



*Citation for published version:*

Hickmann, T, Biermann, F, S nit, C-A, Sun, Y, Bexell, M, Bolton, M, Bornemann, B, Censoro, J, Charles, A, Correa Ramiro, R, Coy, D, Dahmann, F, Elder, M, Fritzsche, F, Gehre Galv o, T, Grainger-Brown, J, Inoue, C, J nsson, K, Koloffon Rosas, M, Krellenberg, K, Moallemi, E, Lobos Alva, I, Malekpour, S, Ningrum, D, Paneva, A, Partzsch, L, Raven, R, Szedlacsek, E, Thompson, J, van Driel, M, Viani Damasceno, J, Webb, R & Weiland, S 2024, 'Scoping article: Research frontiers on the governance of the Sustainable Development Goals', *Global Sustainability*. <https://doi.org/10.1017/sus.2024.4>

*DOI:*

[10.1017/sus.2024.4](https://doi.org/10.1017/sus.2024.4)

*Publication date:*

2024

*Document Version*

Peer reviewed version

[Link to publication](#)

*Publisher Rights*

CC BY

**University of Bath**

**Alternative formats**

If you require this document in an alternative format, please contact:  
[openaccess@bath.ac.uk](mailto:openaccess@bath.ac.uk)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 25. Jun. 2024

1 **Scoping article: Research frontiers on the governance of the Sustainable**  
2 **Development Goals**

3

4 *Author team*

5 Thomas Hickmann<sup>\*1</sup>; Frank Biermann,<sup>2</sup> Carole-Anne Sénit<sup>2</sup>, Yixian Sun<sup>3</sup>, Magdalena Bexell<sup>1</sup>, Mitzi Bolton<sup>4</sup>,  
6 Basil Bornemann<sup>5</sup>, Jecel Censoro<sup>6</sup>, Aurelie Charles<sup>3</sup>, Rodrigo Correa Ramiro<sup>7</sup>, Dominique Coy<sup>4</sup>, Frederik  
7 Dahlmann<sup>8</sup>, Mark Elder<sup>9</sup>, Felicitas Fritzsche<sup>10</sup>, Thiago Gehre Galvão<sup>7</sup>, Jarrod Grainger-Brown<sup>4</sup>, Cristina  
8 Inoue<sup>11</sup>, Kristina Jönsson<sup>1</sup>, Montserrat Koloffon Rosas<sup>12</sup>, Kerstin Krellenberg<sup>13</sup>, Enayat Moallemi<sup>14</sup>, Ivonne  
9 Lobos Alva<sup>15</sup>, Shirin Malekpour<sup>4</sup>, Dianty Ningrum<sup>4</sup>, Aneliya Paneva<sup>16</sup>, Lena Partzsch<sup>17</sup>, Rob Raven<sup>4</sup>, Eszter  
10 Szedlacsek<sup>12</sup>, John Thompson<sup>18</sup>, Melanie van Driel<sup>2</sup>, Jéssica Viani Damasceno<sup>19</sup>, Robert Webb<sup>20</sup>, Sabine  
11 Weiland<sup>21</sup>

12 1 Lund University, Sweden, 2 Utrecht University, Netherlands, 3 University of Bath, United Kingdom, 4  
13 Monash University, Australia, University of Basel, Switzerland, 6 Newcastle University, United Kingdom, 7  
14 University of Brazil, Brazil, 8 Warwick Business School, United Kingdom, 9 Institute for Global  
15 Environmental Strategies, Japan, 10 Stockholm University, Sweden, 11 Radboud Universiteit, Netherlands,  
16 12 Vrije Universiteit Amsterdam, Netherlands, 13 University of Vienna, Austria, 15 Deakin University,  
17 Australia, 15 Stockholm Environment Institute, Sweden, 16 University of Oldenburg, Germany, 17 Freie  
18 Universität Berlin, Germany, 18 University of Sussex, United Kingdom, 19 President Antonio Carlos  
19 University Uberlândia, Brazil, 20 Australia National University, Australia, 21 Université Catholique de Lille,  
20 France

21 *\*Corresponding author: Thomas Hickmann, Lund University, Faculty of Social Sciences, Department of*  
22 *Political Science, Sweden; email: [thomas.hickmann@svet.lu.se](mailto:thomas.hickmann@svet.lu.se)*

23

24 ***Author Contributions***

25 *T. H. led the conceptualization, investigation, methodology, writing of the original draft as well as the review*  
26 *and editing process. F. B., C.A. S. and Y. S. co-led the conceptualization of the article, supported the investigation,*  
27 *methodology, writing of original draft and reviewed and edited the final paper. All other authors provided input*  
28 *to the original draft and reviewed and edited previous versions of the paper.*

29

30 ***Keywords***

31 *Policies, politics and governance (based on pre-defined list of keywords in the database of Global Sustainability)*

32

33

### **Non-Technical Summary**

34 This article takes stock of the 2030 Agenda and focuses on five governance areas. In a nutshell, we see a quite  
35 patchy and often primarily symbolic uptake of the global goals. Although some studies highlight individual  
36 success stories of actors and institutions to implement the goals, it remains unclear how such cases can be  
37 upscaled and develop a broader political impact to accelerate the global endeavour to achieve sustainable  
38 development. We hence raise concerns about the overall effectiveness of governance by goal-setting and raise  
39 the question of how we can make this mode of governance more effective.

40

41

### **Technical Summary**

42 A recent meta-analysis on the political impact of the *Sustainable Development Goals* (SDGs) has shown that  
43 these global goals are moving political processes forward only incrementally, with much variation across  
44 countries, sectors and governance levels. Consequently, the realization of the 2030 Agenda for Sustainable  
45 Development remains uncertain. Against this backdrop, this article explores where and how current  
46 incremental political changes are taking place due to the SDGs, and under what conditions these  
47 developments can bolster sustainability transformations up to 2030 and beyond. Our scoping review builds  
48 upon an online expert survey directed at the scholarly community of the ‘Earth System Governance Project’  
49 and structured dialogues within the ‘Taskforce on the SDGs’ under this project. We identified five governance  
50 areas where some effects of the SDGs have been observable: (1) global governance, (2) national policy  
51 integration, (3) subnational initiatives, (4) private governance, and (5) education and learning for sustainable  
52 development. This article delves deeper into these governance areas and draws lessons to guide empirical  
53 research on the promises and pitfalls of accelerating SDG implementation.

54

## 55 1. Introduction

56 In 2015, the United Nations General Assembly adopted the 2030 Agenda with 17 *Sustainable Development*  
57 *Goals* (SDGs) and 169 targets with the overall ambition ‘to transform our world’ (United Nations 2015). At  
58 that time, expectations were high that the new programmatic vision agreed upon by the United Nations could  
59 drive policies at the global, national and local levels to attain sustainable development. With the first half of  
60 the timespan of the 2030 Agenda for Sustainable Development (2030 Agenda) now over, the SDGs seem to  
61 be in an acute crisis. A recent report by the United Nations Secretary-General even calls for a ‘Rescue Plan for  
62 People and Planet’, highlighting that the vast majority of the global goals show limited progress and several  
63 goals and targets are even regressing (United Nations 2023).

64 A global assessment of the political impact of the SDGs (subsequently referred to as the ‘SDG Impact  
65 Assessment’) published in 2022 has pointed to serious governance gaps in the implementation of the SDGs  
66 (Biermann et al. 2022a, 2022b). The assessment brought together 61 scholars who evaluated more than 3,000  
67 studies to determine whether and how the SDGs have steered the behaviour of actors and institutions at all  
68 governance levels. The meta-analysis identified three main types of steering effects of global goals, described  
69 as *discursive*, *institutional* and *normative* effects. The assessment showed that the political impact of the SDGs  
70 has so far largely been discursive, affecting the way actors understand and communicate about sustainable  
71 development. At the same time, the assessment indicated that the SDGs have in some instances led to the  
72 creation of new institutions and norms mainly understood as rules and policies, with much variation across  
73 countries, sectors and levels. Overall, the assessment concluded that the SDGs had only limited transformative  
74 impact and are at best slowly moving political processes forward. The findings of the assessment were  
75 reinforced by other major studies that also found that SDG implementation is lagging behind due to a series  
76 of interlocking crises and governance challenges (e.g., Sachs et al. 2022; United Nations 2022).

77 In this larger context of slow and insufficient action for implementing the SDGs, we focus here on five  
78 governance areas where at least some steering effects have been observable: (1) global governance for the SDGs,  
79 (2) national integration of the SDGs, (3) subnational initiatives for SDG implementation, (4) private  
80 governance for the SDGs, and (5) education and learning for sustainable development. These governance  
81 areas were identified through an online expert survey directed at researchers affiliated with the Earth System  
82 Governance Project and were further discussed and elaborated within five working groups of the specialized  
83 ‘Taskforce on the SDGs’ under this project. Our review points to fragmentation in the current efforts to  
84 implement the 2030 Agenda for Sustainable Development and underscores the need of a deeply integrated  
85 approach to achieve the SDGs across all governance levels.

86 The remainder of this article proceeds as follows. The following section offers an overview of the current state  
87 of SDG implementation. The third section describes our approach with the online expert survey and the focus  
88 on five governance areas with initial political changes and explains our rationale to draw lessons from these  
89 areas. The fourth section presents insights gained through our scoping review of these five governance areas.  
90 Finally, we summarize the main findings of this review and point to avenues for further research and policy in  
91 the fifth section.

## 92 **2. Where are we heading with the SDGs?**

93 The 2030 Agenda with its 17 SDGs was the outcome of two years of intense diplomatic efforts and  
94 international negotiations (Kamau, Chasek and O'Connor 2018). Conceptually, the SDGs constitute the  
95 most comprehensive attempt by the United Nations to define universally agreed political ambitions to shift  
96 the world on to a more sustainable and resilient path and can be seen as a major diplomatic success. Based on  
97 the concept of governance by global goal-setting (e.g., Kanie and Biermann 2017), the SDGs suggest policy  
98 directions to encourage national governments and ultimately all other political and societal actors to increase  
99 their efforts to attain sustainable development. The SDGs are not legally binding, however, and governments  
100 do not have to formally incorporate the goals into their political-administrative systems. Overall, both the  
101 global goals and the 2030 Agenda are highly aspirational, which led many scholars and policymakers placing  
102 high hopes on these goals to advance a global transformation towards sustainable development.

103 Such hopes have since then been watered down by many reports that point to the lack of progress in meeting  
104 the SDGs, even though first years after the adoption of the SDGs witnessed some achievements in limited  
105 areas. For example, between 2015 and 2020, maternal and child mortality was reduced considerably globally,  
106 more people gained access to electricity, and the proportion of women in leadership positions slightly  
107 increased (United Nations 2020). On the other hand, already in this period the number of people in absolute  
108 poverty grew (for the first time since 1989) along with little progress in the fight against hunger, climate  
109 change, and social inequality (Global Sustainable Development Report 2019).

110 The outbreak of Covid-19 and a lack of a concerted global action against the pandemic, Russia's invasion of  
111 Ukraine with the related global energy, food and security crises, numerous other conflicts as well as the  
112 growing frequency and severity of environmental disasters have made the situation worse (e.g., Krellenberg  
113 and Koch 2021a). Earlier successes have been reversed and at the midpoint of the SDGs, disappointment and  
114 frustration with the lack of political motivation or will among decision-makers to put the global goals as policy  
115 priority is ubiquitous. The latest available reports now stress that it is becoming increasingly unlikely that any  
116 of the 17 SDGs will be met by 2030. The 2023 special edition of the United Nations General-Secretary's report  
117 on SDG progress goes even so far as to call on world leaders to deliver a rescue plan for people and planet that  
118 is focused on three issues: policies and investments that accelerate progress across goals, financing and  
119 improving conditions for developing countries to attain sustainable development, and most importantly for  
120 this article, governance and institutional capacities for sustainable and inclusive transformation (United  
121 Nations 2023: 26-41).

122 Better governance of the SDGs is crucial for the transformation towards global sustainability. With this article,  
123 we delve deeper into key governance areas where at least some progress towards sustainable development has  
124 been achieved. By this means, we contribute to the current debate about opportunities for accelerating SDG  
125 implementation and ask: Where and how is incremental change taking place due to the SDGs, and under what  
126 conditions can these areas be seen as engines of change for a larger transformation?

## 127 **3. Five governance areas with initial political changes**

128 The SDG Impact Assessment (Biermann et al. 2022a, 2022b) was the first comprehensive study that focused  
129 on the political steering effects of the SDGs on the governance of sustainable development across actors,

130 sectors and levels. Despite the lack of substantial political impact of the SDGs, this study pointed to a number  
131 of governance areas where initial political changes occurred due to the SDGs. Building upon these insights,  
132 we conducted an online expert survey that we directed at the members of the Earth System Governance  
133 Project, which is the largest global research alliance on sustainability governance with more than 500 scholars  
134 across the globe mainly from the social sciences and humanities (Earth System Governance Project 2023). The  
135 survey comprised 15 questions and entailed closed and open response options. The main rationale of the  
136 survey was to solicit the opinions of field experts on the areas in which they see the strongest impact of the  
137 SDGs on actors and institutions at various governance levels, as well as on the themes they perceive as deserving  
138 more attention in future research on the SDGs. Following an initial personal invitation in April 2021 and a  
139 reminder via email, a total of 49 experts took part in the survey (the survey questions are available as  
140 supplementary material).

141 This online expert survey led to insights into five key governance areas in which the adoption of the SDGs  
142 generated some political steering effects, namely (1) *global governance for the SDGs*: the impact of the SDGs  
143 on international institutions set in place to promote goal implementation, (2) *national policy integration of*  
144 *the SDGs*: the impact of the SDGs on strengthening institutions and policies for sustainable development in  
145 national governments, (3) *subnational initiatives for SDG implementation*: the impact of the SDGs on efforts  
146 by subnational authorities to foster sustainable development in their jurisdictions, (4) *private governance for*  
147 *the SDGs*: the impact of the SDGs on the private sector and (5) *education and learning for sustainable*  
148 *development*: the impact of the SDGs on knowledge and higher education institutions. While some of these  
149 areas are widely studied, current scholarship has not comprehensively focused on the conditions that trigger  
150 or hamper sustainability transformations across countries, sectors and levels of governance. After the  
151 identification of these five areas, we thus established five working groups under the ‘Taskforce on the SDGs’  
152 of the Earth System Governance Project in which the different governance areas were further scrutinized. We  
153 present here main findings from the discussions in these working groups in a condensed version.

## 154 **4. Scoping review**

155 The following subsections first provide a brief overview about the respective governance area. After that, we  
156 discuss research trends based on a review of the state of the art. As the present article builds upon the SDG  
157 Impact Assessment which synthesized the literature on the governance of the SDGs published between 2015  
158 and early 2021, this article focuses on most recent studies about the impact of the SDGs on the respective  
159 governance area. Finally, each subsection adopts a forward-looking perspective and sketches new directions  
160 for research and policy for the remaining years until 2030 and beyond within their area.

### 161 **4.1 Global governance and the SDGs**

#### 162 Overview

163 With the adoption of the SDGs, a new United Nations institution has been established to review progress on  
164 SDG implementation. The *High-level Political Forum on Sustainable Development (HLPF)* replaced the  
165 Commission on Sustainable Development and has the mandate to provide political leadership for sustainable  
166 development. Moreover, various international organizations and other bodies have integrated the SDGs into

167 their portfolios and made efforts to advance the implementation of some SDGs. In addition, global  
168 partnerships have been launched comprising United Nations entities, national governments and non-state  
169 actors. Despite all these activities, much remains unknown about the effects of the SDGs on global  
170 governance. So far, changes in the system of international agencies, programmes and policies within and  
171 outside of the United Nations have been understudied. In the following subsections, we carve out current  
172 research trends as well as new research directions in this governance area on implementation, reviewing and  
173 political contestations of the SDGs in global governance.

#### 174 Current research trends

175 A first research trend focuses on the challenges to SDG implementation at the global level. Some recent  
176 examples include studies in the area of human mobility (Denaro and Guiffré 2022) and sustainable fisheries  
177 (Cochrane 2021). Studies have also traced developments that might speed up implementation, including the  
178 integration of the SDGs with legally binding mechanisms (e.g., Krauss 2022, Bexell et al. 2023) or proposals  
179 for governance improvements for specific areas (e.g., Zulfiqar and Butt 2021 for ocean governance).

180 Challenges in mainstreaming the SDGs in the operations of international organizations have also received  
181 some attention. Recent literature maps the (lack of) capabilities by international organizations to work on the  
182 SDGs (Haas and Ivanovskis 2022), assesses how they differ in their motivations and approach towards SDG  
183 implementation (Addey 2021), or even cherry-pick goals (Bogers et al. 2023). Moreover, authors point to  
184 potential cooperation and coordination challenges between international organizations in their endeavour to  
185 implement the SDGs (Bogers et al. 2022; van Driel et al. 2022). Some researchers uncover path dependencies  
186 and limitations in creating transformative change (e.g., Taggart 2022, Novovic 2022), while others identify  
187 positive institutional changes in the United Nations Development System despite continued substantive  
188 limitations (Weinlich et al. 2022). Overall, research indicates that the goals mainly affect communication  
189 about cooperation (Schnitzler et al. 2021) and questions their steering potential towards holistic global  
190 (policy) integration (Bornemann and Weiland 2021).

191 Challenges in implementing the SDGs through multi-stakeholder partnerships also gained considerable  
192 academic attention. So far, empirical analyses note that some pre-SDG deficiencies in partnerships continue,  
193 such as the exclusion of marginalized actors (Sénit and Biermann 2021) and weak reporting, while actor  
194 dynamics have shifted towards a stronger participation by non-governmental organizations and business  
195 actors (Bäckstrand et al. 2022). With over 7,700 entries on the SDG Partnership Registry, scholars have started  
196 studying partnerships for the SDGs more closely (e.g., Glass et al. 2023; Widerberg et al. 2023; Long et al.  
197 2022).

198 A second research trend focuses on monitoring and reviewing SDG implementation, where the global level  
199 plays an important role (Bexell and Jönsson 2021). Research has taken a critical stance on the orchestration  
200 efforts of the HLPF constrained by political conflicts and a lack of resources (e.g., Qerimi 2022), and explored  
201 whether this institution stimulates inter-institutional and cross-level governance (Beisheim and Fritzsche  
202 2022). Additionally, the contribution and impact of other actors and governance arrangements, such as  
203 regional organizations (e.g., Marx et al. 2021) or multi-stakeholder partnerships (e.g., Koliev and Bäckstrand  
204 2022), on global follow-up and review processes remains understudied.

205 The SDGs are not implemented in a (geo-)political vacuum and their achievement hinges on global  
206 cooperative arrangements. Power structures and political contestations underpinning the SDGs are thus a  
207 third research trend in the area of global governance. Thus far, scholars have signalled that the global goals are  
208 likely to impact power dynamics between global governance actors, notably through the use of partnerships  
209 for implementation (Jägers 2021). Political willingness (e.g., Li et al. 2023) and politics (Beisheim et al. 2023)  
210 play a key role in this regard. In addition, the potential and role of middle-income countries (e.g., Chatuverdi  
211 et al. 2021) and ‘middle powers’ (Torresini 2021) in addressing new global demands such as the SDGs has  
212 been studied.

213 As the business sector is considered paramount for bridging the SDG (finance) implementation gap, scholars  
214 need to dive into the study of SDG funding and financing (Park 2022) and how this affects the narratives on  
215 development finance (see Mawdsley 2021) and ultimately power dynamics. Power relations between states are  
216 also an emerging research topic. Research suggests that conflict lines from other arenas of international  
217 cooperation act as barriers to reforms of the HLPF (Beisheim 2021) and that contested understandings of key  
218 terms in the 2030 Agenda are a barrier to implementation (Taggart 2022). Nevertheless, early scholarly  
219 assessments of the 2030 Agenda have suggested that the SDGs mainly reflect a ‘traditional’ cooperation  
220 regime, aimed to maintain legitimacy of the United Nations system and multilateral institutions as enablers of  
221 Western interests and imperial power (Caria 2022; Vogt 2022).

## 222 New research directions

223 Given the knowledge gaps sketched above, we warrant studies focusing on the 2030 Agenda and the SDGs to  
224 facilitate discussions on the future of multilateralism and international cooperation. If, as some claim, a  
225 multipolar order world has become a reality (Flockhart and Korosteleva 2022), it is crucial to study this reality  
226 in global sustainable development. The role of partnerships within global sustainable development  
227 governance, and questions of power within those, also deserve increased academic attention. Investigating  
228 questions of power will require more in-depth study of the political nature of arenas of global sustainable  
229 development governance, as well as increased collaboration amongst scholars from different issue areas.

## 230 **4.2 National policy integration of the SDGs**

### 231 Overview

232 Policy integration is the leitmotif of the 2030 Agenda, and the complexity of the SDGs indeed brings new  
233 challenges to goal integration, policy interlinkages and transformative implementation. The national level is  
234 critical in achieving integrated implementation, especially ensuring high-level policy commitments and  
235 creating the needed institutional structures in the early stage, when governments need to translate the SDGs  
236 to their country’s context. Governments must encourage and facilitate action at the national level, as a pivot  
237 between global and local politics, with their power to regulate and enforce rules and their budgetary power to  
238 tax, borrow and spend. Furthermore, the SDGs were created and agreed by national governments, so they  
239 continue to play an important role for coordinated multilateral action. In later stages of implementation,  
240 national governments have resources to maintain momentum. Analysing nationally integrated  
241 implementation is therefore key for understanding the impact of the 2030 Agenda.



## 242 Current research trends

243 Integrated national implementation initiatives are a prerequisite for promoting sustainable development.  
244 Such a political strategy requires consideration of interactions between different goals. Furthermore, national  
245 integration has been discussed as a multi-directional, rather than a linear, process, whereby the SDGs influence  
246 – and are influenced by – domestic contexts, priorities and political dispositions (Nilsson et al. 2022; Ordóñez  
247 Llanos et al. 2022; Okitasari and Katramiz 2022; Forestier and Kim 2020). In this understanding, the  
248 contextual integration (that is, the need to adapt the goals and targets to their national and subnational  
249 contexts) is a key part of national integration (Bowen et al. 2017; Allen et al. 2018; Nilsson et al. 2018; Weitz  
250 et al. 2018). Some regard the SDGs as an ‘enabler of integration’, and a ‘common benchmark against which  
251 development progress can be assessed’ (Le Blanc 2015: 180-182). Here we see an urgent need to investigate  
252 the linkages and connections among the 17 global goals.

253 The literature on steering effects of the 2030 Agenda has captured some initial empirical trends during the  
254 2030 Agenda’s first implementation phase: Nilsson et al. (2022) found that the SDGs mostly impacted the  
255 political discourse on interlinkages and interactions, along with some governments advancing institutional  
256 integration by aligning their public-administrative systems to the 2030 Agenda, and some designating bodies  
257 or forming new units for goal implementation. Considering cross-country variation, Allen et al. (2018) found  
258 that, while all countries face challenges with the interlinkages among SDGs, lower-income countries are  
259 generally less advanced than higher-income countries in this regard. On the SDGs’ normative effects, countries  
260 have increasingly reported in their Voluntary National Reports (VNRs) the integration of the SDGs into their  
261 national policy frameworks, though they have mostly failed to fundamentally change the state’s dominant  
262 development paradigm (Okitasari and Katramiz 2022). Therefore, contrary to the often-misplaced views by  
263 bureaucrats that mere alignment of policy and SDG aims will suffice (Bolton, 2021), integration needs to  
264 occur on an institutional and organisational level.

265 In sum, policy coherence for SDG implementation has not increased significantly (Nilsson et al. 2022). This  
266 may partly be explained by the need to set up institutional and policy structures in the first few years of SDG  
267 implementation to overcome institutional silos, as well as to dedicate time to building momentum and high-  
268 level policy commitments. Meanwhile, SDG implementation has recently been marked by multiple crises,  
269 which have heavily affected all countries and disrupted all modest progress. Worryingly, the United Nations  
270 Department of Economic and Social Affairs (UNDESA) reports that ‘the overlapping crises have led to  
271 cumulative backsliding in SDG progress’ (UNDESA 2022: 1), and similarly, the Sustainable Development  
272 Report 2023 found that ‘all of the SDGs are seriously off track’ (Sachs et al. 2023, vi). In this rapidly changing  
273 context, updating the picture of empirical trends is more important than ever.

## 274 New research directions

275 Overall, national integration of the SDGs is a complex field. Halfway through the timeline for implementing  
276 the goals, we are only beginning to see their impact on national and subnational decision-making (Barquet et  
277 al. 2021). More empirical analysis of SDG policies and their implementation is needed to assess the extent,  
278 nature and effectiveness of national implementation and integration efforts, and for comparative analysis  
279 across countries.

280 A starting point for research could be to study emerging good practices at the national level, including what  
281 constitutes successful SDG integration. This is likely to involve elements of discursive, normative,  
282 institutional and relational change, and greater policy coherence. The latter includes national policies that  
283 support capacity-building (e.g., in finance, technology, knowledge, skills, resources, tools and methods) to  
284 provide the ‘means of implementation’ referred to in the 2030 Agenda. Capacity building in the 2030 Agenda  
285 is related mainly to developing countries, although capacity building is needed in developed countries as well  
286 (Sagar and VanDeveer 2005; Bloomfield et al. 2018). Here, different dimensions of capacity need to be better  
287 understood which is also highlighted in the latest report of the Independent Group of Scientists appointed by  
288 the United Nations Secretary General to assess the state of the SDGs (Global Sustainable Development Report  
289 2023).

290 An important line of inquiry should focus on how national governments can actively promote SDG  
291 implementation. Key questions include: Under what conditions will change occur in different countries?  
292 Does the time pressure to achieve the SDGs by 2030 play a role? And how could governments address  
293 synergies and trade-offs between the SDGs, build alliances and reduce conflicts between a complex web of  
294 stakeholders? In view of the central role of national governments in SDG implementation, more analysis on  
295 their transformation strategies is urgently needed.

### 296 **4.3 Subnational initiatives for SDG implementation**

#### 297 Overview

298 In the end, the SDGs require implementation at the subnational level, such as in cities and regions. It is here  
299 where global goals are translated into concrete action, where SDGs can impact people’s lives and trigger  
300 material effects, and where people may contribute. Moreover, governments often lack decision-making  
301 authority in areas affected by the SDGs where it is subnational entities that have formal and informal authority  
302 and power regarding SDG implementation (Hickmann 2021). The engagement of subnational institutions  
303 and their collaboration with civil society is also important to increase participation, political ownership,  
304 community autonomy and accountability regarding the SDGs (Pisor et al. 2022).

#### 305 Current research trends

306 Since the adoption of the 2030 Agenda, many subnational actors have engaged with the SDGs. There is also  
307 much research on subnational SDG implementation, often under the term of ‘SDG localization’ (e.g., Ansell  
308 et al. 2022; Moallemi et al. 2021). In this literature, there are two overarching and sometimes overlapping foci.

309 The first involves empirical research or reviews that analyze subnational SDG initiatives worldwide. Much of  
310 this research is based on empirical studies to document actions, highlight innovations and reveal challenges in  
311 implementing the SDGs at the subnational level (e.g., Croese et al. 2021; Diaz-Sarachaga 2023; Wang et al.  
312 2020). This literature is dominated by single cases rather than comparative analyses (but see Ningrum et al.  
313 2023) and focuses on individual or only few SDGs. Other studies review a range of SDG engagements, for  
314 example through examining *Voluntary Local Reviews* (VLRs) (Ortiz-Moya et al. 2021; Ortiz Moya and  
315 Kataoka 2022). The spatial focus of this research is predominantly on the urban level, with studies on Bristol,  
316 United Kingdom (Fox and Macleod, 2021); Cape Town, South Africa (Croese et al., 2021); Kisumu City,

317 Kenya (Croese et al., 2021); or Växjö municipality, Sweden (Krantz and Gustafsson, 2021). Some studies also  
318 go beyond descriptive account of programmes, institutions and processes to explore the mechanisms and  
319 effects of (selective) SDG translation in municipalities (Reinar and Lundberg 2023), or the transformative  
320 potential of subnational SDG initiatives (e.g., Leavesley et al., 2022; Ningrum et al. 2023). There is some  
321 evidence that the exercise of producing VLRs may facilitate policy integration at local level by creating  
322 awareness of links between sustainability issues and requiring coordination and information sharing among  
323 departments preparing the VLR (Ortiz-Moya and Reggiani 2023).

324 The second focus area is to guide or assist SDG localization, sometimes adopting a prescriptive or design-  
325 oriented approach. Much of this research is focused on translating SDG targets and indicators, through  
326 developing and quantifying local targets and indicators against the global goals (e.g., Bandari et al. 2022; Patole  
327 2018), characterizing interactions between them and analyzing synergies and trade-offs in a specific local or  
328 regional context (e.g., Szetey et al. 2021; Nilsson et al. 2018). Here, cities are illustrative examples (Krellenberg  
329 and Koch 2021b). A smaller and growing line of research looks at localization from a governance perspective,  
330 focusing on actors and strategic action. This includes research that highlights the urgency for local action (e.g.,  
331 Hajer et al. 2015, Moallemi et al. 2019), discusses challenges related to local SDG implementation (e.g.,  
332 Herrera 2019), tests existing frameworks or develops new frameworks and tools to facilitate the activities of  
333 subnational actors towards SDG implementation (e.g., Allen et al. 2023; García-Peña et al. 2021; Meuleman  
334 and Niestroy 2015; Moallemi et al. 2020; Righettini 2021; Mejia-Dugand and Pizano-Castillo 2020; Masuda  
335 et al. 2021). Some studies use action-oriented research methods to develop contextualized and actionable  
336 implementation frameworks (Annesi et al. 2021).

### 337 New research directions

338 We see the in particular four research directions regarding the implementation of the SDGs at subnational  
339 level. First, future research should aim at a more comprehensive, differentiated and systematic understanding  
340 of subnational SDG implementation, including typologies of forms, processes, challenges and mechanisms of  
341 localization in different contexts. Relevant questions are: What subnational implementation patterns can be  
342 observed in different contexts (urban-rural, global North and global South, federal-centralist, etc.)? How does  
343 the 2030 Agenda connect with and change policy-making and planning practices? What governance  
344 innovations emerge as a result? How do local SDG processes interact with one another and with those at  
345 transnational scales?

346 Second, future research should aim at assessing the success of local implementation initiatives. This includes  
347 the conceptualization and empirical measurement of the potential SDGs transformative impact on systems,  
348 sectors and societies. Relevant questions are: What should be the criteria for measuring the success of  
349 subnational implementation? What does effective and legitimate governance of subnational implementation  
350 look like? What are the transformative impacts and outcomes of subnational implementation, including on  
351 national and international governance?

352 A third research line may focus on explaining local implementation successes (as well as failures) and identify  
353 critical factors and conditions, including institutional, financial and knowledge-based capacities that shape  
354 successful implementation of the SDGs. Explanatory research questions could include: What are the key

355 success factors in legitimating and implementing the SDGs in different local contexts? How is the process of  
356 localising the SDGs shaped by national and local politics, institutions, policies, and power relations?

357 Finally, building on theoretical and empirical knowledge and in close transdisciplinary exchange with  
358 practitioners, research should focus on designing and testing practical strategies and approaches to  
359 strengthening the 2030 Agenda in local contexts. Potential questions include: How can subnational  
360 implementation of the 2030 Agenda be strengthened – and what role can science play? What governance  
361 innovations are needed at the subnational level to enable translation processes between local and national  
362 levels and to strengthen accountability for implementation at local levels?

#### 363 **4.4 Private Governance for the SDGs**

##### 364 Overview

365 The adoption of the 2030 Agenda was preceded by comprehensive stakeholder consultation including the  
366 private sector (Fukuda-Parr and MacNeill 2019). The agenda refers to the United Nations Guiding Principles  
367 on Business and Human Rights (Article 67) and dedicates one goal exclusively to multi-stakeholder  
368 partnerships (SDG 17). This shows that the private sector was identified as a critical actor in helping achieve  
369 the ambitious goals and targets through their regulations and actions. In addition, partnerships between  
370 public and private actors have become a mainstream implementation mechanism for attaining the SDGs  
371 (Pattberg and Koloffon Rosas 2023). Several reports and calls such as ‘Better Business-Better World’ (Business  
372 and Sustainable Development Commission 2017) and ‘SDG ambition - Scaling business impact for the decade  
373 of action’ (United Nations Global Compact 2020) stressed not only the urgency and importance for the  
374 private sector in engaging with this agenda, but also the significant commercial opportunities involved in  
375 addressing the SDGs. We understand the private sector as consisting of organizations not under direct  
376 government control and ownership, including banks, insurance companies, corporate multinationals, small  
377 and medium sized enterprises, consultants and Not-For-Profits such as advocacy groups, charities,  
378 philanthropists, social enterprise, endowments and impact investors. Due to their varied direct impacts on  
379 individual goals as well as their influence stretching across often complex global supply chains, many have  
380 called on the private sector to embrace and integrate the SDGs in a significantly strategic manner by exceeding  
381 voluntary and marginal corporate social responsibility efforts (Dahlmann et al. 2019; Sachs and Sachs, 2021;  
382 Scheyvens et al., 2016; Stubbs et al. 2020).

##### 383 Current trends

384 Since 2015, private sector engagement with the SDGs has primarily been captured in assessments by audit and  
385 accounting firms that have tracked the extent to which companies refer to and discuss the SDGs in their  
386 sustainability reports (Bebbington and Unerman 2018; Diaz-Sarachaga 2021; Pizzi et al. 2021; Rosati and  
387 Faria 2019). Overall, such voluntary efforts are limited to specific issues and reflect an agenda set in the global  
388 North, rather than in the global South (Consolandi et al. 2020; Partzsch et al. 2021). Concerns about green-,  
389 or more broadly ‘SDG-washing’, remain even where spending for corporate social responsibility has become  
390 mandatory (e.g., Poddar et al. 2019; Waddock 2020). Although little research exists on how philanthropies

391 address the SDGs, there is a risk of selective engagement with the SDGs in this sector, given that philanthropic  
392 funding often mirrors business and capitalist strategy (McGoey 2012).

393 A report series on Japanese companies' engagement with the SDGs was conducted through survey research  
394 examining their awareness, activities, and level of engagement, views on specific topics such as climate, gender  
395 equality, and decent work (Onoda et. al. 2022), and efforts to integrate SDGs into their business operations  
396 (Oba et al. 2019). While these reports suggested increasing levels of awareness, activities and engagement, they  
397 were not able to assess their overall impact.

398 Research has also examined whether the private sector sufficiently appreciates and responds to the  
399 interconnected nature of the 17 SDGs that are meant to be treated as an 'indivisible whole' (Dahlmann and  
400 Bullock 2020; van Zanten and van Tulder 2021). Pattberg and Koloffon Rosas (2023) find evidence for  
401 partnerships being 'nexus facilitators', whereby partnerships combining 'green goals' are most prevalent, that  
402 is, the environmental dimension is pioneering the partnership concept. In a similar vein, Kosovac and Pejic  
403 (2023) express confidence that city networks in combination with private sector partnerships can contribute  
404 to effective implementation of SDG 11 (Sustainable cities and communities). The C40 network offers an  
405 illustrative example, as it has been first underpinned by funding from Bloomberg Philanthropies but now has  
406 a broad range of funding partners including governments, foundations and global brands such as IKEA  
407 (Kosovac and Pejic 2023). Overall, private actors play a major role in global, national and local economic  
408 systems with both positive and negative impacts upon the SDGs.

#### 409 New research directions

410 Given the importance of private actors, we need to better understand, critique and improve their role in  
411 achieving transformations towards sustainable development. However, we still lack sound knowledge of the  
412 needed transformations, and change is likely to vary across geographies and scales (Dahlmann and Stubbs  
413 2023). Future research should hence examine the role of private actors and partnerships in these  
414 transformations and the ways in which they enable or constrain SDG implementation.

415 Specifically, we propose a research agenda that distinguishes between governance of, and governance by, the  
416 private sector (Burch et al. 2019), and four types of steering effects: discursive, institutional, relational and  
417 resources (Ordóñez et al. 2022). *Governance of the private sector* refers to novel governance systems designed  
418 to deliberately trigger private sector participation in achieving transformation processes towards the SDGs,  
419 while recognizing the conditions within and by which 'governance of the private sector' is situated, enabled  
420 and constrained. In this perspective, the private sector is primarily an object of SDG governance. In contrast,  
421 *governance by the private sector* refers to governance activities and initiatives originating in and led by the  
422 private sector to achieve transformations for the SDGs. In this perspective, the private sector is a subject in  
423 SDG governance.

424 Discursive effects concern the ways in which the SDGs are referenced in organisational narratives, policy  
425 discourses and external communications. Key questions include: What are the needs expressed by private  
426 actors to enable achievement of the SDGs and how do businesses use the SDGs in justifying their investment  
427 and strategy? On institutional effects, research is urgently needed to explain various changes in rules and  
428 institutional arrangements in support of the SDGs. For instance, how to understand private actors' responses  
429 to emerging policies and institutions created for the SDGs? How did some new private institutions emerge to

430 support the SDG implementation (e.g., the World Economic Forum’s Commission on Business and  
431 Sustainable Development)? How do private governance initiatives (e.g., corporate reporting and eco-labelling  
432 initiatives) adapt to the SDGs? On relational effects, the changing relations between actors such as new  
433 partnerships or contestation are worth investigation, including how private actors engage in SDG partnerships  
434 and to what extent the SDGs provide a common umbrella, or whether they lead to further fragmentation by  
435 actors that target only some goals. Finally, more attention should be given to private actors’ resource  
436 allocation, including their budgets, investments or human resources. In this respect, we need to examine  
437 whether private actors can be incentivized to commit new or repurposed resources for the SDG  
438 implementation, how private actors can attract and retain the necessary skills and talent for addressing the  
439 SDGs, and under what conditions additional sources of funding can be generated.

440 Ultimately, the key question is which conditions enable effective and meaningful engagement of private actors  
441 in *transformative* SDG governance, that is, beyond business-as-usual? Comparative research of what works  
442 and why across multiple and diverse organisations, scales and geographies will be critical to answer this  
443 question and develop useful strategy and policy recommendations.

#### 444 **4.5 Education and learning for sustainable development**

##### 445 Overview

446 Education is a driving force to bring about behavioural and structural transformative changes. By including  
447 SDG 4 as a specific goal related to education, the entire system of SDGs could have become a driver towards  
448 sustainability. The synergies of education with other SDGs and societal sectors make this area especially  
449 relevant in studying the catalyzing effects of the SDGs. However, the literature on the topic is still recent and  
450 limited, focusing so far on exploring the relationship between ‘Education for Sustainable Development’  
451 (ESD) and the SDGs in educational institutions and programmes and on challenges of operationalization and  
452 integration.

##### 453 Current trends

454 The SDGs encourage an interdisciplinary and transversal approach, which enhances critical thinking and thus  
455 contributes to education for citizenship and for promoting changes in society (Ferrer-Estévez and Chalmeta  
456 2021). So far, the literature has mainly focused on SDG implementation in connection with higher education  
457 institutions and concepts such as ESD, which we identify as a first research trend. Recent research describes  
458 the SDGs as a means to promote behavioural changes and considers SDG 4 as fundamental for all other SDGs  
459 to be achieved (Sarabhai 2015), through enhancing the role of ESD as a mechanism capable of generating  
460 transformation in principles, values, skills, and form of conduct in the teaching-learning spectrum (Academic  
461 Network on Global Education & Learning 2021; Sarabhai 2016). Particularly, systematic studies (e.g., Ferrer-  
462 Estévez and Chalmeta 2021) that have mapped the links between the SDGs and ESD identified various ways  
463 through which the SDGs are being invoked in (and are having impact on) education. These mainly relate to  
464 defining the methods and strategies for SDG integration within curricula and the academic field and  
465 developing teaching methods and pedagogical approaches for the SDGs. Related to teaching methods and  
466 pedagogies, research has advanced the use of concept maps to train teachers and students on the SDGs,

467 allowing them to reflect on synergies (Mandrikas 2020), or has promoted case-based learning as a teaching tool  
468 to enhance practical knowledge on the SDGs (Sibbald and Haggerty 2019). However, research on the subject  
469 is still limited, which calls for further investigations on practices of integrating and operationalizing the SDGs  
470 in education. This can be encouraged through participatory planning, identifying the various synergies  
471 between the SDGs with different areas of knowledge, and elaborating training and initiatives that enhance  
472 commitment of educational institutions and staff to sustainable development (Filho et al. 2019).

473 A second research trend is the integration of the SDGs in higher education institutions. Research suggests here  
474 an overall lack of awareness of the SDGs, along with limited critical understanding of their usefulness and the  
475 worldview that the SDGs convey (Filho et. al. 2019) and lack of financial, human and material resources  
476 (Ferrer-Estévez and Chalmeta 2021; Serafini et. al 2022). Furthermore, many initiatives concerning the  
477 integration of the SDGs into higher education institutions are focused on producing rankings and other  
478 standardized measures that often frame knowledge production and practices without considering local  
479 contexts, power relations and asymmetries between the Global North and South.

#### 480 New research directions

481 Based on these research gaps, we see four new directions that could contribute to developing our  
482 understanding of the conditions under which the incorporation of the SDGs within education could trigger  
483 transformation towards sustainability. First, more research is needed on educational activities that address  
484 both SDGs and ESD. This would deepen our knowledge of the synergies between the two and of the ways  
485 through which the SDGs could be better integrated and implemented in educational institutions and  
486 programmes. This research should also focus on the implementation of local solutions through ESD that  
487 integrate and align with the SDGs (Shulla 2020).

488 Second, as higher education institutions have over the years become agents of change to improve sustainability  
489 practices (Filho et al. 2023), research should focus on improving our understanding of the role of educational  
490 institutions in SDG implementation. This implies further investigating whether and how educational  
491 institutions engage with the SDGs, what are the discrepancies on how it is perceived and how it differs across  
492 contexts, particularly in the Global North/South divide, and identifying the conditions that could accelerate  
493 this engagement. These may include, for instance, encouraging peer learning across educational institutions,  
494 designing indicators to monitor the incorporation of the 2030 Agenda into educational practices, elaborating  
495 guidelines for the participation of educational institutions in monitoring and evaluating the goals, and  
496 creating pedagogical approaches that use cognitive, active and problem-based learning to create a knowledge-  
497 building process to promote sustainable development (Gehre Galvão et al. 2020; Filho et al. 2019; Filho et al.  
498 2023; Long 2017; Purcell 2019; Serafini et al. 2022).

499 Third, research needs to better address the conceptual complexity related to education and sustainable  
500 development and to highlight local contexts under the North-South divide. As a myriad of concepts now  
501 exists, such as global education, education for global citizenship, environmental education, education for  
502 sustainable development, sustainability education, and education for the SDGs, research should offer more  
503 clarity on the relationships and potential synergies and conflicts between conceptualizations in order to  
504 increase knowledge on education and the role of the SDGs therein (Weitz 2018) and highlighting solutions  
505 led by localities and communities.

506 Finally, future research should explore how decolonial theory (Mills 2022) and pluri-versal approaches  
507 (Pashby et al. 2020) can be used to deconstruct dominant global higher education institutions imaginaries  
508 and include an intersubjectivity dimension to the agency of marginalized people. A pluri-versal and decolonial  
509 SDG education study makes the case for a de facto equitable, inclusive and sustainable education, from the  
510 perspective of social transformation of the teaching-learning process.

## 511 **5. Looking forward: Avenues for further research and policy**

512 Given the limited progress in the implementation of the SDGs, disappointment and frustration among  
513 researchers and policy-makers are ubiquitous. While the 2030 Agenda with the 17 SDGs constitutes an  
514 unprecedented global vision to attain sustainable development, they do not drive political processes forward  
515 on a larger scale. With the rather broad 2030 Agenda and mostly qualitative nature of the global goals and  
516 targets, the danger is that most actors and institutions continue business-as-usual and use the SDGs to further  
517 their own interests. In some governance areas, however, we observe some initial political changes as a result of  
518 the adoption of the 2030 Agenda and the SDGs. This article delved deeper into five areas, namely global  
519 governance, national policy integration, subnational initiatives, private governance, as well as education and  
520 learning for sustainable development.

521 Overall, we see a quite patchy and often primarily symbolic uptake of the SDGs in key governance areas. While  
522 some studies have pointed to pioneering initiatives of SDG implementation and instances of meaningful  
523 collaboration between different actors and institutions from global to local levels, no clear pathway towards  
524 sustainable development has yet emerged in any of these areas. The individual success stories of some actors  
525 and institutions at different governance levels to implement the SDGs discussed in the literature are  
526 encouraging and inspiring. Yet, it remains unclear how such cases can be upscaled and develop a broader  
527 political impact to accelerate the global endeavour to achieve sustainable development. Fragmentation and  
528 limited integration constitute major obstacles for the SDGs to unfold wider effects. To render a large-scale  
529 political impact, the SDGs need to be incorporated at all governance levels and societal scales. Taking stock of  
530 global governance through goals in its current shape – the larger question that one may pose is whether goal-  
531 based governance is effective at all. While acknowledging their limitations, we still believe that the SDGs  
532 remain important globally agreed guidelines to generate sustainable development. We hence ask more  
533 pragmatically and proactively how can we make this mode of governance more effective until 2030 and  
534 reinvigorate efforts to achieve the SDGs by bringing more actors and institutions on board for the crucial  
535 phase of goal implementation? In this context, the role of science and scientists is critical in identifying leverage  
536 points (e.g., Malekpour et al. 2023) and governance reforms (Biermann et al. 2023) to strengthen the SDGs  
537 and their impact as a mode of sustainable development governance across levels and scales.

538 Our review has pointed to several blind spots in our knowledge about the implementation of the SDGs across  
539 different governance areas. Looking ahead, three research areas deserve our attention. First, given the diversity  
540 and complexity of the 17 SDGs and their 169 targets, we urgently need to advance our understanding on the  
541 interlinkages between goals, including their synergies and trade-offs. Research in this field can use mixed  
542 methods to collect quantitative and qualitative evidence. Knowledge on SDG interlinkages will ultimately  
543 inform policy-makers across governance levels about the potential of synergetic actions in the implementation  
544 of the 2030 Agenda with limited resources. Second, sustainability researchers should further investigate the



545 factors explaining significant variation in the outcomes of SDG implementation across various contexts. This  
546 will require fine-grained, transdisciplinary analysis to compare successful with less successful cases and identify  
547 institutional arrangements needed for effective implementation at all governance levels. Third, researchers  
548 need to examine the forces prompting changes in SDG implementation to understand opportunities and  
549 barriers for driving sustainability transformations. To date, research has largely taken a static view to assess  
550 SDG implementation and focused less on engines of change and potential feedback effects in the  
551 implementation processes. Yet, transformations in socio-technical systems often take place through non-linear  
552 changes. Hence, identifying critical junctures for change is crucial to develop and pursue effective policies  
553 supporting SDG implementation.

554 After all, this ambitious yet challenging research agenda will be possible only through collective action of  
555 researchers across disciplines and between scholars and practitioners. We therefore call for more global  
556 research collaboration to support the implementation of the SDGs until 2030 and beyond.

557

### 558 ***Acknowledgements***

559 *This article synthesizes discussions and main findings from a scoping review of five governance areas undertaken*  
560 *in the ‘Taskforce on the SDGs’ under the umbrella of the Earth System Governance Project. We would like to*  
561 *thank all members of the Earth System Governance Project for their participation in an online survey which was*  
562 *conducive to form different working groups focused on the exploration of political steering effects of the SDGs*  
563 *across different governance areas.*

564

### 565 ***Conflict of Interest Statement***

566 *The authors acknowledge that they have no competing or conflicting interests and that they have no material*  
567 *interests that relate to the content of the paper.*

568

### 569 ***Financial Support***

570 *We received funding from the European Research Council for the project GlobalGoals (grant no. 788001).*

## 571 **References**

572 Academic Network on Global Education & Learning. (2021). Global Education Digest 2021. Global  
573 Education Digest Report Series 4.

574 Addey, C. (2021). Passports to the Global South, UN flags, favourite experts: Understanding the interplay  
575 between UNESCO and the OECD within the SDG4 context. *Globalisation, Societies and Education*,  
576 19(5), 593–604.

577 Allen, C., Metternicht, G. & Wiedmann, T. (2018). Initial progress in implementing the Sustainable  
578 Development Goals (SDGs): A review of evidence from countries. *Sustainability Science*, 13(5),  
579 1453–1467.

- 580 Allen, C., Malekpour, S., & Mintrom, M. (2023). Cross-scale, cross-level and multi-actor governance of  
581 transformations toward the Sustainable Development Goals: A review of common challenges and  
582 solutions. *Sustainable Development*, 31(3), 1250–1267.
- 583 Annesi, N., Battaglia, M., Gagnani, P., & Iraldo, F. (2021). Integrating the 2030 Agenda at the municipal  
584 level: Multilevel pressures and institutional shift. *Land Use Policy*, 105.
- 585 Ansell, C., Sørensen, E., & Torfing, J. (2022). Co-Creation for Sustainability: The UN SDGs and the Power  
586 of Local Partnership. Bingley: Emerald Publishing Limited.
- 587 Bäckstrand, K., Koliev, F., & Mert, A. (2022). Governing SDG Partnerships: The Role of Institutional  
588 Capacity, Inclusion, and Transparency. In E. Murphy, A. Banerjee, & P. P. Walsh (Eds.),  
589 Partnerships and the Sustainable Development Goals (pp. 41–58). Cham: Springer Nature.
- 590 Bandari, R., Moallemi, E. A., Lester, R. E., Downie, D. & Bryan, B. A. (2022). Prioritising Sustainable  
591 Development Goals, characterising interactions, and identifying solutions for local sustainability.  
592 *Environmental Science and Policy*, 127, 325-336.
- 593 Barquet, K., Järnberg, L., Lobos Alva, I. & Weitz, N. (2022). Exploring mechanisms for systemic thinking in  
594 decision-making through three country applications of SDG Synergies. *Sustainability Science*, 17(4),  
595 1557–1572.
- 596 Bebbington, J. & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: an  
597 enabling role for accounting research. *Accounting, Auditing and Accountability Journal*, 31, 2–24.
- 598 Beisheim, M. (2021). Conflicts in UN reform negotiations: Insights into and from the review of the High-  
599 level Political Forum on Sustainable Development. SWP Research Paper 9.
- 600 Beisheim, M., & Fritzsche, F. (2022). The UN High-Level Political Forum on Sustainable Development: An  
601 orchestrator, more or less? *Global Policy*, 13(5), 683-693.
- 602 Beisheim, M. (Ed.) (2023). Country-level Politics around the SDGs. Analysing political will as a critical  
603 element of the Mid-term review of the 2030 Agenda and the SDGs. SWP Research Paper 7.
- 604 Bexell, M., & Jönsson, K. (2021). The politics of the sustainable development goals: Legitimacy,  
605 responsibility, and accountability. London: Routledge.
- 606 Bexell, M., Hickmann, T., & Schapper, A. (2023). Strengthening the Sustainable Development Goals through  
607 integration with human rights. *International Environmental Agreements: Politics, Law and*  
608 *Economics*, 23(2), 133–139.
- 609 Biermann, F., Sun, Y., Banik, D., Beisheim, M., Bloomfield, M. J., Charles, A., ... & Sénit, C. A. (2023) Four  
610 governance reforms to strengthen the SDGs. *Science* 381, 1159-1160.
- 611 Biermann, F., Hickmann, T., Sénit, C. A., Beisheim, M., Bernstein, S., Chasek, P., ... & Wicke, B. (2022).  
612 Scientific evidence on the political impact of the Sustainable Development Goals. *Nature*  
613 *Sustainability*, 5(9), 795-800.
- 614 Biermann, F., Hickmann, T., & Sénit, C. A. (Eds.). (2022). *The political impact of the sustainable development*  
615 *goals: Transforming governance through global goals?* Cambridge: Cambridge University Press.

- 616 Bloomfield, G., Bucht, Karin, Carlos Martínez-Hernández, J., Ramírez-Soto, A.F, Sheseña-Hernández, O.,  
617 Raziél Lucio-Palacio, C.. & Ruelas Inzunza, E. (2018). Capacity building to advance the United  
618 Nations sustainable development goals: An overview of tools and approaches related to sustainable  
619 land management. *Journal of Sustainable Forestry*, 37(2), 157-177.
- 620 Bogers, M., Biermann, F., Kalfagianni, A., & Kim, R. E. (2023). The SDGs as integrating force in global  
621 governance? Challenges and opportunities. *International Environmental Agreements: Politics, Law  
622 and Economics*, 23(2), 157–164.
- 623 Bogers, M., Biermann, F., Kalfagianni, A., Kim, R. E., Treep, J., & De Vos, M. G. (2022). The impact of the  
624 Sustainable Development Goals on a network of 276 international organizations. *Global  
625 Environmental Change*, 76, 102567.
- 626 Bolton, M. (2021). Public sector understanding of sustainable development and the sustainable development  
627 goals: A case study of Victoria, Australia. *Current Research in Environmental Sustainability*, 3,  
628 100056.
- 629 Bornemann, B., & Weiland, S. (2021). The UN 2030 Agenda and the Quest for Policy Integration: A  
630 Literature Review. *Politics and Governance*, 9(1), 96–107.
- 631 Bowen, K. J., Cradock-Henry, N. A., Koch, F., Patterson, J., Häyhä, T., Vogt, J., & Barbi, F. (2017).  
632 Implementing the “Sustainable Development Goals”: towards addressing three key governance  
633 challenges—collective action, trade-offs, and accountability. *Current Opinion in Environmental  
634 Sustainability*, 26, 90–96.
- 635 Burch, S., Gupta, A., Inoue, C. Y. A., Kalfagianni, A., Persson, Å., Gerlak, A. K., Ishii, A., Patterson, J.,  
636 Pickering, J., Scobie, M., Van der Heijden, J., Vervoort, J., Adler, C., Bloomfield, M., Djalante, R.,  
637 Dryzek, J., Galaz, V., Gordon, C., Harmon, R., ... Zondervan, R. (2019). New directions in earth  
638 system governance research. *Earth System Governance*, 100006.
- 639 Business and Sustainable Development Commission (2017). Better Business - Better World. *Business and  
640 Sustainable Development Commission*, 2017. Available at:  
641 <https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=2399&menu=1515>  
642 [accessed 20 June 2023].
- 643 Caria, S. (2022). Cooperation Regimes and Hegemonic Struggle: Opportunities and Challenges for  
644 Developing Countries. *Politics and Governance*, 10(2), 71–81.
- 645 Cochrane, K. L. (2021). Reconciling sustainability, economic efficiency and equity in marine fisheries: Has  
646 there been progress in the last 20 years? *Fish and Fisheries*, 22(2), 298–323.
- 647 Consolandi, C., Phadke, H., Hawley, J., & Eccles, R.G. (2020). Material ESG outcomes and SDG  
648 externalities: evaluating the health care sector’s contribution to the SDGs. *Organization and  
649 Environment*, 33, 511–533.
- 650 Croese, S., Oloko, M., Simon, D. & Valencia, S. C. (2021). Bringing the global to the local: The challenges of  
651 multi-level governance for global policy implementation in Africa. *International Journal of Urban  
652 Sustainable Development*, 13(3), 435–447.

- 653 Dahlmann, F., & Bullock, G. (2020). Nexus thinking in business: Analysing corporate responses to  
654 interconnected global sustainability challenges. *Environmental Science and Policy*, 107, 90–98.
- 655 Dahlmann, F., & Stubbs, W. (2023). Purpose framing as an informal governance approach to sustainability  
656 transformations in the private sector. *Earth System Governance*, 15, 100165.
- 657 Dahlmann, F., Stubbs, W., Griggs, D. & Morrell, K. (2019). Corporate actors, the UN sustainable  
658 development goals and earth system governance: A research agenda. *The Anthropocene Review*, 6(1-  
659 2), 167–176.
- 660 Denaro, C., & Giuffrè, M. (2022). UN Sustainable Development Goals and the “Refugee Gap”: Leaving  
661 Refugees Behind? *Refugee Survey Quarterly*, 41(1), 79–107.
- 662 Diaz-Sarachaga, J. M. (2023). Application of the 2030 Agenda in the Principality of Asturias (Spain). In W.  
663 Leal Filho, M. A. P. Dinis, S. Moggi, E. Price, & A. Hope (Eds.), *SDGs in the European Region.*  
664 *Implementing the UN Sustainable Development Goals – Regional Perspectives* (pp. 1-16). Cham:  
665 Springer Nature.
- 666 Diaz-Sarachaga, J. M. (2021). Shortcomings in reporting contributions towards the sustainable development  
667 goals. *Corporate Social Responsibility and Environmental Management*, 28, 1299–1312.
- 668 Earth System Governance Project (2023). Advancing research on global environmental change and  
669 governance. Available at: <https://www.earthsystemgovernance.org/> [accessed 20 June 2023].
- 670 Ferrer-Estévez, M., & Chalmeta, R. (2021). Integrating Sustainable Development Goals in educational  
671 institutions. *The International Journal of Management Education*, 19(2), 100494.
- 672 Filho, W. L., Shiel, C., do Paço, A., Mifsud, M. C., Veiga Ávila, L., Londero Brandli, L., Molthan-Hill, P.,  
673 Pace, P., Azeiteiro, U. M., Ruiz Vargas, V. & Caeiro, S. (2019). Sustainable Development Goals and  
674 sustainability teaching at universities: Falling behind or getting ahead of the pack? *Journal of Cleaner*  
675 *Production*, 232, 285–294.
- 676 Filho, W. L., de Vasconcelos, C. R. P., Ferreira, P., Araújo, M. M., Berenguer, A., Almeida, N., Fritzen Gomes,  
677 B., Júnior, J. M., Colombo, C. R., Lira, W. G., & Agostinho, T. L. A. (2023). Perceptions of the  
678 academic community on the performance of sustainable development initiatives in higher education.  
679 *Sustainable Development*, 1–17.
- 680 Flockhart, T., & Korosteleva, E. A. (2022). War in Ukraine: Putin and the multi-order world. *Contemporary*  
681 *Security Policy*, 43(3), 466–481.
- 682 Forestier, O. & Kim, R.E. (2020). Cherry-picking the Sustainable Development Goals: Goal prioritization by  
683 national governments and implications for global governance. *Sustainable Development*, 28(5),  
684 1269–1278.
- 685 Fox, S. & Macleod, A. (2021). Localizing the SDGs in cities: reflections from an action research project in  
686 Bristol, UK. *Urban Geography*, 1–21.
- 687 Fukuda-Parr, S., & McNeill, D. (2019). Knowledge and Politics in Setting and Measuring the SDGs:  
688 Introduction to Special Issue. *Global Policy*, 10(S1), 5–15.

- 689 García-Peña, C., González-Medina, M., Diaz-Sarachaga, J. M. (2021). Assessment of the Governance  
690 Dimension in the Frame of the 2030 Agenda: Evidence from 100 Spanish Cities. *Sustainability*, 13,  
691 5519.
- 692 Gehre Galvão, T., Cabral, R., & Maurer, L. (2020). Brazilian university network on the 2030 Agenda:  
693 Challenges and opportunities on territorialising the SDGs in Brazil. Paper presented at the 2020  
694 SDGs Research Symposium GlobalGoals2020, 9–11 June, Utrecht University.
- 695 Glass, L.-M., Newig, J., & Ruf, S. (2023). MSPs for the SDGs – Assessing the collaborative governance  
696 architecture of multi-stakeholder partnerships for implementing the Sustainable Development  
697 Goals. *Earth System Governance*, 17, 100182.
- 698 Global Sustainable Development Report (2023). Times of crisis, times of change: Science for accelerating  
699 transformations to sustainable development. Report by the Independent Group of Scientists  
700 appointed by the Secretary-General. New York: United Nations.
- 701 Hajer, M., Nilsson, M., Raworth, K., Bakker, P., Berkhout, F., De Boer, Y., Rockström, J., Ludwig, K. & Kok,  
702 M. (2015). Beyond cockpit-ism: Four insights to enhance the transformative potential of the  
703 sustainable development goals. *Sustainability*, 7, 1651–1660.
- 704 Haas, P. M., & Ivanovskis, N. (2022). Prospects for implementing the SDGs. *Current Opinion in*  
705 *Environmental Sustainability*, 56, 101176.
- 706 Herrera, V. (2019). Reconciling global aspirations and local realities: Challenges facing the Sustainable  
707 Development Goals for water and sanitation. *World Development*, 118, 106–117.
- 708 Hickmann, T. (2021). Locating Cities and Their Governments in Multi-Level Sustainability Governance.  
709 *Politics and Governance*, 9, 211–220.
- 710 Jägers, N. (2021). UN Guiding Principles at 10: Permeating Narratives or Yet Another Silo? *Business and*  
711 *Human Rights Journal*, 6(2), 198–211.
- 712 Kanie, N., & Biermann, F. (Eds.). (2017). Governing through goals: Sustainable development goals as  
713 governance innovation. Cambridge: MIT Press.
- 714 Koliev, F., & Bäckstrand, K. (2022). When are SDG Partnerships Transparent? The Determinants of Progress  
715 Reporting. In E. Murphy, A. Banerjee, & P. P. Walsh (Eds.), *Partnerships and the Sustainable*  
716 *Development Goals* (pp. 59–69). Cham: Springer Nature.
- 717 Kosovac, A., & Pejic, D. (2023). Cities and the SDGs: A spotlight on urban settlements. In L. Partzsch (Ed.),  
718 *The environment in global sustainability governance* (pp. 269-294). Bristol: Bristol University Press.
- 719 Krantz, V., & Gustafsson, S. (2021). Localizing the sustainable development goals through an integrated  
720 approach in municipalities: early experiences from a Swedish forerunner. *Journal of Environmental*  
721 *Planning and Management*, 64(14), 2641–2660.
- 722 Krauss, J. E. (2022). Unpacking SDG 15, its targets and indicators: Tracing ideas of conservation.  
723 *Globalizations*, 19(8), 1–16.
- 724 Krellenberg, K., & Koch, F. (2021a). Conceptualizing interactions between SDGs and urban sustainability  
725 transformations in Covid-19 times. *Politics and Governance*, 9(1), 200–210.

- 726 Krellenberg, K., & Koch, F. (2021b). How to support German cities in implementing the SDGs: learning  
727 from and about co-design. *Global Sustainability*, 4, e18.
- 728 Leavesley, A., Trundle, A., & Oke, C. (2022). Cities and the SDGs: Realities and possibilities of local  
729 engagement in global frameworks. *Ambio*, 51, 1416–1432.
- 730 Le Blanc, D. (2015). Towards integration at last? The sustainable development goals as a network of targets.  
731 *Sustainable Development*, 23(3), 176–187.
- 732 Li, L., Song, X., Liu, Y., & Chai, L. (2023). Emerging new global soil governance structure in agrifood systems:  
733 Taking the “4 per 1,000” initiative as an example. *Frontiers in Sustainable Food Systems*, 7, 1104252.
- 734 Long, G. (2017). Universities, academics and the 2030 Agenda for Sustainable Development. Together2030  
735 Blog. Available at: [https://together2030.wordpress.com/2017/12/08/universities-academics-and-  
736 agenda-2030/](https://together2030.wordpress.com/2017/12/08/universities-academics-and-agenda-2030/) [accessed 13 July 2023].
- 737 Long, G., Clough, E., & Rietig, K. (2022). Global Partnerships for the SDGs. In E. Murphy, A. Banerjee, &  
738 P. P. Walsh (Eds.), *Partnerships and the Sustainable Development Goals* (pp. 27–39). Cham:  
739 Springer Nature.
- 740 Malekpour, S., Allen, C., Sagar, A., Scholz, I., Persson, Å., Miranda, J. J., Bennich, T., ... & Al-Ghanim, K.  
741 (2023). What scientists need to do to accelerate progress on the SDGs. *Nature*, 621, 250-254.
- 742 Mandrikas, A. (2020). Teaching SDGs Using Concept Maps in Primary Teacher Training. *Journal of*  
743 *Education for Sustainable Development*, 14, 205–234.
- 744 Marx, A., Pertiwi, S. B., Depoorter, C., Hoornick, M., Mursitama, T. N., Otteburn, K., & Arnakim, L. Y.  
745 (2021). What role for regional organizations in goal-setting global governance? An analysis of the role  
746 of the European Union and ASEAN in the Sustainable Development Goals. *Global Public Policy and*  
747 *Governance*, 1(4), 421–445.
- 748 Masuda, H., Okitasari, M., Morita, K., Katramiz, T., Shimizu, H., Kawakubo, S., & Kataoka, Y. (2021). SDGs  
749 mainstreaming at the local level: Case studies from Japan. *Sustainability Science*, 16(5), 1539–1562.
- 750 Mawdsley, E. (2021). Development Finance and the 2030 Goals. In S. Chaturvedi, H. Janus, S. Klingebiel, X.  
751 Li, A. de Mello e Souza, E. Sidiropoulos, & D. Wehrmann (Eds.), *The Palgrave Handbook of*  
752 *Development Cooperation for Achieving the 2030 Agenda* (pp. 51–57). Cham: Palgrave Macmillan.
- 753 McGoey, L. (2012). Philanthrocapitalism and its critics. *Poetics*, 40, 185–199.
- 754 Mejía-Dugand, S., & Pizano-Castillo, M. (2020). Touching down in cities: Territorial planning instruments  
755 as vehicles for the implementation of SDG strategies in cities of the global south. *Sustainability*,  
756 12(17), 6778.
- 757 Meuleman, L., & Niestroy, I. (2015). Common but differentiated governance: A metagovernance approach  
758 to make the SDGs work. *Sustainability*, 7(9), 12295–12321.
- 759 Mills, D. S. (2022). Decolonial perspectives on global higher education: Disassembling data infrastructures,  
760 reassembling the field. *Oxford Review of Education*, 48, 474–491.

- 761 Moallemi, E. A., Malekpour, S., Hadjidakou, M., Raven, R., Szetey, K., Moghadam, M. M., Bandari, R.,  
 762 Lester, R., & Bryan, B. A. (2019). Local Agenda 2030 for sustainable development. *The Lancet*  
 763 *Planetary Health*, 3, e240–e241.
- 764 Moallemi, E. A., Malekpour, S., Hadjidakou, M., Raven, R., Szetey, K., Ningrum, D., Dhialulhaq, A. & Bryan,  
 765 B. A. (2020). Achieving the sustainable development goals requires transdisciplinary innovation at  
 766 the local scale. *One Earth*, 3, 300–313.
- 767 Moallemi, E. A., Bertone, E., Eker, S., Gao, L., Szetey, K., Taylor, N., & Brett, B. (2021). A review of systems  
 768 modelling for sustainability. *Environmental Research Letters*, 16, 113004.
- 769 Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., Neumann, B.,  
 770 Stevance, A. S., Visbeck, M., & Stafford-Smith, M. (2018). Mapping interactions between the  
 771 sustainable development goals: lessons learned and ways forward. *Sustainability Science*, 13(6), 1489–  
 772 1503.
- 773 Nilsson, M., Griggs, D., & Visbeck, M. (2016). Policy: map the interactions between Sustainable  
 774 Development Goals. *Nature* 534(7607), 320-322.
- 775 Nilsson, M., Vijge, M. J., Lobos Alva, I., Bornemann, B., Fernando, K., Hickmann, T., Scobie, M., & Weiland,  
 776 S. (2022). Interlinkages, Integration and Coherence. In F. Biermann, T. Hickmann, & C.A. Sénit  
 777 (Eds.), *The Political Impact of the Sustainable Development Goals: Transforming Governance*  
 778 *Through Global Goals?* (pp. 92–115). Cambridge: Cambridge University Press.
- 779 Ningrum, D., Raven, R., Malekpour, S., Moallemi, E. A., & Bryan, B. A. (2023). Transformative potential in  
 780 sustainable development goals engagement: Experience from local governance in Australia. *Global*  
 781 *Environmental Change*, 80, 102670.
- 782 Novovic, G. (2022). Can Agenda 2030 bring about “localization”? Policy limitations of Agenda 2030 in the  
 783 broader global governance system. *Development Policy Review*, 40, e12587.
- 784 Oba, T., Hokoishi, K., Sato, H., Kokufuda, A., Onoda, S., Amanuma, N., Yoshida, T., & Yano, S. (2019).  
 785 *Mainstreaming the SDGs in Business: Actions by Companies and Organisations in Japan*. Global  
 786 Compact Network Japan (GCNJ), Institute for Global Environmental Strategies (IGES).
- 787 Okitasari, M., Sunam, R., Mishra, R., Masuda, H., Morita, K., Takemoto, K. and Kanie, N. (2019).  
 788 Governance and national implementation of the 2030 agenda: lessons from Voluntary National  
 789 Reviews.
- 790 Onoda, S., Ono, M., Kato, M., Aoki-Suzuki, C., Takahashi, K., Tsukui, A., Doi, A., Shoji, Y., Uchida, H.,  
 791 Osaki, A., Saito, M., Sugawara, E., & Fujino, S. (2022). *SDGs Progress Report 2022: Survey Results on*  
 792 *the Efforts of GCNJ Companies and Organisations*. Institute for Global Environmental Strategies,  
 793 Global Compact Network Japan. Available at: [https://www.iges.or.jp/en/pub/sdgs-business-](https://www.iges.or.jp/en/pub/sdgs-business-progress-2022-en/en)  
 794 [progress-2022-en/en](https://www.iges.or.jp/en/pub/sdgs-business-progress-2022-en/en) [accessed 23 June 2023].
- 795 Ordóñez Llanos, A., Raven, R., Bexell, M., Botchwey, B., Bornemann, B., Censoro, J., Christen, M., Díaz, L.,  
 796 Hickmann, T., Jönsson, K., Scholz, I., Scobie, M., Sun, Y., Thompson, J., Thwaites, J., & Yunita, A.  
 797 (2022). Implementation at Multiple Levels. In F. Biermann, T. Hickmann, & C. A. Sénit (Eds.), *The*

- 798 Political Impact of the Sustainable Development Goals: Transforming Governance Through Global  
799 Goals? (pp. 59–91). Cambridge: Cambridge University Press.
- 800 Ortiz-Moya, F., Saraff Marcos, E., Kataoka, Y., & Fujino, J. (2021). State of the Voluntary Local Reviews  
801 2021: From Reporting to Action. Institute for Global Environmental Strategies.
- 802 Ortiz-Moya, F., & Kataoka, Y. (2022). State of the Voluntary Local Reviews 2022: Overcoming Barriers to  
803 Implementation. Institute for Global Environmental Strategies (IGES).
- 804 Ortiz-Moya, F., & Reggiani, M. (2023). Contributions of the voluntary local review process to policy  
805 integration: evidence from frontrunner cities. *Urban Sustainability*, 3, 22.
- 806 Park, J. (2022). How can we pay for it all? Understanding the global challenge of financing climate change  
807 and sustainable development solutions. *Journal of Environmental Studies and Sciences*, 12(1), 91–99.
- 808 Partzsch, L., K. Hartung, J. Lümmer, & Zickgraf, C. (2021). Water in your coffee? Accelerating SDG6  
809 through voluntary certification programs, *Journal of Cleaner Production*, 324, 129252.
- 810 Pashby, K., da Costa, M., & Sund, L. (2020). Pluriversal possibilities and challenges for Global Education in  
811 Northern Europe. *Journal of Social Science Education*, 19(4), 45–62.
- 812 Patole, M. (2018). Localization of SDGs through disaggregation of KPIs. *Economics*, 6(1), 15.
- 813 Pattberg, P., & Koloffon Rosas, M. (2023). Partnerships for the SDGs: Facilitating a biodiversity-climate  
814 nexus? In L. Partzsch (Ed.), *The environment in global sustainability governance* (pp. 297-316).  
815 Bristol: Bristol University Press.
- 816 Pisor, A. C., Basurto, X., Douglass, K. G., Mach, K. J., Ready, E., Tylianakis, J. M., Hazel, A., Kline, M. A.,  
817 Kramer, K. L., Lansing, J. S., Moritz, M., Smaldino, P. E., Thornton, T. F., & Jones, J. H. (2022).  
818 Effective climate change adaptation means supporting community autonomy. *Nature Climate  
819 Change*, 12, 213–215.
- 820 Pizzi, S., Rosati, F., & Venturelli, A. (2021). The determinants of business contribution to the 2030 Agenda:  
821 Introducing the SDG Reporting Score. *Business Strategy and the Environment*, 30(1), 404-421.
- 822 Poddar, A., Narula, S.A., & Zutshi, A. (2019). A study of corporate social responsibility practices of the top  
823 Bombay Stock Exchange 500 companies in India and their alignment with the Sustainable  
824 Development Goals. *Corporate Social Responsibility and Environmental Management*, 26(6), 1184-  
825 1205.
- 826 Purcell, W. M., Henriksen, H. A., & Spengler, J. D. (2019). Universities as the engine of transformational  
827 sustainability toward delivering the sustainable development goals. *International Journal of  
828 Sustainability in Higher Education*, 20(8), 1343–1357.
- 829 Qerimi, Q. (2022). The Ambitious Modesty of the High-Level Political Forum on Sustainable Development.  
830 *Global Policy*, 13(2), 281–288.
- 831 Reinart, M. B., & Lundberg, A. K. (2023). Goals à la carte: Selective translation of the Sustainable  
832 Development Goals in strategic municipal planning in Norway. *Journal of Environmental Planning  
833 and Management*.



- 834 Righettini, M. S. (2021). Framing sustainability. Evidence from participatory forums to tailor the regional  
835 2030 agenda to local contexts. *Sustainability*, 13(8).
- 836 Rosati, F., & Faria, L.G.D. (2019). Business contribution to the Sustainable Development Agenda:  
837 Organizational factors related to early adoption of SDG reporting. *Corporate Social Responsibility  
838 and Environmental Management*, 26(3), 588-597.
- 839 Sachs, J. D., & Sachs, L. E. (2021). Business alignment for the “Decade of Action”. *Journal of International  
840 Business Policy*, 4(1), 22-27.
- 841 Sachs, J. D., Lafortune, G., Kroll, C., Fuller, G., & Woelm, F. (2022). Sustainable Development Report 2022:  
842 From Crisis to Sustainable Development. Cambridge: Cambridge University Press.
- 843 Sachs, J. D., Lafortune, G., Fuller, G., & Drumm, E. (2023). Implementing the SDG Stimulus. Sustainable  
844 Development Report 2023. Sustainable Development Solutions Network, Dublin: Dublin  
845 University Press.
- 846 Sagar, A. D., & VanDeveer, S. D. (2005). Capacity development for the environment: Broadening the scope.  
847 *Global Environmental Politics*, 5(3), 14–22.
- 848 Sarabhai, K.V. (2015). ESD for Sustainable Development Goals (SDGs). *Journal of Education for Sustainable  
849 Development*, 9(2), 121–123.
- 850 Sarabhai, K. V. (2016). SDGs and the Climate Change Agreement: Challenges and Opportunities for ESD.  
851 *Journal of Education for Sustainable Development*, 10(1), 1–2.
- 852 Scheyvens, R., Banks, G., & Hughes, E. (2016). The private sector and the SDGs: The need to move beyond  
853 ‘business as usual’. *Sustainable Development*, 24(6), 371–382.
- 854 Schnitzler, T. J., Seifert, M., & Gonzáles, C. T. (2021). Achieving sustainable partnership in the United  
855 Nations in the framework of the Sustainable Development Goals. *International Journal of  
856 Sustainable Development*, 24(1), 28–49.
- 857 Sénit, C. A., & Biermann, F. (2021). In Whose Name Are You Speaking? The Marginalization of the Poor in  
858 Global Civil Society. *Global Policy*, 12(5), 581–591.
- 859 Serafini, P. G., Morais de Moura, J., Rodrigues de Almeida, M., & Dantas de Rezende, J. F. (2022). Sustainable  
860 Development Goals in Higher Education Institutions: A systematic literature review. *Journal of  
861 Cleaner Production*, 370, 133473.
- 862 Shulla, K., Leal Filho, W., Lardjane, S., Henning Sommer, J., & Borgemeister, C. (2020). Sustainable  
863 development education in the context of the 2030 Agenda for sustainable development.  
864 *International Journal of Sustainable Development & World Ecology*, 27(5), 458–468.
- 865 Sibbald, S. L., & Haggerty, N. (2019). Integrating Business and Medical Pedagogy to Accomplish the  
866 Sustainable Development Goals. *Journal of Education for Sustainable Development*, 13(1), 92–101.
- 867 Stubbs, W., Dahlmann, F., & Raven, R. (2022). The Purpose Ecosystem and the United Nations Sustainable  
868 Development Goals: Interactions Among Private Sector Actors and Stakeholders. *Journal of Business  
869 Ethics*, 180(4), 1097–1112.

- 870 Szetey, K., Moallemi, E. A., Ashton, E., Butcher, M., Sprunt, B., & Bryan, B. A. (2021). Co-creating local  
871 socioeconomic pathways for achieving the sustainable development goals. *Sustainability Science*,  
872 16(4), 1251–1268.
- 873 Taggart, J. (2022). A Decade Since Busan: Towards Legitimacy or a ‘New Tyranny’ of Global Development  
874 Partnership? *The Journal of Development Studies*, 58(8), 1459–1477.
- 875 Torresini, C. S. (2021). Sustainable Development in Middle Powers’ Governance Arrangements: The Cases  
876 of IBSA and MIKTA. *Politikon: The LAPSS Journal of Political Science*, 50, 49–74.
- 877 United Nations (2015). Transforming Our World: The 2030 Agenda for Sustainable Development.  
878 A/RES/70/1. New York: United Nations General Assembly.
- 879 United Nations (2020). The Sustainable Development Goals Report 2020. New York: United Nations.
- 880 United Nations (2022). The Sustainable Development Goals Report 2022. New York: United Nations.
- 881 United Nations (2019). The Future is Now: Science for Achieving Sustainable Development. Global  
882 Sustainable Development Report. New York: United Nations.
- 883 United Nations (2023). Progress towards the Sustainable Development Goals: Towards a Rescue Plan for  
884 People and Planet. Report of the Secretary-General (Special Edition). Advance Undedited Version.  
885 Available at [https://hlpf.un.org/sites/default/files/2023-  
886 04/SDG%20Progress%20Report%20Special%20Edition.pdf](https://hlpf.un.org/sites/default/files/2023-04/SDG%20Progress%20Report%20Special%20Edition.pdf) [accessed 13 July 2023].
- 887 UNDESA (2022). Ensuring SDG progress amid recurrent crises. Future of the World Policy Brief 137.  
888 Available at [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/DESA-  
889 PB\\_Ensuring-SDG-progress-amid-recurrent-crises.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/DESA-PB_Ensuring-SDG-progress-amid-recurrent-crises.pdf) [accessed 5 July 2023].
- 890 United Nations Global Compact (2020). SDG ambition - Scaling business impact for the decade of action.  
891 *UN Global Compact*, 2020. Available at: <https://unglobalcompact.org/library/5732> [Accessed 20  
892 June 2023].
- 893 van Driel, M., Biermann, F., Kim, R. E., & Vijge, M. J. (2022). International organisations as ‘custodians’ of  
894 the sustainable development goals? Fragmentation and coordination in sustainability governance.  
895 *Global Policy*, 13, 669–682.
- 896 van Zanten, J.A., & van Tulder, R. (2021). Improving companies’ impacts on sustainable development: A  
897 nexus approach to the SDGs. *Business Strategy and the Environment*, 30(8), 3703–3720.
- 898 Vogt, M. (2022). Development postcolonial: A critical approach to understanding SDGs in the perspective  
899 of Christian social ethics. *Global Sustainability*, 5, e4.
- 900 Waddock, S. (2020). Achieving sustainability requires systemic business transformation. *Global  
901 Sustainability*, 3, e12.
- 902 Wang, Y., Yuan, J., & Lu, Y. (2020). Constructing demonstration zones to promote the implementation of  
903 Sustainable Development Goals. *Geography and Sustainability*, 1(1), 18–24.
- 904 Weinlich, S., Baumann, M.-O., Cassens-Sasse, M., Hadank-Rauch, R., Leibbrandt, F., Pardey, M., Simon,  
905 M., & Strey, A. (2022). New rules, same practice? Analysing UN Development System reform effects  
906 at the country level. Discussion Paper 3/2022. Bonn: German Development Institute

- 907 Weitz, N., Carlsen, H., Nilsson, M., & Skånberg, K. (2018). Towards systemic and contextual priority setting  
908 for implementing the 2030 Agenda. *Sustainability Science*, 13(2), 531–548.
- 909 Widerberg, O., Fast, C., Koloffon Rosas, M., & Pattberg, P. (2023). Multi-stakeholder partnerships for the  
910 SDGs: Is the “next generation” fit for purpose? *International Environmental Agreements: Politics,  
911 Law and Economics*, 23(2), 165–171.
- 912 Zulfiqar, K., & Butt, M. J. (2021). Preserving Community’s Environmental Interests in a Meta-Ocean  
913 Governance Framework towards Sustainable Development Goal 14: A Mechanism of Promoting  
914 Coordination between Institutions Responsible for Curbing Marine Pollution. *Sustainability*,  
915 13(17), 9983.