



WORLD INVESTMENT REPORT 2023

**INVESTING IN SUSTAINABLE
ENERGY FOR ALL**

OVERVIEW



**United
Nations**

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

WORLD INVESTMENT REPORT 2023

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ENERGY FOR ALL

OVERVIEW



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Geneva, 2023

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PREFACE

Access to energy is essential to every aspect of people's lives. But hundreds of millions of people live without electricity – and that number rose last year for the first time in decades. It is beyond time to democratize access to safe, reliable, affordable energy sources for all people, everywhere.

However, we are at least a decade late in our efforts to combat global warming. Investment in renewable energy in developing countries is therefore essential and often the most economical way to bridge the energy gap. But while the transition to renewable energy is a global priority, investments in energy infrastructure and efficiency still fall far short of what is needed.

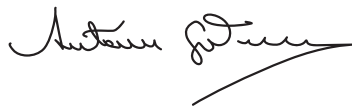
The *World Investment Report* therefore has an important role in the biggest battle of our lifetime: keeping temperature increases below the agreed limit of 1.5°C. By monitoring global, regional and national investment trends and developments, this report supports policymakers by showing where investment is on track, and where more is needed. The report's recommendations are an important guide to boosting climate finance and investment in developing countries – one of the most important factors in combating the climate crisis.

This year's edition highlights some areas of progress while identifying policy gaps and bottlenecks in cross-border investment flows. It shows that global flows of foreign direct investment fell by 12 per cent to \$1.3 trillion in 2022. Vulnerable countries – those that are in greatest need of investment – were the most likely to be left behind.

Least developed countries rely on external sources for almost three quarters of their energy investment. But they may pay up to seven times more than developed countries to access international capital markets. This particularly impedes ramping up of investments in renewables.

I have therefore called for a Sustainable Development Goals stimulus, among other things, to increase long-term and affordable financing to developing countries to enable them to invest at scale in the transition to renewable energy and the Sustainable Development Goals. As part of that stimulus, multilateral development banks should transform their business models and their approach to risk-taking and better leverage their funds to attract greater volumes of private finance into developing countries. Public development banks should also help catalyse sustainable transformations by encouraging scalable private-public partnerships.

We cannot fulfil the world's energy needs and safeguard our planet and our future without massive private sector investment in renewables in developing countries. I commend this report and urge policymakers and those with decision-making power to implement its recommendations.

A handwritten signature in black ink, appearing to read 'António Guterres', with a long, sweeping underline that extends to the right.

António Guterres
Secretary-General of the United Nations

FOREWORD

The prospects for international investment looked extremely gloomy last year, with a cascading crisis of health, climate change and economic shocks causing investor uncertainty around the world. Rising inflation, fears of a recession and turbulence in financial markets put many investment plans on hold at the beginning of the year. In the end, international investment flows did suffer, but proved more resilient than expected. While global FDI declined by 12 per cent last year to \$1.3 trillion, the slowdown was limited, investment flows to developing countries increased marginally and investors finished the year announcing new projects in both industry and infrastructure.

Business as usual, however, is still bad news. The major disparities in global investment patterns remained. The growth of investment in developing countries is concentrated in a small number of large emerging economies. Foreign direct investment flows to many smaller developing countries are stagnant, while flows to the least developed countries fell by 16 per cent from an already low base. Similarly, at the sectoral level, strong growth in some sectors – such as semiconductors, in response to chip shortages – is accompanied by weak performance in other industries that are important for the build-up of productive capacity in developing countries. And while some SDG-investment sectors – notably renewable energy – attract significant international investment, others – such as water and sanitation, agrifood systems and health and education – do less well. Foreign direct investment in agrifood systems, so important for future food security, is lower today than in 2015, when the SDGs were adopted.

A key concern last year was that rising prices of energy and a push in many countries for greater energy security would reverse the trend away from investment in fossil fuels and towards renewable energy. This has, so far, not happened to the extent feared. Investment numbers and values in extractive industries remained stable in 2022, and the number of new renewable energy projects reached a record high.

International investment in renewable energy has tripled since 2015. But, as this report shows, much more is needed. The growth of cross-border investment in the sector has been strongest in the economies that are least

dependent on it. In developing regions, it has barely outpaced overall growth in foreign direct investment and gross domestic product. More than 30 developing countries have not registered a single international investment in utility-sized renewable energy generation since the adoption of the Paris Agreement. Furthermore, while investor interest in renewables is strong, other types of investment needed for the energy transition receive much less attention. Investment needs in power grids, storage and energy efficiency vastly exceed requirements in renewable energy generation.

In developing countries, and especially the least developed countries, the energy transition is one of many competing policy priorities. As demonstrated by the targets in the nationally determined contributions of most developing countries, ambitions are high. But so are the investment needs associated with the targets and the structural barriers to attracting that investment, covered in this report. To name just a few: The cost of capital for investors is a major disincentive, which calls for more international de-risking support at the country level. The capacity to translate the targets into energy transition investment plans and bankable projects is often low, which calls for technical assistance and support in project preparation. And international investment agreements can act as a barrier to climate policy action, which calls for reform to make treaties more conducive to promoting and facilitating investment in the energy sector.

The scale of the challenge is enormous, and so is the range of actions needed to boost investment in sustainable energy in developing countries. The growth of green finance in global capital markets, with sustainable bonds growing fivefold in five years, shows that the appetite among private investors to fund climate change mitigation is there. The task is now to channel those funds to where they are most needed to support the transition and to provide affordable access to electricity for all. This report points the way.

The recommendations of this report will be the subject of discussions at the UNCTAD World Investment Forum in October this year in Abu Dhabi. Taking place ahead of the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change, in the same location, the WIF2023 offers a platform for policymakers at the highest levels, and for the broadest possible constituency of investment-for-development stakeholders, to translate them into concrete action.

Armed with the data and insights this report offers, it is imperative that stakeholders approach investment with a strategic mindset. The complexities and disparities highlighted demand astute decision-making, as the road ahead is fraught with challenges. Together we must navigate this landscape with resolve and intelligence, shaping a more sustainable and equitable world for generations to come.

A handwritten signature in black ink that reads "Rebeca Grynspan". The signature is fluid and cursive, with the first name "Rebeca" and the last name "Grynspan" clearly legible.

Rebeca Grynspan
Secretary-General of UNCTAD

ACKNOWLEDGEMENTS

The *World Investment Report 2023* was prepared by a team at UNCTAD led by James X. Zhan and coordinated by Richard Bolwijn. UNCTAD team members included Dafina Atanasova, Vincent Beyer, Bruno Casella, Joseph Clements, Mathilde Closset, Berna Dogan, Hamed El Kady, Anastasia Leskova, Massimo Meloni, Anthony Miller, Elisa Navarra, Abraham Negash, Yongfu Ouyang, Diana Rosert, Amelia U. Santos-Paulino, Changbum Son, Astrit Sulstarova, Claudia Trentini, Joerg Weber and Kee Hwee Wee.

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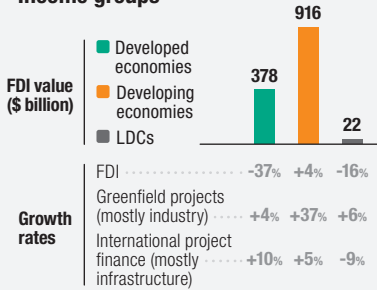
The team is grateful for advice, input and comments at all stages from numerous officials in central banks, national government agencies, international organizations and non-governmental organizations.

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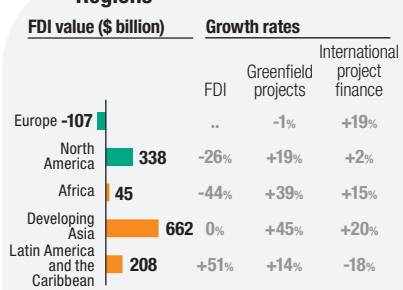
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INTERNATIONAL INVESTMENT TRENDS IN 2022

Income groups



Regions



Developing economies account for **70%** of global FDI

Greenfield projects

(Number)



International project finance

(Number)



Project activity in **developing regions** continues to **grow**

Infrastructure, GVCs and chips see rising investment

Cross-border M&As

(Value)



FDI

(Value)



SDG investment is moving, but **too slowly in some sectors**

Industries

(Project numbers)



SDG sectors

(Developing countries, project numbers)



KEY MESSAGES

Global FDI retreats, but new project announcements show bright spots

Global foreign direct investment (FDI) declined by 12 per cent in 2022, to \$1.3 trillion. The decline was mainly a result of lower volumes of financial flows and transactions in developed countries. Real investment trends were more positive, with growth in new investment project announcements in most regions and sectors. FDI in developing countries increased marginally, although growth was concentrated in a few large emerging economies. Inflows in many smaller developing countries were stagnant, and FDI to the least developed countries (LDCs) declined.

Industry trends showed increasing project numbers in infrastructure and industries that face supply chain restructuring pressures, including the electronics, automotive and machinery industries. Three of the five largest investment projects were announced in semiconductors, in response to global chip shortages. Investment in digital economy sectors slowed after the boom in 2020 and 2021.

Investment project numbers in energy remained stable, allaying, for now, fears of a reversal of the downward trend in fossil fuel investment due to the energy crisis. Oil majors are gradually selling fossil fuel assets to private equity firms and smaller operators with lower disclosure requirements, which calls for new dealmaking models to ensure responsible asset management.

The SDG investment gap widens despite the growth of sustainable finance

International investment in sectors relevant for the Sustainable Development Goals (SDGs) in developing countries increased in 2022. Infrastructure, energy, WASH (water, sanitation and hygiene), agrifood systems, health and education all saw higher project numbers. However, compared with 2015 when the SDGs were adopted, progress has been modest.

A review of investment needs at the midpoint of the 2030 Agenda for Sustainable Development shows that the investment gap in developing countries across all SDG-relevant sectors has increased from \$2.5 trillion in 2015 to more than \$4 trillion per year today. The largest gaps are in energy, water and transport infrastructure. The increase is the result of both underinvestment and additional needs.

The growing SDG investment gap in developing countries contrasts with positive sustainability trends in global capital markets. The value of the sustainable finance market reached \$5.8 trillion in 2022. Sustainable funds had positive net inflows while traditional funds experienced net outflows. Sustainable bond issuance also continues; it has grown fivefold over the past five years. Key priorities for the market are increasing exposure to developing countries and addressing greenwashing concerns.

Developing countries need vastly more support to attract energy investment

International investment in renewable energy has nearly tripled since the adoption of the Paris Agreement in 2015. However, much of this growth has been concentrated in developed countries. More than 30 developing countries have not yet registered a single utility-sized international investment project in renewables. The cost of capital is a key barrier for energy investment in developing countries. Bringing in international investors in partnership with the public sector and multilateral financial institutions significantly reduces the cost of capital.

Most developing countries have set targets for the energy transition in nationally determined contributions. Only about one third of them have translated those targets into investment requirements, and few have developed the asset specifications that are needed to design targeted promotion mechanisms and to market bankable projects. As a result, many developing countries use generic fiscal and financial incentive mechanisms that are less effective for promoting energy transition investment.

De-risking support to lower the cost of capital for energy transition investment in developing countries must be vastly expanded. More technical assistance should be available for investment planning and project preparation. International investment agreements (IIAs) need accelerated reform to expand policy space for climate action and to strengthen promotion and facilitation provisions. In this report, UNCTAD puts forward a Global Action Compact for Investment in Sustainable Energy for All with recommendations for national and international investment policies, global and regional partnerships, financing mechanisms and capital market involvement.

OVERVIEW

INTERNATIONAL INVESTMENT TRENDS

Global FDI declines and downward pressure will continue

After a steep drop in 2020 and a strong rebound in 2021, global foreign direct investment (FDI) declined by 12 per cent in 2022, to \$1.3 trillion. The slowdown was driven by the global polycrisis: the war in Ukraine, high food and energy prices, and debt pressures. International project finance and cross-border mergers and acquisitions (M&As) were especially affected by tighter financing conditions, rising interest rates and uncertainty in capital markets. The value of international project finance deals fell by 25 per cent in 2022, while cross-border M&A sales were 4 per cent lower.

The global environment for international business and cross-border investment remains challenging in 2023. Although the economic headwinds shaping investment trends in 2022 have somewhat subsided, they have not disappeared. Geopolitical tensions are still high. Recent financial sector turmoil has added to investor uncertainty. UNCTAD expects downward pressure on global FDI to continue in 2023. Early indicators for Q1 2023 show weak trends in international project finance and M&As.

Investment project trends show bright spots

Greenfield investment trends provide a positive counterweight. The number of new project announcements was up 15 per cent in 2022, and Q1 2023 data also show resilience. Trends in international investment in real productive assets are therefore more positive than the headline FDI data suggest.

The 2022 decline in FDI flows was, in fact, driven mostly by financial transactions of multinational enterprises (MNEs) in developed economies, where FDI fell by 37 per cent to \$378 billion. The number of new greenfield and project finance announcements increased by 5 per cent.

In developing countries, FDI increased by 4 per cent to \$916 billion, or more than 70 per cent of global flows, a record share. The number of new greenfield project announcements in developing countries increased by 37 per cent,

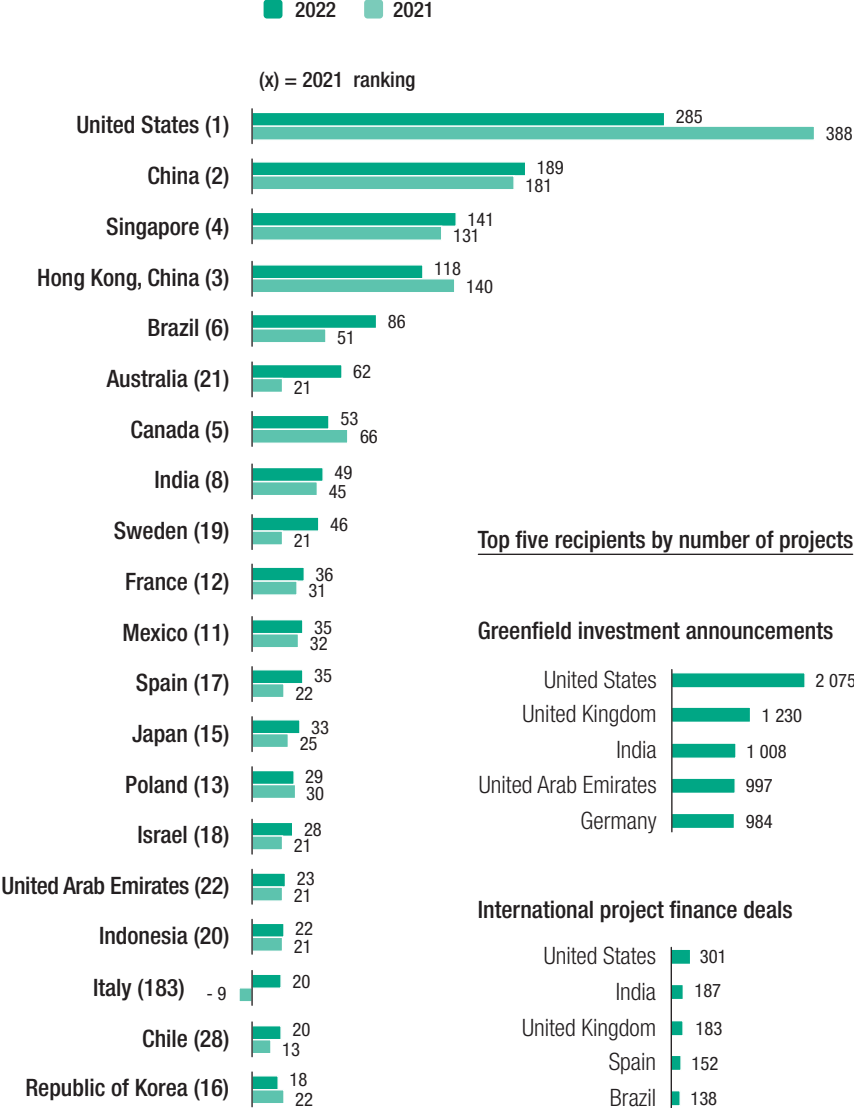
and international project finance deals by 5 per cent. This is a positive sign for investment prospects in industry and in infrastructure.

The FDI increase in developing countries was unevenly shared. Much of it was concentrated in a few large emerging economies. Inflows in many smaller developing countries were stagnant.

- FDI in Africa fell back to the 2019 level of \$45 billion after anomalously high levels in 2021, but greenfield project announcements and international project finance increased.
- FDI inflows in developing Asia were flat at \$662 billion – more than half of global FDI.
- Flows to Latin America and the Caribbean increased by 51 per cent, reaching \$208 billion, the highest level ever recorded.
- FDI flows to the structurally weak, vulnerable and small economies declined. FDI in the 46 least developed countries (LDCs) fell by 16 per cent to \$22 billion – less than 2 per cent of global FDI. Landlocked developing countries (LLDCs) and small island developing States (SIDS) saw small increases in FDI.

The United States of America remained the largest host for FDI, announced greenfield projects and international project finance deals. It was followed by the United Kingdom of Great Britain and Northern Ireland, India, the United Arab Emirates and Germany for greenfield projects, and by India, the United Kingdom, Spain and Brazil for project finance deals (figure 1).

Figure 1. FDI inflows, top 20 host economies, 2021 and 2022
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Outward FDI declines, affected by large transactions

In 2022, MNEs from developed economies decreased their investment abroad by 17 per cent to \$1 trillion. The share of developed economies in global outward FDI remained stable, at two thirds of global outflows.

Aggregate outward investment by European MNEs fell to \$224 billion, down from \$573 billion in 2021. Investment by German MNEs declined by 13 per cent, but at \$143 billion they remained the largest European investors and the fourth largest in the world (figure 2).

MNEs from the United States increased their investment abroad by 7 per cent, to \$373 billion. Cross-border M&A purchases from the United States rose by 21 per cent to a record \$273 billion. Among more than 40 global deals worth more than \$5 billion, 15 originated in the United States.

Outflows from Japan rose by 10 per cent to \$161 billion – making it the second largest investor country. Outflows from Australia rose from \$3.4 billion to \$117 billion, mainly due to a single transaction. MNEs from the Republic of Korea continued their investment abroad at a similar rate as in 2021, at \$66 billion, with announced greenfield projects increasing significantly.

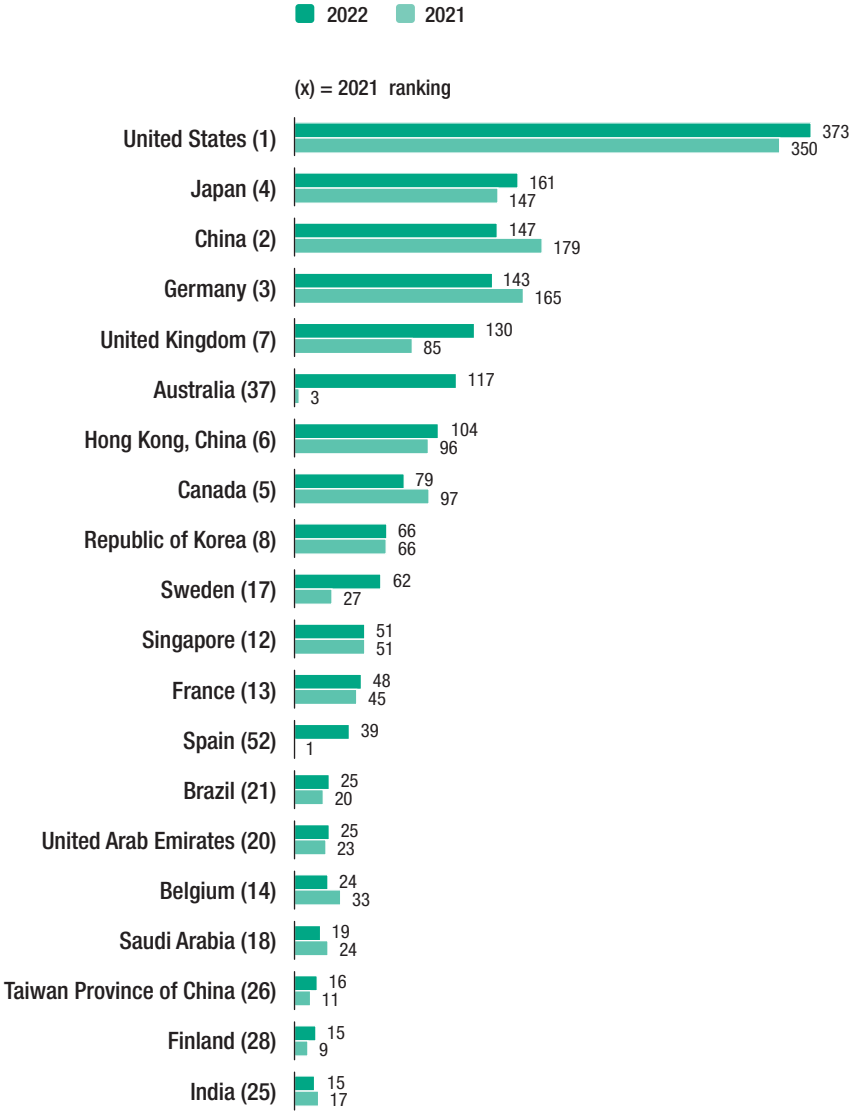
The value of investment activity abroad by MNEs from developing economies decreased by 5 per cent, to \$459 billion. Flows from developing Asia fell by 11 per cent, but the region remained an important source of investment, accounting for a quarter of global FDI. FDI from China fell by 18 per cent to \$147 billion. Nevertheless, China was the third largest investor home country. The largest greenfield announcements by Chinese MNEs were in the battery supply chain.

Increased investment activity in infrastructure, GVCs and chips

Industry trends showed increasing project numbers in infrastructure and global value chain (GVC)-intensive industries, stable numbers in energy, and a slowdown in digital economy sectors. GVC-intensive industries that face supply chain restructuring pressures, including electronics, automotive and machinery, saw growing project numbers and values. Three of the five largest announced investment projects were in semiconductors, in response to global chip shortages.

The degree of internationalization – the ratio of foreign over total assets, sales and employment – of the largest MNEs remained stable overall. The trend documented in successive World Investment Reports (WIRs) of overseas sales

Figure 2. FDI outflows, top 20 home economies, 2021 and 2022
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

growing at a faster pace than assets and employment continued in 2022. However, while in previous years this was driven by asset-light MNEs in the digital economy, in 2022 it was caused by high energy prices, which boosted revenues of companies in oil and gas, commodity trading and utilities. Overseas sales of the top 100 MNEs increased by more than 10 per cent, while the value of their overseas assets declined marginally.

SDG investment up in 2022, but midpoint review shows a growing gap

International investment activity in sectors relevant for the Sustainable Development Goals (SDGs) in developing countries increased substantially in 2022. Infrastructure, energy, WASH, agrifood systems, health and education all saw increased numbers of new project announcements. However, the growth is *unbalanced*, with some SDG sectors showing only slow progress; it is highly *uneven*, with negative trends in LDCs; and growth prospects remain *fragile* due to the expected downward pressures on overall FDI in 2023.









Moreover, international investment activity in SDG sectors in developing countries is still catching up after slow or negative growth in the early period after the adoption of the SDGs in 2015. The increase in investment activity over the period since 2015, as measured by the number of greenfield projects and international project finance deals, is limited for most sectors; one sector (agrifood systems) even shows lower investment activity in 2022 than in 2015 (table 1). At the midpoint of the 2030 Agenda for Sustainable Development, the lack of progress in expanding international investment activity in SDG sectors is a major concern.

In 2022, the combined value of SDG-relevant greenfield investment and international project finance in developing countries reached \$471 billion, up from \$290 billion in 2015. The number of international investment projects in infrastructure (which comprises transport infrastructure, power generation and distribution) and telecommunication saw the highest growth (26 per cent), followed by the water, sanitation and hygiene (WASH) sector (20 per cent).

SDG investment trends among LDCs stand in stark contrast to those in developing countries. In LDCs, cross-border investment in SDG sectors has not yet recovered from the shockwaves of the COVID-19 pandemic. Both the number and the value of projects have been in decline since 2020. In 2022, LDCs received the smallest ever share of SDG-relevant investment projects within the wider developing countries group, dropping from 6.4 per cent in 2021

to 5.1 in 2022. The LDC share saw an even sharper decline in value terms, dropping from 12 per cent in 2021 to 5 per cent in 2022. Project numbers in the last two years were significantly lower in most sectors, except for renewables and WASH, than in 2015.

A review of investment needs in developing countries at the midpoint of the 2030 Agenda for Sustainable Development shows that the investment gap across all SDG sectors has increased from \$2.5 trillion – estimated in *WIR14*, on the eve of the adoption of the SDGs – to more than \$4 trillion per year in 2023. The largest gaps are in energy, water, and transport infrastructure. The increase is the result of both underinvestment and additional needs.

		International private investment in the SDGs: change in number of projects, 2021–2022 and 2015–2022 (Per cent)	
		2021–2022	2015–2022
Infrastructure Transport infrastructure, power generation and distribution (except renewables), telecommunication	  	+26%	+16%
Renewable energy Installations for renewable energy generation, all sources		+8%	+21%
WASH Provision of water and sanitation to industry and households		+20%	+13%
Agrifood systems Agricultural production and processes; fertilizers, pesticides and other chemicals; R&D; technology		+6%	-19%
Health and education Hospital facilities, school buildings and other infrastructure for service delivery	 	+8%	+11%

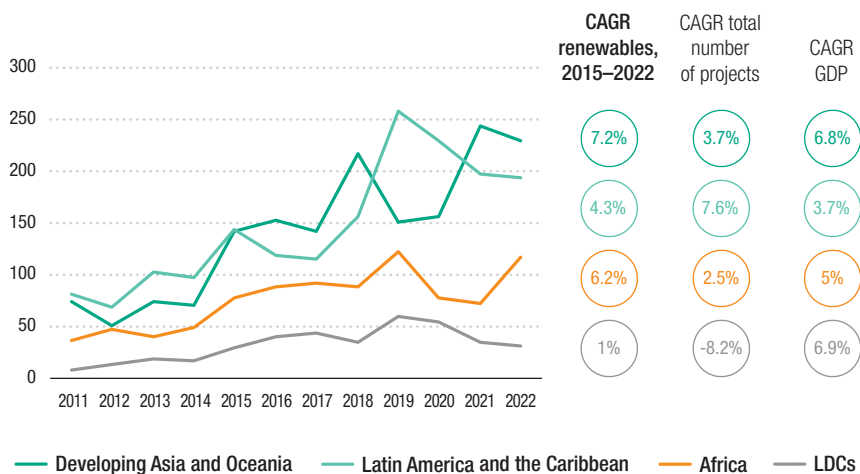
Source: UNCTAD.

Note: Includes announced greenfield investment and international project finance deals.

More widespread growth of energy transition investment needed

The growth of investment in renewable energy slowed down in 2022. Greenfield investment announcements doubled but international project finance deals, which are usually larger, declined. International investment activity in renewables has nearly tripled since 2015. However, this rapid growth has been mostly confined to developed countries, particularly in Europe where strong policy support has provided a push. In developing regions, the growth of international project finance and greenfield projects has been much more gradual. It has outpaced GDP growth, but only marginally. In LDCs, where the need for investment in energy is especially high, renewables investment from international sources has lagged behind GDP growth. Since 2015, LDCs have seen the number of renewables projects increase by only 1 per cent per year, while their economies grew almost seven times faster (figure 3).

Figure 3. Renewable energy: international investment in developing regions, 2011–2022 (Number of projects)



Source: UNCTAD, based on information from The Financial Times, fDi Markets (www.fdimarkets.com) and Refinitiv for projects and IMF for GDP.

Note: Growth rate is calculated as the compound annual growth rate (CAGR) for the period 2015–2022. GDP growth is in terms of purchasing power parity. The data set captures internationally promoted projects of utility-size installations.

In addition to the relatively slow growth of international investment in renewables in developing regions, international project finance and cross-border greenfield projects also show relatively high levels of concentration in a few countries. Larger and more advanced economies attract disproportionate numbers of projects.

At the sectoral level, numbers of investment projects beyond renewable energy generation are also significantly lower. International investment in power grids and storage capacity accelerated only after 2020, even though such investment is a critical complement to renewable energy generation.

International investment in the renewable energy supply chain is growing. The number of new projects announced in critical minerals in 2021 and 2022 was more than double the average level of the last decade. Investment projects in solar and wind power component manufacturing are also increasing, although from a low level. In 2022, the value of announced projects in battery manufacturing tripled, to more than \$100 billion. Most projects are in the United States and in European manufacturing hubs, but a few developing countries attracted sizeable investments.

Fossil fuel divestments call for a new dealmaking model

Despite the fear that high energy prices and the push for energy security would lead to a reversal in the downward trend of international investment in fossil fuel assets, project numbers remained stable for both fossil fuel-based power plants and extractive industries. (In extractives, greenfield investment by oil and gas majors increased, but project finance declined.) The value of investment in renewables surpassed fossil fuels in 2020, and the gradual shift is expected to continue.

Energy companies in the ranking of the top 100 MNEs are divesting fossil fuel assets at a rate of about \$15 billion per year. Divestment does not imply that oil fields, gas plants and other upstream assets cease operations. The buyer will typically aim to make purchased fossil fuel assets generate the highest possible returns. This often means improving the overall productivity of the asset, including by pushing for increased output or extending lifetimes. Buyers include mostly private equity funds, smaller operators within the sector and commodity traders. A key concern is that such private (non-listed) buyers often have lower or no emission-reduction goals and weaker climate reporting standards. This calls for a new model of climate-aligned dealmaking.

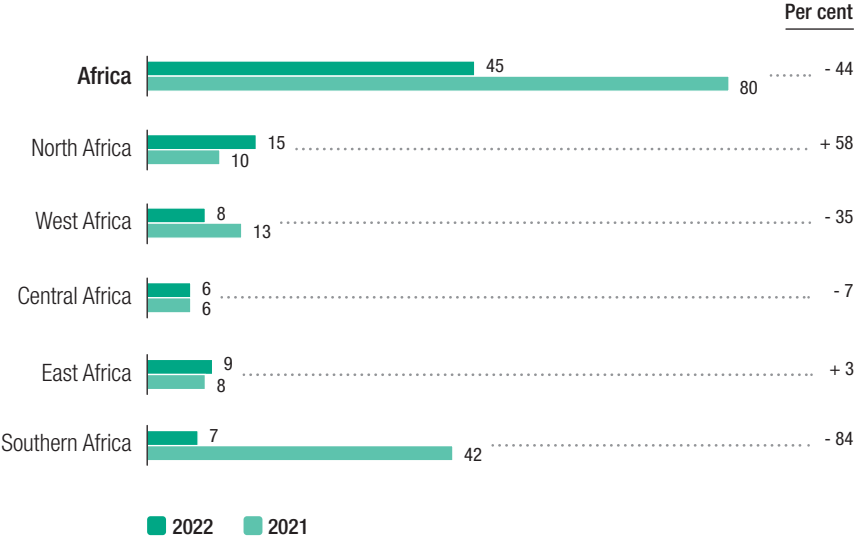
REGIONAL FDI TRENDS

FDI inflows decrease, but investment activity in Africa on the rise

FDI flows to Africa fell by 44 per cent to \$45 billion, following an anomalous high in 2021 that was due to a single intrafirm financial transaction in South Africa. Excluding the effect of this deal, FDI flows to Africa in 2022 would have increased by 7 per cent. North and East Africa saw inflows rise; Central, West and Southern Africa registered declines (figure 4).

The value of greenfield projects announced in Africa almost quadrupled, to a record \$195 billion (from \$52 billion in 2021). The number of projects also rose, by 39 per cent, to 766. The biggest value increases were in energy and gas supply (to \$120 billion), construction (\$24 billion) and extractive industries (\$21 billion). Six of the top 15 greenfield megaprojects announced in 2022 were in Africa.

Figure 4. FDI inflows in Africa, by subregion, 2021–2022 (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

In contrast, international project finance deals in Africa showed a decline of 47 per cent in value (\$74 billion, down from \$140 billion in 2021), despite a 15 per cent increase in project numbers to 157. Decreases in values were registered in renewables, mining and power.

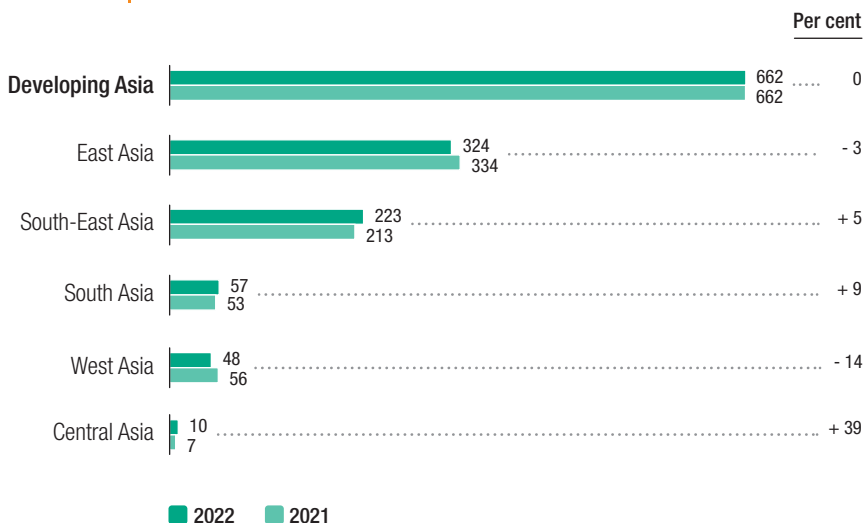
European investors remain, by far, the largest holders of FDI stock in Africa, led by the United Kingdom (\$60 billion), France (\$54 billion) and the Netherlands (\$54 billion).

FDI in Asia stable; project announcements show further growth to come

FDI flows to developing Asia remained flat at \$662 billion (figure 5). The region is the largest recipient of FDI, accounting for half of global inflows.

Inflows remain highly concentrated. Five economies (China, Singapore, Hong Kong (China), India and the United Arab Emirates in that order) accounted for almost 80 per cent of FDI to the region in 2022.

Figure 5. FDI inflows in developing Asia, by subregion, 2021–2022
(Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

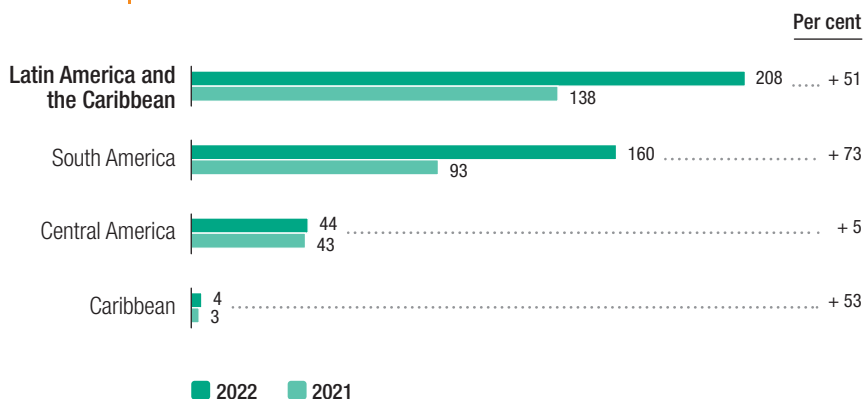
India and the Association of Southeast Asian Nations (ASEAN) were the most buoyant recipients, with increases of 10 and 5 per cent, respectively, and strong growth in project announcements. India became the third largest host country for announced greenfield projects and the second largest for international project finance deals. China, the second largest FDI host country in the world, also saw a 5 per cent increase. FDI in the Gulf region declined, but the number of project announcements increased by two thirds.

The number of announced greenfield projects and international project finance deals in the region increased by 45 and 20 per cent, respectively, indicating strong international investment activity.

Jump in FDI in Latin America and the Caribbean, partly due to high commodity prices

FDI in Latin America and the Caribbean increased by 51 per cent to \$208 billion, the highest level ever recorded (figure 6). High commodity prices pushed up reinvested earnings of foreign affiliates in extractive industries. Project growth across the region was more modest, with 14 per cent more greenfield announcements and a decline in international project finance deals.

Figure 6. FDI inflows in Latin America and the Caribbean, by subregion, 2021–2022 (Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

In South America, most countries saw their FDI flows rise. In Brazil, flows increased by two thirds, reaching \$86 billion, the second highest value ever recorded. Reinvested earnings doubled, but new investment activity also increased; the numbers of announced greenfield projects and international project finance deals rose by almost 30 per cent.

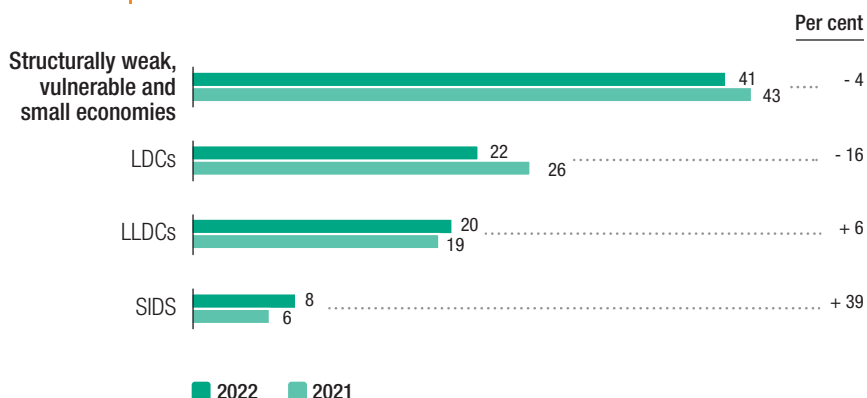
Inflows to Central America and the Caribbean also increased, with both new equity and reinvested earnings up. In Mexico, the largest recipient, both M&As and greenfield investment announcements in manufacturing increased significantly.

FDI in structurally weak, vulnerable and small economies declines

Flows to a group of 84 structurally weak, vulnerable and small economies declined by 4 per cent to \$41 billion in 2022 (figure 7). Inflows to the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS) together accounted for 3.2 per cent of the world total, up from 2.9 per cent in 2021.

FDI in LDCs declined. Flows remained concentrated, with the top five recipients accounting for about 70 per cent of the total. Although the number and value of greenfield project announcements in LDCs increased in 2022, they remain below

Figure 7. FDI inflows in structurally weak, vulnerable and small economies, 2021–2022 (Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

their 10-year average, at about half in number and a quarter in value. International project finance deals in LDCs decreased by 9 per cent in number and by 68 per cent in value to \$20 billion.

The growth of FDI in LDCs has lagged that of other external sources of finance for most of the last decade. Official development assistance (ODA) and remittances are significantly higher. FDI flows remain, nonetheless, an important source of external finance for LDCs, crucial for their sustainable development and their graduation prospects.

FDI in the 32 LLDCs as a group increased. The number of greenfield project announcements increased by 15 per cent (the value tripled to \$31 billion). The increase was particularly pronounced in extractive industries. The number of international project finance deals was 19 per cent lower than in 2021. The majority of projects were in renewables, but projects were also announced in other sectors, including power, mining and industrial real estate.

FDI inflows to the SIDS increased. Project announcements were up in renewable energy and in the recovering tourism sector.

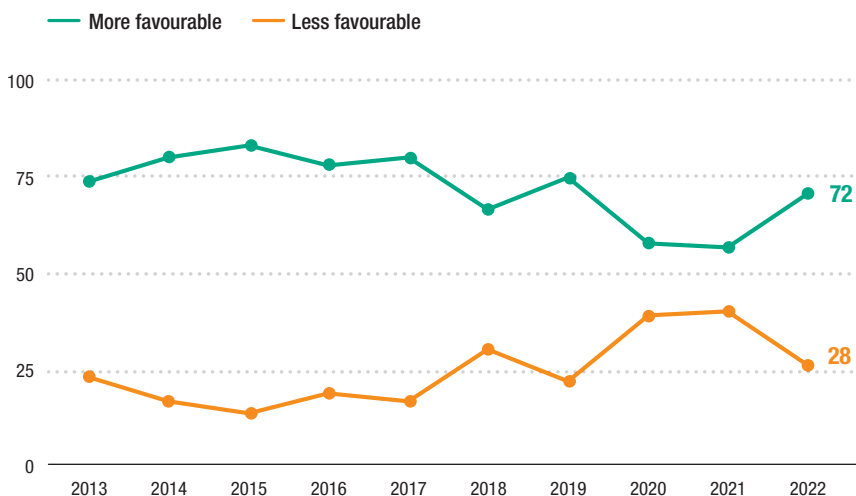
INVESTMENT POLICY DEVELOPMENTS

Investment policymaking activity surged

Sixty-six countries introduced a total of 146 policy measures affecting foreign investment in 2022, over one third more than in 2021. The number of measures favouring investment nearly doubled, from 55 to 102, while the number of policies that were less favourable to investment remained stable. This brought the relative share of favourable policies back to pre-pandemic levels (figure 8).

Three quarters of the measures more favourable to investment were adopted in developing countries. The majority were investment facilitation initiatives, followed by investment incentives and the opening of new sectors and activities to FDI. For the first time since the pandemic, the share of more favourable investment measures also increased significantly in developed countries (by 21 per cent). They included primarily investment facilitation initiatives and incentives for renewable energy and other climate-related investments.

Figure 8. Changes in national investment policies, 2013–2022 (Per cent)



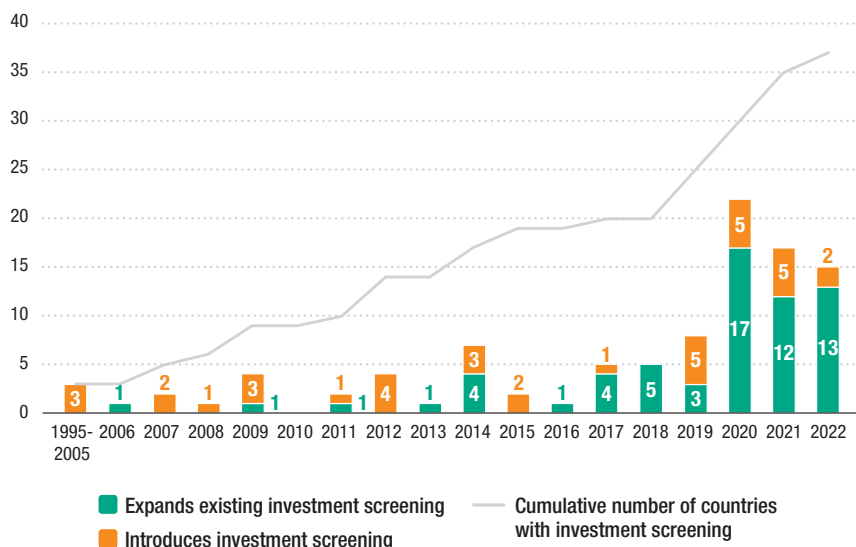
Source: UNCTAD, Investment Policy Monitor.

Investment screening continues to spread

Of the measures less favourable to investment, almost half concerned the introduction or tightening of national security regulations affecting FDI, an expansion of the recent trend. Most of these measures were introduced by developed countries. This brought the number of countries conducting investment screening on national security grounds to 37 (figure 9). Together, these countries account for 68 per cent of FDI stock.

Data on FDI projects that are screened on national security grounds are limited but point to an increase in the number of transactions that undergo review. The greater attention paid to national security considerations in regulatory approaches to FDI is also reflected in the implementation of M&A controls. Among large M&A deals for which data are available, at least 21 were terminated by the parties in 2022 for regulatory reasons, 7 more than in 2021, and their aggregate value jumped by almost 70 per cent, to \$70 billion.

Figure 9. Countries introducing or expanding security-related investment screening, 1995–2022 (Number)



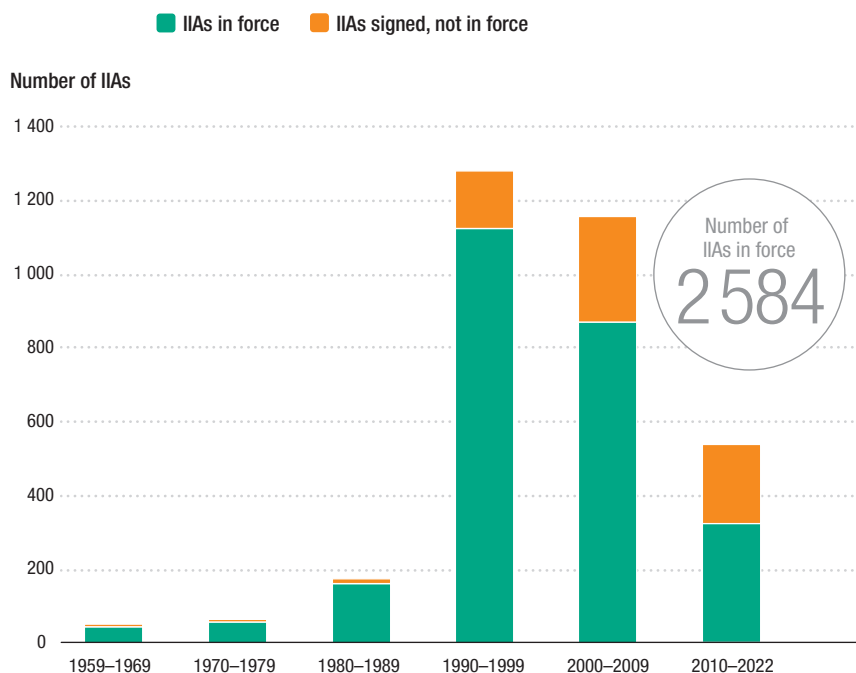
Source: UNCTAD.

Investment treaty terminations again exceeded the number of new treaties

In 2022, the trend towards reform of international investment agreements (IIA) continued. For the third consecutive year, the number of effective treaty terminations (58) exceeded that of new IIAs (15). This brought the IIA universe to 3,265, including 2,584 in force (figure 10).

Of the 58 terminations in 2022, most reflected the abrogation of intra-European Union bilateral investment treaties. By the end of the year, the cumulative number of effective terminations reached 569, with about 70 per cent of those terminated in the last decade.

Figure 10. Stock of IIAs signed and in force, 1959–2022 (By date of signature)



Source: UNCTAD, IIA Navigator.

Note: The figure does not include IIAs that were effectively terminated.

Recent IIAs feature many reformed provisions aimed at safeguarding the right of States to regulate and reforming investor–State dispute settlement (ISDS). It remains to be seen whether the reformed provisions are sufficiently robust to support and not hinder countries’ sustainable development endeavours. More actions are required to accelerate IIA reforms in all areas identified by UNCTAD in its Road Map for IIA Reform.

The year was further marked by the conclusion of negotiations on several international investment instruments with proactive investment facilitation features and with an increased focus on sustainable investment. The work of international organizations on various aspects of international investment governance also continued, with advances in negotiations on investment facilitation and the first outputs agreed upon for the reform of ISDS.

Old-generation IIAs continue to dominate the IIA universe

About 2,300 old-generation IIAs are still in force, dominating the IIA network. The IIAs in force create a universe of more than 4,400 bilateral IIA relationships between pairs of economies. Over 88 per cent of IIA relationships are based on treaties signed before 2012. At least 40 per cent of the relationships created by new-generation IIAs coexist with an earlier one between the same economies. The continued prevalence of old-generation IIAs entails risks for climate action, energy transition and other sustainability objectives, highlighting the need to accelerate the reform of the existing stock of treaties through amendment, replacement or termination.

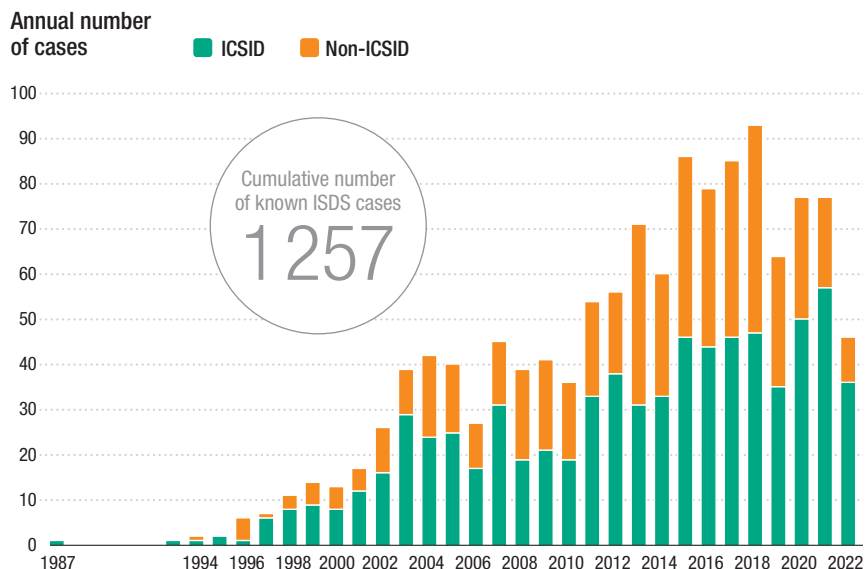
Most new ISDS cases were brought under old-generation IIAs

In 2022 claimants filed 46 new ISDS cases under IIAs, bringing the total count of publicly known cases to 1,257 (figure 11). About 80 per cent of investment arbitration cases in 2022 were brought under IIAs signed in the 1990s or earlier. The Energy Charter Treaty was the most frequently invoked, with 10 cases filed in 2022. Between 1987 and 2022, claimants from five countries – the United States, the Netherlands, the United Kingdom, Germany and Spain, in that order – initiated almost half of all known ISDS cases. To date, 132 countries and one economic grouping have been respondents to one or more ISDS claims.

By the end of 2022, at least 890 ISDS proceedings had been concluded. The relative share of case outcomes was similar to previous years. Thirty-seven per cent of cases were decided in favour of the State, 28 per cent were decided

in favour of the investor (with monetary compensation awarded) and 19 per cent were settled. In the remaining proceedings, either cases were discontinued (14 per cent) or the tribunal found a treaty breach but did not award monetary compensation (2 per cent).

Figure 11. Trends in known treaty-based ISDS cases, 1987–2022



Source: UNCTAD, ISDS Navigator.

Note: ICSID = International Centre for Settlement of Investment Disputes. Information has been compiled from public sources, including specialized reporting services. UNCTAD statistics do not cover investor–State cases that are based exclusively on investment contracts (State contracts) or national investment laws, or cases in which a party has signalled its intention to submit a claim to ISDS but has not commenced the arbitration. Annual and cumulative case numbers are continually adjusted as a result of verification processes and may not match exactly case numbers reported in previous years.

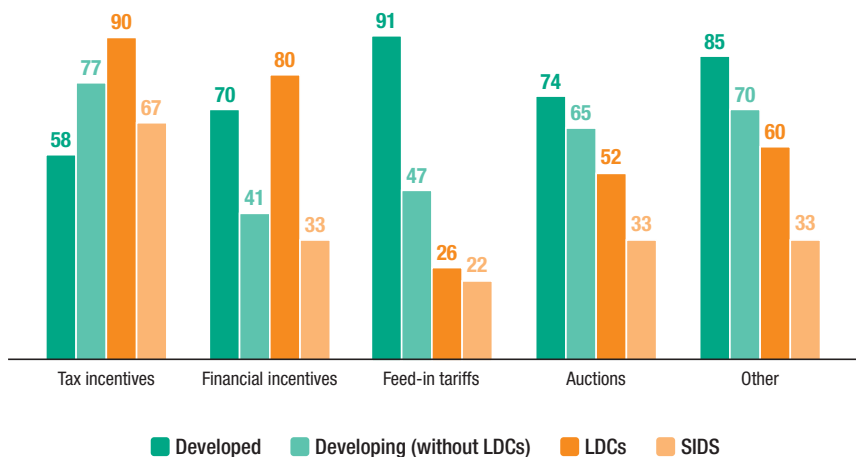
SUSTAINABLE ENERGY INVESTMENT POLICIES

Renewable energy investment measures vary between developed and developing countries

Investment policies have a key role to play in de-risking and incentivizing investment in the energy transition. Countries have adopted various types of instruments to promote private investment in the renewable energy sector. Among these, tax incentives are the instrument most often used for promoting renewable energy investment in developing countries (77 per cent), LDCs (90 per cent) and SIDS (67 per cent). In contrast, developed countries favour feed-in tariffs, auctions and financial incentives, adopted by 91 per cent, 74 per cent and 70 per cent respectively (figure 12).

Figure 12.

Prevalence of private investment promotion instruments, by type (Per cent of countries)



Source: UNCTAD and Climate Change Laws of the World database.

Note: The chart covers laws adopted during the period 2000–2022, as well as amendments of some laws that were adopted before 2000. Feed-in tariff and auction data are based on other sources, covering 193 countries. "Other" includes quota-based instruments, guarantee schemes and business facilitation.

Each of the policy tools to incentivize investment in the renewable energy sector presents advantages and disadvantages. Tax incentives can be customized to achieve specific policy objectives. They typically do not require direct public spending in the way subsidies do. However, they may not address the main barriers to investment in renewable energy, including access to finance, market and infrastructure risks, and high upfront capital requirements. Feed-in tariffs, instead, offer investors guaranteed prices and they provide a longer-term perspective, which reduces uncertainty about the return on investment. However, depending on their design, they can be a burden for public finances and increase the cost of electricity for users. Renewable energy auctions – another investment promotion mechanism – have increased in popularity since 2010 because they are both cost-efficient and adaptable to different economic contexts. However, they can be complex to design and manage and require access to specialized expertise.

Record-high fossil fuel subsidies hinder renewable energy investment

Fossil fuel subsidies worldwide amounted to \$1 trillion in 2022, a record level, and eight times the value of subsidies for renewable energy. Fossil fuel subsidies are a disincentive to transition investment because they make it more challenging for renewable energy to compete, especially when it does not receive the same level of support. An added concern is that they are increasingly allocated to fossil fuel producers rather than consumers. While phasing them out is complex, particularly for developing countries, which face competing interests, doing so would help encourage investment in renewable energy.

UNCTAD developed an IIA toolbox for the promotion of sustainable energy investment

The energy transition adds to the urgency of reform of international investment governance. Old-generation IIAs can hinder States in the implementation of policy measures needed for the energy transition. Most new-generation IIAs fare relatively better by safeguarding States' right to regulate but remain weak in incorporating provisions that proactively promote sustainable energy investment.

The number of ISDS cases related to the fossil fuel and renewable energy sectors is rising. In the fossil fuel sector, investors have been frequent ISDS claimants, initiating at least 219 cases against different types of State conduct. In the renewable energy sector, the last decade has also seen the emergence

and proliferation of ISDS cases, with 119 known cases. Many of these cases challenged legislative changes involving reductions in feed-in tariffs for renewable energy production.

Various options exist to transform IIAs into tools that are conducive to sustainable energy investment and climate objectives. UNCTAD has developed a toolbox with policy options in four areas (table 2): the promotion and facilitation of investment, technology transfer, the right to regulate and corporate social responsibility. Renegotiation, amendment and termination of the large stock of old-generation IIAs are the main options to ensure that the international investment regime contributes to – and does not hinder – sustainable development.

Table 2.	IIA reform toolbox: promoting sustainable energy for all
Promotion and facilitation of sustainable energy investment	Incorporate IIA provisions aimed at actively promoting and facilitating sustainable energy investment
	Provide for preferential treatment of sustainable energy investment
	Establish institutional mechanisms for cooperation on R&D of sustainable technologies
	Commit to technical assistance on the adoption of investment facilitation measures for sustainable energy
Technology transfer and diffusion	Encourage technology transfer of low-carbon and sustainable technologies, including related know-how
	Make efforts to create an enabling environment to receive technology
	Allow certain kinds of performance requirements relevant to the energy transition Ensure that the protection of intellectual property rights does not unduly impede the diffusion of technology
Right to regulate for climate action and the energy transition	Refine the content of investment protection standards and reform ISDS with regard to energy investment
	Acknowledge the need for regulatory flexibility
	Include general exceptions related to climate change and the energy transition
	Clarify provisions on compensation and damages
Corporate social responsibility	Include binding obligations relating to corporate social responsibility
	Specifically oblige energy investors to comply with requirements for sustainable investment (e.g. by requiring environmental impact assessments and maintenance of an environmental management system)

Source: UNCTAD.

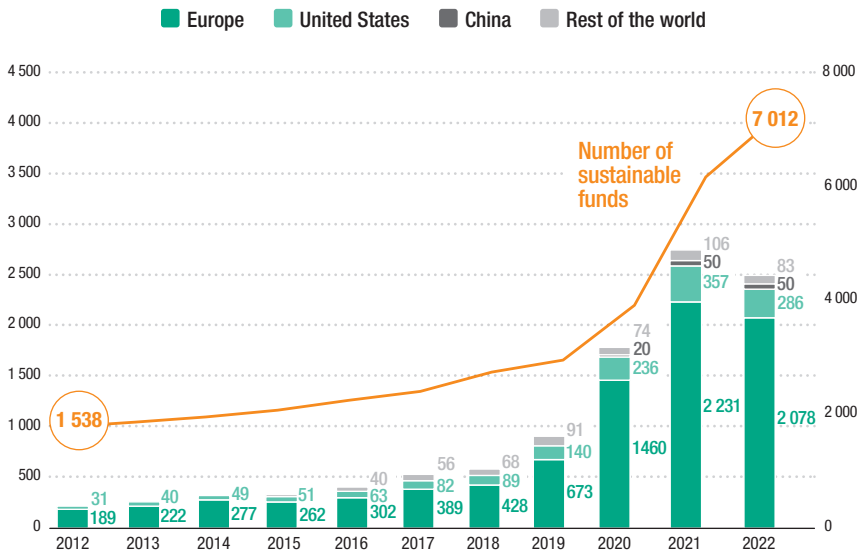
CAPITAL MARKETS AND SUSTAINABLE FINANCE

Sustainability-themed investments remain resilient amid volatile capital markets

The value of the overall sustainable finance market (bonds, funds and voluntary carbon markets) reached \$5.8 trillion in 2022, despite the turbulent economic environment, including high inflation, rising interest rates, poor market returns, and the looming risk of a recession, which all affected the financial markets.

Sustainable funds continued to be more attractive to investors than traditional funds. The value of the global sustainable fund market fell from its high of \$2.7 trillion, in 2021, to \$2.5 trillion in 2022 (figure 13). However, despite the

Figure 13. Sustainable funds and assets under management, 2012–2022 (Billions of dollars and number)



Source: UNCTAD, based on Morningstar data.

decline in market valuation, net inflows to the market in 2022 were positive, in contrast to traditional fund markets, which experienced net outflows. This suggests that investors view sustainable finance as a longer-term strategy and are still convinced by the business case for sustainable sectors, such as renewable energy.

Sustainable funds make a significant contribution to attaining the SDGs. As of the end of 2022, more than half a trillion dollars, or 30 per cent of the holdings of UNCTAD-monitored funds, were committed to eight investable SDG sectors, up from 26 per cent in 2021. Health, renewable energy, agrifood systems and WASH remain the largest recipients of funding, accounting for 95 per cent of the assets committed to SDG sectors.

Sustainable funds tend to outperform their conventional peers on environmental, social and governance (ESG) criteria, but greenwashing persists. The average ESG rating of more than 2,800 sustainable funds monitored by UNCTAD is significantly better than that of the benchmark MSCI global equity index. Nevertheless, at least a quarter of funds do not live up to their sustainability credentials.

The sustainable bond market continues to grow, although the issuance of new bonds declined by 11 per cent in 2022 (figure 14). Despite the 2022 slowdown, annual issuance of sustainability-themed bonds has grown approximately fivefold in the past five years. The outstanding value of the sustainable bond market increased from \$2.5 trillion in 2021 to \$3.3 trillion in 2022. Green bond issuance remained relatively resilient, declining by only 3 per cent in 2022.

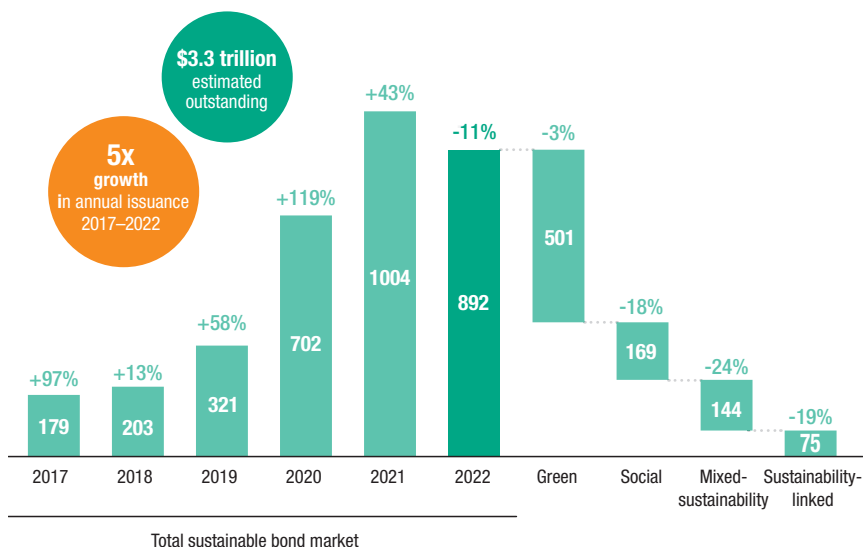
Despite the overall weakness of the bond market in 2022, green bonds continued to be a growing source of finance across the key sustainable development sectors of energy and water, which both saw significant increases in 2022. A drop in the use of green bonds to finance buildings led the overall decline in 2022. When examining the market by issuer type, corporate, government agency and municipal issuers all showed steep declines in the value of bonds issued, but financial institutions and supranational entities increased their issuance in 2022, which helped to prop up the overall green bond market.

Carbon markets today are primarily either compliance markets or voluntary markets. Compliance carbon markets, with issued credits of \$700–\$800 billion per year, are much larger than voluntary carbon markets, at only about \$2 billion per year. However, voluntary markets provide a unique feature that most

compliance markets do not: the ability to channel investment capital across borders to finance new emissions reduction or avoidance projects. Most voluntary carbon market credits are being issued for projects in developing countries and sold to buyers in developed countries (primarily in Europe and the United States, in that order). In this way, the nascent voluntary market holds great potential as a new channel for sustainable finance in climate sectors, such as renewable energy or reforestation.

Carbon markets saw record prices for the cost of a ton of CO₂ equivalent in 2022, raising hopes that a more realistic price for CO₂ (and other greenhouse gases) can help drive the energy transition. For that to work, greater consistency in prices will be important. The spread between the price of carbon in voluntary markets and that in compliance markets ranges from near \$0 to almost \$100, with similar ranges within both markets.

Figure 14. Global sustainable bond issuance, 2017–2022, and by category, 2022
(Billions of dollars and year-on-year growth)



Source: UNCTAD, based on information from Environmental Finance.

Institutional investors continue to make progress on sustainability performance

In 2022, the top 100 sovereign wealth and public pension funds monitored by UNCTAD improved their disclosure of climate action, including investment in sustainable energy and divestment from fossil fuels. Two thirds of reporting funds have now committed to achieving net zero in their investment portfolios by 2050. Institutional investors, such as public pension and sovereign wealth funds, are in a pivotal position to effect change on sustainability and to finance investment in sustainable energy. The capital-intensive and long-term nature of renewables investment corresponds, for example, with the maturity profiles of pension fund liabilities and is a good match for sovereign demand for infrastructure investment.

The rapidly evolving regulatory environment, including the rollout of more widely adopted standards for sustainability reporting, is having an impact on fund disclosure and investment decisions. More funds are employing climate-risk analysis in their investment strategies and increasing engagement with investees.

However, many institutional investors in the UNCTAD top 100 still fail to disclose or report on sustainability-related risks and are not moving quickly enough to reorient portfolios, especially with regard to climate-related action and net zero. Among those that do report, the quality and scope of reporting is often not consistent or comparable, and many lack specific key performance indicators or targets in their reporting.

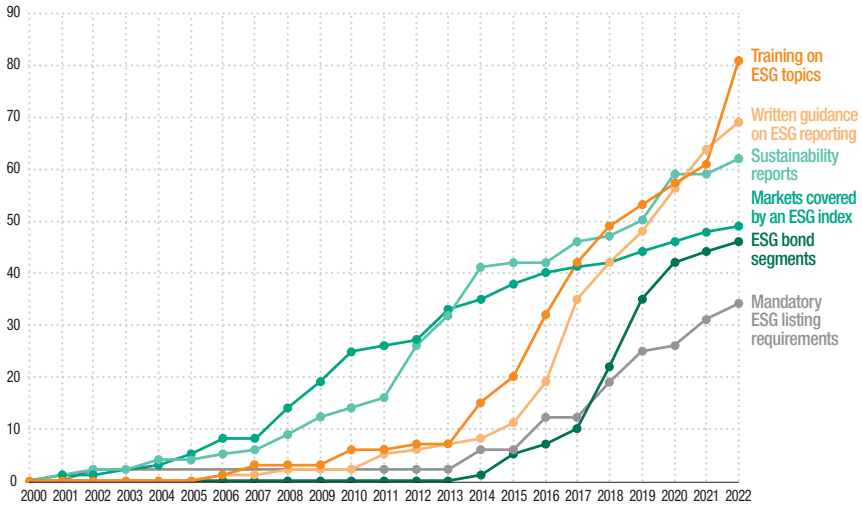
Exchanges increase their sustainable finance support activities

Capital market infrastructure such as stock exchanges and derivatives exchanges are a key leverage point in the investment chain; they can exert significant influence on market participants. Stock exchanges continue to provide support for sustainable finance with increases across the board in the number of exchanges with written ESG disclosure guidance, mandatory ESG reporting, ESG training and related bond and equity offerings (figure 15).

As regulation and standardization of sustainable finance increases, so does the importance of education for market participants. In 2022, training on ESG topics became the most common sustainability activity of exchanges, fuelled in part by the activities of the Sustainable Stock Exchanges (SSE) initiative, which works with development partners and exchanges to train market participants.

Figure 15.

Stock exchange sustainability trends, 2000–2022 (Number of exchanges)



Source: UNCTAD, SSE database.

The SSE Academy was created in response to growing demand from stock exchanges for education and training on ESG disclosure standards and regulatory developments. By working with key development partners such as the International Finance Corporation (a member of the World Bank Group), and the Carbon Disclosure Project (a civil society organization), the SSE Academy has created a global support network for market participants.

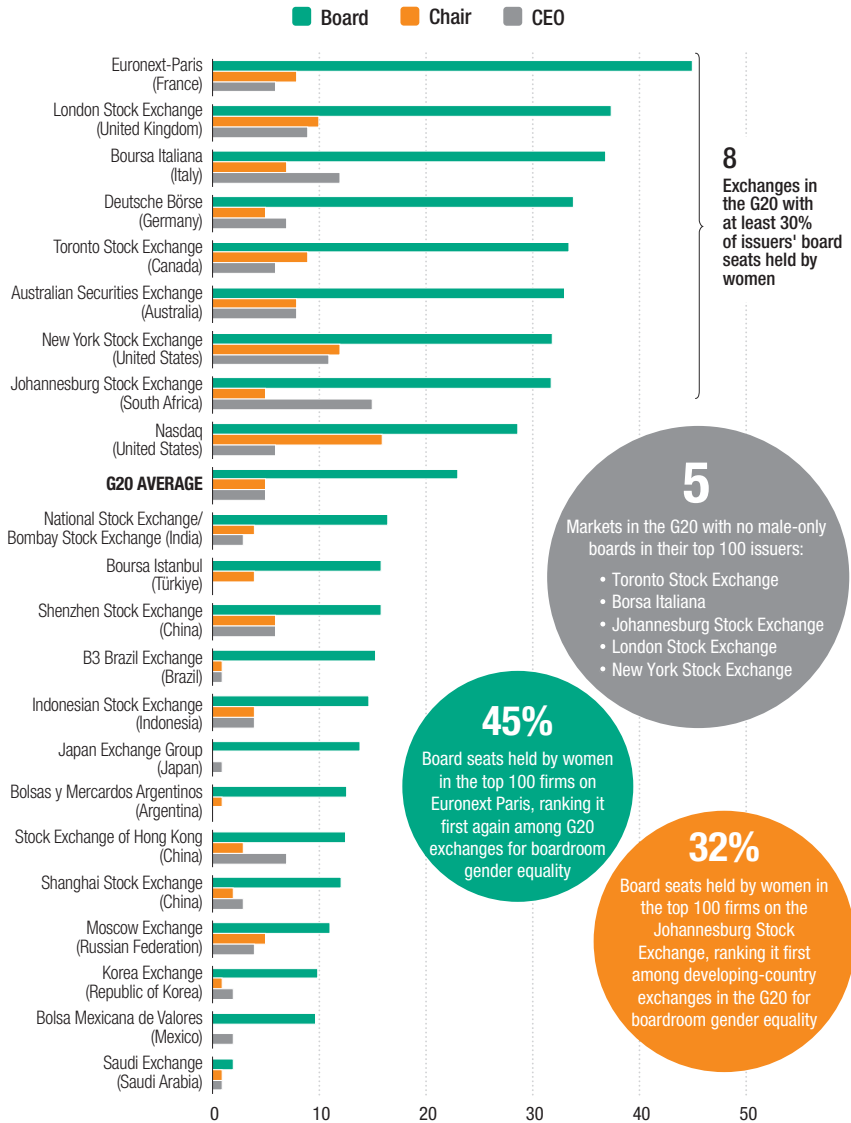
Gender equality in corporate leadership makes modest gains in 2022

Women hold 23 per cent of the 21,561 board seats of the top listed companies on 22 major G20 stock exchanges (figure 16). This share is a 1.3 percentage point improvement year on year, with 18 exchanges showing an increase in women on their issuers' boards, and only four exchanges showing a decrease. In seven out of the G20 markets, policymakers have created mandatory rules regulating the minimum number of women required on boards of listed companies.

Figure 16.

G20 stock exchanges by gender balance of issuers' boards

(Per cent of positions held by women among top 100 issuers by market capitalization)



Source: SSE and IFC (2022), Market Monitor: Gender equality in corporate leadership – G20 exchanges.

Policy and regulatory developments in 2022 show the importance countries attach to the sustainable finance market and its role in achieving net zero

UNCTAD distinguishes seven areas around which the current architecture of sustainable finance policy and regulation is built: national strategy, national framework and guidelines, taxonomy, product standards, sustainability disclosure, sector-specific regulations and carbon pricing. In the 35 markets monitored by UNCTAD, policy developments can be observed across all seven areas. Clear priorities for policymakers are to improve market transparency and credibility and to address sustainability-washing concerns. They pursue these goals through the development of national sustainable finance taxonomies and standards and increased sustainability disclosure requirements.

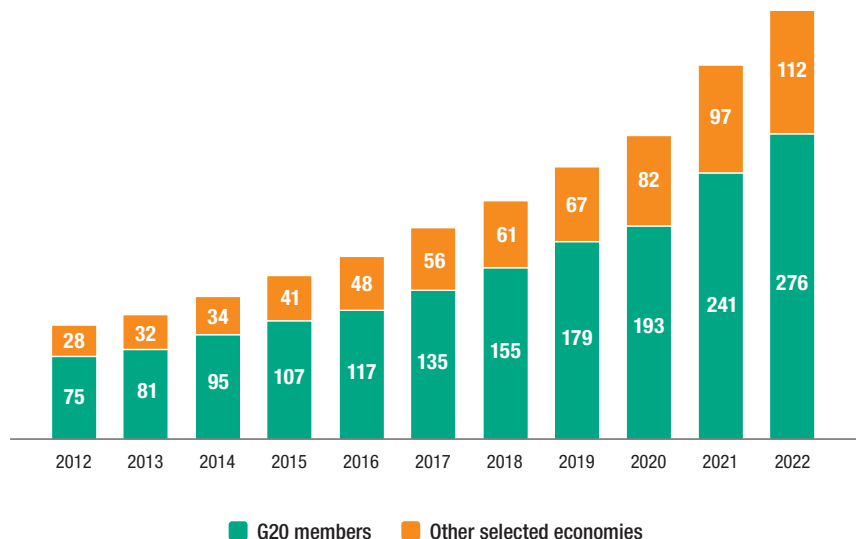
In 2022, according to the Sustainable Finance Regulation Platform of the Global Sustainable Finance Observatory (GSFO), 22 of the 35 economies and country groupings tracked by UNCTAD, representing more than 90 per cent of global GDP, introduced at least 50 sustainable finance policy measures, including several adopted by the European Union at the regional level. The European Union brought the total number of all regulations and policy measures in force by the end of 2022 to 388 (figure 17). In addition, more than 50 measures are under development. Significant progress was made in most policy areas, but most notably in taxonomy development, sustainability disclosure, sector- or product-specific measures, and carbon pricing.

Broadly, China, the United States and the European Union have taken two different approaches to sustainable finance regulation. The European Union has predominantly adopted a regulatory approach, prioritizing the establishment of a comprehensive regulatory framework for sustainable finance. Its policy measures and frameworks have been used as a reference for sustainable finance policymaking in other countries. For example, the European Union taxonomy, based on the principles of “substantial contribution” (to sustainability objectives) and “do no significant harm”, has served as a useful model for other economies, such as South Africa and ASEAN, in developing their taxonomies.

China and the United States have so far pursued a hybrid approach, attaching importance to both regulation and the integration of climate and sustainable development dimensions in industrial policies. In 2022, the United States introduced the Inflation Reduction Act, with a focus on green investment.

Figure 17.

Sustainable finance policy measures and regulations in selected developed and developing economies, 2012–2022 (Number of measures)



Source: Global Sustainable Finance Observatory (GSFO.org), based on UNCTAD, PRI and World Bank data.

Notes: The scope of regulations and policy measures encompasses seven key policy areas for sustainable finance: national strategy, national framework and guidelines, taxonomy, product standards, sustainability disclosure, sector-specific regulations and carbon pricing. Other selected economies and territories include Switzerland, as well as 13 developing economies (Bangladesh, Chile, Hong Kong (China), Colombia, Egypt, Kenya, Malaysia, Nigeria, the Philippines, Singapore, Thailand, the United Arab Emirates and Viet Nam), and ASEAN. Relevant measures of the European Union are included in the number for the G20. The number of policy measures in 2021 was updated to include incentive-related measures.

Securities regulators and international standard setting bodies continue to codify sustainability reporting

The International Organization of Securities Commissions has expressed its support for the International Financial Reporting Standards Foundation's International Sustainability Standards Board (ISSB). The initial ISSB global standards, planned for launch in mid-2023, set out general requirements for sustainability-related financial disclosure (standard S1) and specific requirements on climate-related financial disclosure (S2). The Standards require entities to disclose material information about sustainability and climate-related risks and opportunities, to meet the information needs of investors and capital markets.

The Global Reporting Initiative (GRI) Standards are widely used for corporate reporting on sustainability impacts and a referenced standard in stock exchange guidance documents on sustainability reporting. Under the work programme for 2023–2025, the GRI will review existing standards and develop new topic and sector standards. Its revised Universal Standards came into operation in January 2023. GRI standards address an organization’s impact on the economy, the environment and people, to meet the information needs of a multistakeholder audience. The standards being created by the ISSB focus on the information needs of investors and other capital providers related to sustainability-related risks and opportunities.

The ISSB and GRI Standards can be viewed as two interconnected reporting pillars that address distinct but complementary perspectives. Both organizations, through their collaboration, have committed to ensuring the compatibility of their standards.



The sustainable finance market demonstrated resilience in an otherwise struggling market in 2022, but there are still several challenges. Chief among them is the scale and growth of the market, which still represents only a small share of the overall financial market, and the exposure of the market to developing countries. The second challenge concerns the coherence of policies and standards and the need to ensure comparability and interoperability. The third challenge relates to the coverage of sustainability rules and standards, which have so far generally omitted small and medium-sized enterprises (SMEs) from their scope. A fourth challenge is the quality assurance of products to minimize greenwashing and any backlash associated with it.

With just seven years left for countries to reach a 45 per cent reduction in CO₂ emissions compared with 1990 levels, in accordance with their commitments under the Paris Agreement, a greater push is needed to change investment patterns. In this context, the role of education and training on sustainability integration and disclosure is critical. UNCTAD’s sustainable finance programmes offer a range of training opportunities and educational tools and resources for investors and policymakers. UNCTAD also continues to monitor the sustainable finance market through its coordination of the Global Sustainable Finance Observatory and the Sustainable Stock Exchanges Initiative.

INVESTMENT IN SUSTAINABLE ENERGY FOR ALL

Combatting climate change is one of the defining challenges of our time. It hinges to a large extent on making the transition from energy generated by fossil fuels to energy generated from renewable sources. The energy transition is central to achieving the 2030 Agenda for Sustainable Development, which not only calls for urgent action to combat climate change and its impacts (SDG 13), but also points at the need to ensure access to affordable, reliable, sustainable, and modern energy for all (SDG 7).

Investment needs for the energy transition are enormous

The energy transition will take huge amounts of investment over many years in renewable energy generation, energy efficiency and energy infrastructure. To keep the world on track to meet the goal set out in the Paris Agreement of limiting global warming to, or close to, 1.5°C above pre-industrial levels will require investing about 1.5 times today's global GDP until 2050.

Investment needs are daunting in developed countries and in developing countries that already have significant energy assets. They are much lower in absolute terms in countries where a significant share of the population does not yet have access to electricity, but much higher relative to those countries' existing asset base and to their capacity to finance and support such assets. That is important, because energy investment is needed not only for the transition, but also to ensure access to sustainable and affordable energy for all. Renewable energy capacity needs to increase by a factor of 2.5 in the most advanced economies, but by a factor closer to 25 in LDCs.

Investment requirements are not limited to renewable energy generation. They extend to energy efficiency in buildings, industry and transportation; energy infrastructure such as power grids and storage capacity; clean and low-emission fuels; and the renewables supply chain, including R&D activities, critical minerals, and manufacturing of solar panels and wind power installations; and carbon capture and storage. In addition, investment in fossil fuel assets will remain necessary for some time to supply complementary capacity; thus, investment will also be needed to increase efficiency and to mitigate the impact of such assets, and ultimately to decommission them.

FDI plays a significant role, especially in developing countries

International investment in the renewable energy sector has nearly tripled since the adoption of the SDGs and the Paris Agreement. However, this growth has been unbalanced, with much of it concentrated in developed countries. Also, while investment in renewables has grown, other sectors relevant for the transition, notably energy infrastructure, still see much lower involvement by international investors. This is because electricity distribution is traditionally a highly regulated utility function with predominantly domestic, and often public equity involvement. However, with the clear interest on the part of international investors to finance renewable energy assets and with the connecting infrastructure often a bottleneck for new investment, the motivation for governments to accelerate energy sector reforms should increase significantly.

Placing international investment in the context of total energy transition investment confirms that FDI plays a significant role. In the renewable energy sector, international project finance accounts for 55 per cent of global project finance values. This share increases for developing countries, exceeding 75 per cent in LDCs.

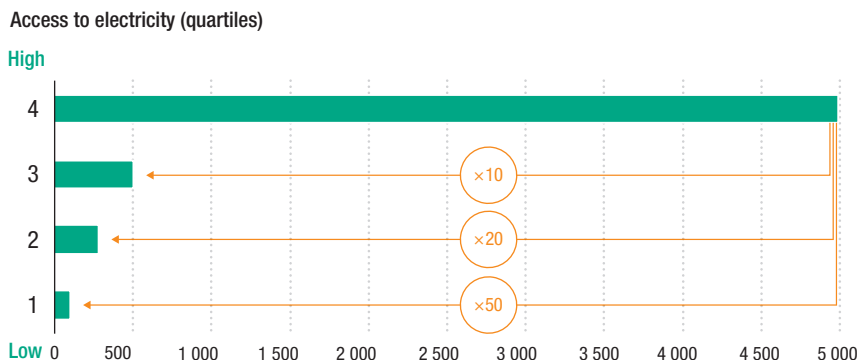
For the poorest countries, therefore, attracting international investment is a crucial prerequisite for a timely energy transition. This is a concern, because many of these countries continue to struggle to attract significant amounts of FDI beyond extractive sectors. To date, 31 developing countries, including 11 LDCs, have not yet registered a single utility-sized international investment project in renewables or other energy transition sectors. Developing countries where almost all of the population has access to electricity have received about 50 times more international investment in renewables per capita than countries with the lowest rates of access to electricity (figure 18).

Energy transition investment decisions hinge on the cost of capital

From the perspective of investors, sustainable energy investment decisions involve multiple choices, including location, source of energy, type of installation and financing modalities. The factors influencing these choices – the drivers and determinants of investment decisions – are the economics of a project, the regulatory environment, the technological and environmental context, and political considerations. Most of the drivers and determinants affect domestic and international investors equally, but a few are more important or more binding

Figure 18.

International investment in renewable energy by access to electricity, developing economies (Dollars per person)



Source: UNCTAD, based on information from The Financial Times, fDi Markets (www.fdimarkets.com), and Refinitiv.

Note: Includes international project finance and greenfield investment, per person (cumulative between 2015 and 2022). Quartiles of the population with access to electricity: 1 = less than 53 per cent, 2 = between 53 and 91 per cent, 3 = between 92 and 99.8 per cent, and 4 = almost 100 per cent.

for international investors, explaining the role of FDI and the potential specific contributions it can make. Critically, international investors can often access cheaper finance, lowering the cost of capital for projects.

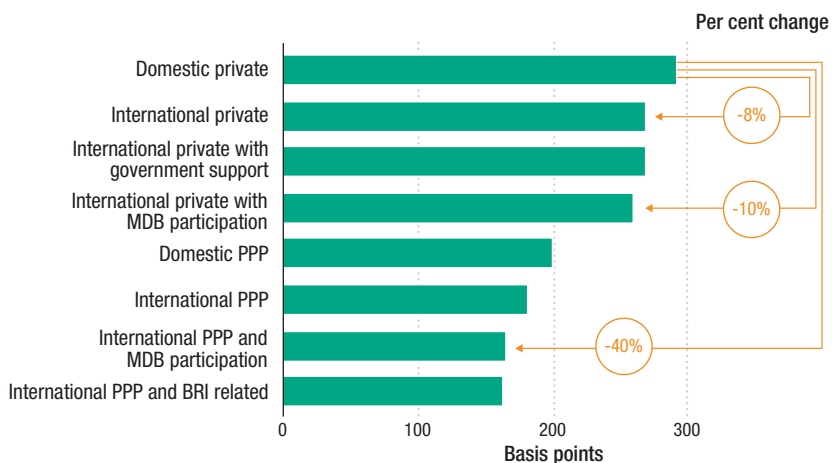
An important indicator underpinning investor choices between different sources of energy and types of installation is the levelized cost of the electricity (LCOE) that is to be generated by a prospective new power plant. The LCOE allows a comparison between different sources of energy on an equal footing. Between 30 and 50 per cent of the LCOE is determined by the cost of capital and by the discount rates applied to project cash flows. Low discount rates favour sustainable energy, because almost all capital expenditures for renewables installations are frontloaded. High discount rates favour fossil fuel-generated energy because the operating expenditures (fuel costs) over their lifetime are discounted. The high cost of capital in developing countries, and especially countries in or near debt distress, thus constitutes a significant economic disincentive for the energy transition. This means that debt relief is inextricably linked to progress on the energy transition. It also means that support in catalysing international investment with lower financing costs is even more important.

Investment partnerships lower the cost of debt finance

Financing decisions and borrowing costs for investors in sustainable energy projects depend on many factors and on country, industry and project risks. A key factor is the line-up of equity and non-equity stakeholders in a project. In developing countries, bringing in international sponsors as (part) project owners leads to a lower cost of capital than in purely domestic projects. Government policy support, while important insofar as it affects the investment enabling environment and cash flow projections (e.g. through subsidies), does not appear to significantly affect borrowing costs. However, minority equity involvement by the public sector – such as through public-private partnerships or PPPs – does decrease borrowing costs substantially. The lowest costs result in international projects with both government and MDB participation.

In developing countries, on average, bringing in international investors lowers the spread on debt finance by 8 per cent; adding in MDBs lowers it by 10 per cent (figure 19). Combining international, MDB and government stakes in public-

Figure 19. Renewable energy: average spread on debt financing by actors involved, developing economies, 2011–2022
(Basis points and per cent)



Source: UNCTAD, based on information from Refinitiv.

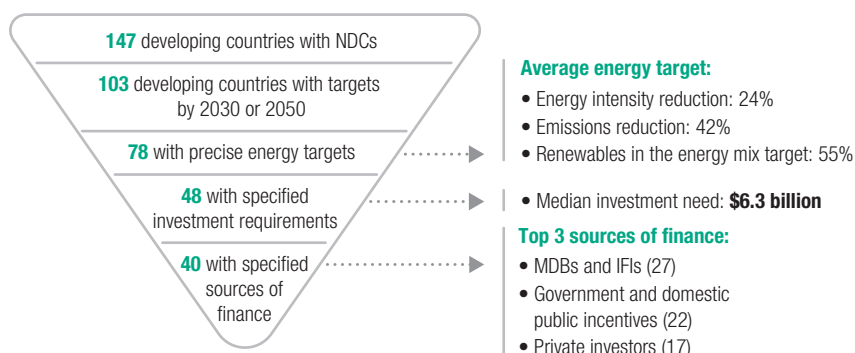
Note: BRI = Belt and Road Initiative, MDB = multilateral development bank, PPP = public-private partnership.

private partnerships reduces the spread by 40 per cent. While increasing the use of PPPs is fraught with challenges, given the negative experiences of the past in many developing countries, their potential contribution to lowering the cost of capital for energy investment makes it imperative to put in place the necessary institutional capacity and safeguards to ensure they work in the common interest. The lower borrowing costs in three-way partnerships lend support to the shift in MDB financing priorities towards sustainable energy and infrastructure assets. The participation of MDBs will be especially important in countries with the highest costs of capital, to counter the disincentive that high discount rates constitute for the shift from fossil fuels to renewable energy assets.

National energy transition plans are crucial for investor confidence

Following the Paris Agreement, all countries formulate energy transition targets and strategies in nationally determined contributions (NDCs). Not all of these show the same level of detailed investment planning. Out of 147 NDCs submitted by developing countries, 48 provide information on investment requirements and 40 discuss prospective sources of investment (figure 20).

Figure 20. Investment focus in nationally determined contributions and energy transition strategies, developing countries



Source: UNCTAD, based on information from the United Nations Framework Convention on Climate Change, <https://unfccc.int/NDCREG>; London School of Economics, Climate Change Laws of the World, <https://climate-laws.org>.
Note: Averages are computed based on countries that reported comparable statistics.

Most countries have adopted specific policy measures for the promotion and regulation of sustainable energy investment. These are often motivated directly by the targets set in NDCs. What is missing in many cases is the intermediate step, translating high-level targets for emission reductions into a transition path for the energy mix; implied asset requirements and infrastructure gaps; assessments of energy demand, potential and locations; and other elements that are crucial to provide investors with greater certainty about investment opportunities and that allow the construction and marketing of bankable projects. In many developing countries, and especially LDCs, capacity-building and technical assistance to move from NDCs to such detailed energy transition investment planning is crucial.

Generic investment incentives are suboptimal for energy investment

Because of the lack of detailed planning in many countries, the policy measures adopted for the promotion of international investment in the energy sector are often similar to those available for any industry. In developing countries, especially, traditional fiscal incentives (income tax reductions) abound, as do other common measures such as indirect tax reductions or exemptions from duties on the import of capital goods. Although these measures can work, approaches that specifically address the needs of the energy sector in transition have proven to be more effective. Feed-in tariffs and quota-based instruments such as renewable energy certificates, which are designed to increase the use of renewable energy, are increasingly common in more advanced energy markets. However, their effectiveness depends on a degree of forward planning on the availability of energy from different sources. Similarly, more sophisticated mechanisms to market renewable energy projects, such as electricity price guarantees and auctions, depend on adequate demand projections, asset planning and regulatory preparation. Jumping from high-level NDC target-setting straight to investment policy measures thus precludes the use of the most effective tools for promoting energy transition investment.

A Global Action Compact for Investment in Sustainable Energy for All

In this report, UNCTAD has identified a set of key challenges for international investment in the energy transition, based on analysis of FDI, project finance, investment policy and sustainable finance trends (table 3). To respond to those challenges, UNCTAD proposes a Global Action Compact for Investment

in Sustainable Energy for All (figure 21). The Compact contains a set of guiding principles that considers all three objectives of the energy transition – meeting climate goals, providing affordable energy for all and ensuring energy security – and puts forward six action packages covering national and international investment policymaking, global, regional and South–South partnerships and cooperation, financing mechanisms and tools, and sustainable finance markets.

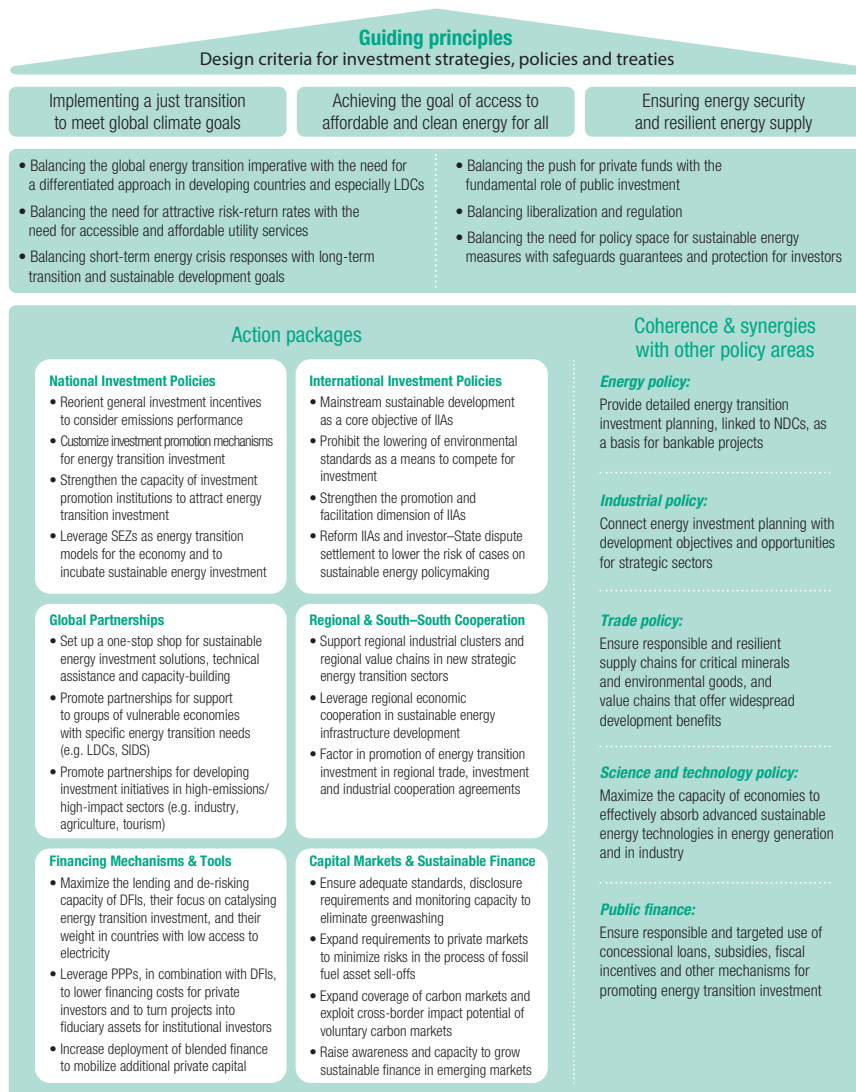
Table 3. Investing in sustainable energy for all: key challenges

FDI trends	
Geographical concentration	Despite strong growth in international investment in renewable energy at the global level, many developing countries are lagging behind.
Sectoral and supply chain concentration	International investment focuses very much on renewable energy generation and much less on other sectors that are crucial for the energy transition.
Investment paradoxes	The pipeline of new investment projects in fossil fuels is still flowing and will for another two decades or more, with asset lifetimes exceeding 30 years.
Project finance trends	
Reliance on international investors	FDI plays a significant role in renewables projects worldwide, but more so in those countries most in need of and least attractive to international investors.
Cost of capital constraints	The high cost of capital in countries in debt distress or with high risk ratings is a strong disincentive for investors to shift towards renewable energy assets.
Insufficient and unbalanced support	International support mechanisms are crucial to catalyse investment; a relatively low share of support reaches countries with low access to electricity.
Investment policy trends	
Weak investment planning in NDCs	Nationally determined contributions and energy transition strategies in many countries do not provide a sufficient basis for effective investment promotion.
Generic investment promotion tools	Developing countries and especially LDCs rely to a large degree on investment promotion tools not designed specifically to support the energy transition.
Old-generation IIAs	Un-reformed IIAs can hinder the implementation of measures needed for the energy transition.
Capital market and sustainable finance trends	
Sustainable finance momentum	Climate finance slowed in 2022, trends in energy markets caused a shift in investment portfolios back to fossil fuels and greenwashing concerns remain.
Institutional investor inertia	A majority of the world's largest funds do not yet disclose or commit to net zero in their investment strategies.
Low coverage of carbon markets	More than three quarters of global emissions are not yet covered by carbon markets, and the spread in the price of carbon across markets is too wide.

Source: UNCTAD.

Figure 21.

Global Action Compact for Investment in Sustainable Energy for All



Source: UNCTAD.

Note: See UNCTAD's Investment Policy Framework for Sustainable Development for detailed national and international investment policy guidance and UNCTAD's Action Menu for Investment in the SDGs for more action packages. DFI = development finance institution, IIA = international investment agreement, LDCs = least developed countries, NDCs = nationally determined contributions, PPP = public-private partnership, SEZ = special economic zone, SIDS = small island developing States.

A key priority listed as part of the investment policy action package is the strengthening of investment promotion agencies (IPAs) and related institutions (including special economic zones) to improve their capacity to attract energy transition projects. This will require capacity-building and innovative solutions, such as the possibility for IPAs to participate in project preparation facilities for green finance, which provide assistance for the preparation of project funding proposals, effectively transforming IPAs into investment development agencies.

Two action packages emphasize the importance of strategic partnerships and international cooperation. For example, the World Investment for Development Alliance, in which numerous UN agencies have joined hands with the World Bank, the Organisation for Economic Co-operation and Development, the World Association of Investment Promotion Agencies, and several knowledge partners and regional organizations, including the African Union, could work towards a “one-stop shop” for capacity-building in sustainable energy investment. Other potential partnership initiatives could be built to support groups of countries that have specific investment needs or that are particularly vulnerable to the impact of climate change.

An important area for action is to ensure that international trade and investment policy contribute more to climate action, by designing rules and proposing trade and investment facilitation methods that help improve the resilience of international supply chains to climate change, ensure responsible supply chains for critical minerals and environmental goods, and maximize the development benefits that countries can derive from participating in growing renewable-energy value chains. To support this, UNCTAD and the World Trade Organization announced a collaborative initiative at the 27th Conference of the Parties (COP27) of the United Nations Framework Convention on Climate Change (UNFCCC) to jointly develop a set of principles for trade- and investment-related climate action.

The action package on financing mechanisms and tools to catalyse private investment in sustainable energy builds on common policy advice provided by all agencies and development finance institutions. De-risking investment through loans, guarantees, insurance instruments and equity participation of both the public sector – through PPPs and blended finance – and MDBs is an important prerequisite for achieving the investment levels required in developing countries that have high risk ratings, and necessary to mitigate the cost-of-capital disincentive to invest in renewable energy installations.

The final set of actions relates to sustainable finance. Significant progress is being made in improving climate disclosure and harmonizing reporting standards.

Expanding requirements to private markets is important across sectors, but it is particularly important in the energy sector, where listed companies, to avoid the risk of stranded assets, will continue to offload fossil fuel operations, often to private equity firms or smaller operators with less stringent reporting requirements. Ensuring the responsible behaviour of both sellers and buyers of assets, and enabling public scrutiny of that behaviour, should be a priority for markets, regulators and the industry itself.



Recent years have seen significant progress, in the form of rapidly growing international investment in renewable energy, widespread policy action to promote and facilitate investment in the energy transition, and solid interest in sustainable finance in global capital markets. However, looking back at the period since the adoption of the SDGs and the Paris Agreement, it must be recognized that – despite all the challenges and crises that the world has faced – the conditions for rapid growth of investment in sustainable energy infrastructure have been exceptionally conducive. The cost of finance has been extremely low, and the cost of renewable energy technologies, especially solar installations, has been decreasing exponentially, to the point that renewables are now more competitive than fossil fuels.

This is now changing. Interest rates are rising, and inflation is driving up prices of the raw materials needed for renewable energy components. Moreover, the energy crisis and energy security concerns are leading to a degree of distraction from a singular focus on energy transition objectives in many countries. Therefore, now is the time to redouble efforts, to bridge the gaps left to date in climate finance and investment, and to ensure that the momentum of energy transition investment is maintained despite emerging headwinds.

The UNCTAD World Investment Forum, which will take place in October this year in Abu Dhabi, will be an important opportunity in this respect. Taking place ahead of COP28, in the same location, the WIF2023 offers a platform for policymakers at the highest levels, and for the broadest possible constituency of investment-for-development stakeholders, to take forward the actions proposed in the Global Action Compact for Investment in Sustainable Energy for All.

NOTE

The Overview is prepared based on the in-depth analysis contained in *World Investment Report 2023: Investing in sustainable energy for all* (United Nations publication, Sales No. E.23.II.D.17).

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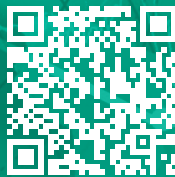
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