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GREEN TRIANGULAR CO-OPERATION:

AN ACCELERATOR TO SUSTAINABLE DEVELOPMENT

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Abstract

This report showcases how triangular co-operation can contribute to achieving 'green' objectives (e.g. on climate change mitigation, climate change adaptation, biodiversity, desertification, and local environmental issues). Data collected through an OECD survey on triangular co-operation (2015) and desk research uncovered 224 triangular projects targeting green objectives, involving 91 countries and international organisations, out of a total of 658 triangular co-operation projects for the period 2014-18. Given the available evidence (data, evaluations and interviews with project managers), the report shows that triangular activities can deliver green goals in innovative, flexible and cost-effective ways within and across regions – and thus could help accelerate implementation of the Sustainable Development Goals and other international green agreements (e.g. the Paris Agreement). Nevertheless, there are several barriers that prevent further deployment of this modality, including lack of awareness on triangular co-operation among the different green communities, insufficient evidence on the potential of green triangular co-operation, and few dedicated vehicles that can pilot and scale-up successful initiatives. The report proposes a number of recommendations for policy makers to overcome these barriers.

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Abbreviations and acronyms

AAAA	Addis Ababa Action Agenda
ADB	Asian Development Bank
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
BAPA+40	2nd High-Level Conference on South-South Cooperation
BMZ	German Federal Ministry for Economic Cooperation and Development
CELAC	Community of Latin American and Caribbean States
CRS	Creditor Reporting System
CBD	Convention on Biological Diversity
DAC	Development Assistance Committee
ECIS	Europe and the Commonwealth of Independent States
FAO	Food and Agriculture Organization
GFC	Green Climate Fund
GFDRR	Global Facility for Disaster Reduction and Recovery
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPI	Global Partnership for Effective Triangular Co-operation
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ILO	International Labour Organization
INDCs	Intended Nationally Determined Contributions
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
IsDB	Islamic Development Bank
JICA	Japan International Cooperation Agency
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
NAPs	National adaptation plans
NAPCDs	National action programme for combating the phenomena of desertification
NBSAPs	National biodiversity strategies and action plans
NDCs	Nationally determined contributions

ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
OFID	OPEC Fund for International Development
SARCOF	South African Regional Climate Outlook Forum
SDGs	Sustainable Development Goals
SEGIB	Ibero-American General Secretariat
SSTrC	South-South and triangular co-operation
TOSSD	Total official support for sustainable development
TrC	Triangular co-operation
UNASUR	Union of South American Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Environmental Programme
UNESCO	United Nations Education, Scientific and Cultural Organization
UNFCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNGA	United Nations General Assembly
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Development Organization
UNITAR	United Nations Institute for Training and Research
UNOSSC	United Nations Office for South-South Cooperation
UNWTO	United Nations World Tourism Organization
USD	United States Dollar
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization

Executive summary

Sustainability and development need to go hand in hand to achieve the Sustainable Development Goals (SDGs) by 2030. Sustainable development is also conducive to achieving other green or green-related agreements, such as the Paris Agreement on climate change, the Convention on Biodiversity, the New Urban Agenda or the Sendai Framework for Disaster Risk Reduction. All of these agreements note the importance of international co-operation. Development co-operation, in particular, is often highlighted as one of the key tools to implement these agreements. At the Second UN High-level Conference on South-South Co-operation, the international community reiterated that triangular co-operation, one particular modality of development co-operation, can also contribute to achieving the 2030 Agenda and the SDGs. This report analyses how triangular co-operation can impact the achievement of sustainable development, notably by fostering 'green' objectives such as climate change adaptation and mitigation, biodiversity, desertification and local environmental issues (e.g. water and air pollution, waste disposal). Green issues here also encompass 'blue' issues, which are those linked to sustainable economic development of seas and oceans.

Triangular co-operation is a modality with ample potential to support the delivery of the SDGs, however the modality can be better used. Moreover, there is no internationally agreed definition on what constitutes triangular co-operation activity. In this report, triangular co-operation is seen as a modality involving at least three partners, a facilitator, a pivotal and a beneficiary partner, and going beyond merely supporting a South-South Co-operation (SSC) arrangement. In other words, triangular co-operation is a modality able to foster knowledge sharing while promoting innovation, co-creation of solutions, mutual learning and benefits for all partners engaged. Triangular co-operation delivers these through technical co-operation, which range from short-term ad hoc capacity building activities to long-term, programmatic approaches mainstreamed across investments. These activities and potential benefits resonate well with green objectives – as indeed one of the key elements preventing the attainment of green objectives in developing countries has typically been limited or no capacity in green areas.

The literature on triangular co-operation is limited and that on green triangular co-operation even more so. The available literature captures green triangular co-operation as a modality facilitating SSC, yet project evaluations and interviews conducted for this report show that green triangular co-operation has fostered horizontality among project partners, encouraged experience sharing in multiple directions, promoted broad participation of stakeholders in finding appropriate solutions and during implementation, ensured consensus and strong ownership, and provided the basis for future replication and scaling-up. Indeed, evaluations show good results and impact in most green projects analysed, often going beyond initial expectations. The report builds upon this evidence and, through selected case studies, illustrates how green solutions that work in one context can be transferred within and across regions in an accessible and adaptable manner. The report also shows that technical co-operation activities that are implemented through a triangular partnership tend to be better adapted and longer-term than average triangular co-operation

activities, notably for areas such as biodiversity or climate change adaptation. In turn, this leads to a better appropriation of the resources and solutions transferred to the beneficiary country, which typically results from the fact that beneficiaries receive knowledge and experiences from a third partner, the pivotal partner.

Despite these success stories, the modality does not match its potential. The report shows that although 34% of all triangular co-operation activities over 2011-18 aim at green objectives, and that, over time, this share is relatively stable (despite more volatile triangular co-operation trends), absolute green triangular co-operation is still small (there are only 224 green triangular co-operation projects identified by the OECD). Interestingly, some of the largest green ODA providers are also active green triangular co-operation providers and, similarly, some of the greatest green ODA recipients are also among the largest green triangular co-operation beneficiaries. The Latin American and Caribbean region, in particular, is heavily engaged in green triangular co-operation – perhaps owing to its growing environmental footprint, while boasting some of the richest terrestrial and marine ecosystems worldwide. At the same time, this region is also relatively more developed (most countries there are middle-income countries) and more exposed to triangular co-operation historically, thus making green triangular co-operation a natural extension of past trends. International organisations also have a key role to play, however most take a traditional view of triangular co-operation facilitating green SSC. Activities take place in environment-related sectors, such as agriculture, energy or water and sanitation; and about 70% of all green triangular co-operation projects have gone ahead precisely because of their green motivation. At the same time, the data show few desertification projects and virtually no 'brown' (or environmentally harmful) projects. This last point suggests that either triangular co-operation data is not capturing brown activities or, more likely, that the modality is suitable to deliver sustainable development objectives because of the strong ownership of beneficiary countries exerted in triangular co-operation activities, leading to sustainable development considerations being integrated from the onset. Triangular co-operation could thus be considered a modality that is ready-to-use for the next generation of development co-operation projects, where sustainable development needs to be at the centre and where alignment with green agreements is needed.

While there is an international mandate to do more triangular co-operation and the evidence shows that green triangular co-operation can provide solutions to accelerate implementation of the SDGs and other green agreements; domestic triangular co-operation policies and strategies are still rare but a review of existing strategies show that most of them highlight the use of this tool for green objectives. At the same time, national green plans and strategies for climate change, biodiversity or desertification, rarely mention triangular co-operation as a possible means of implementation. The report provides a number of explanations behind these incoherent trends, including lack of awareness in the green community of the triangular co-operation modality (which may also be related to the fact that there is no international obligation to report on the use of this modality), limited evidence on the benefits and potential of the modality more generally and in the green space in particular, and the fact that there are no dedicated vehicles to channel, replicate or scale-up triangular co-operation activities, including for green objectives.

While the OECD is working to provide more evidence and document good practices, as well as keeping a repository of triangular co-operation data, further work is needed to overcome some of these barriers. At the same time, bridges ought to be built to reach out to the green community, to raise awareness amongst this community about the benefits of this modality to achieve their goals, on the need to report on the use (or possible use) of

this modality, and more efforts need to be dedicated to ensure that multilateral organisations and banks, notably in the green space, give also more space in their operations to this modality. International organisations and countries engaged and interested in expanding the use of this modality need to multiply their efforts to ensure greater visibility and awareness to achieve green objectives. Implementing partners could also mainstream green triangular co-operation across their operations, could promote the development of dedicated windows to integrate triangular co-operation across the investments planned by multilateral organisations and banks or could suggest the use of such vehicles to fund specific triangular activities to complement existing activities.

Introduction

Development and green issues (understood here as encompassing local environmental, climate, biodiversity and desertification-related issues, as well as sustainable seas and oceans) can be mutually beneficial. There are many examples of how managing these issues can lead to synergies and be mutually supportive and, in fact, there is an international imperative to ensure that development is sustainable (GCA, 2019[1]). However, these processes have not always been complementary and indeed have been managed separately. Unless carefully planned, poverty reduction efforts may heighten vulnerabilities to climate change and environmental degradation for particular groups or across spatial and temporal scales (Eriksen and O'brien, 2007[2]; OECD, 2014[3]; Tanner, 2013[4]). If environmental aspects and sustainability are not systematically considered, development may have devastating impacts, both locally and globally. In fact, human pressure on the Earth's resources is steadily growing, with dire consequences for developing countries. Natural capital has declined in 109 out of 140 countries (UNEP, 2018a[5]), which implies, inter alia, the deterioration or depletion of freshwater and arable land in developing countries, two crucial inputs for development. Over 7 million deaths are now attributable to ambient and household air pollution, again mainly touching upon developing countries (WHO, 2018[6]).

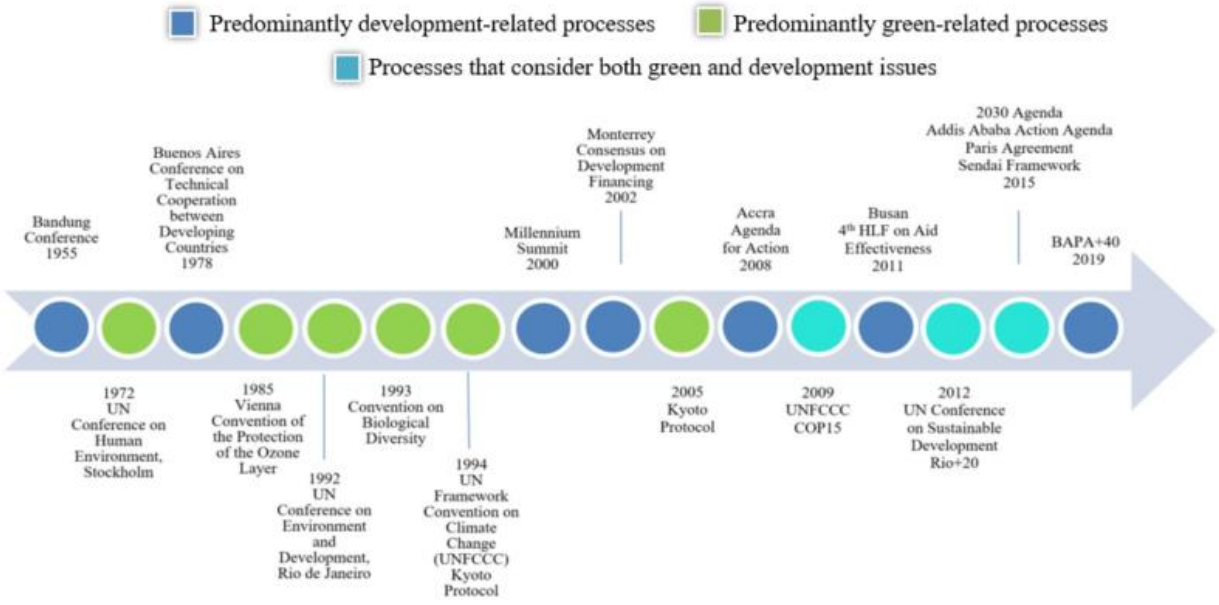
What is more, future threats may take root in current forms of development that are not always sustainable. For example, poorly managed urbanisation or coastal development can lead to the degradation of watersheds or forest ecosystems and the disruption of the critical services that they provide to support human well-being such as clean water, air and a stable climate (Rockström, 2009[7]; Griggs, 2013[8]). Climate change is likely to exacerbate the vulnerabilities arising from these unsustainable trends (IPCC, 2014[9]). Projections of carbon dioxide emissions into 2030 indicate that the global community is off-track for a 1.5 or 2 degree pathway, unless further action is taken in both developed and developing countries (UNEP, 2018b[10]). In addition, activities promoting development will quickly become inadequate to cope with heightened climate change risks, unless these risks are explicitly taken into account in planning (OECD, 2009[11]). An estimated USD 6.9 trillion is needed annually between 2015 and 2030 to ensure that future investments in energy, transport, telecommunications and water infrastructure meet low-carbon, climate-resilient needs, versus USD 6.3 trillion with no further action (OECD, 2017[12]), and with 60% of these financing needs primarily concerning developing countries.

These seemingly contradictory trends explain why development policy makers place the issue of sustainability at the heart of all development endeavours, and why international co-operation is needed in this area. Developing countries have been addressing green concerns themselves for some time - and will continue to do so in the future (e.g. by developing and enforcing relevant environmental regulations or by adapting to climate change). Yet, many local environmental issues and global environmental goods require international co-operation as developing countries often lack the resources (e.g. capacity, financial, technological) and incentives to tackle them alone.

The international green development mandate

Discussions on environmental sustainability issues have traditionally been led separately from those on development, even though both dimensions are intertwined (see Figure 0.1). The Rio Earth Summit in 1992 with the subsequent adoption of the Convention on Biodiversity (1993) and the entry into force of the United Nations Framework Convention on Climate Change (UNFCCC) in 1994 are among the first agreements calling for international co-operation on 'green' issues.

Figure 0.1. Milestones in international development co-operation and green issues



Source: Author's creation.

The year 2015 marked a milestone in bringing the two communities together, with the purpose of renewing global attention on sustainability issues through international co-operation, including through development co-operation (OECD, 2019[13]). Among the various development co-operation modalities, one promising modality is triangular co-operation.

Triangular co-operation: a primer for the green community

There is no international definition of what constitutes triangular co-operation. At a minimum, it requires having (at least) three partners, bearing in mind that the roles taken by these partners can change over the course of a project, namely:

- Pivotal partner: shares a given sustainable development solution, knowledge, expertise, technology or other resources;
- Facilitating partner: connects other actors to form a triangular partnership and provides financial and/or technical support for the collaboration; and
- Beneficiary partner: is the target of a development intervention.

Triangular partnerships make use of the expertise, finance, technology, capacity, experiences and knowledge of a given stakeholder (pivotal partner) to share it with another stakeholder (beneficiary partner), with the support of a third stakeholder (facilitating partner). The literature has usually considered triangular co-operation a modality that can foster South-South co-operation (Hosono, 2013[14]).

A contemporary understanding of triangular co-operation, which includes new development actors and working methods, sees all partners sharing knowledge and expertise in a triangular partnership, often encouraging innovation and co-creation through mutual learning and potentially generating mutual benefits (GPI, 2019[15]). Also, with this understanding, a wide set of partners can participate in a triangular co-operation initiative – i.e. developed or developing country governments, international organisations, civil society organisations, private sector entities, foundations, academia, or other stakeholders. Facilitating partners may therefore also co-create solutions with the other two partners, although typically they provide financial or other type of resources, while co-ordinating the partnership (Hosono, 2013[14]). The partnership can be dynamic and lead to greater engagement and implementation effort when pivotal and beneficiary partners take these two roles interchangeably throughout the project (Cortez and Fernández Trillo, 2017[16]).

What is green triangular co-operation?

Green triangular co-operation is defined here as triangular co-operation activities that target local environmental issues, such as local nature conservation, tackling water pollution, enhancing air purity or managing waste and recycling; as well as global environmental goods, such as adapting and mitigating climate change, stopping biodiversity loss or desertification. These activities may link to the conservation and sustainable use of the oceans, seas and marine resources, as well as to land-based activities. There is virtually no literature looking at how green aid is being delivered through triangular co-operation (Klöck, Molenaers and Weiler, 2018[17]; Kato, 2013[18]). Moreover, most of the work focuses on climate change mitigation and adaptation. The UNOSSC and South Centre (UNOSSC and South Center, 2017[19]) provide an overview of climate-related South-South and Triangular Cooperation initiatives and describe how these can support the implementation of the Paris Agreement in the context of the SDGs. The UNFCCC Technology Executive Committee (2017) report looks at how SSTrC can accelerate the exchange of technologies, knowledge and practices in the context of climate change adaptation for the water and agriculture sectors (UNFCCC, 2017[20]). Also the Ibero-American General Secretariat note a steady increase in green triangular co-operation activities in Latin America and the Caribbean (SEGIB, 2017[21]). Yet, this literature takes a traditional view of triangular co-operation – i.e. green triangular efforts support South-South co-operation in a linear fashion. More recent work, however, looks at how triangular co-operation could help development co-operation align with the Paris Agreement (OECD, 2019[13]).

The present report, in contrast to the existing literature, shows that green triangular partnerships can foster horizontality, promote the sharing of experiences in multiple directions, enable the participation of a broader group of stakeholders, emphasise consensus-building and offer great potential for replication and scaling-up beyond the life of the project and initial set of actors – promoting ownership by the actors involved in the long run (Cortez and Fernández Trillo, 2017[16]; Cortez, 2018[22]). In other words, green triangular co-operation is a modality of development co-operation that can facilitate the transfer of solutions within and across regions by making this transfer more accessible and

adaptable. It can accelerate the implementation of the global sustainability agenda. This potential is also identified in some of the available literature (UNFCCC, 2017[20]). Yet, as will be seen in the next sections, while green triangular co-operation represents 34% of all triangular co-operation activities over 2014-18, the modality still represents a 'junior' modality of development co-operation (OECD, 2016[23]). There is scope to increase the use of this modality, including in the green space. Indeed, the modality can help deliver development and green issues in innovative and collaborative ways, which explains why it features in the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda:

- The 2030 Agenda for Sustainable Development covers explicitly environmental issues (two goals and 29 targets) (UNGA, 2015[24]) but most other goals and targets also refer to green issues (Reid, 2017[25]). Moreover, Sustainable Development Goal (SDG) 17 (partnerships for the other goals) focuses on finance, technology, capacity building, trade and systematic issues (including multi-stakeholder partnerships, often a form of triangular co-operation) and aims at enhancing triangular, regional and international co-operation on access to science, technology and innovation, and enhance knowledge-sharing on mutually agreed terms to implement the other SDGs; as well as enhancing international support to implement the SDGs through, inter alia, triangular co-operation. The SDGs go beyond traditional development co-operation in environment-related areas because this co-operation may not be sufficient to achieve the SDGs and other international green agreements, e.g. on climate change (UNOSSC and South Center, 2017[19]).
- The Addis Ababa Action Agenda (AAAA) of the Third International Conference on Financing for Development also highlights the importance of strengthening international co-operation, including triangular co-operation, as a means of bringing relevant experience and expertise in developing countries (paragraph 57), including to combat climate change and preserve the planet's natural resources (UNGA, 2015[26]).

In the green area, the Convention on Biological Diversity (CBD) established that triangular co-operation is a 'critical element for the success of the 2011-20 Strategic Plan of the CBD' (CBD, 2010[27]). The New Urban Agenda, outcome of the 2016 UN Conference on Housing and Sustainable Urban Development and which touches upon key local environmental issues, also mentions triangular co-operation as means to achieve sustainable urban development, develop and expand capacities and foster exchanges of urban solutions and mutual learning at all levels and by all relevant actors (UN Habitat, 2016[28]). At the same time, the Paris Agreement does not mention triangular co-operation explicitly. The Sendai Framework for Disaster Risk Reduction, which takes into account climate risks does not mention it either. Yet, the processes called upon in these agreements suit well the triangular modality:

- The Paris Agreement within the UNFCCC[1] marked a turning point in international co-operation on climate change, as it breaks up the dichotomy of Annex I and Annex II countries of the Kyoto Protocol. Whereas tackling climate change was traditionally seen an issue for the North and for North-South co-operation, now all countries have the responsibility to mitigate and adapt to climate change, notably by supporting partner countries on the basis of common but differentiated responsibilities. The Paris Agreement calls to accelerate and intensify international actions and investments across Parties to enhance individual and collective action to address climate change threats (including greenhouse emissions avoidance and

reductions, adaptation, the provision of the means of implementation to developing countries (including finance, technology and capacity building), information exchange, periodic reviews of the actions taken and facilitating compliance). In fact, Article 11.1 of the Paris Agreement highlights the importance of capacity building for countries to take effective climate action; and Article 11.3 states that all countries "should co-operate to enhance the capacity of developing country Parties to implement this Agreement". These activities can be fostered relatively well through triangular co-operation (UNFCCC, 2017[20]).

- The Sendai Framework for Disaster Risk Reduction 2015-30 notes that international co-operation is pivotal to reduce disaster risk and calls for strengthening existing mechanisms to provide effective support and achieve better implementation (UNDRR, 2015[29]), which will require capacity building, financial and technical assistance, as well as technology transfer – all amenable to triangular co-operation.

Finally, the Outcome Document of the 2nd High-Level Conference on South-South Cooperation (BAPA+40, 2019[30]) recognises that South-South and triangular co-operation (SSTrC) can help achieve sustainable development through, inter alia, addressing climate change (UNGA, 2019, paragraph 18[31]). The document also calls upon all countries to strengthen efforts in the implementation of the 2030 Agenda by promoting economic, social and environmental dimensions of sustainability, including through SSTrC (paragraph 24 (b)), as well as the dissemination and diffusion of environmentally sound technologies to developing countries (paragraph 24 (h)).

This report builds the evidence base on green triangular co-operation. The report is organised in three chapters. The first chapter looks at the latest trends in green triangular co-operation. These findings are based on the results of an OECD survey on triangular co-operation (OECD, 2016[23]), additional research, project information and data shared in the OECD's online project repository, as well as consultations with triangular co-operation project managers from countries and international organisations. The second analyses how green issues are addressed through triangular co-operation and what lessons emanate from interviews and project evaluations (looking at case studies involving a range of facilitator and pivotal countries and institutions: Brazil, China, Costa Rica, Denmark, Germany, Islamic Development Bank, Japan, Mexico, Morocco, Switzerland, Thailand and the United Nations Development Programme). The third chapter concludes the report with an overview of what is hindering further use of green triangular co-operation. This chapter proposes a few avenues for further research and to overcome existing barriers.

Chapter 1. Trends in green triangular co-operation

This chapter provides an overview of recent green triangular co-operation trends, using the OECD Triangular Co-operation Project Repository. The chapter looks at the partners engaged, the geographic and sector distribution, the objectives pursued through green triangular co-operation projects (local environmental issues, climate change mitigation and adaptation, biodiversity and desertification), as well as typical activities, budgets and project lengths. The analysis is complemented with the data from the OECD Creditor Reporting System and, when available, existing literature.

1.1. Green development co-operation and triangular co-operation

Development co-operation providers are central when it comes to supporting partner countries in achieving a better local environment and to help them with global environmental challenges. Many of the contributions to green outcomes in partner countries have come from development co-operation budgets, i.e. official development assistance (ODA), e.g. see the contributions of climate finance channelled as ODA to partner countries (Klöck, Molenaers and Weiler, 2018[17]). In 2017, the providers of the OECD Development Assistance Committee (DAC) alone committed USD 89.3 billion in ODA for green issues. Table 1.1 provides an overview of these ODA amounts. These can be broken down by green area, although overlaps across environmental areas do not allow for these figures to be added up. In addition, multilateral development banks and other international organisations' reporting to the OECD provided USD 31.5 billion in climate finance in 2017.[2] While these figures alone give an indication of the relatively large magnitudes of green ODA, one could still add what non-DAC donors, such as Brazil, China or Arab Gulf donors, also commit for these purposes.

Table 1.1. ODA commitments tackling green objectives in 2017, USD billion

		Principal Objective	Significant objective
DAC members Rio Markers methodology	Local environmental issues	11	23.5
	Climate change adaptation	5.8	12.5
	Climate change mitigation	9.4	11
	(Both climate change adaptation and mitigation)	(3.4)	(4.8)
	Biodiversity	3.5	5.2
	Desertification	0.4	2.6

Note: The OECD uses the Rio Markers methodology scoring system of three values, in which development co-operation activities are 'marked' as targeting the environment or the Rio Conventions with a 'principal' or 'significant' objective, or as not targeting the objective. One activity can address several policy objectives at the same time, since the three Rio Conventions and local environmental objectives are mutually reinforcing. Therefore, overlaps need to be taken into account and marker data cannot be simply added (e.g. the category 'both climate change adaptation and mitigation' needs to be deducted from the categories 'climate change mitigation' and 'climate change adaptation') to obtain total climate-related ODA (OECD, 2011[32]).
Source: OECD Creditor Reporting System, https://stats.oecd.org/Index.aspx?DataSetCode=CRS1 (OECD, n.p.[33]).

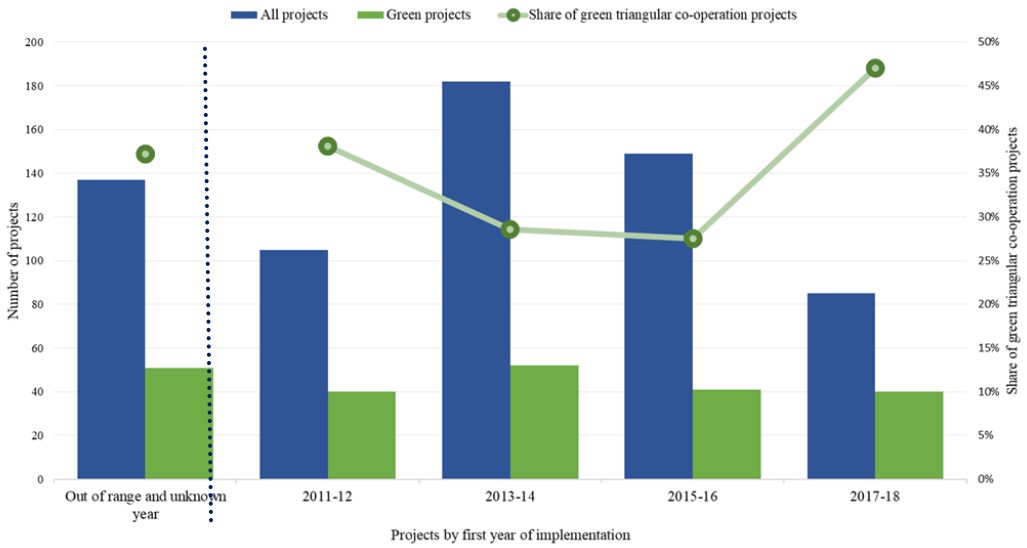
The literature and work on green development co-operation has been focusing on a range of topics, including green growth, green finance and investment, tracking public and private financial flows, financing by philanthropic organisations, and looking at the effectiveness of these interventions (Hicks et al., 2008[34]; OECD, 2013[35]; Alova, Orihuela and Karousakis, 2018[36]; OECD, 2014[3]; Crishna Morgado and Lasfargues, 2017[37]). The OECD DAC Peer Reviews[3] systematically look at how providers plan and implement their green development co-operation activities. The Peer Reviews have found that while development finance is increasingly supporting global environmental issues, mainstreaming in development co-operation portfolios is relatively low (OECD, 2019[38]).

There is no specific literature looking at green triangular co-operation, except Kato (2013[18]), and, as mentioned, most of this literature takes a traditional view, whereby triangular co-operation is a modality used to leverage South-South co-operation.[4] Moreover, while OECD DAC Peer Reviews look at triangular co-operation, they place no particular focus upon green triangular co-operation. Furthermore, in a survey conducted in 2018 on DAC members' priorities and activities on environment and development

co-operation, no member mentioned SDG 17 as a priority – although partnerships with the private sector and, in a few cases, with civil society were mentioned. Most members mentioned the importance of bilateral, multilateral and regional modalities of development co-operation – but no member mentioned triangular co-operation (OECD, 2019[38]).

As indicated earlier, green triangular co-operation is defined here as triangular co-operation activities that target local environmental issues, such as tackling water pollution, waste disposal or enhancing air purity; as well as global environmental goods, such as adapting and mitigating climate change, stopping biodiversity loss or desertification. Despite the difficulties that exist to quantify triangular co-operation generally (UNOSSC and South Center, 2017[19]; SEGIB, 2017[21]),[5] the evidence gathered for this report, drawing on the OECD triangular co-operation repository, shows that green triangular co-operation represents 34% of all triangular co-operation projects on average for the period 2011-18 and that this figure is relatively stable over time (with an average of 42 projects per annum), notably compared to the swings in total triangular co-operation projects (see Figure 1.1).

Figure 1.1. Green triangular co-operation represents a sizeable share of all triangular co-operation projects



Note: N all = 658; N green = 224. Project tallies depend on their first year of implementation. The OECD receives projects on on-going basis and is still gathering data on 2017-18. Therefore, data for 2017-18 is still limited and lower than previous years.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

1.2. Recent trends in green triangular co-operation

The OECD has conducted two surveys on triangular co-operation, in 2012 and 2016. These surveys show an upward trend for triangular co-operation (see Figure 1.1). The number of triangular co-operation projects as well as their budgets and average project length are increasing - a fact also confirmed by other institutions such as the Ibero-American General Secretariat (SEGIB) or the UNOSSC (UNOSSC and South Center, 2017[19]). For example, in Latin America and the Caribbean the amount of triangular co-operation projects increased seven-fold over 2008-18 (SEGIB, 2017[21]). There is a great variety of triangular co-operation in terms of scale, scope, regions, sectors and project types. Moreover,

respondents to the OECD survey of 2015 mentioned a more strategic use of triangular co-operation by pooling different actors' expertise and resources, including for green projects.

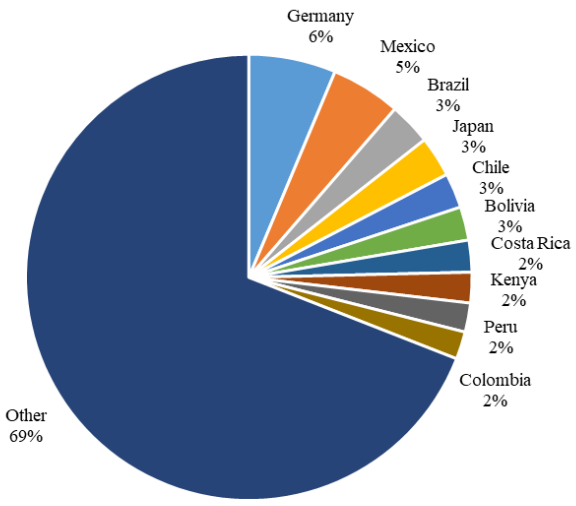
The surveys, database and the work of the Global Partnership Initiative (GPI) on effective triangular co-operation are the starting point of the present analysis, helping fill a gap in understanding the nature of green triangular co-operation.

The OECD database includes 132 green triangular co-operation projects. Out of the 63 survey respondents, 40 countries and international organisations reported green projects. Additional research and information helped uncover a further 92 projects from 12 additional partners. In total, there are 224 green triangular co-operation projects in which at least one of their years of implementation takes places in the period 2014-18 or for which project dates are known to fall in this range but exact information is missing. The next sections illustrate the main trends in green triangular co-operation using this database.

1.2.1. Partners engaged in green triangular co-operation

The top ten participants in green triangular co-operation projects over 2014-18 are Germany, Mexico, Brazil, Japan, Chile, the Plurinational State of Bolivia, Costa Rica, Kenya, Peru and Colombia (see Table 1.2). These 10 countries account for about 30% of all green triangular co-operation (see Figure 1.2). These findings are consistent with the overall triangular repository, although some partners (such as Guatemala or India) are prominent in triangular co-operation activities but do not target green issues. Among the facilitating partners in green triangular projects, the largest ones were Germany, Japan, Norway, Spain and the Czech Republic, similarly to the overall triangular database.

Figure 1.2. Countries participating in green triangular co-operation



Note: N=950, which is the sum of the times that each country has been involved in triangular co-operation projects. For instance, Germany 6% means that Germany was participating in 60 projects (projects in which other countries might have also participated).
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

These countries are also some of the largest providers of green ODA worldwide, thus displaying coherence across their modalities of development co-operation. For example,

Germany and Japan are among the top donors for biodiversity, desertification, climate change or the environment over 2014-17. The next sections provide case studies illustrating how Germany and Japan engage in green triangular co-operation. At the same time, some other green ODA providers appear less active in green triangular co-operation (e.g. France, the United Kingdom or the United States) in the OECD database.[6]

Among the pivotal countries engaged in green triangular co-operation are several dual recipient-provider countries, known for having strong sustainable development pathways, i.e. Costa Rica (Berbegal-Ibanez et al., 2019[40]) or Colombia (OECD, 2014[3]), some of which have also been important beneficiaries of green ODA (e.g. Mexico or Colombia for biodiversity ODA). Among the green triangular co-operation beneficiary countries are also some of the largest green ODA beneficiaries (e.g. Bolivia for biodiversity or desertification, Brazil for environmental ODA, or Kenya for desertification ODA) and other countries that are less prominent green ODA recipients (e.g. Burkina Faso, Jamaica, Timor-Leste). These findings are consistent with the overall triangular co-operation repository, although a few countries are more prominent in green triangular co-operation projects compared to their overall engagement in triangular initiatives, such as Ecuador, and others are more active in overall triangular co-operation than in green triangular co-operation, such as Indonesia.

Table 1.2. Top partners engaged in green triangular co-operation over 2014-18

Country and Role	Projects involved
Germany (F)	60
Mexico (P)	48
Brazil (P,B)	29
Japan (F)	28
Chile (P)	24
Bolivia (B)	23
Costa Rica (P,B)	22
Kenya (B)	21
Peru (P,B)	20
Colombia (P,B)	19
Mozambique (B)	17
China (P)	16
Guatemala (B)	16
Honduras (B)	16
Spain (F)	16
El Salvador (B)	15
Norway (F)	14
Uganda (B)	14
Argentina (P)	13
Ecuador (B)	13

International Organisation	Projects involved
United Nations Development Programme (UNDP)	20
OPEC Fund for International Development (OFID)	16
European Union	13
World Tourism Organization (UNWTO)	8
Community of Latin American and Caribbean States (CELAC)	8
Food and Agriculture Organization (FAO)	7
Global Environmental Facility (GEF)	7
United Nations Industrial Development Organization (UNIDO)	6
Islamic Development Bank (IsDB)	6
International Fund for Agricultural Development (IFAD)	5
World Bank (WB)	5
United Nations Environment Programme (UNEP)	3
Inter-American Development Bank (IADB)	2
World Food Programme (WFP)	2
Union of South American Nations (UNASUR)	2
Inter-American Institute for Cooperation and Agriculture	2
United Nations Educational, Scientific and Cultural Organization (UNESCO)	2
United Nations Office for South-South Cooperation (UNOSSC)	1
United Nations Children's Fund (UNICEF)	1
International Labour Organization (ILO)	1

Note: N = 224. Countries' roles refer to them being pivotal (P), facilitator (F) or beneficiary (F) countries. All international organisations are facilitators.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

The top international organisations participating in green triangular co-operation projects (see Table 1.2) are the United Nations Development Programme (UNDP), the OPEC Fund for International Development (OFID), the European Union, the United Nations World Tourism Organization (UNWTO), the Community of Latin American and Caribbean States (CELAC), the Food and Agriculture Organization (FAO), the Global Environmental

Facility (GEF), the United Nations Industrial Development Organization (UNIDO), the Islamic Development Bank (IsDB), the International Fund for Agricultural Development (IFAD) and the World Bank. These findings are consistent with the main international organisations engaged in the overall triangular co-operation initiatives. All of these international organisations participate in green triangular co-operation as facilitating partners, following the traditional understanding of triangular co-operation as enabling South-South exchanges (see Annex A). Among these organisations, the multilateral development banks are important providers of green ODA (Crishna Morgado and Lasfargues, 2017[37]), providing USD 31.5 billion in 2017.

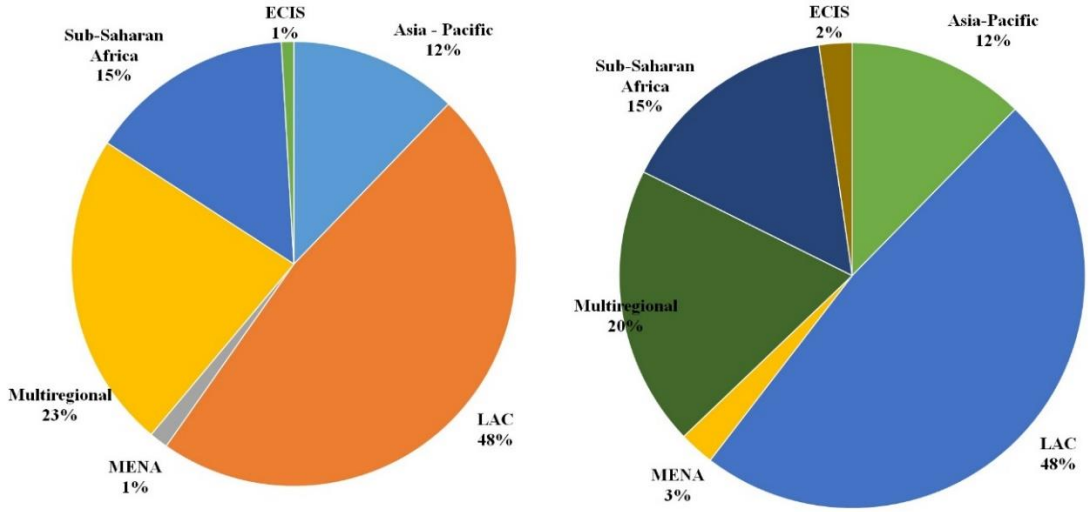
In addition to governments and international organisations, 49% of the reported projects over 2014-18 involved non-state actors, such as universities and research institutions, the private sector or civil society organisations. This is coherent with general triangular co-operation patterns, as almost half of the overall projects reported to the OECD (47%) are supported by partners beyond governments and international organisations (GPI, 2019[15]).

1.2.2. Geographic distribution of green triangular co-operation

Most green triangular projects are implemented in Latin America and the Caribbean (LAC, 48%) followed by trilateral initiatives among two or more regions (multi-regional, 23%), sub-Saharan Africa (15%) and Asia-Pacific (12%, see Figure 1.3 and **Error! Reference source not found.**). Latin America and the Caribbean has a predominant share in green triangular initiatives, which is probably due to the fact that the LAC region supports a rich biological diversity, with around sixty per cent of global terrestrial life (UNEP, 2016[41]). Latin America and the Caribbean is also likely to endure climate change impacts with important implications for the region's development (Reyer et al., 2015[42]). Moreover, while Latin America and the Caribbean only produces 5% of global emissions of greenhouse gases, its contribution to global figures is increasing due to the industry and transport sectors (Energy Transitions, 2018[43]). This contrasts with green ODA trends, where the LAC region is less prominent, probably due to the fact that the levels of development are higher and so donors are investing less than would be needed, notably in the environmental arena. In fact almost half of the countries in the region are upper middle-income countries and many traditional providers are slowly phasing out their bilateral co-operation in the region, as for example happened recently in Chile (OECD, 2019[44]). In such cases, triangular co-operation is a tool that could be used to continue sharing knowledge and experiences among countries in the region and beyond.

Figure 1.3. Triangular co-operation projects by region of implementation

Green triangular co-operation projects (left) and overall triangular co-operation projects (right)



Note: N green = 224. N overall = 658. MENA refers to Middle East and North Africa. ECIS refers to Europe and the Commonwealth of Independent States.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

Despite the importance of LAC for green triangular co-operation, the region is less engaged in cross-regional exchanges (4% for Africa and 3.6% for Asia-Pacific), compared to Africa and the Asia-Pacific regions (12.5% of the projects), which may be explained by the fact that the LAC region is relatively homogeneous and intra-regional triangular exchanges are common and historically well-established, documented and organised (SEGIB, 2017[21]).

1.2.3. Sector distribution of green triangular co-operation

In terms of sectors, 24% of the green triangular co-operation projects deal with general environmental protection activities,[7] followed by the agriculture (18%) and energy sectors (17%). These sectors account for over half of all green triangular co-operation projects (59%), followed by water and sanitation (8%), disaster risk management (7%) and business (6%). Other green sectors, such as forestry or waste management, account for 4% each. These findings are not surprising in a green context but differ from those of the overall triangular database, where 27% of the projects target government and civil society, followed by agriculture (20%) and the environment (12%). These sectors account for more than half of the overall triangular co-operation projects (see Figure 1.4 and **Error! Reference source not found.**). These trends are coherent, however, with green ODA trends. For example, desertification and biodiversity-related ODA often target the agriculture and water sectors; while environmental and climate-related ODA target the energy sector.

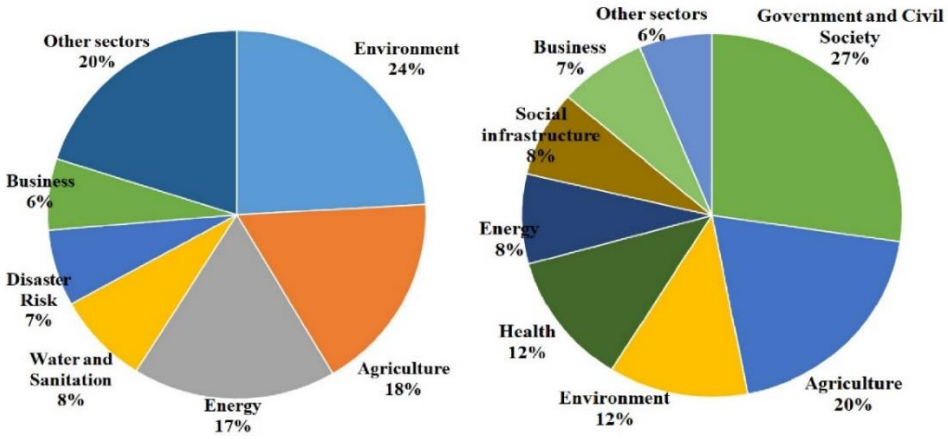
1.2.4. Focus of the green triangular co-operation

Most of the green projects have a green 'principal' objective, indicating that the projects would have not gone ahead without the original green motivation (70.6% of the projects, see Table 1.3). For the remaining 29.4% of the projects, green issues are 'secondary', meaning that they are integrated into triangular co-operation activities with other primary

objectives. By doing so, projects capitalise on green co-benefits with other development-related areas and also display the degree to which green issues have been mainstreamed into triangular co-operation. Most of the projects were environment- (41.1%) or climate-related (40.6%), and these were predominantly having a 'principal' objective. Relatively few projects were reported with a desertification-related aim.

Figure 1.4. Triangular co-operation projects by sector

Green triangular co-operation projects (left) and overall triangular co-operation projects (right)



Note: N green = 224. N overall = 658. Sectors under 5% threshold are classified under 'other sectors'. *Source*: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

At the same time, the database only has four instances of four projects where the principal objective was to conserve or sustainably use the oceans, seas and marine resources, and five more with a secondary objective. All in all, this represents 4% of all green triangular co-operation projects, suggesting that there is scope to increase 'blue' projects in the area of triangular co-operation in the future.

Table 1.3. Green triangular co-operation projects classified by objective

Targeted area of the triangular co-operation activity	Projects where this is the 'principal' objective	Projects where this is a 'secondary' objective	Total
Environment	29.5%	11.6%	41.1%
Climate Change Adaptation and/or Mitigation	27.2%	13.4%	40.6%
Biodiversity	12.9%	4%	16.9%
Desertification	1%	0.4%	1.4%
TOTAL	**70.6%**	**29.4%**	100%

Note: The authors attributed the green component of the triangular co-operation projects (N= 224), so the attribution can only approximate actual project objectives. For example, some adaptation activities help conserving biodiversity, so the main objective will depend on the context of the project. In such cases, the authors prioritised an objective based on available project information. N environment= 92; N climate= 91; N biodiversity= 38; N desertification= 3.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

Although there is no information yet on how much ODA flows for 'brown' activities (i.e. activities that can be deemed as unsustainable, or contrary to the philosophy of the SDGs), the OECD triangular co-operation database only found an example of what could be considered a 'brown' project (a gas project). The fact that no 'brown' projects were reported suggests that providers either did not report these type of activities or, more likely, that providers primarily resort to green or, at least, 'do no harm' projects when using the triangular co-operation modality. This may be due to greater ownership by the target group in triangular co-operation, leading to sustainable development considerations being integrated from the onset. If that were the case, triangular co-operation would be a modality that is ready-to-use for the next generation of development co-operation, where sustainable development issues need to be at the core of all activities.

1.2.5. Typical activities, budgets and project duration

Green triangular co-operation takes place mainly through project-type interventions, e.g. through technical co-operation activities. Training and dispatching experts, e.g. for seminars, workshops and exchange visits, also occurred frequently, notably in triangular co-operation projects targeting biodiversity issues. These activities are in line with overall triangular co-operation activities. A recent report in the area of climate change adaptation (UNFCCC, 2017[20]), however, notes a trend moving beyond *ad hoc* capacity-building SSTrC initiatives towards longer-term initiatives for a better appropriation of technologies, building relationships and capacity beyond the project (e.g. joint research, train the trainer programmes, networks and platforms on knowledge and technology). This finding is coherent with some of the literature (Rivero and Xalma, 2019[45]) and with the overarching trends of the OECD database on triangular projects targeting climate change adaptation and biodiversity, in which some projects aimed at building and strengthening local and institutional capacities through, for instance, scientific and technical exchange. One example of this are the Sustainable Agriculture for Climate Change Adaptation project of Norway, Thailand, Lao PDR, Sri Lanka and Cambodia, over 2010-17, which assisted small-scale farmers to adapt to climate change through sustainable agriculture techniques and appropriated technology. Another example is the Amazonia without Fire Program between Italy, Brazil, Bolivia, Ecuador and the Development Bank of Latin America (2010-18), which aimed at reducing the negative externalities of using fire in livestock and agriculture in the Amazon region by developing alternative practices to the use of fire. A third example is the EUROCLIMA+ programme (see Box 1.1).

Box 1.1. The EUROCLIMA+ Programme

EUROCLIMA+ promotes environmental sustainability and climate resilience, and reduces climate change and its effects in 18 countries in Latin America, with a particular focus on the most vulnerable people. The programme, funded by the European Union with co-financing from the German Federal Government through the Federal Ministry for Economic Cooperation and Development (BMZ) and the governments of France and Spain, supports the implementation of partner countries' Paris Agreement commitments in the fields of climate governance, financing and technical assistance for the execution of projects. The programme strengthens the capacities of partner countries to mitigate and adapt to climate change through strategic dialogue and knowledge management (notably by actively promoting and financing South-South Co-operation among Latin American

countries), and implements actions in the following sectors: (a) forests, biodiversity and ecosystems; (b) energy efficiency; (c) water management with an urban resilience perspective; (d) disaster risk management and reduction; (e) urban mobility; and (f) resilient food production.

The programme follows the following principles:

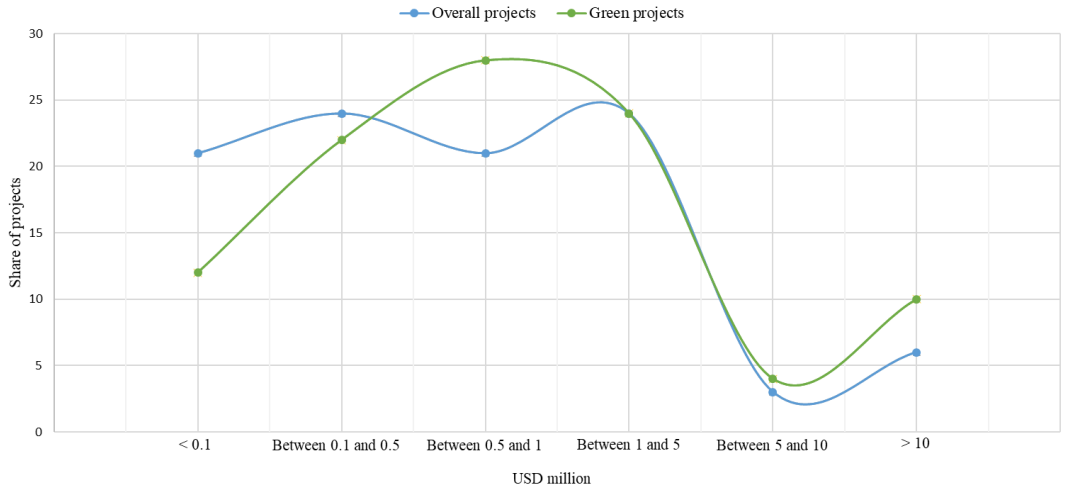
- Demand-oriented: EUROCLIMA+ responds to the needs of Latin America through close collaboration with partner countries.
- Participatory approach: strategic decisions are taken in jointly by partner countries, EU Member State (AECID, AFD, Expertise France, FIIAPP and GIZ) and United Nations (ECLAC and UN Environment) implementing agencies, the European Commission and the Programme Secretariat.
- South-South Co-operation: EUROCLIMA+ promotes south-south co-operation through multi-country and regional initiatives.
- Scaling and replication: EUROCLIMA+ supports climate actions that can be scaled up, combined and/or replicated across partner countries.
- Access to climate finance and investment: the programme helps to mobilise climate funds and access sources of international climate finance.

The predecessor programme, EUROCLIMA, was launched in 2010. The current programme, EUROCLIMA+, has been implemented since 2017. Commitments to date amount to EUR 144 million, or approx. USD 160 million.

Source: EUROCLIMA+, http://euroclimaplus.org/inicio-es/quienes-somos (EUROCLIMA+, n.d.[46])

The typical budget for green triangular projects is relatively larger than those for all triangular co-operation projects (see Figure 1.5). The median of the triangular co-operation projects is USD 1.7 million, compared to USD 2.1 million of green triangular co-operation projects. Especially when it comes to renewable energy projects, we find relatively large volumes. Costs were shared among partners in 51% of the green projects, higher compared to the general database (45%), which is probably reflecting the fact that green projects imply slightly more technology transfer or include more infrastructure-related activities.

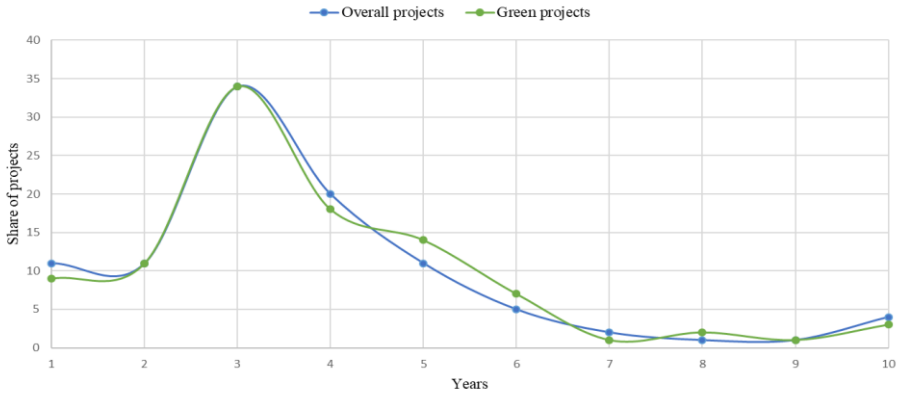
Figure 1.5. Green triangular co-operation projects have bigger budgets than overall triangular co-operation activities



Note: The analysis is based on N=495 for the overall database and N=170 for the green subset.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

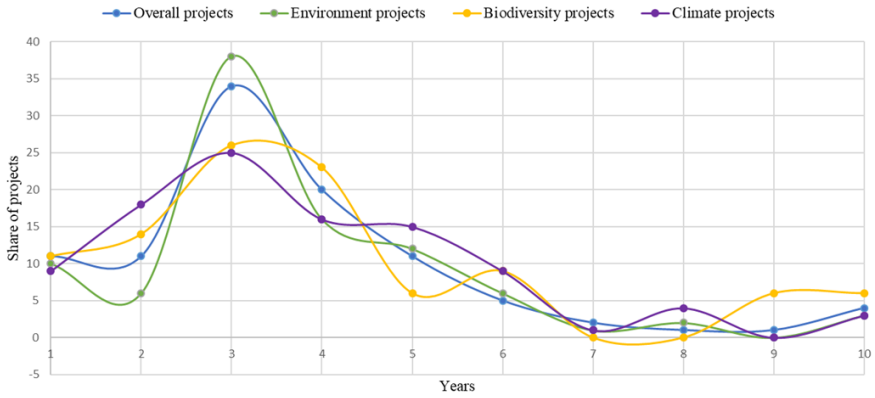
Regarding project durations, there are no stark differences between green and overall triangular co-operation projects. Most green triangular co-operation projects last between 2 and 3 years (34%), which is similar to overall triangular co-operation projects (33.8%, see Figure 1.6). Interestingly, climate-related projects are longer than the average overall triangular projects (48% of projects are longer than 4 years), 40% of environment-related triangular initiatives lasts between 3 and 4 years, and 12% of triangular projects targeting biodiversity issues lasts more than 9 years (see Figure 1.7).

Figure 1.6. Green triangular co-operation by project duration, compared to the overall OECD Triangular Co-operation Project Repository



Note: The analysis is based on N=580 for the overall database and N=170 for the green subset.
Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

Figure 1.7. Environment, biodiversity and climate triangular co-operation by project duration, compared to the overall OECD Triangular Co-operation Project Repository



Note: The analysis is based on N= 580 for the overall database, N environment= 94, N climate= 79 and N biodiversity= 35. Some projects can tackle more than one green dimension. Therefore, projects can be included in more than one group in this figure. Climate-related projects include projects targeting climate adaptation and/or mitigation. Desertification projects available at the OECD Triangular Co-operation Project Repository are limited and so were excluded.

Source: OECD Triangular Co-operation Repository of Projects, http://www.oecd.org/dac/triangular-co-operation/triangular-co-operation-repository.htm (OECD, n.d.[39]).

Chapter 2. Addressing green issues through triangular co-operation: good practices from case studies and evaluations

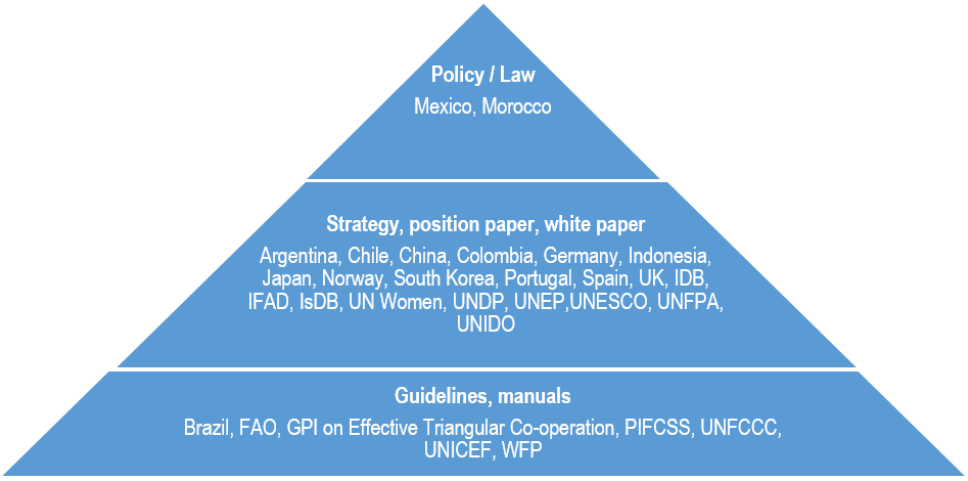
This chapter looks at the context in which green triangular co-operation takes place, as well as illustrates with concrete case studies some of the benefits of green triangular co-operation, notably on transferring solutions within and across regions; mainstreaming green triangular co-operation across organisations; and developing more adapted capacity building. These benefits are illustrated through case studies that have been evaluated and through interviews of project managers.

Green triangular co-operation represents a sizeable share of overall triangular co-operation activities. While the previous chapter was charting the ground on green triangular co-operation from a quantitative perspective, the present chapter takes a qualitative approach and focuses on how countries engage in green triangular co-operation.

2.1. Green triangular co-operation: aligning development policies with various environmental commitments

Despite the growing interest and political attention, only 26 countries and international organisations have developed specific policies, strategies or guiding documents for their triangular co-operation (see Annex A and Annex B). For the majority of these, triangular co-operation is guided either by their foreign policy (e.g. Argentina, Chile, United Kingdom) or their overall development co-operation strategy (e.g. China, Portugal). At times, these strategies include a reference to triangular co-operation (e.g. Japan, Korea, Spain).

Figure 2.1. Countries and international organisations with policies, strategies or guidelines for triangular co-operation



Source: Enabling Effective Triangular Co-operation (Piefer-Söyler, Yukizawa and Kifukwe, 2020, forthcoming[47])

Among these countries and institutions, nine mention green objectives in their triangular co-operation documents explicitly (i.e. Argentina, Brazil, Colombia, Spain, UNESCO, UNFCCC, World Food Programme, the Inter-American Development Bank and the Islamic Development Bank). In another six cases, countries and institutions mention triangular co-operation and green objectives but do not link these explicitly (i.e. Chile, Japan, Korea, Mexico, UNEP and UNIDO). Finally, 10 countries and institutions that have a triangular co-operation document, do not mention green objectives (i.e. China, Germany, Indonesia, Norway, Portugal, International Fund for Agricultural Development, UN Women, UNFPA, UNICEF).

At the same time, governments are increasingly committing to green their development pathways, which can be observed in the formulation of a number of domestic plans, programmes and strategies, which include sections dedicated to international co-operation. Given the international mandate to work on triangular co-operation, the paper also looked

at whether this mandate is echoed in national climate change adaptation, mitigation, biodiversity and desertification plans or strategies. For this purpose, the paper reviewed available documents looking for references to triangular co-operation:[9]

- With the Paris Agreement, nearly all governments agreed to establish national roadmaps for decarbonisation – the nationally determined contributions (NDCs). The NDCs can be considered as national climate plans with targets, policies and actions for governments in the field of climate change adaptation and mitigation. They are nationally determined, thus tailored to national circumstances, ideally with a view towards integrating climate policies and actions with social and economic development priorities and therefore directly linked to the SDGs (UNFCCC, 2016[48]). To date, 184 parties have submitted NDCs to the UNFCCC and the Marshall Islands has even submitted a second NDC (UNFCCC, n.p.[49]).
- The UNFCCC Cancun Adaptation Framework (2010) called for the development of National Adaptation Plans (NAPs) in all developing countries. NAPs were meant to guide them into comprehensive, long-term planning for adaptation. NAPs aim to reduce developing countries' vulnerability to the impacts of climate change by building adaptive capacity and resilience. They also seek to enhance the coherence of adaptation and development planning within countries and facilitate country-owned, country-driven action. As of now, 43 countries have submitted adaptation plans and strategies to the UNFCCC (UNFCCC, n.p.[50]).
- Countries have to prepare National Biodiversity Strategies and Action Plans (NBSAPs) under the CBD (Article 6). The NBSAPs need to ensure mainstreaming into the planning and activities across sectors with activities that can impact biodiversity. To date, 190 Parties have developed NBSAPs in line with Article 6 tp date (CBD, n.p.[51]).
- One of the obligations under the UN Convention to Combat Desertification (UNCCD) is the formulation of National Action Programme for Combating the Phenomena of Desertification (NAPCDs). To date, 121 action programmes have been submitted to the UNCCD. (UNCCD, n.p.[52])

Table 2.1 provides an overview of the results of the analysis, namely, that only four countries mention triangular co-operation in one of these documents, which are meant to not only guide implementation of biodiversity, desertification, climate change adaptation and mitigation domestically, but also reflect how these activities ought to be implemented. Triangular co-operation is only mentioned in the plans of Algeria, Argentina and Mexico for the case of biodiversity; and in Colombia's NDC.

Table 2.1. Countries mentioning triangular co-operation across green planning tools

International instrument	Number of documents reviewed	Mention of triangular co-operation	Share of total	Countries
National Biodiversity Strategy and Action Plan (NBSAPs)	188	3	1.6%	Algeria Argentina Mexico
Nationally Determined Contributions (NDCs)	193	1	0.5%	Colombia
National Action Programme to Combat Desertification (NAPCDs)	35	0	-	-
National Adaptation Plan (NAPs)	31	0	-	-

Note: Documents reviewed in December 2018.
Source: CBD NBSAPs Repository, https://www.cbd.int/nbsap/search/default.shtml (CBD, n.p.[51]), UNFCCC NDCs Repository, https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx (UNFCCC, n.p.[49]), UNCCD NAPCDs Repository, https://www.unccd.int/convention/action-programmes (UNCCD, n.p.[52]), UNFCCC NAPs Repository, https://www4.unfccc.int/sites/napc/Pages/Home.aspx (UNFCCC, n.p.[50]).

Argentina and Colombia are the only countries that have started building bridges among their triangular and green communities, which is a surprising finding that contrasts with previous studies, which point at countries having accumulated technologies and innovative solutions on green issues that can be shared through trilateral activities (Hosono, 2013[14]; UNFCCC, 2017[20]; UNOSSC and South Center, 2017[19]). The finding also contrasts with the previous chapter, where a stable trend in green triangular co-operation was observed, particularly important in the LAC region. This begs the question why triangular co-operation is not mentioned in these documents. Our guiding hypothesis to answer this question is lack of awareness among the green community of the potential benefits of triangular co-operation in their area; no obligation to report or communicate specifically on triangular co-operation when reporting internationally on these items; or a lack of labelling trilateral initiatives as such, and thus having many activities happening 'under the radar'. This is also partly a consequence of the fact that triangular co-operation is only gaining relevance recently (OECD, 2016[23]; BAPA+40, 2019[30]) and partly due to limited evidence on trends (see previous section 1.2 above) and good practices (see 2.1.1 below). At the same time, it is telling that three out of the four countries that mention triangular co-operation in these documents are doing so in the area of biodiversity, and that the CBD is the only green agreement that has explicitly referred to triangular co-operation as a means of implementation.

Summing up, if triangular co-operation is to gain traction, then countries ought to develop further policy documents that explicitly refer to this modality and, in doing so, to how this modality can tackle green objectives. At the same time, bridges ought to be built to reach out to the green community, to raise awareness amongst this community about the benefits of this modality to achieve their goals, on the need to report on the use (or possible use) of this modality, and more efforts need to be dedicated to ensure that multilateral organisations and banks, notably in the green space, give also more space in their operations to this modality.

2.1.1. Green triangular co-operation: leveraging the impact of this modality

Triangular co-operation fosters co-operation between countries of the 'South' and the 'North' in multi-directional ways. As such, triangular co-operation can be a way to improve the performance of development co-operation for the environment, given that it allows for greater realism in describing, designing and expecting change in the complex systems that environmental ODA typically sought to influence (Caldecott, 2017[53]). And green triangular co-operation may have benefits beyond the green domain, e.g. to raise awareness of own competencies, to improve domestic co-ordination and to foster relations with other countries (MRREC, MIDEPLAN and AECID, 2018[54]). Below are a selection of case studies that illustrate some of these benefits, in particular to (a) transfer solutions within and across regions; (b) mainstream green triangular co-operation across operations; and (c) developing more adapted capacity building. All of these areas display greater impact than would have otherwise been and this greater impact is due to the triangular component, according to the evaluations consulted and interviews conducted for the report.

Transferring local green solutions within regional contexts

For some green issues, triangular co-operation may be an optimal way to capitalise on the knowledge and experiences of certain pivotal countries. Triangular co-operation can make the most out of these experiences either by replicating, updating or even scaling up to other contexts within the immediate regional context of the pivotal country, which may be suitable when geo-climatic (and, often, socio-economic) conditions are similar.

As seen earlier, Germany is one of the most active green triangular co-operation players. Germany has been promoting local environmental issues through its Regional Fund for Triangular Co-operation in Latin America and the Caribbean. The Fund is implemented by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The Fund promotes triangular co-operation across a range of themes, in particular public policies for sustainable development through capacity development, a regional platform to exchange experiences and knowledge, and political dialogue (GIZ, 2017[55]). All partners need to contribute to triangular projects, either in kind or financially, with the German contribution never exceeding USD 330 000.

The Regional Fund usually leads to one of the most frequent constellations to implement a triangular activity, that of a DAC member collaborating with two partner countries, one of which taking a pivotal role, while the other being the beneficiary of the intervention. Using this framework, Germany established a partnership with Mexico (pivotal partner) and Bolivia (beneficiary partner) to reuse treated wastewater for agricultural purposes (see Table 2.2).

Table 2.2. Green triangular co-operation can be successfully scaled-up for greater impact

Project title:	**Reuse of treated wastewater for agricultural purposes**
Countries/IOs:	Bolivia, Germany, Mexico.
Objective:	Sustainable cross-sector and participatory strategies for improving wastewater treatment are developed and implemented, thus helping to improve food security and contain the spread of diseases caused by contaminated water and agricultural produce.
Budget:	USD 680 000 (Bolivia: USD 80 000; Mexico and Germany: USD 300 000 each).
Project period:	2014-16 (building upon previous project 2011-13).

Source: GIZ - Triangular cooperation between Mexico, Bolivia and Germany: promoting the reuse of recycled wastewater for agricultural irrigation in Bolivia, https://www.giz.de/en/worldwide/12980.html (GIZ, 2019[56])

An evaluation of the Mexico-Bolivia-Germany triangular project considered it highly successful, achieving good results and impact. Interestingly, the project scaled-up a previous triangular project (2011-13) with the same partners and that had already achieved positive outcomes. Scaling-up the project benefitted from good relations between the participating partners in Bolivia and Mexico, notably at the municipal level. It fostered the systematisation of experiences across countries and their transfer to the national level policy agenda. In fact, the success of the project lied precisely on its triangular set up: multiple perspectives were put forward through a mixed commission (where all three countries were represented and that helped co-ordinate political and administrative stakeholders across levels of governance) to deal with a complex local environmental issue. The mixed commission ensured that the project was highly efficient and effective, fostering dialogue on water-related issues among stakeholders and experts. As a result, the impact of the project was greater than initially expected, notably at the national level (Cortez and Fernández Trillo, 2017[16]).

Another example shows how a green triangular co-operation activity can be scaled up successfully from a previous arrangement, also among countries in the LAC region. Switzerland had been supporting Nicaragua since 2012 in the area of water supply and sanitation access in rural communities, but faced challenges when reaching out to small urban areas. To meet these challenges, Switzerland reached out to Brazil, where a particular sewage model was in operation in Brasilia, which could fit well to the Nicaraguan context. With the project, Nicaragua adapted Brazilian systems and technology to its own context, reducing pollution from uncontrolled discharges into water streams. In addition, the three partners disseminated the findings at the regional level, with trainings for 70 experts from Costa Rica, Honduras, El Salvador, Panama and the Dominican Republic. Among the success factors behind the project were fluid and objective communication flows among the three partners, which facilitated technical assistance, and Switzerland's role as link and co-ordinator of the initiative (Inaa et al., 2018[57]).

Achieving global goals across regions

As seen in the previous chapter (see 1.2.2 above), cross-regional triangular initiatives are relatively less common than intra-regional activities. Yet, cross-regional green triangular activities can also deliver important results. Germany's Regional Fund has promoted triangular projects on climate change adaptation by leveraging indigenous knowledge, solutions and technology in its triangular activities (GIZ, 2017[55]). In this context, Germany implemented a project with Costa Rica and Morocco (see Table 2.3), a project that builds across environment-related areas (in this case climate change adaptation, biodiversity and local environmental issues) in two seemingly different contexts, yet facing similar environmental pressures and capacity challenges. A recent project evaluation considered this project good practice in the field of triangular co-operation (Cortez and Fernández Trillo, 2017[16])

Table 2.3. Green triangular co-operation can have impact beyond a region

Project title:	Improving the management and sustainable use of forests, protected areas and watersheds in the context of climate change
Countries/IOs:	Germany, Costa Rica, Morocco
Other partners:	Fundación de Cooperación para el Desarrollo Sostenible
Objective:	The project aimed at: (a) improving the management of watersheds in Costa Rica using Moroccan expertise; (b) adapting and consolidating the existing initiatives in Costa Rica to prevent forest fires; (c) contributing to the protection of biodiversity in Morocco through eco-tourism and the development of value chains, improving rural communities' socio-economic situation in a sustainable way; and (d) using the experience of Costa Rica in Payment for Ecosystem Services to design a scheme in Morocco.
Budget:	USD 900 000 (each partner: USD 300 000)
Project period:	2013-16

Source: Informe Transversal de las siete evaluaciones realizadas (Cortez and Fernández Trillo, 2017[16])

The project was based on strong horizontality, joint learning and mutual exchange, and sharing knowledge given the context of climate change. Sector policies, institutional frameworks and working methods of relevant partners from Morocco and Costa Rica were analysed and shared, focal points for co-operation identified and measures implemented in the following areas: watersheds, financing mechanisms in the forest sector, forest fire prevention tools, and approaches to harness the potential of protected areas. In fact, Costa Rica was facing problems with forest fires, soil erosion and water conservation, leading to loss of agricultural productivity and sedimentation of its rivers. Costa Rica had limited experience in managing watersheds or managing the impact of forest fires – areas where Moroccan support and knowledge could be relevant and pertinent. Similarly, Morocco had limited eco-tourism experience, an area where Costa Rica has ample experience, notably in valuing vulnerable protected areas and natural resources, in promoting their conservation and introducing payment for ecosystem services. The project evaluation concluded that the approach taken to design and implement the project ensured its success, allowing partners to go beyond expected results. The triangular co-operation design was central to ensure smooth co-ordination, facilitation and information exchange – because the project created a framework of trust between partners (Cortez and Fernández Trillo, 2017[16]).

Another example of work across regions are the Denmark-China-Ghana-UNDP and Denmark-China-Zambia-UNDP pilot projects. These projects exemplify how triangular co-operation can transfer technology in the area of climate change mitigation across and within regions (UNOSSC and South Center, 2017[19]). Both projects focused on transferring Chinese renewable energy technology by creating and strengthening enabling environments, regulatory frameworks for renewable energy technology deployment and up-scaling, and the removal of barriers for their introduction (see Table 2.4). The projects achieved substantial results, notably affordable clean energy access for poor rural communities and co-benefits in a number of areas (e.g. agriculture, education, forestry). Another aim of the project was also to foster a better and more coherent co-operation between China and countries in Africa, notably with capacity building from Denmark.

Table 2.4. Renewable energy projects in Ghana and Zambia

Project title:	**Renewable Energy Technology Transfer projects**
Countries/IOs:	China, Denmark, Ghana, Zambia, UNDP
Other partners:	Chinese Academy of Sciences (Zambia part)
Objective:	In Ghana: speed up off-grid community-based electrification, increase the share of renewable energy and promote the productive use of energy; support broader socio-economic and environmental objectives; create an enabling environment to absorb new technology in China to provide it appropriately, promote the production of renewable energy technology in Ghana through private sector development and inclusion; support and review China's policies and guidelines through capacity building. In Zambia: strengthen the enabling environment for the transfer and use of priority renewable technologies; remove market barriers to the adoption of renewable technologies for the rural poor; invigorate the Chinese capacity for development co-operation on renewable energies.
Budget:	USD 2.7 million (Ghana) and USD 2.6 million (Zambia)
Project period:	2014-18

Source: Climate Partnerships for a Sustainable Future: An initial overview of SSC on climate change in the context of sustainable development and efforts to eradicate poverty, https://www.unsouthsouth.org/2017/11/15/climate-partnerships-for-a-sustainable-future-an-initial-overview-of-ssc-on-climate-change-in-the-context-of-sustainable-development-and-efforts-to-eradicate-poverty-2017/ (UNOSSC and South Center, 2017[19]).

Denmark funded the triangular co-operation arrangement; while UNDP implemented both pilot projects and also facilitated, co-ordinated and provided the necessary oversight between all actors. China provided concrete experience and technical knowledge in the renewable energy sector to both Ghana and Zambia. These partners valued the innovative and holistic approach taken to transfer renewable energy technology with China, on the one hand, and among Ghana and Zambia, on the other hand, and then led to greater results than expected because of its triangular set-up.[10]

Mainstreaming green triangular co-operation

There are few successful examples of mainstreaming triangular co-operation and including it within large-scale investments or programmes. Notwithstanding, there is a promising example in the Islamic Development Bank's Reverse Linkage approach. The Bank introduced this modality in 2010 and offers a matchmaking platform to its member countries, facilitating and enabling a mutually beneficial arrangement among member countries to share expertise, knowledge and good practices to address specific development constraints or exploit unique opportunities in other member countries. The modality operates through systematic peer-to-peer interactions and capacity development that may promote cross-border investments, regional co-operation and leverage resources.

The Islamic Development Bank is the facilitating partner in all Reverse Linkage activities. Pivotal partners showcase technology and expertise, are exposed to a new environment, learn from partner country challenges, get a boost to their reputation and visibility, and may develop business and other long-term relations with the beneficiary country. Beneficiary partners obtain expertise and solutions in various domains, enhancing their capacity in a cost-effective manner and building on proven results, again with the possibility of developing long-lasting bilateral relationships. While the Bank provides grants for technical co-operation and concessional loans for infrastructure; pivotal and beneficiary partners also contribute financially or in-kind to a project (IsDB, 2018[58]).

Within the context of the Bank's continuous drive to implement sustainable and climate-compatible development investments and the launch of its Energy Sector Policy, Climate Change Policy and Action Plan (IsDB, 2019[59]), the Reverse Linkage approach becomes even more relevant from the perspective of green triangular co-operation. There are several examples where the Reverse Linkage approach has been applied to boost green investments. For instance, through the Reverse Linkage modality, the Islamic Development Bank is assisting Mali to develop its renewable energy infrastructure with the support of Morocco. The Bank's Energy Sector Policy has dedicated pillars for promoting renewable energy and knowledge transfer and dissemination among member countries. In addition, the Bank is familiar with Mali's challenges and the capacity gaps of the national energy supplier; and has collaborated with Morocco's energy authority and identified it as a potential source of expertise in its Partnership Strategy for Morocco.[11] A memorandum of understanding was signed between the Islamic Development Bank and the Moroccan Agency for International Cooperation to transfer Morocco's expertise to Mali. The co-operation model helped enhance the contribution of the Bank to the climate change agenda, while achieving other objectives such as developing rural electrification in sub-Saharan Africa and building the capacity of the executing agency of Mali. The project was signed as part of a Framework Agreement with Morocco to establish a Facility for Capacity Development and Preparation of Projects in the renewable energy sector, notably for rural areas, under the Reverse Linkage modality (IsDB, 2017[60]). The project will significantly contribute to the achievement of SDGs 7 and 13, aiming at providing universal and affordable access to clean energy. The Islamic Development Bank facilitates the exchange of expertise, technology and resources between the two countries. The budget of the project was USD 17 million (IsDB, 2017[60]). Other such Reverse Linkage projects, following the same approach, include the Bank, Morocco and Burkina Faso project in the water and sanitation area (Casado-Asensio and Piefer, 2018[61]) or the project between the Bank, Turkey and Bangladesh to enhance the capacity of Bangladesh's Cotton Development Board in cotton varieties development.

Building upon the IsDB's example, mainstreaming triangular co-operation across the operations of international organisations, notably those operating in the green space, such as the Global Climate Fund, the Global Environmental Facility or the UNFCCC Adaptation Fund could be a way to ensure that the investments of these organisations incorporate the triangular modality and thus, achieve greater results and impact. If mainstreaming were not possible, a dedicated triangular co-operation window could be launched as a first step. The Adaptation Fund, for example, already provides 'South-South Grants' in the field of climate change adaptation. Through its Readiness Programme for Climate Finance, the Fund aims to strengthen the capacity of countries to receive and manage climate financing and to adapt and build resilience to counter changing climate conditions. The programme also aims to advance direct access in developing countries and promotes the accreditation of National Implementing Entities from developing countries that are particularly vulnerable to the adverse effects of climate change. Such a model could be extended to the area of triangular co-operation.

Strategic green capacity building

Capacity building is at the core of how triangular partnerships can add value to partner countries. Triangular co-operation can tackle one particular challenge in the green area – the limitations in individual and organisational technical capacity, which are hindering the continuity of positive change initiated by development co-operation programmes (OECD, 2009[62]; OECD, 2018[63]). For example, the thematic evaluation of EU environment and

climate change programmes concludes that the success of interventions to build local capacity and improve the availability and access to biodiversity data might be undermined by constraints to maintain and further develop the databases in the future (European Commission, 2015[64]).

Through triangular co-operation, Japan has ample experiences in building the capacity of its partner countries building on its own climate change adaptation activities and its work as a bilateral provider of development co-operation. For example, with the BOSAI Project (2012-14), Japan worked with Thailand to build the capacity at all levels to cope with climate-related disasters using Japan's own experiences (Hosono, 2013[14]), and then transferred Thailand's approach (which was building upon Japan's) to Central America. The project led to effective mutual learning and the co-creation of innovative solutions among partners, leading to communities that are better prepared to cope with climate-related disasters (Hosono, 2013[14]). Another interesting example is the KIZUNA Project, which aims at exchanging knowledge through the training of 4 000 professionals in Chile and LAC and the creation of an expert network at the national and regional level. This project builds on previous co-operation between Chile and Japan, whereby Japan supported Chile to improve its disaster risk reduction systems. Through the project, this experience is now being scaled-up and shared with the LAC region, taking a systematic approach and greater dimension than previously, and promoting the establishment of a centre of excellence in Chile to sustain capacity over time (see Table 2.5).

Table 2.5. Disaster Risk Reduction Human Resources Training Programme for Latin America and the Caribbean

Project title:	KIZUNA Project
Countries/IOs:	Chile, Japan, LAC
Other partners:	University of Chile; Pontificia Universidad Católica; National Forest Corporation; Pontificia Universidad Católica de Valparaíso; and National Firefighting Academy
Objective:	Train 4 000 regional professionals; promote knowledge exchange and creation of a specialist network at national and regional level, with Chile becoming a centre of excellence in disaster risk reduction.
Budget:	USD 407 000 (Chile) and additional contribution from Japan
Project period:	2015-2020

Source: Joint Chile-Japan "Kizuna Project" highlighted at Third High-Level Meeting on Country-led Knowledge Sharing (HLM3), https://www.jica.go.jp/usa/english/office/others/newsletter/2016/1603_04_03.html (JICA, 2016[65]) and AGCID Kizuna, https://www.agci.cl/index.php/kizuna (AGCID, n.d.[66]).

As mentioned earlier, while ad hoc capacity building has been traditionally the norm in triangular co-operation activities, more systematic and longer-term programmes are currently being implemented. There is still limited evidence of the impact of these programmes but interviews with project managers suggest that these are likely to foster greater appropriation of knowledge and technology, and thus lead to more effective triangular co-operation.

Chapter 3. Conclusions and way forward

3.1. International mandate for green triangular co-operation

Development can improve environmental conditions, if carefully managed to ensure that environmental degradation is averted or, at least, if 'do no harm' approaches are considered. Examples include water and air pollution, climate change, the loss of biological diversity, poorer natural ecosystems or desertification. While the impact of poor local environmental conditions is felt in specific areas across partner countries (e.g. polluted air and water in rapidly growing urban areas); the impact of a worsening global environment is felt in all countries – and disproportionately so in poorer countries and by the poorest in these countries (e.g. farmers surviving on rain-fed agriculture or on the ecosystems provided by clean rivers and healthy forests). Unless efforts to address local environmental conditions increase, developing countries will suffer the most. At the same time, unless global environmental challenges are reigned in, recent development gain may be reversed.

The international community has been reconciling the development and green agendas, notably with the 2030 Agenda for Sustainable Development, the Addis Ababa Action Agenda on financing for development and a number of green or green-related agreements, such as the UNFCCC Paris Agreement or the Sendai Framework for Disaster Risk Reduction. These agendas call for reinforced international co-operation and, often, with triangular co-operation as a key mean of implementation. More recently, the Second High-level United Nations Conference on South-South Cooperation (BAPA+40) also enshrined triangular co-operation as an important modality of development co-operation, notably in green areas. Indeed, triangular activities can deliver green goals in innovative, flexible and cost-effective ways and, as such, could help accelerate implementation of these agreements. Recent trends in green triangular co-operation (e.g. on climate change mitigation, climate change adaptation, biodiversity, desertification, and local environmental issues) show that this international mandate is sinking in: 34% of all triangular co-operation projects on average over 2014-18 are green and many countries are developing triangular co-operation policy documents, which include green objectives.

This goes in line with recent trends in aligning climate-related development co-operation trends with the Paris Agreement (OECD, 2019[13]). As argued in the paper, a contemporary view of triangular co-operation promotes participatory processes and dialogue, as well as multi-directional learning and knowledge sharing partnerships. Green triangular co-operation offers concrete technical and policy responses and solutions from developing countries that are adaptable to similar contexts and that are affordable. What is more, it appears that triangular co-operation could be a ready-to-use modality in the era of the 2030 Agenda, as the way a triangular partnership is set up lends itself to sustainable development and green objectives.

3.2. Recent trends in green triangular co-operation

Building on the OECD database on triangular co-operation, we can provide a radiography of the state of green triangular co-operation. The largest green triangular co-operation facilitating partners from the DAC are Germany, Japan, Norway, Spain, and the European Union, which is consistent with the overall triangular co-operation trends and coincides with some of the largest providers of green ODA worldwide. Some of the largest providers of 'green' ODA (e.g. United Kingdom, France, United States) are not listed in this report, probably owing to the fact that they are not yet providing information on their triangular co-operation activities to the OECD. A number of international organisations are also key green triangular co-operation facilitators, notably among the United Nations family, which is consistent with the overall triangular co-operation initiatives. Most of these follow a traditional understanding of triangular cooperation as enabler of South-South exchanges.

Almost half of green triangular co-operation initiatives are implemented in Latin America and the Caribbean, probably due to the fact that the region is not only a champion of triangular co-operation worldwide, but also because LAC boasts 60% of global terrestrial life and emissions, though starting from relatively low levels, have been growing in recent years. This contrasts with green ODA trends, where the LAC region is less prominent due to its higher development levels. Triangular co-operation therefore proves to be a useful tool in countries where traditional development co-operation is phasing out but where needs are still important. LAC countries, however, engage little in cross-regional triangular co-operation, an area that could be developed in the future.

Almost a quarter of green triangular co-operation projects are environment-related, followed by the agriculture and energy sectors. These sectors are coherent with green ODA trends, although differ from the overall triangular co-operation initiatives. At the same time, about 70% of green triangular co-operation projects have a green 'principal' objective, meaning that they would have not gone ahead without their original green purpose. Most of the projects were either environment- or climate-related, mainly with a 'principal' objective. Only about 9% of all green projects target the conservation and sustainable use of oceans, seas and marine resources, suggesting the potential for further growth in this area in the future. The OECD triangular co-operation database only has one 'brown' project, suggesting that either donors have not reported their 'brown' activities to the OECD or that triangular co-operation is a ready-to-use modality for the next generation of development co-operation where sustainable development issues will be at the core.

Green triangular co-operation takes places mainly through project-type interventions. However, a recent trend can be observed, especially in the areas of climate change adaptation and biodiversity, of moving away from ad hoc capacity building activities towards longer-term initiatives (as seen with the Sustainable Agriculture for Climate Change Adaptation project or the Amazonia without Fire Program). Future triangular co-operation activities in other green areas ought to take this direction. The typical budget for green triangular projects, around USD 2 million, is larger than those for all triangular initiatives, especially when it comes to renewable energy projects. Cost-sharing among triangular partners is also more frequent compared to triangular co-operation trends, which reflects the nature of some green investments (e.g. in infrastructure or technological transfer). Finally, although there are no stark differences between green and overall triangular project durations, climate-related projects tend to be slightly longer, again reflecting specificities in some of the sectors concerned (e.g. energy or water and sanitation projects).

3.3. Green triangular co-operation at domestic level

While the report showed that there is an international mandate for implementing green triangular co-operation, and that a sizeable share of triangular co-operation activities are targeting green objectives; the paper also uncovered that virtually no national green plan or strategy of developing countries incorporates yet triangular co-operation as a means of implementation.

Countries are increasingly committed to greening their development pathways, which is reflected in the recent growth of National Adaptation Plans, Nationally Determined Contributions, National Biodiversity Strategies and Action Plans, and National Action Programmes for Combating Desertification. However, only four countries mention triangular co-operation in one of these planning tools documents and only two of these countries also have linked triangular co-operation explicitly with green objectives in their strategic documents. There are more countries developing triangular co-operation policy documents, and most of these mention green-related objectives – however it appears that domestic green communities have limited awareness on the potential benefits of triangular co-operation as an international co-operation tool that can accelerate green development. It could also be explained by the limited visibility that this modality has, compared to other modalities. Triangular co-operation is only gaining relevance recently and reporting to the OECD is still nascent. Moreover, with fewer projects being reported or being visible, there is also limited evidence on trends and impact.

The report has analysed at how triangular co-operation can contribute to achieving green objectives. Indeed, the report reviewed the literature for green triangular co-operation and collected a number of case studies, looking for good practices that emanate from interviews with project managers and, when available, project evaluations. The cases include examples from a number of facilitators: Germany, Japan, Switzerland, the Islamic Development Bank and the UNDP; and a number of pivotal countries: Brazil, China, Costa Rica, Mexico, Morocco and Thailand. The cases focused on local environmental issues, as well as global environmental challenges. What these show is that triangular co-operation may be an optimal way to capitalise on the knowledge of pivotal countries either by replicating, updating or scaling up to other contexts. This can be done within a region or across regions – but in both instances, the examples presented here display results and impact greater than initially foreseen and precisely because of their triangular set-up.

Cross-regional triangular initiatives are less common than intra-regional triangular projects but these can lead to important green development results. As such, further cross-regional triangular co-operation would be needed if the global development and green agendas are to be successful. There are several ways to do so, for example taking the Islamic Development Bank's approach to mainstream the modality across its operations, while ensuring that its investments are all sustainable and climate-compatible. Another way is to create dedicated triangular co-operation financing windows in international organisations and financing institutions, notably the green ones (such as the Global Climate Fund). The report highlighted how the Islamic Development Bank is successfully mainstreaming triangular co-operation through its Reverse Linkage modality at a time when it also decided to only invest in sustainable, climate-compatible projects. This example clearly shows the way for other development finance institutions and organisations to accelerate a green development pathway.

Finally, this chapter also touched upon the importance of capacity building and how triangular co-operation can support the individual and organisational technical capacity of

partner countries. While there are many examples of successful ad hoc capacity building, there is less evidence on systematic long-term initiatives that ensure appropriation of knowledge and technology in green areas. Some examples were put forward, particularly led by Japan, to ensure capacity building through longer-term and programmatic approaches, building on previous to standalone and ad hoc technical co-operation activities. Future research ought to look at the impact of these initiatives, which are more frequent now than in the past. All would ensure that triangular co-operation activities enables learning and knowledge and experience sharing, and thus accelerates green activities and results.

Triangular co-operation implementation still needs to be scaled up, even more so in the green domain. More needs to be done to raise awareness on the modality and its benefits (notably with the different green communities) and this can only be done by collecting more information on green triangular co-operation activities, not just through better reporting of activities, for example to the OECD, but also by building the evidence base of what works and not, understanding success stories and good practices, as well as results and impact.

3.4. Main take ways and next steps

Ensuring that green triangular co-operation can have more impact requires taking a number of actions, for example by:

- *Improving the evidence base on green triangular co-operation*. More policy analysis, quantitative and qualitative data are needed to build this base:
  - More systematic studies that document lessons learned, good practices and challenges of green triangular co-operation.
  - Studies would take place in a variety of geographic and socio-economic contexts, as well as across thematic issues (i.e. to understand better why no 'brown' projects take place through triangular co-operation or why so few 'blue' triangular co-operation projects are currently being implemented).
  - More quantitative information on green triangular co-operation would be readily available, with information on sectors of operation, instruments used, regions and countries that are typically beneficiary or pivotal, project length and size.
  - Further information on cost-benefit profiles of the implemented projects would be needed to ensure replication and possible scaling up in the future.
  - For this to happen, bilateral and multilateral donors could report their triangular co-operation activities to the OECD, which keeps the largest repository of triangular co-operation data.
- *Understanding the impact of green triangular co-operation*. The evidence base also needs to grow on the actual results and impact of green triangular co-operation, in particular to answer the question of how is triangular co-operation benefitting the poorest. For this to happen, more evaluations of green triangular co-operation projects are needed and more such evaluations that look at the particular added-value of using this modality. The OECD has already developed a toolkit on monitoring and evaluating the added-value of triangular co-operation (OECD, 2018[63]), which is being piloted by the European Union (Piefer-Söyler and Pelechà

Aigües, 2019[67]) and Germany, which both are important green triangular co-operation partners. Further pilots would be necessary to continue refining the toolkit and for collecting further evidence that can feed back into designing investments in triangular way, accounting for complexity of the green area, where investments affect environmental, economic and social systems simultaneously (Caldecott, 2017[53]). Doing so would help promote the modality and design more effective projects.

- *Promoting policy dialogue on green triangular co-operation*. It is only through exchange among practitioners that the boundaries of the green triangular co-operation field are likely to be extended. The OECD, for example, organises annual dedicated international meetings on triangular co-operation, where practitioners can discuss issues pertaining to triangular co-operation – exchanging good practices and experiences. The OECD can act as a conduit for policy concerns and recommendations for triangular co-operation providers; and can channel these to policy discussions at highest levels such as the Global Partnership for Effective Development Co-operation and the GPI, G20, the UNFCCC, CBD, BAPA+40, or to capitals through DAC members and participants. This is particularly key, given that the green communities still lacks awareness of the potential impact of the triangular co-operation modality to deliver green objectives and the triangular co-operation community needs to advocate more strongly on the benefits of this modality.
- *Forging multi-stakeholder partnerships.* Triangular co-operation can take the shape of a multi-stakeholder partnership, beyond government. The report has not identified examples where the private sector was engaged in a green triangular co-operation initiative – yet the private sector is key to mobilise resources and knowledge and to innovate, e.g. for addressing climate change and promoting green growth. At the same time, the private sector also has a key role in environmental pollution and degradation, hence engaging the private sector through green triangular co-operation can be a promising way to accelerate green action.
- *Mainstreaming green triangular co-operation*. Many donors undertake mainstreaming to benefit from its perceived advantages, namely enabling a given consideration to be systematically integrated across policies, plans, budgets and activities – and across all stages of the programming cycle. Donors could consider extending these efforts to the area of triangular co-operation, ensuring that it is integrated across projects, notably large investments. Donors could also use the triangular modality to promote environmental mainstreaming – that is, to ensure that green dimensions are tackled through development co-operation interventions (OECD, 2019[38]).
- *Creating dedicated mechanisms for green triangular co-operation.* A way to promote triangular co-operation is to ensure that dedicated funding mechanisms are created at the global level. International organisations and development finance institutions, notably those that operate in the green space, such as the Green Climate Fund (GCF), could beef up their capacity to implement green triangular co-operation activities. They could do so by either mainstreaming triangular co-operation across their activities or by creating a funding window.

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Annex A. Triangular co-operation across selected international organisations

Table A.1. Triangular co-operation across selected international organisations

International Organisation	Strategic document	Mention of Triangular Co-operation
Asian Development Bank (ADB)	Strategy for promoting safe and environment-friendly agro-based value chains in the greater Mekong subregion and Siem Reap Action Plan (2011-2022)	Not mentioned
	Strategy 2020: Long-Term Strategic Framework (2008-2020)	Not mentioned
	Strategy 2030: Achieving a Prosperous, Inclusive, Resilient and Sustainable Asia and the Pacific	Not mentioned
African Development Bank (AfDB)	Strategy: at the Center of Africa's Transformation (2013-2022)	Not mentioned
Asian Infrastructure Investment Bank (AIIB)	Energy Sector Strategy: Sustainable Energy for Asia	Not mentioned
Convention on Biological Diversity (CBD)	Strategic Plan for Biodiversity and the Aichi Targets (2011-2020)	Not mentioned – but triangular co-operation identified as a critical element in the achievement of the Plan
Global Facility for Disaster Reduction and Recovery (GFDRR)	Gender Action Plan (2016-2021)	Not mentioned
Inter-American Development Bank (IDB)	Update to the Institutional Strategy: Partnering with Latin America and the Caribbean (2010-2020)	Leverage SSTrC: Co-operation should be harnessed to generate regional public goods that facilitate the movement of factors of production, address potential distribution issues, and solve disputes. Co-operation can also leverage the exchange of knowledge and best practices, particularly with Asia and other emerging regions, to shorten the learning curve of policy- and decision-makers. Additionally, co-operation can help harmonise regulations— which, in a context of financial integration, can help improve the resilience of local markets to exogenous shocks, reduce the cost of capital, and mobilise resources to manage the risks of natural disasters.
International Finance Corporation (IFC)	Strategy and Business Outlook Update (2019-2021)	Not mentioned
International Fund for Agricultural Development (IFAD)	Strategic Framework (2016-2025)	IFAD will facilitate multi-stakeholder partnerships between governments, the private sector and small-scale rural producers, including through South-South and Triangular Co-operation. As a global institution IFAD will promote SSTrC as a key mechanism for delivering relevant, targeted and cost-effective development solutions to partners across the globe. It will play a more significant role as a knowledge-broker for SSTrC by facilitating opportunities for sharing relevant innovations, technologies, methodologies and lessons between policymakers, development practitioners and the private sector.
Islamic Development Bank (IsDB)	Reverse Linkage Mechanism – Development through South-South Co-operation	The Reverse Linkage is a technical co-operation mechanism whereby member countries and Muslim communities in non-member countries, exchange their knowledge, expertise, technology and resources to develop their capacities and devise solutions for their autonomous development.
International Organization for Migration (IOM)	Middle East and North Africa Regional Strategy (2017-2021)	Not mentioned
UN HABITAT	Strategic Plan (2014-2019)	Not mentioned
United Nations Women (UN Women)	Strategic Plan (2018-2021)	UN-Women will further develop internal capacity to support South-South and triangular initiatives. UN-Women will expand co-operation with UN agencies and global partners, particularly with the UNOSSC, and explore innovative strategies and funding modalities to scale up SSTrC. UN-Women will also support the design and implementation of bilateral and

		multilateral assistance, adding value to triangular co-operation and ODA.
United Nations Convention to Combat Desertification (UNCCD)	Comprehensive multi-year workplan for the Convention (2018–2021) and two-year costed work programme for the Convention (2018–2019)	Not mentioned
United Nations Development Programme (UNDP)	Strategic Plan (2018-2021)	UNDP looks to expand and deepen its partnerships outside the UN system in the following areas: (a) South-South and triangular cooperation; […] UNDP will continue to work closely with the UNOSSC and Member States to implement the UNDP strategy on SSTrC as an essential instrument to support implementation of the 2030 Agenda. A key element will be the launch of a global development solutions exchange within the global South. Solutions to SDG challenges are being developed by governments and other actors in programme countries across the global South. A core responsibility of the global platform will be to facilitate UNDP efforts to capture, disseminate and help implement these solutions through SSTrC approaches. UNDP will mainstream SSTrC across operational programming. Progress in filling the policy gap in South-South cooperation through the adopted strategy and operational approaches will remain central to continued efforts by UNDP.
United Nations Environmental Programme (UNEP)	Medium-Term Strategy (2018-2021)	A strengthened strategic regional presence will also enable UNEP to foster effective and relevant partnerships, including through South-South and triangular cooperation and with the wider UN system at regional, sub-regional and country levels through the UN "Delivering as one" initiative.
United Nations Educational, Scientific and Cultural Organization (UNESCO)	Medium-Term Strategy 37 C/14 (2014-2021)	North-South-South triangular cooperation is a catalyst for dialogue and co-production of scientific knowledge, in synergy with local and indigenous knowledge brokers, and for science diplomacy.
United Nations Framework Convention on Climate Change (UNFCCC)	Action for Climate Empowerment: Guidelines for accelerating solutions through education, training and public awareness (2016)	The Climate Technology Centre and Network works with stakeholders engaged in a wide range of activities related to climate technologies to facilitate south-south, north-south, and triangular collaboration and cooperation […] To strengthen regional and international efforts, Parties and other relevant organizations and agencies in a position to do so could cooperate in and support the following activities […] Strengthen North–South, South–South and triangular collaboration in matters of climate change education and training, skills development.
United Nations Population Fund (UNFPA)	Strategic Plan (2018-2021)	UNFPA presence at the country level is operationalized through […] Partnerships and coordination, including South-South and triangular cooperation (through the systematic exchange of knowledge solutions and innovation), as well as inter-agency humanitarian coordination, based on collaborative advantage that reinforces the collective accountability to achieve results […] The new UNFPA South-South and triangular cooperation strategy creates a platform to exchange know-how and support between the countries in need and those with deployable expertise […] UNFPA country offices in the pink quadrant will need strong skills for advocacy and will require technical support from headquarters, regional offices and/or partner organizations. These countries will engage in increased South-South and triangular cooperation.
United Nations High Commissioner for Refugees (UNHCR)	Strategic Directions (2017-2021)	Not mentioned
United Nations Children's Fund (UNICEF)	Strategic Plan (2018-2021)	Programming for at scale results for children […] includes South-South and triangular cooperation.
United Nations Development Organization (UNIDO)	Medium Term Programme of Work (2018-2021)	South-South and triangular cooperation will remain a key priority for UNIDO. As part of its efforts to strengthen such co-operation, UNIDO will enhance the co-ordination and synergies between its investment and technology promotion centres, thus bringing together a large network of resources and information.

	The 2030 Agenda for Sustainable Development: Achieving the industry-related goals and targets (2015)	Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms. Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement the SDGs, including through North-South, South-South and triangular cooperation.
World Bank (WB)	Corporate Responsibility Strategic Plan (2016)	Not mentioned
	Overview of the World Bank Group Strategy (2014)	Not mentioned
World Food Programme (WFP)	Strategic Plan (2017-2021)	Means of implementation – support partnership-based efforts to strengthen capacities and improve the integration and coherence of actions towards the SDGs, including by […] enabling SSTrC. Revitalise global partnerships – support stakeholders, including UN agencies, regional bodies, the private sector and local communities, in joining collective action towards the SDGs, including through SSTrC among developing countries and the provision of common services. International support for capacity-strengthening, including through SSTrC, provides common services, improves implementation of national plans to achieve the SDGs, especially through greater technology transfer, innovation, improved data collection and quality, and knowledge sharing. WFP will provide and facilitate support to capacity-strengthening of governments for the implementation of zero hunger and related national SDG plans, including through support to SSTrC among developing countries. In humanitarian and other situations, and when called on by partners, WFP provides common services, mobilizes and shares knowledge, expertise, technology and financial resources, including through SSTrC. WFP will support partnership-based actions for continuous innovation and learning to address the multiple challenges to sustainable development, including through SSTrC. Enhance international support for implementing effective and targeted capacity development in developing countries to support national plans to implement the SDGs, including through North–South and SSTrC. Dollar value of financial and technical assistance (including through North–South and SSTrC) committed to developing countries.
World Health Organization (WHO)	Strategic Plan: Initiative for Vaccine Research (2010-2020)	Not mentioned
	Strategic Plan: Investing in Knowledge for Resilient Health Systems (2016-2020)	Not mentioned
World Intellectual Property Organization (WIPO)	Strategic Plan (2017-2021)	Not mentioned
World Meteorological Organization (WMO)	Strategic Plan (2016-2019)	Not mentioned

Source: Author's own research based on a selection of institutions working on green issues.

Annex B. **Triangular co-operation across selected countries**

Table B.1. Triangular co-operation across selected countries

Country	Strategic document	Mention of triangular co-operation
Argentina	South-South Cooperation Argentine Republic - Project Catalogue (2013)	Argentine Fund for South-South and Triangular Co-operation (FOAR) is assigned as an implementing agency for triangular cooperation with three main pillars of cooperation: 1) Administration and governance, 2) Human rights, 3) Sustainable development. This third pillar seeks for, among other sectors, to promote the preservation of natural resources without jeopardizing the ability of future generations to satisfy their needs.
Brazil	Cooperação Brasileira para o Desenvolvimento Internacional (2014-2016)	Triangular cooperation is understood as a modality of Brazil's South-South Co-operation as an alternative arrangement and complementary to the bilateral efforts. The parameters for triangular cooperation are: 1) demand-driven performance, 2) exchange of technology and knowledge without imposing conditionality, 3) replication of good practices to be transferred and adapted to the reality of each country. Environment is one of their key sectors, in which they refer to triangular co-operation as complementary to bilateral aid.
Chile	Chile's development co-operation strategy (2015-2018)	Chile contributes to the international co-operation System, articulating its development co-operation activities with developed countries and international organisations, in order to implement its work within this modality of triangular co-operation.
China	China's White Paper (Foreign Aid) (2014)	China regards trilateral co-operation as opportunities to learn international cooperation of 'global quality' and intends to enhance its involvement in triangular co-operation.
Colombia	Informe de Gestion APC-Columbia (2015)	APC intends to share knowledge and good practices that add value to other countries through south-south and triangular co-operation. Triangular co-operation as a way to achieve strategic goals of APC. One of the key sectors is environmental conservation and sustainability (environment, climate change, biodiversity, reforestation).
Germany	Triangular Co-operation in German Development Cooperation (2013)	Germany works on the regional balance of triangular co-operation, which currently are concentrated in LAC countries. Germany also have an intention to Improve the impact of co-operation by a complementary use and dovetailing of knowledge, experience and finance from emerging economies (pivotal partners).
Indonesia	The strategic plan of BAPPENAS 2015-2019	There are various development planning policies in the context of accelerating the realisation of development in the period of 2015-2019, and one of which is "planning the Program on South-South and Triangular Co-operation"
Japan	JICA's Mid-Term Strategic Plan (2012)	Japan intends to strategically implement triangular co-operation and endeavor to accumulate knowledge and share it in the process. Enhancement of strategic partnerships with emerging donors is also mentioned to promote triangular co-operation and serve as an interface for aid co-ordination frameworks.
South Korea	Korea's ODA White Paper (2017)	In line with international trend, Korea is promoting triangular co-operation to build. The Ministry of Foreign Affairs is forging and expanding partnerships through KOICA to undertake triangular co-operation more systematically and effectively.
Mexico	International Co-operation Development Law	The law is the base context of Mexico's development co-operation. Triangular co-operation is also mentioned in it as a modality in growth.
Norway	Norwegian Aid and Triangular Cooperation (2019)	Norway sees its main role in triangular co-operation in financial component as well as knowledge sharing. NOREC's role in human resource exchanges in triangular co-operation is also mentioned.
Portugal	Strategic Concept for Portuguese Development Cooperation 2015-2020	Portugal sees triangular co-operation as a relevant instrument for knowledge-sharing, joint learning and capacity development, based on each partner's comparative advantages, on the complementarity of actions and leveraging of financing resources. Triangular co-operation is, therefore, a significant long-term investment due to its potential multiplying effects. It is complementary to bilateral co-operation efforts and can add value to these cooperation relations.
Spain	Plan Director de la Cooperación Española 2018/2020	Spain has a rich experience in triangular co-operation mainly in Ibero-American area and an intention to continue its expansion to Africa, to share experiences and generate synergies in fields such as migration, gender, employment, fight against climate change, water and modernisation of the administration.
UK	Country Strategies	Triangular co-operation is mentioned in country strategy of relevant partner countries (ex. China, India)

Source: Author's own research based on countries that made a specific reference to triangular co-operation.

Notes

[1] The United Nations Framework Convention on Climate Change (UNFCCC) already pointed to the fact that developing countries' ability to undertake climate action depends on the extent of support they receive from developed countries (UNFCCC, 21st preambular paragraph, Art 4(7)).

[2] The multilateral development banks and other international organisations that reported to the OECD-DAC are the Asian Infrastructure Investment Bank, the Adaptation Fund, the African Development Bank, the Asian Development Bank, the Climate Investment Funds, the European Bank for Reconstruction and Development, the European Investment Bank, the Green Climate Fund, the Global Environmental Facility, the Global Green Growth Institute, the Inter-American Development Bank, the International Fund for Agricultural Development, the Intergovernmental Panel on Climate Change, the Multilateral Fund for the Implementation of the Montreal Protocol, the Nordic Development Fund, the United Nations Framework Convention on Climate Change and the World Bank.

[3] Peer reviews provide in-depth examinations of development systems and policies, including lessons learned, in all DAC member countries. They aim at improving the quality and effectiveness of development co-operation policies and at promoting good development partnerships for better impact on poverty reduction and sustainable development. This is achieved through learning on what has worked and what has not from peers; holding DAC members accountable for their commitments; and reviewing their performance against key dimensions of development co-operation, updated regularly (OECD 2019b).

[4] Following this tradition, it seems that green South-South Cooperation, is on the rise (Carolini, Gallagher and Cruxên, 2018[70]).

[5] For Latin America and the Caribbean, the Ibero-American Secretariat collects annual information on South-South and triangular co-operation among countries of the region as well as their activities with other regions. The findings from the 2017 report on South-South co-operation in Latin America and the Caribbean shed light on the importance of this modality in the green space, although the SEGIB classification differs from the one taken in this paper (indeed projects with a focus on agriculture or energy were counted a productive sector or infrastructure, whereas here they could be green if the objective was related to the environment).

[7] The OECD is working to improve the reporting on triangular co-operation to its Creditor Reporting System. According to the OECD Creditor Reporting System (CRS), DAC providers disbursed USD 61.1 million in 2017 in triangular development co-operation projects, of which 14.6% tackled green issues (USD 8.9 million). As reporting on triangular co-operation was only possible recently (in 2016 for 2015 flows) but only really picked up in 2018 for 2017 flows, we decided to use the results of the OECD surveys and additional research.

[8] These include projects that are related to environmental policy and administrative management, biosphere protection, biodiversity, site preservation, flood prevention and control, environmental education and training, or environmental research.