

Putting the United Nations Sustainable Development Goals into practice: A review of implementation, monitoring, and finance

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In January 2016, after two years of international negotiations, the Sustainable Development Goals (SDGs) came into effect. The SDGs are the successors to the Millennium Development Goals (MDGs) and represent an ambitious but potentially flawed agenda for sustainable development through to 2030. This review assesses the legacy of the MDGs, the development of the SDGs, and the international framework to put the SDGs into practice. We propose dividing the framework for SDG delivery into three key areas: implementing the goals and the SDG agenda (Implementation); monitoring, evaluation, and review (Monitoring); and increasing and improving global finance flows for sustainable development (Finance). This review identifies the challenges faced by the international community for making the SDGs an effective platform for equitable and sustainable development across these three areas. Proposed approaches and solutions are discussed and further research is suggested. This review concludes that further critical attention to the “Implementation”, “Monitoring”, and “Finance” framework is vital to ensure accountability and transparency from an ever-growing number of state and non-state development actors. This review also seeks to further the potential for greater links between development theory, development geography, and development actors and institutions to improve development under the SDGs and increase engagement from geography on the SDGs. This framework points towards a basis for critical engagement on the sustainability, equality, and quality of development, while challenging the primacy of economic growth-based paradigms in SDG implementation.

KEYWORDS

development finance, governance for sustainable development, indicators, monitoring and evaluation, Sustainable Development Goals

1 | INTRODUCTION

The Sustainable Development Goals (SDGs) were launched at the United Nations (UN) General Assembly in September 2015 (UN, 2015f) and came into effect on 1 January 2016. The SDGs are a vast agenda of 17 goals and 169 targets, agreed unanimously by all UN member states as global goals of ambition. This review article discusses the potential to better develop and implement the SDGs to deliver genuine “progress” for communities around the world.

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This review focuses on three important elements of the practice of the SDGs at the global level: defining the global “means” for implementing the SDG agenda (Implementation), monitoring, evaluation and review (Monitoring), and boosting global finance flows under the SDGs (Finance). For each, this article reviews the development of the SDGs, analyses the main challenges and proposed approaches, and points towards research agendas in development theory and practice. We seek to contribute to bridging the divide between (critical) development studies, development geography and the practice of development. The SDG approaches discussed will cover those which are extant and others that we propose.

We recognise that the international development “machine” (Ferguson, 1990) neither functions perfectly nor provides an ideal model for improving the global human condition. However, “development” falls between being a “subject of study” and a “field of action” (Currie-Alder, 2016), which causes tensions in developing shared aims when studying the SDGs. This review explores the boundaries between these two concepts, to contribute to the basis of future development scholarship and a shared understanding of how to potentially make the SDGs more effective while understanding that development is never a neutral term.

This approach broadly relates to “critical pragmatism”; we strive for open-ended and flexible inquiry aimed at achieving greater understanding of current practices and policies, rather than final consensus about aims (Kadlec, 2006). Using this in a development context, rather than comment on the “long-standing split” between critical Marxian interpretations and neo-classical developmentalist theories, we aim to contribute to the notion that development is both alternative and developmentalist, both critical and practical (Bebbington, 2000). Critical pragmatism uses social philosophy and social sciences by a combination of deriving immanent standards from an empirical base, drawing on the value of lived experience, and integrating perspectives with the resources and theoretical constraints of the social sciences (Midtgarden, 2012). Although frequently discussed for deliberative democracy (Forester, 2012; Kadlec, 2008), we argue that a critical pragmatic approach for the SDGs could bridge the gap between development as theory and development as practice to contribute to furthering local, national and global progress by 2030.

2 | AIMS AND APPROACH

We aim to provide a basis for geographers and other researchers to contribute to improving SDG implementation by increasing engagement with the SDGs. Geography has much to offer, despite little direct engagement from geography with the SDGs. However, we argue that geographical study must apply itself to the means of achieving the SDGs, as well as theoretical and critical discussions of the significance of the goals themselves; as Olsson, Hourcade, and Köhler (2014, p. 9) note, “the means to achieve the goals, the transition pathways, are more contentious than the goals themselves and thus deserve much more attention in research”.

Although the SDGs are closely aligned with conventional growth paradigms, stating that “domestic resources are first and foremost generated by economic growth” (UN, 2015f, p. 29), we recognise that for 15 years they will shape global development activities and financial flows. Critical pragmatism argues that “the world does not fit our aims; our aims move in step with our grasp of the world” (Wagenaar, 2011, p. 294). As the SDG “era” begins, key areas should be analysed, critiqued and improved, where possible, to hopefully arrive at 2030 with more positive outcomes for people around the world. A critical pragmatist approach attends equally to process and outcomes (Forester, 2012); we aim to contribute to better understanding how to improve sustainable development practice through reviewing the processes and outcomes of the Millennium Development Goals (MDGs) and the development of the SDGs.

The approach to this review emerged from in-person observations from attendance at three key sessions of the negotiations in 2015, which covered indicators, implementation and financing for development, and the drafting of the final documents. In conducting this review, a significant body of academic, “grey” and policy literature was compiled over a number of months as the academic, governmental and non-governmental responses to the negotiations developed. These key resources were drawn from, inter alia, the International Institute for Sustainable Development’s (IISD) Sustainable Development Announcement portal and the Sustainable Development Solutions Network (SDSN) mailing list and archive (both key resources for practitioners and observers to share development updates), the UN’s sustainable development portal, reporting from major UN process observers (such as the IISD), and over 2,000 delegate statements from the intergovernmental negotiations posted to the UN’s Post-2015 process information portal.

TABLE 1 The Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)

Millennium Development Goals	Sustainable Development Goals
1. Eradicate Extreme Hunger and Poverty	1. End poverty in all its forms everywhere
2. Achieve Universal Primary Education	2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Promote Gender Equality and Empower Women	3. Ensure healthy lives and promote well-being for all at all ages
4. Reduce Child Mortality	4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Improve Maternal Health	5. Achieve gender equality and empower all women and girls
6. Combat HIV/AIDS, Malaria and other diseases	6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure Environmental Sustainability	7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Develop a Global Partnership for Development	8. Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all
	9. Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation
	10. Reduce inequality within and among countries
	11. Make cities and human settlements inclusive, safe, resilient and sustainable
	12. Ensure sustainable consumption and production patterns
	13. Take urgent action to combat climate change and its impacts
	14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
	15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss
	16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
	17. Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

3 | LESSONS LEARNT FROM THE MILLENNIUM DEVELOPMENT GOALS

Much can be learnt from the MDGs as the precursor of the SDGs. Evaluating positive outcomes from the MDGs reveals the critical importance of “Implementation”, “Monitoring”, and “Finance” in furthering international development goals.

The MDGs were a consequence of the Millennium Declaration, adopted in 2000 (UN, 2000). Strong political consensus emerged around the normative Declaration (Fukuda-Parr, Greenstein, & Stewart, 2013), and the MDGs were articulated in the Secretary General’s “Road Map” a year later, albeit as an annex to the actual document presented at the General Assembly (UN, 2001). The intention was to make reporting against the Declaration possible through targets, indicators and international time-series data (Fukuda-Parr et al., 2013). The MDGs were based on the International Development Goals (IDGs) formulated by the Organisation for Economic Co-operation and Development’s (OECD) Development Assistance Committee (DAC) (Hulme, 2007). A task force from the UN, the DAC and the International Financial Institutions (IFIs), in a predominantly “technical” process, worked to align the IDGs and the broadly defined aims of the Millennium Declaration into the MDGs.

The MDGs were altered several times; after 2007, they featured eight goals, 22 targets and 60 indicators. Goals 1–7 focused on the global South, covering poverty, education, gender equality, health and “environmental sustainability” (UN, 2008). Goal 8 applied globally to “develop a global partnership for development” (UN, 2001), but had no quantifiable targets (Hulme, 2007) (see Table 1).

Although the MDGs were soft law (Miller-Dawkins, 2014), an exploratory study noted evidence in five countries of government agencies established to oversee progress towards the MDGs, national-level engagement with MDG discourses, and participation in MDG dialogues at the international level (Sarwar, 2015). Overall, national-level MDG implementation was slow and complex; some lower income countries appeared to engage with the goals to meet aid package conditions (Sarwar, 2015) and the World Bank exerted significant influence over national development strategies (Hulme, 2010).

By the end of 2015, there was progress in many MDG areas (UN, 2015b), although not entirely attributable to the MDGs. The MDGs had some success in reducing income poverty, “but they were less successful in ameliorating non-income deprivations, such as access to quality education or to basic health services” (World Bank and International Monetary Fund, 2016, p. 1). A few “overachieving” nations drove global successes (Camfield, Crabtree, & Roelen, 2013); the majority of global progress occurred in Brazil, India, China and East Asia, arguably based on economic growth or policies not related to the MDGs, and with several issues relating to the equality of growth (Hackenesch & Janus, 2013; Vandemoortele et al., 2013). Progress was focused on narrowly defined indicators, limited in the least developed countries and curtailed in conflict-affected countries. In seven of 16 thematic areas, at least one global region has shown “poor progress or deterioration” and targets have not been met for all regions for any theme (UN, 2015c).

Narrowly defined measurement approaches had unintended consequences. MDG7’s target to halve the proportion of the global population lacking access to clean water led to data collection for an indicator to evaluate the percentage of the population with “improved/unimproved” water sources (World Health Organization, UNICEF, 2014). “Improved water sources” measures whether a piped water source exists, giving no indication of water quality. Although MDG7 refers to water quality, the indicator measured represents a compromise between the ideal (“quality”) and the practical (“improved/unimproved”) (Georgeson, 2015).

Unrealistic expectations and impossible-to-reach MDG targets may have had political costs. For example, the narrative that Africa is “lagging behind” in MDG progress is pervasive (Easterly, 2009). However, measuring rates of change, rather than progress versus targets, suggests that faster progress in sub-Saharan Africa and the “least developed countries” (LDCs) was observed after adoption of the MDGs (Fukuda-Parr et al., 2013). The MDGs may have been more useful as a “tool”, not practical targets (Clemens, Kenny, & Moss, 2007); the MDGs’ legacy is more complex than ranking countries or entire regions as on or off target. Moreover, the focus on national-level targets obscures how local knowledges and practices ground global development in everyday realities, as highlighted by post-development approaches (Mercer, Mohan, & Power, 2003).

The MDGs directed significant funding towards important issues and influenced changed global discourses that represent poverty as more than a dollar value (Chasek, Wagner, Leone, Lebada, & Risse, 2016). Even when goals were not met, there was faster progress on improving quality of life in developing countries since the Millennium Declaration, including access to water, education and healthcare, and increases in per capita income (Fejerskov et al., 2016); although the exact contribution of the MDGs remains elusive (Kenny & Sumner, 2011). Any assessment relies on data availability; in 2014 only 79 countries had at least two data points for 16–22 selected MDG indicators (UN, 2015b). Data availability has improved since 2000; the MDGs suggest that monitoring, good data and the right indicators are crucial for the SDGs. By setting targets, many challenges are now monitored, providing evidence of the scale of the difficulties of collecting data and improving livelihoods, and the inequalities in uneven progress. However, the related emergence of the “aid effectiveness” paradigm over the same period contributed to a re-centring of economic growth and improving productivity in development thought (Mawdsley, Savage, & Kim, 2014). Difficulties in assessing the MDGs arise from the discord between the goals of “global ambition” applied as fixed national targets. Therefore, the SDGs require better articulations of what the goals mean at a global versus national level.

To summarise, the MDGs may have lacked political legitimacy as the outcome was not negotiated (Bexell, 2015). Moreover, designing targets and indicators “involves simplification, reification and abstraction, which have far-reaching implications for redefining priorities” (Fukuda-Parr, Yamin, & Greenstein, 2014, p. 105) and significantly affects global investment flows and development outcomes. Indicator design influenced the definitions of “development” and “poverty” in the language of development (Fukuda-Parr, 2014). In several ways, therefore, the Millennium Declaration represented a great step forwards in international agreement for development (Hulme, 2007), but the MDGs took a step back by relying on “technical” exercise seen by some as a “donor country view” of development (Darrow, 2014) and a return to behind-closed-doors decision-making (Bexell, 2015).

4 | FORMATION OF THE SUSTAINABLE DEVELOPMENT GOALS

Before the UN Conference on Sustainable Development (UNCSD, or Rio+20), Ban Ki-Moon’s high-level sustainability panel recommended developing successors to the MDGs (Sachs, 2012). Rio+20’s outcome document outlined the basis for negotiating post-2015 goals (UN, 2012) through the Open Working Group (OWG) on SDGs. The OWG conducted 13 sessions over 17 months, taking inputs from national delegations and representatives of “civil society” and “major groups”. Member states shared the OWG’s 30 places on a regional basis; in total, 70 member states’ delegations took part.

Stakeholder groups contributed thematic joint position papers for consideration. Importantly, the OWG's novel approach was seen to "democratise" the process, contributing to shared understanding and ownership (Chasek et al., 2016). In July 2014, the OWG agreed an incomplete list of 169 targets and 17 goals (Table 1). A number of targets featured "placeholders" when final agreement was not achieved, such as 4.c, "By 2030, increase by [x] per cent the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States" (UN, 2014b, p. 10) (later reformulated). At the 68th General Assembly, the UN adopted the OWG report as the basis of the SDGs (UN, 2014a). Seven months of negotiations followed to resolve disagreements, and reach consensus on the preamble, Means of Implementation (MoI), indicators, and Follow-up and Review process. The outcome document "Transforming our world: the 2030 Agenda for Sustainable Development" was adopted at the 69th General Assembly in September 2015 (UN, 2015f). Responsibility for indicator development was assigned to the UN Statistics Commission, which formed an Inter-Agency Expert Group (IAEG-SDGs).

2015 saw two other important summits for the SDGs. In July, the third International Conference on Financing for Development (FfD3) was held in Addis Ababa, resulting in the Addis Ababa Action Agreement (AAAA) (UN, 2015d). The 21st Council of the Parties of the UN Framework Convention on Climate Change (UNFCCC) (held in December in Paris) led to a global agreement on reducing emissions (UN, 2015a). The SDG and FfD3 processes were intertwined, sharing one session of negotiations in 2015. We observed that some delegations called for the FfD3 outcome to represent the MoI, largely reducing implementation to the financial aspects. Without the Paris Agreement, the SDGs would have offered little on climate change; SDG13 was deferential to the UNFCCC through respect for process. Moreover, climate change is not integrated as a threat multiplier across the goals.

The unprecedented process of in-depth global consultation with civil society stakeholders and all member states gives the SDGs more legitimacy (Chasek et al., 2016). The SDGs move away from existing development approaches through isolated intergovernmental agreements (Risse, 2016). The politically negotiated outcome and consultative process may lead to greater "buy-in" from states and faster SDG implementation at regional, national and sub-national levels (Sarwar, 2015). If development has evolved three (partially distinct) schools of thought, "national development", "international development" (concerned with affecting change abroad in "poorer" countries), and "global development" (concerned with creating a common future) (Currie-Alder, 2016), then the SDGs' process partially moves from the concerns of international development to global development. The SDGs' consultation process could have countered the tendency towards centralisation of power in modern public institutions, which reduces participation and democratic control (Midtgarden, 2012).

The SDGs' central role in the post-2015 development agenda (Figure 1) presents inherent tensions and challenges; the politically negotiated outcome could be interpreted as either a hard-fought balance or a less-than-coherent compromise. The breadth of the SDGs countered the MDGs' narrow focus on 22 targets, but presents difficulties for action by setting targets across many scales and domains. However, its assurances that economic-growth-as-usual is beneficial to development and "domestic resources are first and foremost generated by economic growth" (UN, 2015f, p. 29) threaten the equilibrium of environmental, social and economic concerns. This also demonstrates a "growing re-validation and focus on economic growth as the fundamental driver of 'development'" (Mawdsley et al., 2014, p. 30). The SDGs' "universality" appears novel (Long, 2015), yet the SDGs cannot apply to all countries in the same way. The SDGs may be less comparable between countries and create a new role for "donor" states as implementers, partners and funders, blurring the governance lines of national, international and global development.

Ensuring that SDG actions start quickly is important for delivering more positive achievements by 2030 (Gurría, 2016; Lucci & Lally, 2016). We use "Implementation", "Monitoring", and "Finance" as a framework to discuss appropriate short- and medium-term actions that could positively influence the trajectory of the SDGs. We believe that this approach aligns with the view that development studies is shifting towards identifying the overlapping roles of scholars and practitioners (Silvey & Rankin, 2010), which requires developing the foundations for linking development theory and geography with development practitioners and contemporary "grey" development literature.

5 | IMPLEMENTATION

The 2030 agenda has several elements: a "revitalised Global Partnership for Development" (UN, 2015f, p. 10), the global Means of Implementation (MoI), and national and regional translation of the SDGs. To be successful these processes must generate greater regional and global collaboration and make the global goals relevant nationally and sub-nationally, while managing the interrelations in the SDGs agenda (Waage & Yap, 2015).

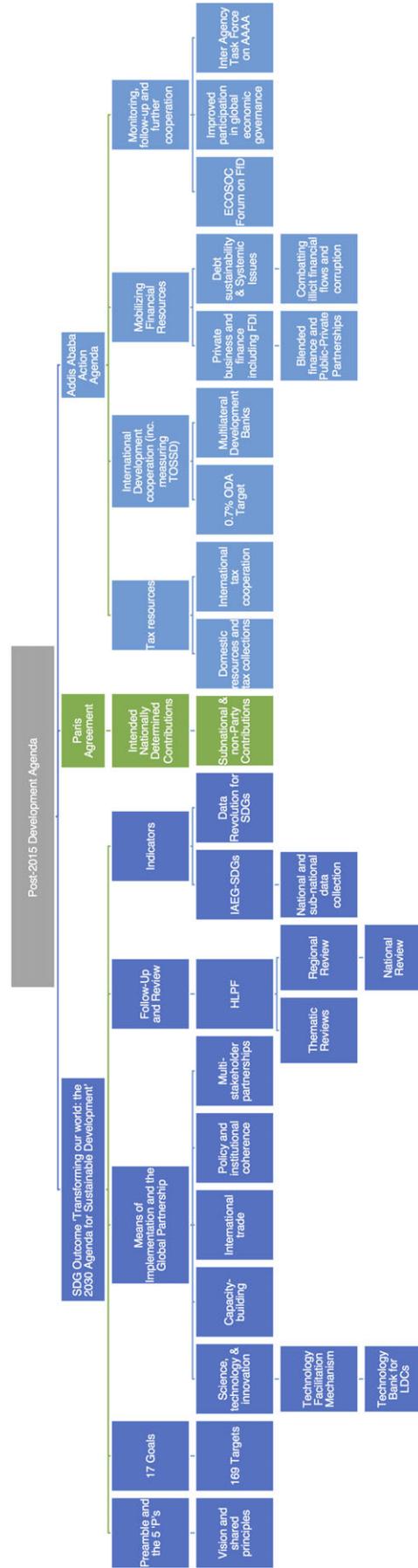


FIGURE 1 The Post-2015 Development Agenda, comprising “Transforming our World” (including the SDGs), the Addis Ababa Action Agenda and the Paris Agreement of the UN Framework Convention of Climate Change

Global “implementation” is defined broadly. The global partnership must facilitate “an intensive global engagement” to help implement the targets by bringing together governments, businesses, civil society, the UN and other actors (UN, 2015f, p. 10). Other global MoI include technology transfer mechanisms, financial mechanisms, tightening tax regimes, and harder-to-interpret resolutions to grow international trade “in a manner consistent with the [SDGs]” (UN, 2015d, p. 24).

The outcome documents of the SDGs and the third International Conference on Financing for Development (FfD3) lack binding commitments and the global MoI may not be powerful tools. This reflects trends of declining multilateralism and the rise of less formal, networked forms of governance based on softer forms of influence (Abbott & Bernstein, 2015). However, the growing understanding of importance of place-based development must be considered (Curry & Koczberski, 2015). Internationally, the High Level Political Forum (HLPF) is the annual forum for the SDGs. The summary of the first HLPF shows some useful recommendations for future meetings but focused on emphasising “Leaving No One Behind” and helping the most vulnerable first (UN, 2016a). The HLPF heard 13 voluntary national reviews of SDG implementation (UN, 2016c), although 22 had been anticipated.

5.1 | (Re)making the global partnership

The Global Partnership aims to redefine development cooperation for the SDGs’ mutually agreed agenda. However, with the MDGs it had little impact. Defining what this *actually is* could make the global MoI useful. SDG17 aims to deliver the global partnership that was promised under the MDGs. Developing country delegations frequently stressed the importance of SDG17 and implementation targets of each SDG (prefaced with letters) (Delegation of South Africa, 2015b). SDG17 has three elements: policy and institutional coherence, monitoring and accountability, and multi-stakeholder partnerships (Global Reporting Initiative, 2016a).

The international community should start quickly with SDG implementation (Stuart et al., 2016); some positioned 2016 as the “Year of Implementation” (Gurría, 2016; IISD, 2016d). Some countries took a significant time to change national policies under the MDGs (Sarwar, 2015). Continuing the momentum from the consensus of 2015 could be key for removing the uncertainty remaining in the SDGs’ outcome document.

5.2 | The UN’s structure

It has been identified that the “universal” development agenda requires new governance structures for the UN (Baumann & Kloke-Lesch, 2016) and new, ambitious ways of working (Kalapurakal, 2016). Some organisations have outlined their SDG roles, such as the Development Cooperation Forum (IISD, 2016b), the UN’s regional organisations like the UN Economic and Social Commission for Asia and the Pacific (UNESCAP, 2015), the UN Development Programme (UNDP) (Rogers, 2016) and the UN Development System (UNDS) (IISD, 2016c). Although a thorough institutional analysis is beyond the scope of this review, we believe that the broad “system-wide” institutions in the UN system (like the HLPF, the UNDP, the UNDS and others) need greater clarity in their roles, so that their efforts do not overlap.

Moreover, coordination between UN entities that tackle specific development issues would appear to be important, and we would argue that different organisations should not hold oversight for different goals based on substantive content (the United Nations Environment Programme [UNEP] should not solely oversee environment-related goals, for example). Rapid assessments of the interconnections between different SDGs and greater coherence across UN organisations would be important for more effective arrangements and coordinated action. However, the scale of such coordination is significant and there are many potential pitfalls; the organisation of the 2nd UN Environment Assembly in Nairobi (UN, 2016e) (positioned as the “global parliament for the environment”) and the World Health Organisation’s (WHO) 69th World Health Assembly in Geneva (WHO, 2016) for the same week, but on different continents, suggests that there is some way to go.

In navigating the interconnectivity of the universal SDG agenda, the UN regional commissions and other regional bodies have a significant role. The regional commissions provide a forum for “developing integrated approaches among countries that share similar economic, social, environmental and cultural realities” (UN, 2015g, p. 2). Each region has different contexts and models for regional integration, alongside rising South–South cooperation; future research should examine different models for regional cooperation for the SDGs in different regions.

5.3 | Navigating complexity

The SDGs’ complex agenda requires an unprecedented level of collaboration between the UN system and other development actors. The number and breadth of multi-stakeholder partnerships reported to the UN’s Partnership Exchange for the

SDGs demonstrates this (UN, 2016d). The UN's role through to 2030 is not fully defined, but it has at least four roles and two normative responsibilities (Chandran, 2016). The end of Ban Ki-Moon's term as Secretary General and the lack of focus from the world's major economies on UN reform and multilateralism makes rapid reform of the UN system more difficult (ibid).

Strictly speaking, the UN will not "implement" many things; instead supporting national translation is a high priority. National planning for the SDGs is a huge undertaking, which took years under the MDGs (Sarwar, 2015). Even the Netherlands (small population, high income, ranked "very high" on the Human Development Index, highly engaged with SDG process) will have to develop policies and further its own efforts. The Netherlands found that three out of 41 environmentally focused SDG targets were not covered by current policy and existing policy targets are not being met (Lucas, Ludwig, Kok, & Kruitwagen, 2016).

Stakeholder groups, companies and national governments should align their actions to the SDGs in a fundamental shift in attitudes towards development. The Netherlands, Sweden and Japan have already begun to assess how their current policies align (Lucas et al., 2016; Post-2015, 2016; Weitz, Persson, Nilsson, & Tenngren, 2015). Beyond national governments, actors as diverse as the Independent Research Forum (2016), the Global Reporting Initiative, the UN Global Compact and the World Business Council on Sustainable Development (2015) through the "SDG Compass" initiative for business-level action, and the international agricultural research community (Consortium of International Agricultural Research Centers, 2016) have demonstrated how broad engagement and collaboration could maintain momentum on the SDGs.

For multi-stakeholder partnerships and development with a large number of varied actors, mechanisms to hold non-governmental actors (particularly in the private sector) more accountable are required (Torres-Rahman, Baxter, Rivera, & Nelson, 2015). Some initiatives to track partnerships or non-governmental actors exist, such as the Global Reporting Initiative's Target 12.6 tracker, which monitors sustainability reporting (Global Reporting Initiative, 2016b). Initiatives like this and the UN "Partner Exchange" (a portal to track multi-stakeholder partnerships) (UN, 2016d) are a starting point but may not deliver sufficient critical engagement with the content and outcomes of actions. More broadly, models of responsibility for the goals that go beyond what is "count-able" are required to address systemic issues and those that lose out from development processes (Fukuda-Parr & McNeill, 2015). The governmental and multilateral processes for Follow-up and Review will be discussed under "Monitoring", but all actors in the "Global Partnership", including the private sector (UN Conference on Trade and Development, 2016), must be included in review processes.

Given the complexity of applying the SDG agenda universally, peer learning between countries will be an important part of the Follow-up and Review process (discussed further under Monitoring). Follow-up and Review should go beyond "review" to discuss improving implementation by sharing what works and what does not, and why. Follow-up and Review could deliver iterative improvements in implementation through annual overviews of SDG implementation and peer support for mutual learning (Paul, 2016). Some countries argued for the third International Conference on Financing for Development (FfD3) outcome document to represent the SDG implementation plan (Delegation of Switzerland, 2015); this was rejected for blurring the roles of the SDGs and FfD. However, the SDGs will benefit from successful implementation of the Addis Ababa Action Agreement (AAAA) by the Inter-agency Task Force on Financing for Development (IATF-FfD).

5.4 | Technology transfer

The current MoI may not deliver technology transfer in a meaningful way. During intergovernmental negotiations, we observed that member states presented numerous opinions about defining technology transfer and designing an effective mechanism. Technology transfer was agreed to be important for global SDG progress, yet current suggestions seem limited. Significant challenges exist for technology transfer in developing countries, including those related to intellectual property and patents (Costello et al., 2009; Watts et al., 2015). Moreover, technology-focused development can exacerbate existing patterns of social and spatial inequality (Bunnell, 2002); any technology transfer approaches must be sensitive to local and community dynamics.

South Africa stated on behalf of the Group of 77 and China that "a global technology facilitation mechanism would prove one of the most transformative means to implement sustainable development" (Delegation of South Africa, 2015a). However, the SDGs' proposal appears underwhelming in its scope, consisting of three "tools". The "Technology Facilitation Mechanism" (TFM), launched by UNEP alongside the SDGs (UNEP, 2015), consists of an inter-agency task team on science, technology and innovation, an online platform to map information on existing initiatives, and a multi-stakeholder forum on science, technology and innovation.

Further research is required to understand how to maximise technology transfer's potential to facilitate greater global cooperation by identifying what is required to supplement the current proposals. Diaz Anadon et al. (2014) identified eight functions that can be applied internationally to improving flows of technologies; the TFM appears to only partially address several "facilitating" functions and does little to deliver other functions such as managing transnational externalities, reducing social distance between transnational actors and local populations, and reducing risk. Further research to support innovation and technology systems scholarship to focus on the SDGs is needed (Harley et al., 2014). SDG target 17.8 calls for a "technology bank" for LDCs by 2017 to facilitate technology transfer and domestic science capacity building; proposals include an "intellectual property bank", which represents a novel approach (UN, 2015e). A UN study assessed that this was feasible and desirable (UN, 2016b). If the LDC technology bank is successfully established on time, it can be a template for institutions to assist other country groups, such as the small island developing states and land-locked developing countries, and demonstrate the relevance of the SDG implementation targets.

5.5 | Beyond technology and money

Global SDG implementation needs MoI that go beyond technology transfer and finance; many factors contribute to sustainable development. Some analyses focus on the interactions between infrastructure-like or institutional goals, and those relating to well-being or the environment (Waage et al., 2015). These "infrastructure" goals for functioning, equitable societies (such as SDG11 on cities and human settlements) cut across traditional governance structures.

Development actors must broaden the implementation debate; technology is not a "magic bullet". International technology diffusion requires "indigenous" technology development and the development of institutional and governance structures to support local innovation (Fu, Pietrobelli, & Soete, 2010). However, money, technology and industrial development can only partially assist with SDG targets relating to good governance, participation, education, health, and respect for human rights. At national or sub-national levels, the societal "infrastructure" (Waage et al., 2015) for implementing the SDGs should be conceptualised as place based and contextually situated (Nilsson, Griggs, & Visbeck, 2016). Many geographers have conducted insightful research into the local effects of development approaches (Bebbington, 2004; Büscher, 2014; Thieme, Bedi, & Vira, 2015). Such insights can aid in linking global goals to local outcomes to move beyond the grand narratives of technology transfer and international financial flows.

5.6 | Policy coherence

Policy coherence is vital for sustainable development under the SDGs (European Commission, 2015). Each country should consider both national-level risks and how national-level SDG actions could affect other countries (Suter & Fishman, 2016) to ensure policy coherence in national development plans. The Coopman, Osborn, Ullah, Auckland, and Long (2016) study of interlinkages in the EU from SDG12 (sustainable consumption and production) demonstrates the research required for integrated and coherent action; mapping policy coherence for all SDGs for all levels of governance will be even more difficult.

Such risks arise from an inherent tension in practically implementing the SDG agenda. Studies have explored the interactions between goals (Coopman et al., 2016; Georgeson & Maslin, 2014; Waage & Yap, 2015), and working to achieve one goal may positively or negatively affect others. Attempting to deliver an energy-intensive, Western model of water treatment to achieve target 6.1 (universal access to safe and affordable drinking water) will affect energy and climate-change-related goals. Furthermore, certain targets threaten the entire SDG agenda if pursued to the detriment of other goals: such as target 8.1 to sustain per capita economic growth at 7% per annum in the LDCs, or target 9.2 to "significantly raise" industry's share of GDP and double it in the LDCs. Further research is required into such interactions, and how the "universal, balanced and indivisible" SDGs are interpreted by national governments.

There needs to be progress and shared learning between states (facilitated by the UN) on national translation of the SDGs. There are lessons from the (defunct) Commission for Sustainable Development (CSD) and the Rio+20 preparatory process, and both documented how sustainable development was translated into national contexts (Risse, 2016). Different frameworks exist for incorporating the SDGs into national policy (while preserving "universality"), including existing sustainable development related policy frameworks and related concepts like the green economy (Davidse, 2015; Delegation of Thailand, 2015; Ministerio de Relaciones Exteriores de Colombia, 2015). However, retaining the SDGs' universality will allow countries to interact in regional forums for shared learning and to contribute to global reporting. Frameworks should be engaging and relevant within countries (Kalapurakal, 2016) and preserve the aims of place-based development (Curry &

Koczberski, 2015). Policy coherence within and beyond borders is a significant challenge that requires more research, as it could slow down rapid progress on implementing the SDGs.

Finally, a thorough assessment of how inherent tensions between the SDGs can be overcome is required, notwithstanding concerns from member states about “repackaging” goals due to their “delicate political balance” (Delegation of South Africa, 2015b). We observed that these concerns were stated frequently by many member states. Some approaches are “Health in all Goals” (Becerra-Posada, 2015), reintegrating health into the urban (Herrick, 2014), using natural capital accounting to assess trade-offs and policy impacts (Bann, 2016), viewing a group of the goals as the “infrastructure” for goals relating to the environment and personal well-being (Waage & Yap, 2015), and climate change’s position as a threat multiplier.

6 | MONITORING

Two areas of the SDG outcome document relate to monitoring: the “Follow-up and Review” process and the SDG indicators. Follow-up and Review is the national, regional and global process for countries to report SDG progress and discuss successful and unsuccessful approaches. The indicator list for all 169 targets was designed by the UN Statistical Commission through the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) (UN Statistical Commission, 2016a). Although the target- and goal-setting process was negotiated, the indicator design more closely resembled the MDGs. However, significant consultation took place with national statistics offices and other stakeholders that returned thousands of comments on proposed indicators.

6.1 | Follow-up and review: Restrictions of the high level political forum

During the latter stages of the intergovernmental negotiations, it was clear in our observations that the “Follow-up and Review” proposals were chaotic. Significant work was required after the official launch. At the global level, the replacement of the Commission for Sustainable Development (CSD) (worked for one month a year) with the High Level Political Forum (HLPF) (meets for eight days a year, three of which are ministerial statements) means that few days are devoted to global-level SDG monitoring. The HLPF must avoid becoming “yet another talk-shop without substantive outputs and visibility” (Espey, Wałęcik, & Kühner, 2015, p. 30). It needs coherence, reflecting the contemporary understanding of Follow-up and Review; information about other country actions and their positives can change behaviour and policy (Halle & Wolfe, 2016). The HLPF’s role in coordinating a networked review process needs greater elaboration. The HLPF needs to be dynamic, highly visible and attract interest beyond those in the UN conference room (Espey et al., 2015). Given a much-reduced appetite for multilateralism, a reliance on “orchestration” and soft modes of influence may be by design (Abbott & Bernstein, 2015). To deliver effective global reporting given its limited time, the HLPF must find a strategy to “devolve” much of the Follow-up and Review process to the regions, which should involve an oversight role to ensure greater coordination across regional organisations.

6.2 | Follow-up and review: Regional review

Regional organisations will have a significant role in Follow-up and Review, given countries’ desire for lesson learning between countries (Delegation of Germany, 2015; Delegation of Norway, 2015) or peer review (Delegation of Rwanda, 2015; Delegation of Tanzania, 2015), rather than global ranking. Regions have become central to understanding world politics (Acharya & Johnson, 2007) and frequently share similar environmental, public health and security challenges, and effective regional structures can facilitate cooperation and regularise relations (Pascual & Benner, 2012). Progress has been made; in Latin America and the Caribbean a regional Forum on Sustainable Development was established, focusing on development based on progressive structural change for equality and sustainability (UN Economic Commission for Latin America and the Caribbean, 2016). However, obstacles remain: there is no definition of a “region” for the UN, member states choose their regional affiliation, and the regions’ broader role needs further definition.

The MDGs’ design did not reflect the regional dimensions of its agenda (Bhattacharya, 2016), but greater attention was paid to regional review in SDG discussions. The evolution of the global governance complex, driven by structural change that has spread economic globalisation, creates opportunities for regional organisations as actors within the UN system, although regional organisations are not all the same and are not fully fledged foreign policy actors (Wunderlich, 2012). Regions may play a role in defining new forms of sovereignty in an increasingly globally connected world

(Pascual & Benner, 2012), but defining regionhood is problematic. Regionhood is constructed through discourse (Van Langenhove, 2013) and path dependencies from local socioeconomic, cultural and political forces (Wunderlich, 2012); no two regions' participation in the UN system for the SDGs will be the same. Differing approaches to regional integration lead to cohesion issues for the role that regional organisations can play in global governance (Wunderlich, 2012).

The UN positioned its regional organisations as key to SDG monitoring as a “dynamic and effective nexus” (UN, 2015g, p. 2) between national and global levels. This presents an opportunity for greater regional cooperation and more reflective responses to the SDG agenda through a greater capacity for facilitating “lesson learning”. However, only two paragraphs in the outcome document relate to regional review. Regional Follow-up and Review should deliver an understanding of each country's approach to the SDGs. We suggest that output-based reporting could deliver faster reporting on the SDGs' outcomes and impacts. Measuring national-level outputs could measure how the SDGs change approaches and whether countries are developing the “enabling conditions” for positive SDG action. Tracking sub-national actions and commitments demonstrated the scale of climate change responses (Hsu, Cheng, Weinfurter, Xu, & Yick, 2016). National and sub-national SDG reporting could both deliver transparency and accountability measures for local governments and the private sector, and better connect the global goals to everyday livelihoods.

6.3 | Indicators: How many indicators?

The UN Statistics Commission's proposed list from March 2016 included 229 indicators; 149 of these were coded green (UN Statistical Commission, 2016a), indicating general agreement on measurement. However, 80 were coded grey, indicating that “more in-depth discussion was still needed” (UN Statistical Commission, 2016a, p. 5); they are unlikely to be currently measurable. The ratio of goals:targets:indicators is radically different for the SDGs (17:169:229, or approximately 1:10:14) compared with the MDGs (8:22:60, or approximately 1:3:8); the SDGs have more targets per goal and fewer indicators per target. The indicator development must balance two seemingly intractable problems; the current 229-indicator proposal does not capture the full breadth of the SDGs, but it is unmeasurable by any country with currently available data (Loewe & Rippin, 2015). Moreover, national, regional and global reporting are supported by country-level data (Jütting, 2016) and therefore all hinge on the viability of national-level indicators.

Reducing the number of indicators was proposed several times. The Sustainable Development Solutions Network (SDSN) proposed “cross-cutting” indicators to reach a total lower than the number of targets. Their final report suggested 100 global monitoring indicators with complementary national indicators (SDSN, 2015b), which is, perhaps not incidentally, the same number suggested by delegates during intergovernmental negotiations (Delegation of United Kingdom, 2015b).

The 169 targets contain approximately 371 discrete outcomes (Delegation of the United States, 2015). It can be argued that 169 targets and 371 outcomes are difficult to measure with a reduced indicator list and that 100 indicators are still too many for effective public communication. The SDSN also proposed an unofficial SDG index and dashboard. An unofficial approach based on existing data, unrestricted by the IAEG-SDGs' process, could provide an initial assessment of the current situation, and where development efforts must deliver the fastest rates of change (Sachs, Schmidt-Traub, Kroll, Durand-Delacré, & Teksoz, 2016). A “stop gap” measure allows the national-level planning process for each country to begin more rapidly and permits a more nuanced understanding of how each country will implement the SDGs, without waiting for new official statistics to be collected. However, this risks replicating MDG monitoring from currently available indicators, leading to a similar prioritisation of issues.

We also suggest there is the potential for a smaller global “snapshot” set of indicators accompanied by a comprehensive set of recommended indicators (multiple per target) for national-level monitoring and management. A “two track solution” (Davis, Matthews, Szabo, & Fogstad, 2015) considers the difference between indicators at the impact and process levels and could broadly measure global progress while freeing up UN Statistical Commission resources for capacity building for national statistics agencies and more detailed national-level monitoring. Davis et al. (2015) suggest 20–40 “political” indicators and 300 or more “technical” indicators; the 371 discrete outcomes identified by the US during negotiations (Delegation of the United States, 2015) could serve as a basis for formulating the technical indicators. The SDSN calls for indicators to promote accountability and to be a management tool (SDSN, 2015b), but these two roles do not require the same indicators.

6.4 | Indicators: What gets measured, gets managed

Given the influence of indicator design on MDG implementation, indicators should promote situationally appropriate actions and measure them. If “what gets measured, gets managed”, measuring the wrong thing matters (Barnett, 2015).

Numerous studies indicate the intended and unintended consequences and power of performance management in political and policy spaces (Bevan & Hood, 2006; Bjørnholt & Larsen, 2014; Fukuda-Parr, 2014; Hood, 2012; Smith, 1995). The IAEG-SDGs focused on measuring against the targets with national statistics. The Statistical Commission stated that “the compilation of global indicators will be based to the greatest extent possible on comparable and standardized national official statistics” (UN Statistical Commission, 2016b, p. 10). The focus on technical feasibility risks unintended consequences from the specificity of indicators; one-size-fits-all measurements will lead to narrow approaches on the ground. During one of the civil society dialogues between stakeholders and national delegations, observers of the intergovernmental negotiations called for measuring what matters, not doing what is measurable (Blanken, 2015).

The criticism remains that relying on a limited number of indicators will fundamentally change what happens under the SDGs. This approach treats the SDG targets as “a management tool” and “a report card” (SDSN, 2015b, p. 2); while indicators are important for accountability and assessing the SDGs’ outcomes, managing development activities through a narrow range of indicators risks leaving areas of the SDGs untouched. Balance must be achieved between communicating what the SDGs have done in a succinct way while monitoring the entire range of targets.

6.5 | Indicators: Inflexible indicators

The current indicators contain many one-size-fits-all measurements, although in some cases the Statistical Commission was willing to adopt other indicators for which methodological and data collection improvements are required. Others only measure part of each target (Table 2).

If not measured, the other difficult aspects of such targets may not be tackled. The MDGs had positive impacts where they measured what was happening, often for the first time. However, what was measured represented only part of the original ambition and the measured approach was applied globally. In many cases, the SDGs may repeat this process.

To confront this challenge, new sources of data are required. Although the Global Partnership for Sustainable Development Data was formed to deliver the much-vaunted “Data Revolution” (UN, 2014c), there must be evidence of its effectiveness. As noted in calls for “Open Data” (World Bank, 2015), new sources of data and greater volumes of data must be accessible, useable, and deliver greater accountability. The SDGs’ data revolution could deliver a “beyond National Statistics” agenda, recognising the potential for SDG measurement from alternative approaches such as citizen-generated data, private sector data, big data and academic contributions (Georgeson, Maslin, & Poessinouw, 2017). The tensions in existing data collection arrangements between national bodies and UN agencies (Jütting, 2016) show the scale of this challenge. National accounts and survey-based methods are costly and time consuming; the SDGs also need more agile methods. In

TABLE 2 Examples of mismatches between SDG targets and their indicators

Target	Indicator	Challenge
10.2: “By 2030, empower and promote the <i>social, economic</i> and <i>political</i> inclusion of all, irrespective of <i>age, sex, disability, race, ethnicity, origin, religion</i> or <i>economic or other status</i> ” (emphasis added) (UN, 2015f, p. 18)	“Proportion of people living below 50% of median income, disaggregated by age group, sex and persons with disabilities” (UN Statistical Commission, 2016a, p. 26)	Target 10.2 includes three types of inclusion to be achieved across nine different categories of potential exclusion. This, therefore, targets 27 different kinds of inclusion. However, the indicator only measures economic inclusion for three kinds of exclusion (by age, gender or disability status)
4.7: “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development” (UN, 2015f, p. 17)	“Percentage of 15-year-old students enrolled in secondary school demonstrating at least a fixed level of knowledge across a selection of topics in environmental science and geoscience. The exact choice/range of topics will depend on the survey or assessment in which the indicator is collected” (UN Statistical Commission, 2016a, p. 20)	The indicator only discusses a fraction of the education for the sustainable development agenda that the target promotes

its consultation exercise, the UK Office for National Statistics (ONS) recognised the role of non-official data producers for the SDGs (UK Stakeholders for Sustainable Development, 2016). The ONS' role must broaden from collecting and publishing statistics to also interpreting and assessing other data sources. As the UN states that SDG indicators should be derived from national statistics (UN, 2015f), national statistics agencies need to develop standards to incorporate “non-official/alternative” data into official reporting.

6.6 | Indicators: Vague targets

Determining impact under the SDGs will be difficult where “vague” targets must be measured (Loewe & Rippin, 2015). Many indicators attempt to measure progress towards targets that include “unmeasurable” words. For comparison, MDG8.B and 8.C were hard-to-measure targets, seeking merely to “address” various issues; MDG8 saw little progress towards the “global partnership for development”. The SDGs, through an intergovernmental process with political compromises, feature many vaguely worded targets (perhaps deliberately to foster non-binding agreement). Target 12.6 seeks to “Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle”; it is hard to assess a target to “encourage”.

Other targets require a baseline to measure improvement. Even with a baseline, some targets with no actual target make it difficult to define a “successful” outcome, such as target 7.2, “By 2030, increase substantially the share of renewable energy in the global energy mix”. Even as global goals of ambition, not fixed planning targets, global reporting cannot easily determine what progress would be “substantial”. Our initial assessment suggests that at least 98 words or phrases in the SDG targets could present one of these measurement difficulties.

6.7 | Indicators: Disaggregation

The greatest measurement challenge may be to deliver full data disaggregation outlined by the outcome document. The intergovernmental process called for development to “Leave No One Behind”; disaggregated data could overcome the unevenness of MDG progress. The SDGs' outcome document calls for disaggregation by “income, sex, age, race, ethnicity, migration status, disability and geographic location and other characters relevant in national contexts” (UN, 2015f, p. 33) (see also target 10.2 in Table 2). Disaggregation could link local everyday realities (Rigg, 2007) and uneven and unequal patterns of development (Bebbington, 2003; Dunford & Liu, 2016) to global development discussions. While this approach could deliver inclusive development practices, overcome one-dimensional attempts to measure poverty, and highlight inequalities of power (Slater, 1977), the size of the measurement burden is significant.

A human-rights-based approach to data and monitoring could help overcome shortcomings; designing disaggregation is not value neutral and presents risks to the rights of data subjects (Office of the High Commissioner for Human Rights, 2016). The Danish Institute for Human Rights (2015) mapped how each target relates to human rights standards, where indicators do not reflect human rights as expressed in the targets and where indicators do not provide sufficient disaggregation. Civil society organisations have identified other shortcomings on equity and human rights (IISD, 2016a).

6.8 | Indicators: Global statistical capacity

The global shortfall in statistical capacity is another barrier to understanding the impact of the SDGs by 2030, and must be urgently addressed. Although World Bank data suggest an improvement in statistical capacity globally (Mohieldin, 2015), many countries are not able to monitor against the SDGs. Some smaller nations lacked the spare capacity to contribute feedback on proposals (UN Statistical Commission, 2015), and no country is currently capable of measuring against all indicators, let alone with full disaggregation. Baselines and progress for only a few targets can be monitored completely at the global level (World Bank, 2016c). Therefore, it appears unlikely that the statistical resources challenge will be overcome in many countries in time to provide accurate, disaggregated reporting by 2030. If the capacity gap is not resolved by 2030, this is a fundamental challenge to the SDGs' dual role as a statement of global ambition and a monitoring framework for assessing development “progress”.

Nevertheless, the amount of official development assistance (ODA) to national statistics agencies must be increased in developing countries and these countries must receive greater technical support. The PARIS21 organisation, hosted by the OECD, estimates that the share of ODA for statistics was 0.24% in 2013, and that the countries with the lowest statistical capacity receive less statistical aid per capita than many countries with greater capacity (PARIS21, 2015a). PARIS21 has called for ODA for statistics to increase to around 1% and proposed a “Data Compact”, where countries would “sign up to

a limited set of basic principles and receive, in return for progress, enhanced and flexible financial and technical assistance” (PARIS21, 2015b, p. 9).

7 | FINANCE

Funding for development is a central issue (Fejerskov et al., 2016). During the intergovernmental negotiations, discussions focused on broadening discussions beyond Official Development Assistance (ODA) to other financial flows, illicit financial flows and tax (Delegation of United Kingdom, 2015a), the concerns of many countries that other financial flows would replace ODA and that the 0.7% ODA target would be ignored (Delegation of Ecuador, 2015). Studies of the geographies of finance more broadly have gained prominence (Engelen, 2012; Hall, 2010; Pike & Pollard, 2010), however the geographies of international aid are less studied, despite the relevance of geographical approaches to development finance flows (Overton, Murray, & McGregor, 2013). There is, therefore, a need to research how local, regional and national geographies interact with global flows of development finance.

Investment is neither an end goal nor a synonym for development or progress (Büscher, 2014). However, we delineate a difference between finance as input into development processes versus “achieving” investment, which can threaten to replace development as the desired outcome (Soederberg, 2007). The SDGs agenda requires vast amounts of finance; the global funding gap for child and maternal health is estimated to be \$33 billion (The Lancet, 2015). An estimated \$1 billion is required to increase statistical capacity to monitor the SDGs in 77 of the world’s poorer countries (Sustainable Development Solutions Network [SDSN], 2015a). Whether this is possible must be examined; as Kharas, Prizzon, and Rogerson (2015, p. 7) commented, “Where is the money? remains a revealing enough question in its own right, even if answering it is far from sufficient to achieve the SDGs”.

Potential actions to improve development financing under the SDGs include boosting flows of finance from various sources, increasing the rigour of the multilateral development banks’ (MDBs) sustainability policies, introducing central bank mandates for sustainable development and climate change, “ratcheting up” commitments under the Addis Ababa Action Agreement (AAAA), and holding all development finance actors to sufficient transparency and accountability standards.

7.1 | The Addis Ababa Action Agreement’s limitations

The initial reaction to the third International Conference on Financing for Development (FfD3) outcome, the AAAA, was generally negative; a “resounding disappointment” that was “remarkable only for its alliteration” (The Lancet, 2015). The AAAA is heavy on rhetoric but light on binding outcomes. Campaigners had called for stronger outcomes on international tax cooperation, fossil fuel subsidies, gender equality, transparency and debt. The coordinated civil society stakeholder response highlights the AAAA’s failure to deliver a mandate for action, exposing the gap between SDG ambition and agreeing actions to make the goals a reality (Addis Ababa CSO FfD Forum, 2015). The FfD3 outcome upholds narrow views of industrial development and economic growth as the drivers of development and remains uncritical of the role of international trade.

However, the Inter-agency Task Force offers some evidence that the AAAA could deliver iterative improvements after member states have agreed joint ambitions (Coopération Internationale pour le Développement et la Solidarité, 2015) to overcome the gap between ambition and action. Through its mandate to advise on progress, implementation gaps and recommendations for corrective action (UN, 2015d), the IATF could “ratchet up” commitments from Addis Ababa. The AAAA does have stronger follow-up mechanisms than previous FfD documents (Caliari, 2017). Its first report, while unable to examine implementation, contained an assessment of AAAA commitments that begins to assemble a monitoring framework. This is noteworthy, given the vagueness of these commitments. But it relies on soft power; the IATF envisages its role as mapping out policy options, analysing underlying assumptions and assessing implications, leaving policy choices to governments (IATF on FfD, 2016). Non-state observers of the FfD process remain sceptical (Caliari, 2016); future reports need to demonstrate that recommendations are acted upon.

Increasing tax collection and mobilising greater domestic resources will aid SDG implementation, but require a broader context of improved global cooperation to avoid abandoning collaborative approaches for the SDGs. The AAAA refers to the International Monetary Fund (IMF) and OECD’s capacity-building efforts for tax collection (UN, 2015d). To effectively increase domestic resource mobilisation, international efforts should help all countries that need technical assistance. From the AAAA, countries pledged to enhance the resources of the Committee of Experts on International Cooperation in Tax

TABLE 3 Funding estimates related to the SDGs

Estimate	Amount	Source
Meeting the SDG targets	\$17 trillion in total	UN (2013)
Meeting the SDG targets	\$2 trillion to \$3 trillion per year	Schmidt-Traub and Sachs (2015)
Meeting the SDG targets	\$5 trillion to \$7 trillion per year	UN Conference on Trade and Development (2014)
Funding to end AIDS by 2030	Funding must nearly double to an estimated \$36 billion a year from current annual funding of \$19 billion	Oberth (2015)
Funding for malaria prevention to meet the SDG target	Triple current levels of funding	Oberth (2015)
Funding for the SDGs in developing countries	An annual investment shortfall of \$2.5 trillion	UN Conference on Trade and Development (2014)

Matters (UN, 2015d) and progress has been made. The 2015 G20 summit in Turkey endorsed the “Base Erosion and Profit Shifting (BEPS) Action Plan”, reaffirming commitments to implement an automatic information exchange system by 2018 (G20, 2015; OECD, 2015). Thirty-one countries signed the “Multilateral Competent Authority Agreement”, aiding countries in understanding how multinational companies structure themselves, representing a significant increase in cross-border tax cooperation (OECD, 2016a). Continued scrutiny must demonstrate that this leads to improved, more equitable global tax collection.

Progress is required on issues insufficiently addressed in Addis Ababa, including illicit financial flows, greater international tax cooperation and fossil fuel subsidies. But the AAAA may not be sufficiently binding. Evidence from the Monterrey Consensus¹ is not wholly positive on progress made for scaled-up aid, donor co-ordination, development finance innovations and improving the quality and targeting of aid (Nunnenkamp & Thiele, 2013).

7.2 | The existing shortfall in development finance

The scale of the financing challenge for the post-2015 agenda is significant; Table 3 summarises available estimates. As with the MDGs (Clemens et al., 2007), increasing development finance is necessary but insufficient to meet the SDGs. Moreover, the funding shortfall is highly unlikely to be met by ODA alone, but current assessments of total development funding are insufficient. Some compare the scale of ODA to all financial flows (such as foreign direct investment and domestic resources), regardless of intent (Michel, 2016). All resource flows to developing countries are not financing for development and ODA often targets the poorest people in the poorest countries. Structural issues in the global economic system remain; all funding sources are negatively impacted by illicit outward financial flows from developing countries. In 2014, illicit financial outflows were 1.3 times greater than total foreign direct investment and 11.1 times greater than ODA (Kar & Spanjers, 2015).

In 2015, 13 years after Monterrey, only six countries met their 0.7% ODA target; the average was 0.3% (OECD, 2016c). As Figure 2 shows with 2014 data, for many countries the overall level of ODA, or the trend, or both, show cause for concern. Even if other sources of development financing increase considerably, ODA and official assistance (including debt relief) are the largest source of international resources in the countries where poverty is deepest and domestic resources are most stretched (Development Initiatives, 2015). So that the SDGs “leave no one behind” and ensure that the SDGs reach those in extreme poverty, all developed countries should meet the 0.7% target.

7.3 | Scaling up funding for development

The International Financial Institutions (IFIs) introduced the “Billions to Trillions” agenda at the intergovernmental negotiations (African Development Bank, et al. 2015), suggesting a move from billions of dollars in ODA to trillions in multi-sourced development finance, including private finance, increased tax revenues in developing countries, reducing tax evasion and illicit financial flows, reducing the costs for migrant remittances, and strengthening ODA and multilateral development finance. There are calls to move beyond an aid-centred paradigm and make development assistance more locally relevant (Michel, 2016). This is challenging when only 30 countries are eligible for ODA until 2030 (Kharas, et al., 2015) and poverty is highest where government revenues are lowest (Development Initiatives, 2015).

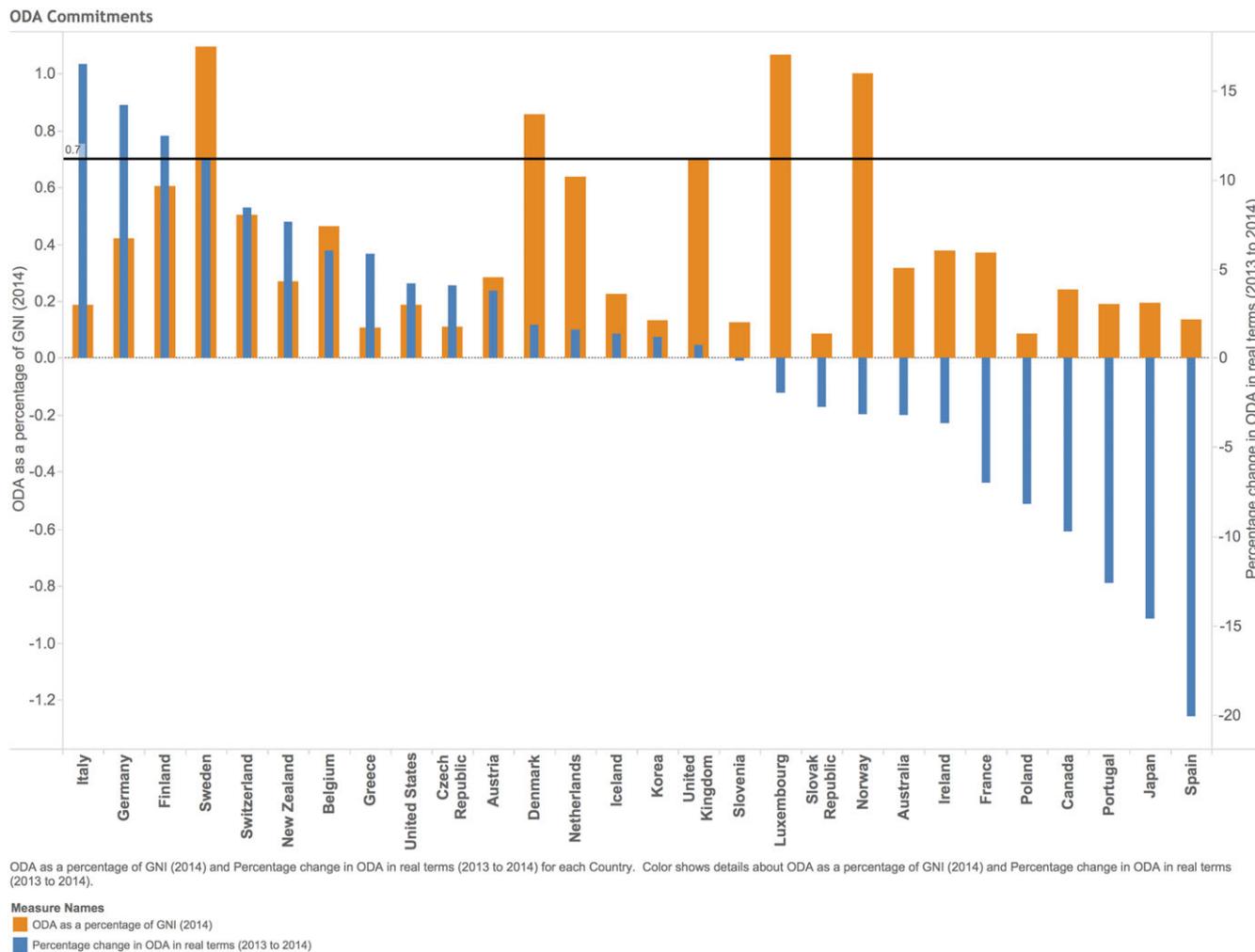


FIGURE 2 Official development assistance (ODA) as a percentage of gross national income (GNI) for 2014 and percentage change in ODA funding from 2013 to 2014 by country. The level of 0.7% for the countries party to the ODA commitment is indicated in black

Produced by all the major MDBs and Bretton Woods institutions, “Billions to Trillions” could be a pragmatic framework that recognises that ODA may not be sufficient by incorporating multiple sources of finance and making them accountable and transparent (The Economist, 2015). However, it risks eroding development finance norms, creating a backdoor to increased corporate influence in UN decision-making (Adams & Martens, 2015), and potentially a licence for developed nations to not meet the 0.7% ODA commitment (Figure 2).

While better mobilisation of domestic resources and improved tax regimes could improve development-related funding within countries, two questions remain: how can more national resources be mobilised? What is the role of ODA? Kharas et al. (2015) make recommendations in five areas, including reducing distortions in concessional public finance and focusing it on countries that struggle with credit-worthiness; market-based public borrowing to target middle-income countries who lose access to concessional finance; and incentivising and aligning transparent sources of private finance. Other development finance flows must increase globally; impact investment currently exists at the local scale, but development impact bonds could incentivise larger financial institutions to invest in development goals by linking a return on investment to achieving those goals (Mendoza, 2015). Blended finance has been suggested to increase funding flows; using ODA and grant funding to “leverage” other public and private finance (Hurley & Mensah, 2016). However, such sources of funding are likely to support certain projects, such as larger infrastructure projects.

However, increasingly global and influential flows of finance (Pike & Pollard, 2010) must be connected with development realities, which are often localised, specific and not visible on a balance sheet. A centre-periphery model of international financialisation has generated significant costs for developing countries; better funding under the SDGs requires

greater coherence and stability in international financial flows for development (Garcia-Arias, 2015). Many “beyond ODA” financial instruments are not widely used in LDCs (Hurley & Mensah, 2016); these countries should receive financing on fair terms and countries that struggle with credit ratings could benefit from guarantees to leverage borrowing.

A method for tracking multi-sourced development finance is required, including a framework to measure pledges made under the SDGs, ODA, FfD, climate finance under the United Nations Framework Convention on Climate Change and other similar platforms. These should be treated as separate to hold governments to account and avoid double counting. The OECD’s Development Assistance Committee is developing the Total Official Support for Sustainable Development framework to measure all “resource flows originating from official sources and interventions to developing countries and multilateral institutions in support of sustainable development” (OECD, 2016b, p. 3). More broadly, the role of “aid” or ODA requires further clarification; current conceptualisations as one of many tools (Michel, 2016) or a dual role supporting sustainable development in the LDCs and leveraging other sources of funding (OECD, 2016b) may not respond to critiques of the growth in non-state development finance (Adams & Martens, 2015; Garcia-Arias, 2015; Mawdsley et al., 2014).

7.4 | Transparency and accountability

Greater transparency is needed for this new multi-sourced development finance paradigm. The Group of 77 and China expressed concern for additionality in funding pledges between climate funding and ODA (Delegation of South Africa, 2015c). An SDG Fund has been established (Torres-Rahman et al., 2015); any SDG commitments must be genuinely additional instead of re-categorising existing development, climate or aid budgets. Further research could address how to monitor and make multi-sourced development financing as accountable as ODA or the MDBs. Moreover, the policies of the development banks may be neither strong enough nor sufficiently aligned to the SDGs. MDBs provided \$500 million a year between 2010 and 2013 for fossil fuel exploration (Bast, Makhijani, Pickard, & Whitley, 2014), peaking at \$1.6 billion in 2013 (Oil Change International, 2014). Transparency and accountability of ODA and MDBs needs to be increased and a similar framework for private sector involvement needs to be created. This would be one step to address critiques of rising influence of corporate actors in global development governance (Pingeot, 2014), including concerns about the power and influence over agenda setting and political discourses that the private sector may gain from partnership initiatives (Adams & Martens, 2015).

There has been progress; the 2016 Aid Transparency Index shows that 10 major donors, accounting for 25% of total aid flows, met aid transparency commitments made in 2011 (Publish What You Fund, 2016). While this is positive, it demonstrates the challenge for multi-sourced development finance; even the IMF and the International Finance Corporation receive a “poor” rating on the Aid Transparency Index (Publish What You Fund, 2016). We propose that blended finance and private finance should be held to the same standards as ODA and the IFIs. The difficult negotiations to agree the “Comprehensive Framework for Non-State Actors” under the WHO (Adams & Martens, 2015) are further proof that genuine transparency will not be simple. A similar framework to agree fundamental principles for partnership arrangements between international organisations and non-state actors should be a primary aim for the UN system.

7.5 | Aligning financial institutions with the SDGs

The MDBs’ role must be further defined. Practical suggestions include greater cooperation between MDBs and IMF (Mohieldin, 2015) and increased market-based lending by MDBs (Kharas et al., 2015). FfD3 suggested that development banks should develop policies to align with the post-2015 development agenda (UN, 2015d); this non-binding statement must lead to meaningful change for the MDBs. There is some progress from other financial institutions: the Islamic Development Bank signed a memorandum of understanding with United Nations Environment Programme (UNEP) to increase its support for the SDGs (UNEP, 2016) and Economic and Social Commission for Asia and the Pacific (UNESCAP) member states agreed measures to increase regional financing for sustainable development (UNESCAP, 2016).

There is little evidence of a realignment of development banks with the SDGs; the World Bank Group’s 2016–2020 “Climate Change Action Plan”, a framework on action on climate change affecting many areas of the SDGs, mentions them only once in passing (World Bank, 2016b). Most MDBs have environmental and social policies, which may not be sufficient aligned to the SDGs. The Inter-American Development Bank’s (IDB) environmental safeguard policy only states that environmental “considerations” should be “mainstreamed” across economic and social development; proposals are screened for environmental risk but the environment assessments for even the highest risk projects do not have to include a “no project” scenario (IDB, 2006). An IDB report on energy projects concluded that investment decision-making needed to change, with environmental issues “barely considered” relative to minimising cost (Gomelsky, 2012). Progress will be slow; the latest review of the World Bank’s environmental and social framework began in 2012 and is still ongoing (World Bank, 2016a).

For monetary policy institutions, sustainable development and climate change should be matters of financial stability. Mark Carney, Governor of the Bank of England, described climate change as a “tragedy of the horizon” (Bank of England, 2015), a mismatch between the timescales of investment decisions, assessments of financial stability and the impacts of climate change: an unaddressed issue in financial stability decision-making. Central bank mandates for sustainable development and climate change could be developed to factor these issues into their assessments; we suggest aligning mandates with the 15-year horizon of the SDGs, or beyond.

7.6 | The role of trade in development

Both the SDGs and FfD3 are optimistic that significantly increasing international trade could be consistent with sustainable development (UN, 2015d). Trade itself, however, is not inherently positive and benefits to developing countries from trade can be dubious (Røpke, 1994). There are significant concerns of the inequalities created by increasing global trade and financialisation (Engelen, 2012; Garcia-Arias, 2015). Increasing world trade “in a manner consistent with the SDGs” is problematic as increasing trade should not be a goal; this is a confusion of ends and means (Rodrik, 2001). The difference is subtle but significant; maximising trade’s potential to contribute to equitable development (Rodrik, 2001), rather than maximising trade, should be the target. As with economic growth, confronting the SDGs’ dominant narrative on trade is necessary to improve sustainable development.

8 | CONCLUSION

The SDGs are part of the vast, complex, inconsistent, democratically negotiated post-2015 development agenda (Figure 1). Compared with the MDGs, the indicator and reporting needs are more complex, the MoI are more far reaching and the financing needs are significantly greater. The SDGs are hugely ambitious: to set the global community onto a different path, creating better, more sustainable livelihoods for everyone within 15 years (Risse, 2016). The global community must avoid the mistakes of the MDGs while reproducing the positive gains that they fostered.

The framework of “Implementation”, “Monitoring”, and “Finance” outlined in this review is a starting point to hold governments, international organisations and non-state actors accountable. These three elements will not be enough to “achieve” the SDGs, but without significant improvements in these areas, the SDGs may not deliver better development. Continued momentum could prevent the size and complexity of the SDGs from rendering the goals and targets irrelevant and avoid “cherry picking” from the goals. This framework can contribute to putting the SDGs into practice, including challenging the centrality of economic growth in development (Mawdsley et al., 2014).

Geographers must recognise that engagement with development attracts many students to the discipline (Willis, 2014). Geography has much to contribute to understanding the SDGs through its focus on both the importance of place, space and networks, and the tensions and interactions of economic, social, cultural and environmental issues. Greater collaboration is needed between development researchers and practitioners. Although post-structuralist approaches to development, for example, may focus on the local, these must be supported by an understanding of the SDGs’ global landscape to consider how the SDGs influence everyday livelihoods. Critical pragmatism has much to offer, for example Forester (2012, p. 8) comments that “Schön developed a powerful account of how we can learn in action, learn from the consequences of our practical moves, and learn from our engaged attempts to change the world”.

Critical engagement with the SDGs within and beyond geography on implementation, monitoring and financing is vital to avoid economic-growth-as-usual dominating the SDG agenda. We must remain aware of the critical period of 2027–30 for potential preliminary discussions of the SDGs’ successor, to build the case that this should focus on substantive sustainable development issues and not maintain the centrality of economic growth. This review hopefully empowers geographers to actively engage with the SDGs in a critical but pragmatic way. To further the SDGs’ central aim to improve livelihoods around the world, this review also calls on geographers to understand their work within the contemporary global development context to confront questions of development in theoretical or practical ways across local, national and global scales.

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NOTE

¹ The Monterrey Consensus was the outcome document of the first international conference on financing for development, held in Monterrey, Mexico in March 2002 (UN, 2003). Perhaps the most visible part of the Monterrey Consensus restated the agreement to work towards the target for developed countries to commit to spending 0.7% of their GDP on ODA. It also represented an attempt to reclaim a voice for the UN and all member states in relation to the international economy, shifting influence away from the Bretton Woods institutions (while still engaging them and a wider group of stakeholders) (Caliari, 2017). The Monterrey Consensus was followed up by the 2nd international conference in Doha, Qatar in November and December 2008, which led to the adoption of the Doha Declaration (UN, 2009).

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