

## &gt; CHAPTER 13

# Areas for policy action

Recommended interventions to address misalignments between STI and the SDGs

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## OVERVIEW

We propose a transformation of research funding and support systems, to mobilize a diversity of pathways to address the SDGs.

We identify four main **areas for action**, with specific policy recommendations for research funders and policymakers:

1. Increase funding for SDG-related research and innovation, particularly in low-income countries
2. Devote more funding to research that addresses underlying social inequalities, social innovations and informal research, in combination with technical solutions
3. Improve alignment between countries' SDG priorities and their STI portfolios
4. Adopt a more holistic approach to research evaluation, with indicators and data that relate to a range of desired inputs, outcomes and impacts

Footnotes for this chapter are on page 139. A full list of references can be found on page 140.



→ Introduction

This chapter draws from the findings in Section 2 to outline the main challenges and opportunities for STI policy to better contribute to sustainable development. We identify four overarching **areas for action**, each with specific recommended policy shifts for policymakers, researchers and funders to meet SDG-related challenges.

Our recommendations build on and refine recent academic and policy debates which promote shifting the focus of R&D expenditure from mainly supporting economic and productivity growth towards addressing sustainable development.<sup>1</sup>

Calls for change include: revising the use of indicators to appraise the success of investments in research and innovation;<sup>2</sup> increasing the involvement of diverse researchers and other stakeholders in setting STI funding and policy priorities;<sup>3</sup> increasing funding for interdisciplinary and transdisciplinary research;<sup>4</sup> and paying attention to evolving priorities by maintaining an open portfolio of research directions.<sup>5</sup>

These shifts require a revision of funding instruments and their governance, as discussed in Chapter 11. New systems of monitoring and evaluation, supported by ambitious data-collection, are also needed, to enable funders and policymakers to take account of diverse and plural STI directions and of different ways of appraising successes and failures.

'... shifting the focus of R&D expenditure from mainly supporting economic and productivity growth towards addressing sustainable development.'

Specific policies will naturally differ across contexts. As discussed in Chapter 10, policy approaches that recognize diversity are necessary to address the multiple challenges related to the SDGs.

Most of our recommendations are aimed at research funders, aid agencies and philanthropies. However, research funding systems can undergo these radical transformations only if the broader STI policy community and innovation system – from individual researchers to private companies, higher education organizations and financial institutions<sup>6</sup> – also embrace the changes.

AREA FOR ACTION #1

Increase funding for SDG-related research, particularly involving LICs

Challenge 1: Research and innovation are largely unrelated to the SDGs, especially in richer countries

Our research reveals a global misalignment between the SDGs and research and innovation priorities. Between 60% and 80% of publications authored in high-income countries (HICs) and upper-middle income countries (UMICs)<sup>7</sup> in the Web of Science (WoS) between 2015-2019 are unrelated to the priorities and challenges of the SDGs. This proportion falls to 20-40% in low-income countries (LICs),<sup>8</sup> but these countries account for only 0.2% of the research output published globally.

The figures are even more dramatic if we consider patented inventions, which can be taken as a proxy for innovative activity. In HICs and UMICs, 97% and 98% of inventions respectively are unrelated to SDGs, falling to 91% in LICs.<sup>9</sup> Again, the contribution of LICs and lower-middle income countries (LMICs) is minimal, at just 2%.

Challenge 2: Research funding is concentrated in relatively few organizations in HICs

LICs face larger SDG challenges than most other countries.<sup>10</sup> However, it is HICs and UMICs that account for the vast majority of all WoS publications (93%) and patents (98%), and very few of these involve partnerships with lower-income countries. The proportion of publications and inventions produced in collaboration between HICs or UMCs and LICs is below 0.5%.<sup>11</sup>

While this marginal participation of a large part of the world's population is in part due to the WoS focus on 'excellent' journals in the English language,<sup>12</sup> it also reveals the international inequalities governing research funding. STI priorities are driven overwhelmingly by research organizations in HICs and a handful of large UMICs. The negligible involvement of researchers from LMICs and LICs limits the impact of research on the users and contexts that need it most.<sup>13</sup>

The limited participation of researchers and inventors from LICs and LMICs also undermines the creation of research and innovation capabilities that could enhance all components of these countries' research and innovation systems.<sup>14</sup> Research and innovation capabilities have certainly been growing and evolving in LICs and LMICs.<sup>15</sup> However, we were unable to fully capture these capabilities in our analysis due

to lack of data.<sup>16</sup> More data and research are needed to better measure research and innovation capabilities in LICs beyond those captured by the WoS and patents.

Our findings also show that, within countries, a significant share of WoS SDG-related research is conducted by a few large organizations. While economies of scale may benefit research productivity, such concentration makes it harder to encompass multiple perspectives and explore diverse STI pathways (as recommended in Chapter 10). This is particularly the case if representation within research organizations is biased in terms of gender or ethnicity.<sup>17</sup>

**AREA FOR ACTION #1**

**Recommended policy shifts**



**Fund more research and innovation that directly addresses SDG-related issues**

Our findings indicate a need for funders and policymakers in HICs and UMICs to steer STI funding towards SDG-related challenges. This requires decisions about what types of research and innovation are related to the SDGs (Chapter 12) and which to prioritize among complex, contrasting and synergic directions. Defining such priorities is a crucial part of ensuring that STI contributes to the SDGs.



**Involve a wide range of actors in research funding decisions**

The recent re-emergence of mission-oriented STI policies<sup>18</sup> may help steer STI funding towards broad SDG challenges.<sup>19</sup> However, such top-down missions tend to privilege a single solution to very complex problems.<sup>20</sup> Funders and policymakers should consider the relevant contexts and the plural understandings about SDG priorities and how to address them.

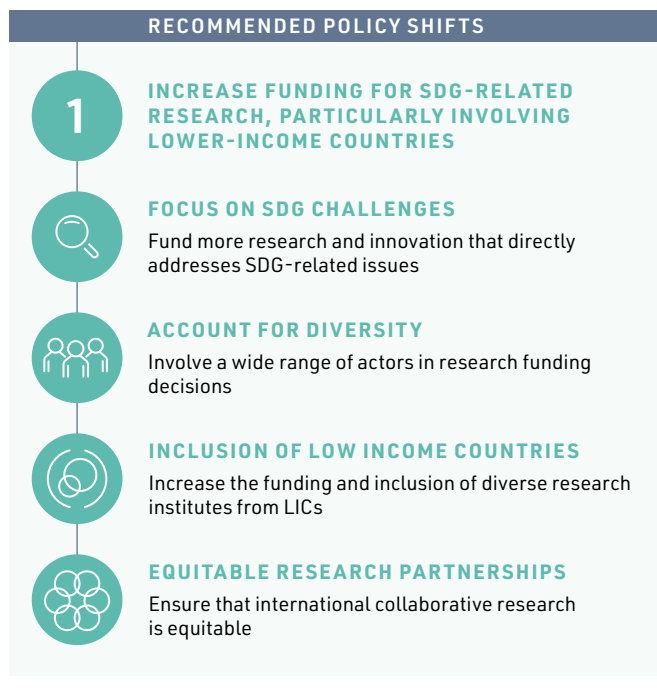
To better align research funding with the complex and diverse SDG challenges, public and private R&D funders and policymakers should:

- involve a more distributed set of actors in the design, implementation and evaluation of research funding<sup>21</sup>
- ensure that data, monitoring and impact evaluations underpin decisions and approaches to reorienting and steering STI
- revisit consultative and evaluation processes regularly to keep up-to-date with evidence and challenges

We discuss some concrete options for addressing these points in Chapters 10 and 11.

Of course, consultation alone is not enough if it does not influence the prioritization of research funding. In some contexts, historically entrenched funding, disciplinary priorities and

Figure 13.1 / Area for action #1: Summary of recommendations



the interests of public and private organizations may suppress attempts to steer funding to address the societal challenges of under-represented groups.<sup>22</sup> For example, the European Commission (EC) involved citizens in the development of its Horizon Europe funding programme.<sup>23</sup> However, this participatory process seems not to have created a greater diversity of STI pathways to address societal challenges.<sup>24</sup> Compared with earlier EC funding programmes, it appears to have led to only a small improvement in aligning research funding with diverse societal values.<sup>25</sup>

By including LIC researchers and stakeholders in their advisory and management committees, policy and funding agencies can ensure that the views of plural stakeholders are considered in the planning, definition and evaluation of research agendas. Such broad-based participation tends to lead to research with stronger impact,<sup>26</sup> and can open up the practice of science by increasing transparency. This, in turn, may help government bodies and others to steer STI pathways towards SDG priorities (Chapter 11).



**Increase the funding and inclusion of diverse research institutes from LICs**

Since LICs focus most of their research on SDG-related issues, increasing research funding in these countries would directly boost research related to the SDGs. It could also improve capabilities to address the SDGs where they are most needed.

Therefore, national and international funding frameworks should focus on supporting SDG-related research that involves a leading role for research organizations based in LICs. The worldwide Think Tank initiative<sup>27</sup> and the DELTAS programmes in Africa<sup>28</sup> are examples of how the involvement of LIC organizations in leading roles can help to create research and innovation capabilities beyond academia.



### Ensure that international collaborative research is equitable

Funders and donors should ensure that collaborative projects are based on equitable partnerships.<sup>29</sup> It is important that LIC partners are not exclusively data providers,<sup>30</sup> that decisions are taken collaboratively, and that LIC researchers can access data that is currently prohibitively expensive.<sup>31</sup> Such equitable collaborations may require investment in capabilities and capacities, and this investment should be integrated and valued as part of funded research projects.

Equitable collaborations can also help funders, donors and researchers in HICs and UMICs to better understand existing research portfolios, priorities and capabilities in LICs, thereby increasing the effectiveness of funding and avoiding duplications.

Our analysis of Chagas-related publications revealed that international collaborations, especially between HICs and non-HICs, are particularly important in steering research towards the SDGs. Collaborations between HICs and non-HICs constitute 26% of SGD-related research on Chagas disease, compared with just 18% of non-SDG-related research on Chagas. Moreover, when HIC research about Chagas involved collaborations with non-HIC authors, it was more likely to be related to the relevant SDGs (3, 5, 11 and 15).

Science policy initiatives and research funders have been supporting the development of research infrastructure and capabilities in UMICs and LMICs for many years, with the aim of creating more equal partnerships. A synthesis of evidence related to those efforts could help to inform future policy and investment.

Similarly, some organizations in HICs are already pursuing funding models that prioritize LIC-based research and amplify LIC researchers' and stakeholders' views about STI priorities. These include the Swedish International Development Agency; the International Development Research Centre (IDRC) of Canada, which restricts the amount of money spent on researchers in HICs; and the German International Climate Initiative, which aims to spend at least 60% of its funding in LICs. The UK's Global Challenge Research Fund also committed to building new and more equitable partnerships. However, an early evaluation concluded that its research agendas were still dominated by researchers from HICs.<sup>32</sup>

An example of LICs prioritizing LIC-based research is the Accelerating Excellence in Science in Africa initiative, which committed to 'shifting the centre of gravity' for science to

Africa. It was established jointly by the African Academy of Sciences and the African Union Development Agency, in partnership with funding agencies such as the Bill and Melinda Gates Foundation and the UK's Wellcome Trust. Although this initiative has run into difficulties, the concept behind its creation was powerful.

The Forum for Agricultural Research in Africa and the Asia Pacific Association of Agricultural Research Institutions both foster collaborative activities between LICs on knowledge exchange, knowledge management and policy advocacy. However, neither organisation promotes much research collaboration.

## AREA FOR ACTION #2

### Increase funding of research into underlying issues of deprivation, inequalities and conflict

#### Challenge 1: Research on underlying issues of deprivation, inequalities and conflict is underfunded

Underlying social issues that are central to SDG-related challenges include:

- inequalities within and among countries (linked to SDG 10)
- gender inequality (SDG 5)
- conflict, injustice and weak institutions (SDG 16)
- poor-quality education (SDG 4).

These areas attract a low and relatively slow-growing share<sup>33</sup> of research publications in the WoS, less funding and fewer international collaborations than average. However, there is evidence that research on these topics has a stronger influence on policy and society than other areas of research.<sup>34</sup> While research and innovation tend to focus on more technical solutions, social innovations are also needed to address the SDGs.

The discrepancy in research funding may be because different challenges need different amounts of research. Research related to societal issues may also be more common in literature not covered in the WoS. However, the shrinking support for research on deeply rooted inequalities – compared to, for example, energy (SDG 7) or economic growth (SDG 8) – is likely to be a major constraint to addressing complex priorities across all SDGs.

#### Challenge 2: A lack of connection between social and technical research

Crucially, research related to issues of deprivation, inequalities and conflict is isolated from research related to SDGs focused on the environment, infrastructure and growth.<sup>35</sup> Not only does this compound the above challenge, but it also highlights a serious disjuncture between STI quests for infrastructure, growth and environmental integrity on the one hand and the imperatives of poverty eradication, inclusion and peace on the other. This situation is at odds with the multiple

recommendations that a more holistic approach, combining social and technical STI, is needed to address the SDGs.<sup>36</sup>

Our findings show, for example, that research related to SDGs 16 (Peace, justice and strong institutions) is disconnected from research related to SDGs 14 (Life below water) and 15 (Life on land),<sup>37</sup> despite the well-known connections between conflicts and access to natural resources. Indeed, our case study on fisheries in the Lake Victoria region (Chapter 2.3) demonstrates how the governance of fishing and the alternative pathways for improving access to fish relate to long-standing conflicts in the region.<sup>38</sup> Similarly, research on SDGs 4 (Quality education) and 16 (Peace, justice and strong institutions) is weakly connected with research on SDG 3 (Good health)<sup>39</sup> despite the importance of governance and education in addressing neglected diseases such as Chagas.<sup>40</sup>

**Challenge 3: The importance of social innovations and informal research organizations in addressing the SDGs**

Social factors are important in addressing the whole range of SDGs, including environment and infrastructure-related SDGs. In our global survey (Chapter 7), when asked about the STIs that are likely to contribute to specific SDG targets, stakeholders pointed to social, policy and grassroots innovations more than to physical technologies. For instance, social justice, increasing access to education, changing consumers’ behaviour, public health, controls on invasive species, and affordable housing were among the highest-rated innovations across all SDGs, alongside renewable and solar energy. Despite this high prioritization, these topics form a marginal share of published research and do not appear among patented inventions.

Moreover, STI pathways to address SDG priorities are not always produced in formal research organizations. Our Indian case study<sup>41</sup> illustrates how STI pathways can be based around ‘indigenous’ or ‘traditional’ sciences and techniques. Although these STI pathways are difficult to capture with standard data, they must be taken seriously, considering the rich diversity of such pathways around the world and the importance given to grassroots and social innovations in our global survey.

**AREA FOR ACTION #2**

**Recommended policy shifts**

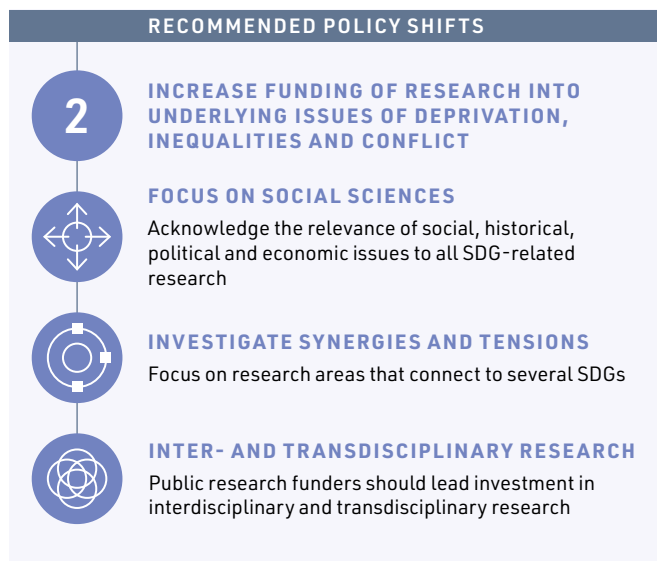


**Acknowledge the relevance of social, historical, political and economic issues to all SDG-related research**

STI policies should put social science and humanities research on deprivation, inequalities, conflicts and education at the core of funding initiatives. Such a focus will enable a greater understanding of how these issues are related to the full range of SDGs.

Social sciences research on these issues and their impact on the SDGs can be more contentious and harder to measure than, for instance, research on health technologies or

Figure 13.2 / Area for action #2: Summary of recommendations



renewable energy technologies. The impact of social science research on SDG targets related to deprivation, inequality, conflict and education is more difficult to attribute to specific projects<sup>42</sup> than is the case for health research, for example.<sup>43</sup> However, funders and researchers should not shy away from investing in research on these fundamental issues. As we recommend below, a more multidimensional approach to STI evaluation could help.



**Focus on research areas that connect to several SDGs**

Substantially more research is needed to better understand the synergies and tensions between the SDGs. Our research shows that only a few research areas are relevant to several SDGs.<sup>44</sup> For example, one large research area of more than 9,000 publications on environmental issues and economic development is related to SDGs 12 (Responsible consumption and production) and 13 (Climate action) as well as to SDGs 7 (Affordable and clean energy), 8 (Decent work and economic growth) and 9 (Industry, innovation and infrastructure). A smaller research area of around 1,700 publications that address topics related to food insecurity is related to SDGs 1 (No poverty), 2 (Zero hunger), 3 (Good health and well-being) and SDG 5 (Gender equality). These are highly interdisciplinary research areas, including research from the social sciences and humanities, physical sciences and engineering, life and health sciences, computer science and mathematics.

Funders may wish to learn from these areas and promote more challenge-led, rather than disciplinary-led, research to help understand synergies and tensions between SDGs. Beyond those few research areas that are relevant to several

SDGs, funders should fund more research that explicitly investigates tensions and synergies between different aspects of sustainability. It is especially important to connect research on deep-seated issues of deprivation, inequalities and conflict with research on more technical solutions.<sup>45</sup> More research is needed to understand, for example, how new technologies interact with complex societal, political and historical issues.



### Public research funders should lead investment in interdisciplinary and transdisciplinary research

Research funders and science policymakers need to take seriously the production of knowledge in multiple arenas beyond formal science and technology.<sup>46</sup> Social innovations, ‘indigenous’ sciences and traditional techniques currently struggle to attract public funding and other support.

Greater support is also needed for interdisciplinary and transdisciplinary research, which could improve the understanding of synergies and tensions between socioeconomic, environmental and infrastructure-related SDGs. For example, in our case study on Chagas disease,<sup>47</sup> the bibliometric analysis shows that interdisciplinary research helps to steer research towards the SDGs. Open science practices, including the participation of a diverse set of actors in research production, also help to meet societal needs.

Beyond research, we need more funding to understand the impacts of translating and implementing research findings in specific contexts.<sup>48</sup> For example, narrowly focused biomedical health research alone is unlikely to solve health issues in LICs. To facilitate the implementation of biomedical science, research in the humanities, social sciences and public policy will also be needed. In the case of Chagas disease, for example, research into public policies and institutions (SDG 16), sustainable cities and communities (SDG 11) and education (SDG 4) are all relevant to tackling the disease, complementing research more directly related to health (SDG 3).<sup>49</sup>

‘Greater support is needed for inter- and transdisciplinary research, which could improve the understanding of synergies and tensions between SDGs’

Interdisciplinary and transdisciplinary research projects can be difficult to design, conduct and assess but there is a clear need for STI policies to support substantially bolder efforts in this direction.<sup>50</sup> An important move would be to increase the active presence of diverse stakeholders in research projects. This should include not just academic disciplines but also representatives from across policy, industry and civil society.

Examples include marginalized knowledge producers such as small farmers, forest people and water conservationists.

One option would be to complement formal research funding agencies with agencies that actively support informal research partnerships, including between researchers and social innovators. Few countries currently have agencies that promote practical and implementation research and related capabilities in the charitable and informal sectors.

Funding and creating spaces for interdisciplinary exchange, either within universities or with other actors such as funding or policy agencies, would also help promote this type of research. Chapter 11 provides examples of how this could be facilitated globally and locally.

### AREA FOR ACTION #3

#### Address the misalignments between STI portfolios and SDG priorities

##### Challenge 1: Historical and ingrained patterns of funding

We found that countries’ research priorities align with their SDG priorities for only four of the SDGs: SDG 1 (No poverty), SDG 2 (Zero hunger), SDG 3 (Good health and well-being), and SDG 6 (Clean water and sanitation).<sup>51</sup> However, these prioritizations seem to be driven by historical patterns of funding development research, rather than by SDG challenges themselves.

##### Challenge 2: LICs and LMICs need more funding to build their own research capabilities

While most SDG challenges are worse in LICs, only a tiny amount of SDG-related research takes place in those regions.<sup>52,53</sup> This means research users in LICs rely on research carried out elsewhere, which is likely to be less relevant to their contexts. An example is the dominant focus of global health research on diseases that cause a burden mainly to HICs rather than LICs.<sup>54</sup> The lack of SDG-related research in LICs is problematic since research is one of the key ways of creating capabilities to address SDG-related issues.<sup>55</sup>

##### Challenge 3: STI pathways differ in their alignment with different SDGs and targets

The STI pathways that become mainstream are not necessarily in the best position to address the diversity of SDG-related issues. For example, in our Indian case study,<sup>56</sup> the dominant pathway of breeding new rice varieties privileges input-intensive agriculture, thereby adversely affecting agrobiodiversity (relevant to SDG 2) and making agriculture less sustainable (SDG 12). The alternative pathway of in-situ seed conservation has positive impacts in both these SDG areas. However, it is not supported by public research funding because academic researchers consider that the dominant pathway leads to higher yields, thus achieving the target of doubling agricultural productivity (SDG 2).

AREA FOR ACTION #3

Recommended policy shifts



**Research prioritization should be more responsive to national and local challenges**

Countries and regions should regularly review how they prioritize research funding, in order to support shifting local and national SDG priorities.

Funding portfolios should be revised frequently, based on consultations across different disciplines and sectors of society. LIC researchers and users should be involved more consistently in decisions about funding research into SDG-related issues in their countries and regions. Otherwise, there is a risk of imposing research directions and innovation pathways that are driven by countries and organizations with limited understanding of local challenges.

Funding research into local challenges, in consultation with stakeholders, is also essential to create research capabilities. Ensuring strong research skills and opportunities in academia and beyond – for example, among doctors, public administrators or farmers – can help to make STI more effective and relevant.



**Open and plural decision-making is needed to develop multidirectional funding portfolios**

The diversity of SDG-related issues and STI pathways requires a diversity of research and innovation directions.<sup>57</sup> Research funding should support a wide array of different subjects, approaches and directions.

Funding programmes should prioritize diversification and avoid closing down pathways that may be important for

addressing social and economic challenges.<sup>58</sup> A portfolio approach can be deployed to maintain a range of projects or interventions, each looking at a different dimension that is relevant to particular beneficiaries.<sup>59</sup> The portfolio approach may also involve funding a variety of projects across a continuum from radical to incremental innovation.<sup>60</sup>

Funders can use participatory processes, combined with evaluation and monitoring, to ensure that citizens’ plural perspectives are taken into account and to prevent STI pathways, that are relevant to marginalized social groups, from being closed down.<sup>61</sup> It is important to involve plural stakeholders, especially research users and civil society organizations, in setting research priorities and criteria to evaluate research projects.<sup>62</sup> Such participation is also needed in the process of designing research funding, so that calls for proposals are shaped by plural perspectives.<sup>63</sup>

AREA FOR ACTION #4

**Adopt a more holistic approach to research evaluation and data-collection**

**Challenge 1: The dominant evaluation systems hinder research that is relevant to the SDGs**

Traditional research evaluation (which tends to equate excellence and research productivity with high-profile publications) hinders the development of interdisciplinary research, which is likely to have a stronger impact on the SDGs than other types of research.<sup>64</sup>

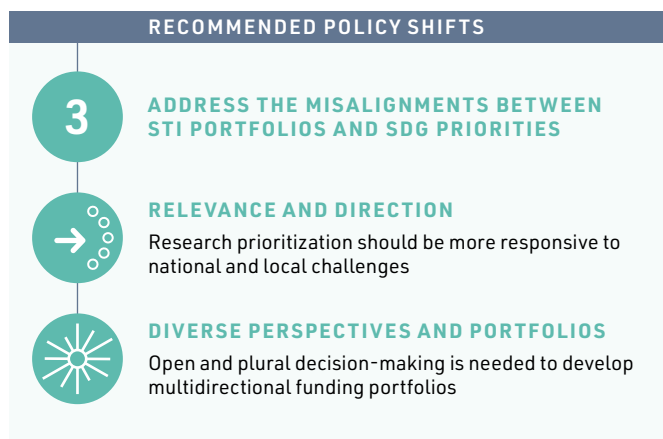
For example, several stakeholders view research related to SDGs 4 and 16 as important in tackling Chagas disease. However very little medical research is carried out in these areas,<sup>65</sup> as the research evaluation system does not reward medical researchers for considering educational and governance implications.

Changing the evaluation system to reward social impact as well as scientific excellence might steer research towards the complex social issues, such as deprivation, inequalities and governance, that are key to addressing technical challenges.

**Challenge 2: Available data provide a biased picture of STI activities**

Most evaluation of STI investments is based on bibliometric indicators produced using research outputs such as publications and patents.<sup>66</sup> Yet these are only two of many forms in which new knowledge may manifest itself (as discussed in Chapters 4, 5 and 12). Moreover, standard repositories such as the WoS include mainly English language publications. Thus, using standard bibliometric indicators provides an incorrect and incomplete picture of the research and innovation activities in lower-income and less formal settings.<sup>67</sup> It discounts many of the social, policy and grassroots innovations that stakeholders and researchers themselves consider so relevant to achieving the SDGs (Chapter 7).

Figure 13.3 / Area for action #3: Summary of recommendations



The same limitations apply to our own analysis. Our mapping of global STI covers only those areas where we could access data (publications and patents). To better understand the changes needed to achieve the full potential of STI to meet the SDGs, we therefore combined our analysis of STI outputs with a global survey and three in-depth case studies.

AREA FOR ACTION #4

Recommended policy shifts



**A more multidimensional approach to the evaluation of public STI**

There is a need to broaden the current metrics-based approach to assessing research in order to promote more research on the underlying issues of deprivation, inequalities and conflict, and to increase the recognition of social innovations, different forms of knowledge, and the role of users. This does not mean compromising the quality of research. Our research indicates that SDG-related research on issues of deprivation, inequalities and conflict is as excellent as the average research in the WoS, as measured using standard bibliometric metrics.<sup>69</sup>

Nevertheless, funders need research evaluation measures that promote and value a diversity of research outputs and activities that may not fit the traditional definition of ‘excellent’ research. Evaluation should consider positive and negative impacts on society as perceived by different stakeholders. The key is to use a multidimensional approach, such as the RQ+,<sup>70</sup> which promotes several different evaluation approaches, rather than solely focusing on disciplinary excellence.

Moving away from traditional forms of evaluation requires a greater effort in data-collection, but is also likely to deliver development research that has a stronger impact on society.<sup>71</sup> Monitoring, evaluation and learning techniques have evolved

rapidly and there is a growing body of assessment literature to inform approaches that consider plural understandings of diverse research pathways.<sup>72</sup>

We propose two practical examples for developing such measures in this report. In Chapter 6 we measure and appraise countries’ research specializations in relation to their SDG challenges, using data on academic publications and SDG indicators. In Chapter 9, we appraise different STI pathways to address SDG-related challenges in specific contexts using multi-criteria mapping.

Funding agencies need to base their decisions on thorough evaluations, which involve the collection of detailed data and case studies, to better evaluate the impact of different STI pathways on the SDGs. Many research funders are beginning to adopt more comprehensive and finer-grained evaluations. Some, including UKRI and IDRC, are seeking to enhance the role of users, brokers and intermediaries in their research funding portfolios. This may facilitate the engagement of plural stakeholder groups with a range of perspectives on how STI can best contribute to the SDGs. Other funding agencies are developing innovative ex-ante approaches to inform research funding in light of the need to address societal goals. The Norwegian Research Council,<sup>73</sup> for example, recently undertook a consultative exercise, which included a foresight and futures component, to underpin its research strategy. This approach has the advantage of directly addressing the need to break from old patterns and pathways.

Research funders and policymakers need to engage more critically in analysing the relationships between research outputs and SDG outcomes. This can work better if we have decentralized research and funding institutions that allow stakeholders to engage more frequently. In Chapter 11 we provide a few concrete examples.



**Invest in collecting more inclusive STI data**

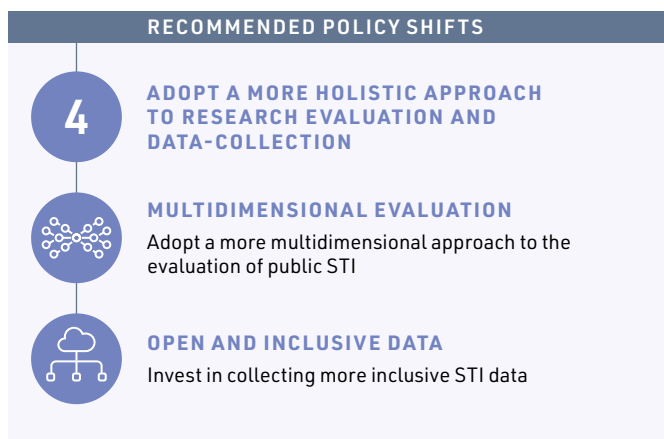
To avoid undue influence from HIC priorities, funders should give greater attention to research that is of local interest, published in languages other than English, and available in outlets that are accessible to research users and more open than academic publications and patents.

It is also vital to take advantage of the enormous advances in producing, harvesting and analysing unstructured data to fund the collection and use of data about forms of STI other than publications and patents.

In Chapter 12, we present a tool that enables stakeholders to develop their own mapping of SDG-related research, while Chapter 11 proposes ways for international bodies to collect and monitor data on STI.

Vital to the success of all our recommendations is the engagement of civil society actors working on informal and small-scale research and innovation efforts across the globe.

Figure 13.4 / Area for action #4: Summary of recommendations





Notes

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69. Figure 4.9, Chapter 4.
70. Ofir et al, 2016.
71. McLean and Sen, 2019.
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END OF REPORT