, as it does not help them in assessing progress. The numbers themselves often perform to particular audiences, both national and international. Aid-recipient countries, for example, must signal both to their development partners and to national audiences.

The UK delegates the SDG 6.5.1 reporting task to very junior officials in the Department for Environment and Rural Affairs (DEFRA) yet sees itself as thoroughly executing the process. The UK's justifications given for its scores are minimal and certainly bear little comparison to the extensive and reflective answers offered by the Malaysian focal point. Whilst the SDGs are global, they clearly matter more for some than for others.

In the Ethiopian context:

There's this real frustration from people working in local government, in utilities, in ministries, about constantly having to be upwardly accountable and adapt to the way that a consultant, or an engineering firm, or a donor wants things to work, and actually, a real frustration that that doesn't allow countries or regions (...) to develop coherent, locally-specific strategies that can then be fed by these external actors.

For aid-recipient countries such as Ethiopia, the scoring is a signalling mechanism to donors. Weaker scores may mean a case for more resources but, over time, the score requires gradual improvement to demonstrate capability. (This tension is also noted for WASH monitoring in Uganda; Quin et al., 2011; 2016.) The weakest scores for SDG 6.5.1 are for financing. It is entirely consistent that resourcing for IWRM implementation is insufficient in practice. In seeking resources to support this process, any government has an incentive to state that insufficient resources are available and that more are needed.

In relation to India, interviewees argue that mechanisms such as formal IWRM scoring are a way that different state institutions can signal their power and capability, both nationally and internationally. This is despite formal capabilities being very weakly enacted in practice. (This aligns also with the observations seen in Weinstein et al., 2019.)

At the aggregate, global level, the IWRM number also performatively signals control or agreement about the process of reconciling competing uses of water. This inculcates an illusion of effective global action through the expenditure of resources on processes of monitoring, which dovetails neatly with the co-optation of the language of the SDGs by corporate, capitalist interests, as expressed by one of our interviewees:

The SDG agenda has allowed corporate interests and CSR agendas to really shape a lot of the ways the data is reported. And if you look at a lot of the people that really use the SDG language – it's big corporations, particularly in the water sector: Coca-Cola, Pepsi, breweries and things like this. These guys love talking about SDG 6, and they are also, you know, suspiciously, the ones that are perhaps the most deleterious to achieving it. Veolia, Procter and Gamble – these types of people were really pro-the Human Right to Water. And you see normative elements in [the text of the Human Right to Water and Sanitation] as well.

This final point demonstrates that the performativity of the indicator is also material. A fantasy artefact is not useless; it performs a function, and it demands resources and attention. It may not provide the signal that it is asserted to have (incentivising the implementation of IWRM), but rather it performs a function for powerful actors, controlling narratives and signalling that action is being taken even where action is inadequate or actively problematic.

CONCLUSION

At the 2023 SDG Summit in New York, the theatrical and performative basis of the SDGs were comically well articulated. The event centred on the world's lack of progress on most of the SDG indicators, at the mid-way point to their targeted achievement by 2030. The event opened with a slickly produced animated short film projected onto huge HD screens. The clip closed with a rallying call: "We're down at

half-time. But any match is won in the second half". Fictional television football manager Ted Lasso then appeared, emphatically imploring attendees to "BELIEVE!"

This appears to signal that the SDG indicators are an article of faith; that their value and efficacy are clear; and that the only barrier to progress is that people do not sufficiently believe in them. Efforts then focus on the business of production of the indicators, with little space for critical reflection on their value and limitations.

Our analysis suggests that the SDG 6.5.1 indicator is a fantasy artefact. The numbers it produces are subjective, contested, and largely meaningless. They appear to hold little value to the countries producing them, and they are produced to feed the demand for this data coming from global institutions. This certainly corroborates the analysis of Bandola-Gill (2022) and Broome (2021) and extends their argument from poverty numbers to water numbers. Our research also builds on the concerns of Guppy et al. (2019) that in a 'race for indicators', poor indicators built on poor data become the distracting focus of activity and resourcing. We also agree with and elucidate Herrera's (2019) concern that global universalising ambitions hide and reduce focus on the complex local institutional configurations that actually take action.

A common response to criticism of an indicator or an index is to double down on indicator design and attempt to 'correct' the identified problems through new components or new data. As noted earlier, this is the suggestion of Benson et al. (2020). However, we suggest that such a method will only compound the problems that we identify in this article.

It does appear to be time to question the global quantitative indicator obsession. It provides an illusion of functionality and action at the expense of materially meaningful analysis of actually existing conditions.

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