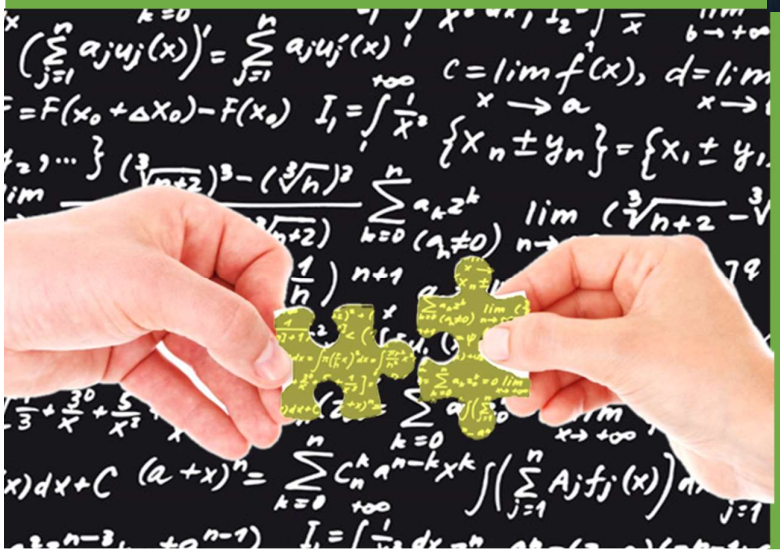
ARTNeT on FDI

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

Developing Comprehensive General and Sector-Based Indicators for Assessing the Contribution of Foreign Direct Investment to Sustainable Development



Ali Dadkhah

ASIA-PACIFIC RESEARCH AND TRAINING NETWORK ON FDI

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WORKING PAPER

Developing Comprehensive General and Sector-Based Indicators for Assessing the Contribution of Foreign Direct Investment to Sustainable Development

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Abstract

Foreign direct investment (FDI) can contribute to the sustainable development of home and host countries through creating jobs, generating economic growth and development, helping to alleviate poverty eradication, improving access to energy, infrastructure, health and environment. While FDI can generate significant positive development results, this outcome is not the primary objective of the private multinational enterprises (MNEs) that control the vast majority of FDI flows. These enterprises seek strategic investments that will increase their global competitiveness and profitability. Governments should therefore prioritize attracting investment projects from MNEs that maximizes the positive and minimizes the negative developmental impacts of the investment. Quality, sustainable FDI will indeed be even more critical to helping countries recover and build back better in the COVID-19 recovery period. However, to attract and approve sustainable FDI projects, countries must have tools to evaluate the sustainability inward FDI projects and the extent to which they are aligned with the sustainable development priorities of that country. This paper provides those specific tools to policymakers: it provides a framework for developing weighted country-specific general and sector specific indicators to evaluate FDI projects. Policymakers can use the framework indicators conceptually introduced in this paper to develop tailored investment sustainability indicators to assess FDI against national development priorities and plans.

Keywords: Foreign Direct Investment, FDI, Sustainable FDI, FDI Indicators
JEL Codes: F21, F23

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1. INTRODUCTION

Foreign direct investment (FDI) is defined as investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy in an enterprise resident in another economy (UNCTAD, 2005). Beyond its direct benefits for host countries as a source of external finance and new employment, FDI is increasingly recognized for its contribution to national and regional competitiveness. FDI is essential to create jobs, generate economic growth and development and address the challenges we are facing in the areas of poverty eradication, access to energy, infrastructure, health and environment. FDI is an integral part of a growth-oriented international economic system, and spurs prosperity and economic development in host countries.

While FDI can generate significant positive development results such as creating jobs and transfer of capital, this outcome is not the primary objective of the private multinational enterprises (MNEs) that control the vast majority of FDI flows. These enterprises seek strategic investments that will increase their global competitiveness and profitability. Governments should seek to attract MNEs that will formulate FDI projects in ways that maximize the positive and minimize the negative developmental impacts of the investment. This in turn raises the question of sustainability of FDI into the developing countries and this project aims to better understand the broader impact of FDI and deepen the sustainability of FDI in economies. There is no agreed definition for “sustainable FDI”. According to Sauvant and Hamdani 2015, sustainable FDI is “commercially viable investment that makes a maximum contribution to the economic, social and environmental development of host countries and takes place in the framework of fair governance mechanisms”. This is a definition that goes beyond “do no harm” and calls for efforts on the part of foreign affiliates to make an active contribution to sustainable development.

It is important to understand the extent to which projects contribute to host countries’ development priorities and doing this requires the governments to be equipped with the tools and capacity to robustly assess the investment project’s potential consequences on the host country’s economic, environmental, social and governance. This assessment should enable governmental to evaluate the investment projects and

direct public support toward sustainable FDI projects that can most readily promote the national, regional, and local development priorities.

The objective of this study is to identify and develop comprehensive general and sector specific FDI sustainability indicators for host countries to evaluate the MNE's investment projects. General indicators will be defined along four dimensions: economic, social, environmental and governance. Sector specific indicators will be developed for 9 sectors.
This report is structured as follows:

- Section 2 provides an overview of the sustainable development goals and how they relate to FDI.
- Section 3 explains the methodology to construct a comprehensive General and Sector-Based Sustainability Indicators
- Section 4 discuss the general indicators in more detail
- Section 5 provides a list of sector specific indicators
- Section 6 provides an overview of current obstacles to achieve concrete sustainable FDI indicators
- Section 7 sets up the concluding remarks and the way forward.

2. SUSTAINABLE DEVELOPMENT GOALS

Investment plays a role in making progress toward the Sustainable Development Goals (SDGs). It creates jobs, develops skills, triggers innovation, and improves living standards. The concept of sustainable development is generally attributed to the 1987 Brundtland Report of the World Commission on Environment and Development that tied traditional economic objectives to environmental concerns by recognizing the needs of future generations. Subsequent international discussions have added social and, more recently, governance issues as similarly essential components of sustainable development.
Sustainable FDI is a relatively new term that is meaningful when considered in conjunction with sustainable development. For FDI to aid sustainable development, FDI projects must be commercially sustainable themselves while also promoting the

host country's development on economic, environmental, social and governance measures.

The 2015 Addis Ababa Action Agenda calls on the private sector to adopt principles for responsible business and investment and engage as partners in the development process (UNGA, 2015). It also calls on the private sector to invest in areas critical to sustainable development and to help shift economies to more sustainable consumption and production patterns. At the same time, it commits governments to strengthening regulatory frameworks and developing policies to better align private sector incentives with public goals, and to encourage the private sector to adopt sustainable practices and foster long-term investment (UNGA, 2015).

Source: United Nations - Sustainable Development Goals

Box 1: Sustainable Development Goals

The Sustainable Development Goals (SDGs), agreed at the United Nations General Assembly in September 2015, were described as 'a plan of action for people, planet and prosperity' (United Nations, 2015). These goals are ambitious and embrace a wide range of environmental, social, and economic issues, including climate change, energy, water stewardship, marine conservation, biodiversity, poverty, food security, sustainable production and consumption, gender equality and economic growth. The United Nations called on all governments to develop national strategies to pursue the SDGs but also acknowledged 'the role of the diverse private sector ranging from micro-enterprises to cooperatives to multinationals' in addressing these goals.

The SDGs have been described as demonstrating 'the scale and ambition' of the United Nations '2030 Agenda for Sustainable Development', designed to 'shift the world onto a sustainable and resilient path' (United Nations, 2015). Seventeen SDGs and 169 associated targets are documented in 'a genuinely comprehensive vision of the future' in which 'little is left unaddressed'; from 'the wellbeing of every individual to the health of the planet, from infrastructure to institutions, from governance to green energy, peaceful societies to productive employment'.

The ratification of the SDGs is the latest in the line of global sustainable development initiatives. It can be traced back to the declaration designed 'to inspire and guide the peoples of the world in the preservation and enhancement of the human environment' (United Nations Environment Programme ,1972), following the United Nations Conference on the Human Environment held in Stockholm in 1971. More recently, the SDGs are seen to build on the United Nation's Millennium Development Goals (MDGs) established in 2001. The MDGs were described as having 'produced the most successful anti-poverty movement in history' (United Nations, 2015). However, other assessments of the achievements of the MDGs have been less positive.

MNEs often quantify the benefits and cost of a project in terms of its contribution to the corporation's global profitability. This profitability is generally quantifiable. On the other hand, the benefits and costs for host countries are more diverse and complex to quantify. The tendency is often to focus on more easily quantifiable economic factors that directly correspond to the foreign investor's project proposal which potentially overlooks the project impacts on less quantifiable interests (Kline, 2012). Quantifying

the conventional short-term measures could have a negative longer-term impact on the host country. The challenge of evaluating long-term FDI project impacts on less quantifiable non-economic effects is even more daunting but nevertheless necessary.

3. FDI SUSTAINABILITY INDICATORS

The development of FDI sustainability indicators will allow the host country to assess the impact of FDI projects on the economic, social, and environmental dimensions of sustainable development and make an inform decision. This section develops comprehensive general and sector-based sustainability indicator for assessing the contribution of FDI to SDGs in relation to the host countries development priorities. The goal for the host country is to apply this tool to FDI projects, quantify their long-term impacts and improve their FDI policy climate. These indicators only measure the impact on the host country and not the sustainability of the investor.

3.1 Previous Studies

The notion of FDI qualities and their contribution to SDGs have come to the forefront of international policy discussions in recent years. The World Bank has been calling for a framework that differentiates across types of FDI and their various socio-economic impacts (Echandi et al., 2015). UNCTAD launched its Investment Policy Framework for Sustainable Development in 2015 (UNCTAD, 2015). United Nations Industrial Development Organization (UNIDO) initiated a platform for organizations, policymakers, and academia to engage in public-private dialogue on issues related to FDI's contribution to inclusive and sustainable development.

Scholars of the International Institute for Sustainable Development (IISD) and the International Centre for Trade and Sustainable Development (ICTSD) developed an indicative list on the sustainability characteristics of FDI (Sauvant and Mann, 2017). Sauvant and Mann, 2017 has developed a set of indicative common FDI sustainability characteristics along the following four dimensions of economic, social, and environmental development and governance, as well as a set of indicatives "emerging common FDI sustainability characteristics", with all stakeholder groups showing a growing propensity to recognize them.

Georgetown University has developed an index to be used by host countries to grade the sustainability of a prospective FDI by a given MNE. Among a set of 'priority development objectives' (PDOs) the host country can choose what it deems as the 10 most important PDOs (Kline, 2012). It then enables countries to evaluate how the FDI meets or fails to meet their PDOs. Like Sauvant and Mann (2017) and Kline (2012) has categorized PDOs under four policy areas namely economic, environmental, social and governance.

The Organisation for Economic Co-operation and Development (OECD) has also undertaken the "FDI qualities project", which in part aims to provide governments with relevant instruments for this purpose. OECD identifies five "FDI qualities indicators", namely productivity-innovation, skills, job quality, gender, and carbon footprint. These were selected based on an assessment of how FDI can contribute to specific sustainable development goals (OECD, 2019).

ESCAP's Handbook on Policies, Promotion and Facilitation of Foreign Direct Investment for Sustainable Development in Asia and the Pacific (2017) has also gathered a list of indicators to measure the impact of FDI on inclusive and sustainable development:

Economic	Contribution of FDI to GDP growth, net exports, employment, (gross) capital formation, net capital inflows, government revenue, extent of forging linkages with domestic SMEs, technology transfer and absorption, competition, infrastructure development, etc.
Social	Contribution of FDI to skills development, community development, women and disadvantaged groups employment, health benefits and pension plans, minimum wage, and level of labour conditions (e.g., conformity with ILO labour standards), extent of CSR programmes and their results, number of families lifted out of poverty, accessibility and affordability of goods and services produced.
Environmental	Level of environmental pollution (air, water, ground), level of GHG emissions, level of energy efficiency and water consumption, level of discharge of waste and recycling, application, and transfer of environmentally sound technologies, etc.

Source: ESCAP, 2017

ESCAP's Handbook seeks to take stock of the findings on and experiences with inward FDI and to summarize them in a convenient package that helps policymakers formulate better FDI policies and investment promotion authorities (IPAs) to better promote and facilitate FDI for sustainable development. According to ESCAP, 2017, better FDI policies mean policies that help attract higher inflows of FDI of higher quality and higher development impact across the three dimensions of sustainable development namely economic, social, and environmental. The current project will expand on the list of indicators gathered in ESCAP, 2017, define threshold for each indicator and further develop sector specific indicators.

A comprehensive list of these studies and their focus and methodologies are shown in Annex D.

Although the indicators in this study are categorized under the similar clusters as the previous studies, the focus of this study is different from the previous ones. This study builds a comprehensive sector specific index to quantify the FDI sustainability from the viewpoint of the FDI recipients (host countries) for each individual FDI project while other studies focus on the sustainability of the FDI in the economy (OECD, 2019 and Sauvant and Mann, 2017) or measure the sustainability of the investor (WEF, 2020). Also, while the previous studies give the same weight to different clusters of indictors (Kline, 2012 and OECD, 2019), while this study gives different weight to different clusters depending on their relevance to the sector under study.

3.2 Methodology

Prior to listing the series of indicators that could be used to measure the impact of investment project on SDGs, it is important to identify the SDGs that could be potentially impacted by investment projects. Once these SDGs are identified we can then translate them into quantifiable indicators. As the last stage, these indicators can be grouped into clusters with similar characteristics.

First, we need to identify the SDGs that could be impacted by the MNE's investment projects. Like other related studies (Sauvant and Mann, 2017 and OECD, 2019), a detailed assessment of all 17 SDGs and their respective targets was undertaken to

identify the areas where FDI may contribute to sustainable development through financing and the activities of foreign MNEs.

Goal 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, is one of the most important SDGs related to FDI, as economic growth and employment provide the basis for reaching many of the other Goals. In addition to this, the role of FDI is specifically mentioned in connection with a number of other goals and targets, such as Goal 10 “Reduce inequality within and among countries” (with its specific target 10.b “Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest”) and Goal 17, “Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development“ (with its specific target 17.3 “Mobilize additional financial resources for developing countries from multiple sources” and its specific indicator 17.3.1 “Foreign direct investment”). A full list of these SDGs and Targets are shown in Annex A.

Second, we have translated the above identified SDGs into detailed quantifiable indicators. A full list of these indicators is detailed below. These indicators are explained in detail in the next section.

Table1 Sustainability Indictors by Sustainability Cluster and Description

Clusters	Indicators	Description
ECONOMIC	Job Creation	Number of jobs created
	Capital Investment	FDI inflows minus capital and profit
	Direct Payments	Payment to the host country including taxes, royalties and other compulsory agreed entrance payments
	Technology Transfers	Transfer mechanisms include in-house training for local employees; workshops or mentoring programs open to suppliers or other local businesses; sharing production specifications and quality control methodology with local suppliers; licensing patented products or processes to local companies; and loan or lease of equipment.
	Investment in Infrastructure	Part of investment capital of a foreign investment project is allocated for the construction of basic infrastructure on the project site (roads, electric grids, bridges etc.).
ENVIRONMENTAL	Resource Management	Presence of a conservation, protection, or recycling technique within an FDI project for the project site
	Pollution Controls	Commitments for pollution controls like the one existed in its home country as well as industry "best practices".
	CO2 Emissions[2]	Comparing the generated CO2 emissions per unit of output to the host country level in the IEA database
	Renewable Energy	Energy use for the project being derived from renewable energy sources

[2] Carbon dioxide (CO2) is the primary greenhouse gas responsible for global warming. Other greenhouse gases also contributors to global warming but are beyond the scope of this chapter.

	Environmental Protection Budget	Allocation of a certain budget by the MNEs to environmental protection
SOCIAL	Skills Enhancement	Number of workers trained, and type of training being offered by MNEs under a skills enhancement programme
	Labor Rights	MNE's commitments to key labor rights including freedom of association, collective bargaining, non-discrimination, and workplace safety
	Healthcare Coverage	MNE providing adequate medical support to their workers
	Wage[3]	Wages that the MNEs set to pay host country workers
	Skill Intensity	Skill intensity is defined as the share of skilled occupations (managers, professional and technicians) in total occupations
	Gender Employment Equality	Number of female workers proposed in the FDI project compared to the number of male workers
GOVERNANCE	Responsible Business Conduct	Adoption of International Standards of Responsible Business Conduct
	Transparency	External transparency through monitoring, auditing or personnel systems facilitates beneficial access to information regarding corporate policies and operations
	Local Management	Representation of host country specialists in management
	Supply Chain Standards	Linkage of a domestic company to a foreign investor's international supply chain

[3] This indicator does not cover additional benefits, such as contribution to pension and health insurance.

	Stakeholder Dialogue	Mechanism for corporate contact and communication with local stakeholders, both to keep them informed and to monitor and respond to local concerns

Finally, like Sauvant and Mann, 2017 and Kline, 2012, these indicators are grouped into four clusters of economic development, social development, environmental development, and governance. These are the four dimensions of the definition of "sustainable FDI". It is noteworthy to mention that there is an overlap between these four dimensions and this study has tried to separate them to the extent possible.

3.3 The Scoring Strategy

After having selected the indicators under each cluster and studied their characteristics, the variables were normalized to make them comparable, an important step given that the raw data available are of different nature and scale. It was decided that the selected scoring strategy should be as simple and transparent as possible as well as match the characteristics of the variables and the objective of the project. In the OECD Services Trade Restrictiveness Index (STRI) methodology (OECD, 2009; Nordås, 2010), the crucial factor for preserving variation among countries from the underlying data is the scoring. The OECD STRI review of several indicators' methodologies about the scoring strategy and the weighting scheme shows that standard practices include transformation into a unique scale and transformation of continuous variables into ordinal scales through ranking; sample-based methods for scoring and weighting are also often used. Several normalization methods exist, including ranking, standardization, Min-Max, Distance to a reference, categorical scale, binary scores, indicators above or below the average, etc., and each has its pros and cons (Hoffmann et al., 2008). Considering the different nature and scale of the data and, the number of indicators, a multiple binary strategy [0,1,2] was adopted. This is a simple and transparent method. In most instances the answer of either 1 or 2 is applicable but in some other instances the score is divided to 0, 1 or 2.

3.4 The Threshold Strategy

The scoring strategy follows a multiple binary methodology, with a range of 0 to 2, which calls for selecting thresholds. The indicators have varying nature and scale, and some variables are continuous. Assigning thresholds is a complicated task and involves some judgments. In this study, the effort has been made to define these thresholds in accordance to recognized indices and recommended levels and standards defined by international organizations such as International Labour Organization (ILO) and Food and Agriculture Organization (FAO). Host countries could choose to adjust these thresholds based on their level of development and development goals and priorities.

3.5 The Weighting Scheme

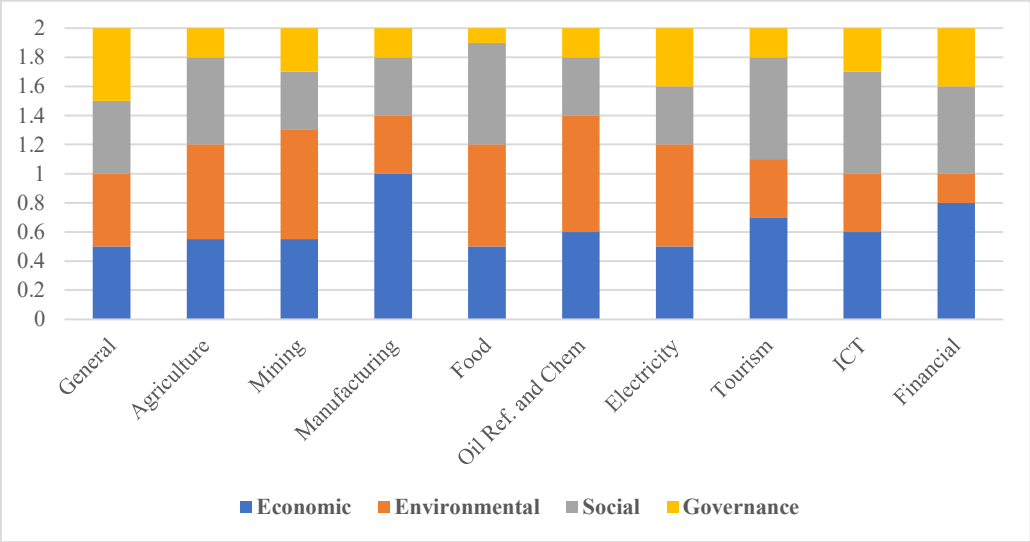
Several weighting techniques exist to determine the relative importance of a given cluster compared to the other variables. Some are derived from statistical methods, others from expert opinions who reward components according to their presumed influences. The diversity of the weights resulting from applying different methods is notable and each one has advantages and disadvantages. Selecting the appropriate weighting procedures involves judgment on variables that are relatively more important than others in terms of SDGs.

In this study, two different indices were developed: a general and a sector specific one. The general one is applicable to all sectors and equal weighing scheme was used for it. For the sector specific index though, a different weight was assigned to each indicator depending on the characteristics and nature of that sector. For instance, in the mining sector, the emphasis is on the environmental cluster and more weight therefore needs to be given versus to the manufacturing sector. In economic cluster, however, the manufacturing sector plays a more important role and therefor more weight should be given to it there.[4] It should be mentioned that these are only suggested weights by the author and the host countries can adjust them according to their development priorities.

[4] This is one of the areas where there is a need for further reach. There are different approaches that could be taken here to reduce the subjectivity and make the weights more relevant. For instance, host countries could adjust the weight for each sector based on their development priorities or a survey could be conducted between the different stakeholders to assign a more consistent weight to each indicator.

Once the weight for each cluster has been assigned, the indicators under each cluster are given an equal weight. The chart below shows the weights for each cluster in the general index compared to the sector specific ones.

Figure 1 Sector Specific Weight for Each Cluster



Source: Author's elaboration.

3.6 Data Source

In addition to using the FDI project proposal, the main sources of data countries can use to obtain data to complete their indictors, are the World Bank Enterprise Surveys, OECD Statistics, ILO Statistics, Financial Times' fDi Markets database and the International Energy Agency.

4. GENERAL SUSTAINABLE INVESTMENT INDICATORS

4.1 Economic Development

While FDI helps promote the economic development of the recipient countries, FDI associated activities may also give rise to sustainable development challenges (Hindelang and Krajewski, 2016). Here are the indicators to measure the economic dimension of the investment project in host countries:

a) Job Creation

Creating new jobs is a principal benefit that investment projects can offer to a host country or region and, in this case, the more the better. This indicator examines how investment project could impact the labour market of host countries. According to SDG 8 “Promote inclusive and sustainable economic growth, employment and decent work for all”, both the quantity and quality of jobs created matter to ensure that all citizens can work productively and receive fair compensation. The indicator deals with the quantitative part and specifically identifies how many jobs are created through the investment project. The extent of job creation varies with level of development and economic structure. FDI projects in garment manufacturing for instance creates more jobs per dollar invested than those in mining. Like OECD, 2019 the threshold we look at is the number of jobs created per unit of greenfield FDI. According to project-level data on announced cross border greenfield investments, every million USD of capital expenditure (CAPEX) creates nearly three jobs. We set this as the threshold for this indicator.

b) Capital Investment

This indicator deals with the amount of capital being invested by a company with the purpose of profit generation within a certain time frame. Kline, 2012 suggests using variety of factors including amounts of capital and the repatriation rate of initial capital to measure capital investment. The amount of capital invested in different projects varies depending on the region and sector. Often the most attractive sectors for capital investment are capital-intensive sectors such as mining, telecommunication, construction, and infrastructure. Therefore, it is not possible to simply assign a number for capital invested and follow the principle of the more the better. To provide a threshold for this indicator, we suggest using the FDI project’s net financial resource transfer over time, calculating FDI inflows minus capital and profit repatriation. The longer initial capital and new profits remain in the host country, the higher the rating score on this indicator. In terms of timeframe, we look at net financial resource transfer over three periods; less than 3 years, 3 to 5 years and more than 5 years.

c) Direct Payments

This indicator deals with the amount of payment received by the host country including taxes and loyalties from the FDI project. These payments received by the host countries are considered very important, since such payments are a main direct and official benefit received from an investment and play a valuable role in host country revenue generation. This also represent a direct increase in disposable revenue that can be expended for any public purpose. However, most start-up companies incur losses in the first few years and do not generate any taxable profit. So, it is important to look at the payment the host country is receiving over time. The threshold for this indicator is whether the direct payment (including taxes, royalties and other compulsory agreed entrance payments) over 3 years period is at least 5% of total cost of the FDI project.

d) Technology Transfers

This indicator relates to transfer of technology from MNEs to host countries. Foreign companies are usually more productive compared to domestic companies. This is largely since affiliates of foreign firms bring more advanced technologies and managerial knowhow from their headquarters operations, which allows them to produce more productively than domestic firms (OECD-UNIDO, 2019). It should be mentioned that only technology transfers accompanied by local control should be considered under this indicator. Technology transfer could have various form and therefore difficult to identify. To assign a threshold to this indicator, like Kline, 2019, we have considered some of the characteristic of technology transfers which include sharing production specifications and quality control methodology with local suppliers; licensing patented products or processes to local companies; loan or lease of equipment; and knowledge taken away by employees to start their own businesses. If the investment project proposal includes one of these functions, then it should have a positive score under this indicator.

e) Investment in Infrastructure

Infrastructure development means building of any physical components as part of the realization of an investment project such as roads, rails, electric grids, airports or in a

less physical component dominant such as telecommunications network and domestic financial system. Investment in infrastructure is explicitly raised in the context of SDG Goal 9 “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. Infrastructure development is very much about investment into infrastructure and foreign firms’ involvement is often critical if funding from domestic investors and expertise of domestic developers is lacking. High quality infrastructure is also seen as an essential component of a good investment and business climate more generally. The indicator’s threshold will be that at least 10% of the investment capital for a foreign investment project is allocated for the construction of basic infrastructure on the project site.

4.2 Environmental Development

According to the World Economic Forum’s Global Risks Report 2019, environmental risks are perceived as the gravest global threats in the next decade, especially extreme weather events, climate change policy failures, and the accelerated pace of biodiversity loss (WEF, 2019; IPCC 2018). SDG 13 is to “take urgent action to combat climate change and its impacts”.

This cluster of indicators examine how FDI relates to environmental development and access to sustainable energy and energy infrastructure. FDI can directly contribute to developing renewable energy infrastructure. Due to decreases in the cost of some critical renewable energy technologies, private investors have begun to profitably cater to the investment needs of this sector (Ang et al., 2017). MNEs can play a critical role in the deployment and innovation of renewable energy technologies across borders. FDI in renewable energy is particularly relevant in the context of mitigating CO2 emissions of emerging economies, where demand for energy is expected to grow most rapidly in the coming decades.

a) Resource Management

This indicator is meant to evaluate how well a proposed investment project adopts project design and management techniques appropriate to the natural resources it will affect with a goal to efficiently exploit non-renewable while generally protecting the natural environment. FDI projects will vary widely in how directly they relate to natural

resources. While it can be assumed that all MNE's try to use new technologies and follow the highest standards of safeguards, the recent history of some FDI projects in the mining sector has demonstrated that such projects have multiple negative effects on the local environment. The threshold for this indicator is whether the FDI project proposal has mechanisms for conservation, protection, or recycling technique for the project site.

b) Pollution Controls

Weak environmental regulation in a host country attracts inward FDI by profit-driven companies eager to circumvent costly regulatory compliance in their home countries, resulting in many developing countries turning toward relatively pollution- intensive activities (Jensen, 1996). Therefore, assessing the presence and effectiveness of pollution controls is most essential for FDI projects related to heavy industries where the potential for environmental damage is greatest. An assessment should consider the type and level of potential contaminants, the project proposal's steps to prevent or at least substantially reduce their occurrence, and any commitment to clean-up and restoration if significant pollution occurs. The threshold for this indicator is whether the MNE's proposal has commitments for pollution controls like the one existed in its home country as well as industry "best practices".

c) CO2 Emissions

The distribution of emissions across economic sectors is uneven, both in terms of direct emissions from fuel combustion in production activities and indirect emissions from use of electricity and heating. Although the immediate local impact will be less significant or discernible than some other environmental effects, a FDI project proposal should still be evaluated in terms how much its CO_2 emissions may contribute to the threat of global warming. The indicators proposed for examining the relationship between FDI project and host countries' CO_2 emissions per unit of output.

To measure this indicator, like OECD, 2019 study, we use International Energy Agency's (IEA) World CO_2 emissions from Fuel Combustion database. This database of IEA contains annual CO_2 emissions from fuel combustion across 23 sectors for over 140 countries. The IEA database contains an extensive selection of CO_2

emissions data for over 190 countries and regions. Emissions data are based on the IEA World Energy Balances 2020 and on the 2006 IPCC Guidelines for Greenhouse Gas Inventories. The IEA database produces new data each year. The threshold for this indicator is whether the proposed FDI project generate more CO_2 emissions per unit of output compared to the host country level in the IEA database for the latest year available.

d) Renewable Energy

As the global economy grows, so too will the demand for energy. SDG 7 is to "ensure access to affordable, reliable, sustainable and modern energy for all". A critical avenue to reduce greenhouse gas emissions in the immediate term and meet growing energy demands is to increase production and use of renewable energy, and foreign investors can play an important role in this respect. Therefore, the contribution of FDI to the generation or use of renewable energy such as hydro, solar, wind and biogas is important with the recommended threshold of at least 50% energy use for the project is derived from renewable energy sources.

e) Environmental protection budget

Expenditure on environmental protection is one of the measures that shows commitment of a foreign company to improving environmental performance. FDI projects which have allocated a special budget for environmental protection should have less negative impact on the local environment and enhance the sustainability of the project. The establishment of an environmental protection fund or other mechanism should be part of any FDI project, with a minimum level of annual spending on environmental monitoring and relevant environmental protection activity. The threshold for this indicator should be an allocation for environmental protection by the MNEs of at least 1% of the total cost of the project.

4.3 Social Development

Social development cluster includes indicators that encompass some of the actual improvements to a society's standard of living that represent end goals for a country's development process. Principal attention is generally paid to economic indicators that

are simply instrumental measures which aim should be to enrich a society's way of life as reflected in personal and interpersonal social value indicators. Evaluated in this category, FDI projects should clearly contribute to improvements on several relevant social indicators.

a) Skills Enhancement

This indicator examines the link between FDI project and employee's skills enhancement, more specifically the number of workers trained, and type of training being offered by MNEs under a skills enhancement programme. Foreign firms may contribute to skill enhancement by training local employees, or offering support to domestic partners, for instance to ensure the quality and reliability of their suppliers. They may also induce local firms to invest in human capital in response to rising competitive pressure from their presence in the market or to imitate more profitable foreign firms' practices. According to UNCTAD (2000, 2016), foreign MNEs tend to invest more in training than their local counterparts. FDI project proposals often contain plans to upgrade the current skills of new local employees through work-related training that teaches specific operational knowledge and techniques needed to perform their jobs in the new corporate facility.

Training's definition should not be limited to on-the-job training, as other types of training opportunities might also be offered that enhance more general skills. These other types of training include company sponsoring seminars or furnishing information on life-skills topics offering financial grants to support further formal education for employees or providing philanthropic scholarships for deserving local students. The threshold is at least 50% of local workers at every career level have been trained annually.

b) Labour Rights

Safety at work is a crucial measure to examine non-working conditions and labour market outcomes more broadly. SDG 8 includes a metric measuring the "frequency rates of fatal and non-fatal occupational injuries" (SDG indicator 8.8.1). The metric monitors target 8.8: "Protect labour rights and promote safe and secure working

environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment".

FDI projects should be expected to respect and uphold fundamental labor rights as developed by International Labor Organization (ILO) Conventions. This indicator examines the extend of MNEs commitments to key labor rights including freedom of association, collective bargaining, non-discrimination, and workplace safety. The threshold for this indicator is whether the FDI project proposals contain credible commitments to specified high labor standards.

c) Healthcare Coverage

This indicator relates to the provision by foreign investors of adequate medical support to their workers. The provision of adequate healthcare is a fundamental component of a decent standard of living that comprises a core objective of sustainable development. FDI projects can positively affect local healthcare through direct provision of basic in-facility health services to employees. The healthcare package could include basic in-facility health services or company-sponsored health insurance coverage for employees. The threshold is whether the foreign company provides healthcare coverage to least 80% of its employees.

d) Wage

This indicator deals with the wages that the MNEs set to pay host country workers and whether they pay higher average wages than their domestic peers. There are several studies that suggest that MNEs is associated with a wage premium (Lejárraga and Ragoussis, 2018). The extent of the foreign wage premium though strongly differs across countries, including when they are from the same region. The threshold for this indicator is whether the MNE pays above the median wage in the host country for the jobs it proposes to create.

e) Skill Intensity

SDG 4 states that countries should "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". Skills are an important production

factor; they enable innovation; and they facilitate the transfer and absorption of technology. FDI can importantly foster skills development. Foreign firms tend to hire more skilled labour than their domestic peers, in part, due to their greater technology intensity (OECD, 2019). MNEs can increase the demand for skilled labour relative to that of unskilled labour, ultimately leading to an increase in skill intensity in the host country.

The indicators provide host country with an indication of how FDI projects correlates to the skill outcomes in their country. The indicators assess the extent that foreign firms hire more or less skilled workers. The threshold for this indicator is whether the number of skilled occupations in the FDI project is at least 25% of the total occupations in that project. Skilled occupations include managers, professional, technicians and associate professionals.

f) Gender Employment Equality

This indicator assess how FDI relates to gender equality in employment. SDG 5 states that by 2030 every country should “achieve gender equality and empower all women and girls.”. Gender disparities and discrimination persist in the labour markets, where women tend to work in lower value added services jobs and are paid on average 20% less than men (ILO, 2016). Women are also under-represented in the business sector and less likely to reach senior management position (ILO, 2016). Foreign projects can affect gender equality in host countries by influencing the relative demand for female and male workers. The threshold for this indicator is whether the number of female workers proposed in FDI project is like the number of male workers.

4.4 Governance

FDI projects’ duration and its relative importance within the enterprise structure will be shaped by the corporate governance system responsible for specific FDI decision making and the related process of business-government relations with the host country and other governments. An MNE affiliate differs from a purely domestic enterprise in that a foreign investor adapts business procedures to operate under and between various national law requirements that may compete or even conflict. The MNE goal of achieving global profitability and the cross-national span of its operations

provide latitude for choices and actions unavailable to solely domestic enterprises. An assessment of the governance procedures for a proposed FDI project and its relationship to both the parent company and the interests or involvements of other governments constitute relevant factors for a project evaluation.

a) Responsible Business Conduct

In the current world of foreign investment policy MNEs are held responsible in terms of their social and environmental programmes (RBC), or corporate social responsibility programmes (CSR) which define to what extent an investment can be considered sustainable. Recent experiences have demonstrated that the presence of RBC standards or CSR programmes have a positive effect on the interaction of investors with local communities. While CSR programmes can involve philanthropy, assistance to and facilitation of local community initiatives, including social entrepreneurship, skills enhancement trainings, support of small start-ups through micro grants or loans, they do not necessarily apply to the core business production practices, RBC standards are more forceful and define to what extent the enterprise is sustainable in all aspects of its business. The indicator here measures whether the MNE has adopted a particular set of internationally recognized standards or principles of RBC, such as the OECD Guidelines for MNEs, the United Nations Global Compact and United Nations Guiding Principles on Business and Human Rights.

b) Transparency

FDI project proposals with business structures that incorporate external transparency through monitoring, auditing or personnel systems facilitate beneficial access to information regarding corporate policies and operations. At a minimum, the enterprise should employ professional independent auditors. This composition would encourage a level of confidence that public interests have been considered and announced decisions reflect real corporate intentions. The threshold for this indicator is whether the MNEs has committed to an independent audit at least once every two years.

c) Local Management

Representation of host country specialists in management is a strong indicator of sustainability of a foreign investment project or company. Local managers can learn new technologies, obtain very useful experience in corporate management and, importantly, will contribute the effective project management, maintaining operational sustainability after the foreign investor's possible exit from the project. The indicator proposed is the number of local representatives in management, with the threshold of at least 1/3 of the total management composition being local managers.

d) Supply Chain Standards

The supply chain standards introduced by a foreign investor for the implementation of a project can affect the production quality and future growth of the project. The local business can benefit from effective linkages to the international production and global marketing network of the foreign investor. This includes aspects related to sustainable and responsible business practice on ethics, labour, health and safety, diversity, and the environment for supply chain of MNEs. Using these standards introduced by the foreign investor can have a multiple effect on local partners and their business linkages by increasing their standards on the above-mentioned aspects to the international level. The threshold for this indicator will be the existence of at least one linkage of a domestic company to a foreign investor's international supply chain.

e) Stakeholder Dialogue

Stakeholders comprise groups that can affect or are affected by the FDI project. Project proposals should provide a mechanism for corporate contact and communication with local stakeholders, both to keep them informed and to monitor and respond to local concerns. Maintaining an ongoing dialogue with local stakeholders is important because these groups form the most proximate, knowledgeable, and self-interested parties whose continuing support is essential for a sustainable FDI enterprise. Project proposals should recognize such groups and identify how communication with them will be managed. The threshold for this indicator is there is a site visit and consultation local stakeholders prior to establishing of the project and once a year thereafter.

Annex B provides a full list of the general sustainable investment indicators and their thresholds.

5. SECTOR-BASED SUSTAINABLE INVESTMENT INDICATORS

In this section, the sector specific indictors for the Primary (agriculture and mining), Secondary (manufacturing, food, oil refinery and chemicals, electricity generation and distribution) and Services (tourism and hospitality, telecommunications, and financial services) are discussed.

The horizontal indicators developed in previous section are still applicable to all the above-mentioned sectors. However, the nature of some of these sectors required some additional indicators specific to those sectors. These new indictors will be added to the previously developed horizontal indictors under the relevant clusters (economic, environmental, social or governance). In addition to this, some clusters are more important than the others in these sectors. For instance, special consideration needs to be given to environmental cluster when dealing with mining and oil sectors. To take this into account, weight for each of these clusters will need to be adjusted to capture the importance of the specific SDG for that sector. A full list of these sector specific indicators and the adjusted weights are reflected in Annex C.

5.1 Agriculture

Global food security has been in a severe condition in recent years, especially in developing countries and therefor it has been an important topic under the SDG agenda. Developing countries need sufficient investment to promote their agricultural development. While a wide range of MNEs are involved in the agricultural sector, policies should not only aim at increasing private investment in agriculture but also at ensuring that investments are sustainable and responsible. MNEs can create employment and bring expertise, financing capacities and marketing networks to enhance the competitiveness of agricultural production and value chains. However, large-scale investments can also have adverse social and environmental impacts. Policies, laws, and regulations must be well-designed and effectively implemented to

ensure that such investments bring both economic and social benefits to the host country, including improved livelihoods and poverty reduction, while guaranteeing a sustainable use of natural resources. Below is the list of agriculture sector indicators.

a) Land Productivity

Land productivity is a measure of agricultural value of outputs obtained on a given area of land. Maintaining or improving the output over time relative to the area of land used is an important aspect in sustainability for a range of reasons. At farm level, land productivity reflects technology and production processes for given agro-ecological conditions. In a broader sense, an increase in the level of land productivity enables higher production while reducing pressure on increasingly scarce land resources, commonly linked to deforestation and associated losses of ecosystem services and biodiversity.

To measure land productivity, we suggest using the following formula: “Gross value of agricultural production / farm agricultural area” in each year. Like the study developed by Wilson, 2005 we suggest the following threshold for this indicator:

- Weak <8 %
- Average 8 % to 15 %
- Strong >15 %

b) Risk Mitigation Mechanisms

According to FAO, resilience encompasses absorptive, anticipatory, and adaptive capacities and refers to the properties of a system that allows farms to deal with shocks and stresses, to persist and to continue to be well functioning (in the sense of providing stability, predictable rules, security, and other benefits to its members) (FAO, 2020). It is important for the host country to take them into account while dealing with a FDI project. This indicator measures the incidence of the following mitigation mechanisms:

- Access to or availed credit
- Access to or availed insurance
- On farm diversification (share of a single agricultural commodity not greater than 66% in the total value of production of the holding).

Access to credit and insurance is defined here as when a given service is available and the holder has enough means to obtain the service (required documents, collateral, positive credit history, etc.). According to FAO, access to one or more the above 3 factors will allow the farm to prevent, resist, adapt and recover from external shocks such as, floods, droughts, market failure, climate shock and pest or animal diseases (FAO, 2020). Therefore, the threshold for this indicator is access to at least one of the above 3 factors.

c) Soil Degradation

The indicator measures the extent to which agriculture activities affects soil health and therefore represents a sustainability issue. FAO and the Intergovernmental Technical Panel on Soils (ITPS) have identified 10 main threats to soil functions: soil erosion; soil organic carbon losses; nutrient imbalance; acidification; contamination; waterlogging; compaction; soil sealing; salinization and loss of soil biodiversity (FAO, 2020). FAO has further suggested that that host countries should focus on the following four threats which combine the characteristics more widespread: soil erosion, reduction in soil fertility, salinization of irrigated land and waterlogging (FAO, 2020). The threshold for this indicator is whether the FDI proposal causes any of above-mentioned threats.

d) Water

Agriculture is by far the main user of freshwater. On average, 70% of all water withdrawal is for agriculture (OECD, 2010). In many places, the collective withdrawal of water for all sectors (agriculture, cities, industries, etc.) is beyond what can be considered environmentally sustainable: dry rivers without environmental flow, dried up wetlands, overexploitation of groundwater leading to progressive reduction of the water table. Sustainable agriculture therefore implies that that level of use of freshwater for irrigation remains within acceptable boundaries. The indicator captures the extent to which the proposed FDI project contributes to unsustainable patterns of water use. Ideally, the level of sustainability in water use is measured at the scale of the river basin or groundwater aquifer, as it is the combined effect of all users sharing the same resource that impact water sustainability. This indicator calculates the water usage of the MNEs in agriculture sector as follows:

Groundwater balance = annual groundwater abstraction for agriculture by MNE – annual groundwater recharge from rainfall

If the ground water value is negative, the pattern of groundwater use is unsustainable. Therefore, the threshold for this indicator is zero.

e) Management of Pesticide

Pesticides are important inputs in modern agriculture (crop and livestock), but if not well managed they can cause harm to people's health or to the environment. Practices associated with integrated pest management (IPM) exist that contribute to minimise risks associated with the use of pesticides and limit their impact on human health and on the environment. The International Code of Conduct on Pesticide Management defines best practice in pesticide management (FAO, 2020). The proposed indicator is based on MNE's investment proposal on the use of pesticides on the farms, the type of pesticide used, and the type of measure(s) taken to mitigate the associated risks. The threshold for this indicator is whether the MNE's has the history of adhering to the International Code of Conduct on Pesticide Management.

f) Organic Certificate

Both plant and animal species represent valuable natural endowments that are vulnerable to (especially man-made) environmental changes, requiring careful protection and management. The Convention on Biological Diversity (CBD) stresses the close relationship between agriculture activities and biodiversity, considering three levels of biodiversity: genetic level diversity; agrobiodiversity at production system level; and ecosystem level (wild) biodiversity. The way agriculture is practiced influences all three levels. This indicator measures the level of adoption of more sustainable agricultural practices by MNEs that better contribute to biodiversity by the farm at ecosystem, species, and genetic levels. FAO has suggested the organic certification as a benchmark for this indicator. FAO has further suggested the following criteria for organic certification schemes:

i. Leaves at least 10% of the holding area for natural or diverse vegetation.
ii. Farm produces agricultural products that are organically certified, or its products are undergoing the certification process.

iii. Farm does not use medically important antimicrobials as growth promoters.
iv. At least two of the following contribute to farm production: 1) temporary crops, 2) pasture, 3) permanent crops, 4) trees on farm, 5) livestock or animal products, and 6) aquaculture.
v. Practices crop or crop/pasture rotation involving at least 2 crops or crops and pastures on at least 80% of the farm cultivated area (excluding permanent crops and permanent pastures) over a period of 3 years. In case of a 2-crop rotation, the 2 crops must be from different plant genus, e.g., a grass plus a legume, or a grass plus a tuber etc.
vi. Livestock includes locally adapted breeds.
(FAO, 2020)

According to FAO's formulation, to secure organic certification status, MNEs will have to check 3 out of 6 criteria. Therefore, the suggested threshold for this indicator is whether the MNE can secure the organic certification status from FAO for the project.

5.2 Mining

The mining industry has a major role to play in contributing to achievement of the SDGs and mining companies have an opportunity and responsibility to show how they are mainstreaming these Goals into their business practices. Companies can demonstrate good corporate citizenship through systematic action to avoid and mitigate their negative impacts on people, economies, and the planet, and through leverage of their transformative potential to catalyse sustainable development. The sustainable investment indicators in the mining sector, besides economic, must focus on the environment and social dimensions, such as rational resources management, pollution, and waste control. We have assigned the following indicators to measure the investor's contribution in this sector to the sustainable development of the host country.

a) Rate of reinvestment

To maintain the sustainability of an FDI mining project, the investor should reinvest some part of it for further project development purposes. The recommended threshold for this indicator is at least 20% of generated profit for reinvestment.

b) Research and Development

Since mining is a specific sector that depends on research and development for sustainable growth, this indicator recommends that a certain amount of annual profit derived from a specific mining project is laid aside to calculate the economic sustainability of the project based on scientific research and undertake an independent assessment of the environmental and social impacts of the project, including an assessment of the capacity of hydrocarbon reservoirs, sustainability of glaciers, biodiversity, and direction of river streams, etc. The proposed threshold for this indicator is at the level of 5-10% of annual profit.

c) Environmentally Sustainable Technologies

Almost all conflicts in mines start from accusations leveled by local communities that foreign investors violate ecological safety standards and damage the environment. The mandatory use of recognized environmentally sustainable technologies (ESTs) would address this problem. The indicator determines to what extent a foreign investor uses these technologies. The recommended threshold is 100% of technologies used should be environmentally sustainable.

d) Conservation and Clean Up

This is a very important indicator of a required action which should be included in the general conditions of the investment agreement or contract. After closure of the mine, the investor should clean up and conserve the deposit based on agreed environmentally safe techniques. If these conditions are not included in the investment agreement or contract or do not have the explicit written legally endorsed commitment and agreement from the investor, the project should not be approved. The threshold for this indicator is existence of adequate and binding measures in the investment agreement for cleaning up the site.

5.3 Manufacturing

Manufacturing sector is closely related to SDGs 7, 8, 9, 12 and 13. UNIDO, which focuses particularly on SDG 9, believes that the structural shift toward more innovation and technology-oriented industrial activities will significantly change the nature of

competition, redefine work and redraw traditional industrial boundaries. As such, the arrival of the new industrial revolution promises considerable opportunities for inclusive and sustainable development for manufacturers as they align their business models with the achievement of the SDGs. In this section we have listed some indicators that are specifically related to manufacturing.

a) Work Safety

Safety at work is a crucial measure to examine non-working conditions and labour market outcomes more broadly. The strongest correlation between FDI concentration and occupational injuries occurs in countries with labour-intensive manufacturing activities. SDG 8 includes a metric measuring the “frequency rates of fatal and non-fatal occupational injuries”. The metric monitors target 8.8: “Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment”. This indicator examines the extend of MNEs commitments to workplace safety and reduction of work-related injuries. This could be achieved by providing safety training and safety gears to employees. Therefore, providing safe work environment is a key factor in manufacturing sector. The threshold for this indicator is whether the FDI project proposals contain credible commitments to work safety and a dedicated budget for protective gears.

b) Production Growth

Production growth is a basic economic indicator for manufacturing. It has multiple effects combining other factors and indicators and creating the basis for further development of the sector. As production volume increases, demand for additional workers and local supply will also increase, generating more profit and contributing to the economic sustainability of the sector. The sectoral sustainable investment indicator is annual production growth with a threshold of 10%. During contract negotiations, a foreign investor should present a project business plan with all calculations and commitments to ensure that the project leads to 10% annual production growth to reach the indicator benchmark. Increase of level of production leads to higher demand for local supply and workforce and resulting in sustainability of the FDI.

c) Fulltime Employment

Manufacturing is often linked to seasonality for local workers, and this could be one of the key constraints to sustained growth of the sector. FDI effects on job security could arise because of distinct propensities in the use of part-time employee, such as the incidence of temporary work. Temporary work contracts often include a different set of legal obligations; in particular, certain aspects of employment protection legislation do not apply to them, and their use is more widespread among migrants, women, and youth (OECD, 2018). They are also associated with poorer health conditions, including mental illnesses (Virtanen et al., 2005). It is therefore important for the host country to assess the proposed FDI project based on the type of employment. The proposed indicator in this case is the extent and length of temporary employment with the threshold of 80% of workers fully employed for at least 12 months.

5.4 Food

The food sector confronts significant sustainable development challenges. It both contributes to, and suffers from, environmental degradation, especially human-induced climate change and deforestation (Sachs J. et al., 2020). Food sector feeds the growing global population, but also contributes to the epidemics of obesity and metabolic diseases, while chronic malnutrition has continued to worsen in the years since adoption of the SDGs (FAO, 2020).

a) Product Lines

This indicator in the food sector refers to its contribution to healthy and sustainable dietary patterns through its products and strategies. It denotes the products and services that a food company offers to the market, with a focus on their qualities, their impact on human health and well-being, and their impact on the planet's sustainability. It recognizes that marketing and consumption of a company's products has a direct impact on individuals' health and well-being. This indicator specifically assesses whether the MNE proposal in food sector will give primacy to healthy, nutritious, and sustainable diets and products, especially concerning children and other vulnerable groups.

5.5 Oil Refinery and Chemicals

The oil and gas industry are central to the global economy and many national economies, including in developing and emerging countries. It is also central to sustainable development, as oil and gas are key pillars of the global energy system and, as such, are drivers of economic and social development. A particular challenge for the industry is its role in climate change.

a) Carbon Resiliency

The Paris Agreement recognized that countries need to assess their vulnerabilities to climate change and undertake adaptation planning processes. Similarly, oil and gas companies may consider developing a comprehensive understanding of the implications of climate change for their businesses. This includes the implications of the economic and physical risks of climate change for their infrastructure and operations across a range of scenarios. One of the approaches to this is setting internal shadow prices on companies' carbon emissions as a tool for screening projects and identifying impacts of potential carbon. The threshold for this indicator is existence of such measure within the MNE's FDI proposal.

b) Climate Change

Climate change may impact a company's infrastructure, assets, operations, and supply chains. For example, rising sea levels may threaten offshore facilities or pipelines in coastal areas. To improve the resilience of MNE's facilities and local infrastructure, companies should identify and evaluate a wide variety of risks, including those that may be influenced by climate change. There are significant opportunities for the oil and gas industry to support both the avoidance and restoration of degraded land, thereby reducing GHG emissions and sequestering carbon through nature-based solutions. The threshold for this indicator is whether the MNE is participating in UN-supported national reduce emissions from deforestation and forest degradation (REDD+) programmes (through, for example, the purchase of credits or investment in an innovative financing mechanism.).

c) Flaring

As much as 3.5% of the natural gas produced globally is estimated to be lost to flaring every year (Nature, 2016). The flaring of natural gas is sometimes necessary during the initial commissioning of a well, or for safety reasons. Many companies are already reducing flaring in their operations. However, routine flaring (the burning of the associated natural gas during oil production) still occurs and wastes valuable energy. The threshold for this indicator is whether the MNEs have placed measures to reduce the flaring of associated gas including capture and use for power generation, liquefaction for transport or re-injection back into the reservoirs.

d) Carbon Capture and Storage (CCS)

One of the greatest opportunities for oil and gas companies is to develop low-GHG emitting energy through large-scale CCS development and deployment (IFC, UNDP & IPIECA, (2017). By sequestering CO2 in geological formations deep within the earth for permanent storage, CCS is a key technology in the pursuit of lowering global GHG emissions. The threshold for this indicator is whether the MNE proposal has CCS measures in place.

5.6 Electric Power

The electric power industry is a strategically important industry and one of the main sectors of industrial and agricultural production. The sustainable investment indicators for FDI in the power industry is linked to power generation and consumption.

a) Environmental Damage Control

Power generation based on renewable energy can be considered as an environmentally friendly process. However, the construction process of renewable power stations can cause serious damage to the local environment. Therefore, it is important for FDI project to follow the construction safety standards and environmental damage control recommended by IEA during the construction and operation of the power station. Environmental damage control mechanisms should be in place. The presence of such control mechanism in an FDI project can be considered as a threshold for this indicator.

5.7 Financial Services

The following sections mainly discuss the banking industry, including public and multilateral development banks. There is a broad consensus that the financial services industry, including commercial and investment banks and investment, insurance, accountancy, consumer finance, credit card and financial advisory services companies, has a vital role to play promoting sustainable development. However, there are concerns that the industry has been slow in taking up the challenge. The sustainable investment indicators in the financial sector, besides economic, have to focus on the environment and social dimensions. We have assigned the following indicators to measure the investor's contribution to the sustainable development.

a) Socially Responsible Investment (SRI)

SRI is a form of investment that uses nonfinancial criteria to screen investments for social, environmental or governance reasons or to pick investments that perform well with regard to both financial and non-financial indicators (Geobey and Weber 2013). SRI, also called responsible investing, started as a financial niche product but found entrance into mainstream investing because it improves the risk management in investment decisions through the integration of social, environmental and governance criteria (Weber 2015). It conducts "social" screening, community investment and shareholder advocacy (O'Rourke, 2003) to guarantee sustainable financial returns. The main goals of SRI are to achieve attractive financial returns through investments that take long term sustainability concerns into account (Weber, et al., 2011). The threshold for this indicator is whether the financial MNEs use SRI as a screening method for their investments.

b) Green Bonds

Green bonds address sustainability issues, such as climate change (SDG 13), water (SDG 6), clean energy (SDG 7), and sustainable cities and communities (SDG 11). According to the Sustainable Banking Network (SBN), they are an effective financial product to address climate change and the SDGs (Sustainable Banking Network, 2018). They enable investors, in particular institutional investors, to direct their investments toward sustainable development while maintaining comparable financial

returns compared to conventional bonds. Because many institutional investors today conduct environmental, social and governance disclosure their appetite for green investments that are in-line with fiduciary duty increases. Therefore, green bonds are already a way to finance environment-related SDGs and offer an opportunity to further close the SDG financing gap, in particular in emerging countries that might issue bonds to attract private investors. The threshold for this indicator is whether the financial institutes invest at least 20% of their portfolio in green bonds.

c) Sustainable Credit Risk Assessment

Commercial lenders conduct environmental and social credit risk assessments regularly (Weber, Diaz and Schwegler 2014). Studies suggest that sustainable credit risk assessment reduces credit defaults because it analyzes risks that could be material for the borrower. Sustainable credit risk assessment could lead to channelling loans to greener and more social clients. The threshold for this threshold is whether the financial institute performs sustainable credit risk assessment in lending money to its clients.

5.8 Tourism and hospitality

While the tourism and hospitality industry can be seen to have a vital role to play in the drive towards a more sustainable future the leading players within the industry must address several challenges as they look to make a meaningful contribution to the achievement of the SDGs.

The development of tourism has multiple effects: the benefits are spread across various economic agents, including individuals and small enterprises, and contributing to income distribution and rural development. To improve the planning and management of tourism development it is important to have adequate understanding of the main issues of tourism and sustainable development. Tourism should not negatively affect the natural, cultural, and biological diversity of the visited place and efforts should be made to limit or avoid damage from tourist flows. The use of scarce and non-renewable natural resources of the country should be minimized in the provision of tourism services and the development of tourism infrastructure.

a) Number of Tourists

This is a main and key indicator for tourism development in any FDI project. The more tourists visit the resort or recreation area the more profit and other related benefits it generates. The recommended threshold for this indicator is 100 tourists per year for every 1 million USD of investment.

b) Amount of Money Spent per Tourist

This indicator refers to any expenditure made by tourists for accommodation, food, and any leisure activities during their stay in the foreign invested tourism facility. The importance of this indicator comes from its multiple effects on sustainability of the project and socio-economic effect to the sector. The threshold for this indicator is $1,000 USD per week per tourist.

c) Environmental Damages

This indicator measures the level of damage to the environment from tourists generated by an FDI project. Even though tourism can be a less polluting sector compared to others such as mining, the environmental damages associated with huge tourist flows should not be underestimated. This indicator has a direct negative correlation with the willingness of tourists to visit recreation places, as nobody wants to visit polluted areas. To secure the sustainability of the FDI project, the proposed threshold for this indicator expressed in monetary terms should not exceed $100 damage inflicted per tourist per year (average).

5.9 Information and Communications Technology (ICT)

ICT has led to important economic changes over recent decades. It has also become an important economic sector in itself, comprised of many goods and services produced and traded all over the world. But, more significantly, ICT has also transformed the methods of production across all industries. ICT has become an increasingly important tool for development, providing access to information for science, technology, and innovation, fostering and enhancing regional and international cooperation and knowledge-sharing. While this has led to substantial improvements in productivity, it has also created new barriers to entry. Only those

individuals with the requisite skills and those firms with access to the right tools can reap benefits from this technological revolution. Moreover, this sector is characterised by constant and rapid changes. The ICT sector has the potential to bring large benefits in terms of productivity and economic development, but it can also risk exacerbating the conditions that lead to inequality and exclusion. We have provided the following indicators to assess the investor's contribution to the sustainable development.

a) Privacy

ICT could result in the loss of privacy, growth of surveillance and violations of human rights without adequate oversight and boundaries (Earth Institute and Columbia University, 2017). ICT is changing the way people interact with each other. The Internet of Things can bring benefits to users in terms of monitoring and intelligent capabilities; however, these devices collect, transmit, store, and have a potential to share vast amount of personal and individual data that encroach private spaces and can be vulnerable to security breaches. This indicator assesses the issues in data privacy and security policies. The threshold for indicator is adherence of the MNEs to the OECD Recommendation on Internet Policy Making Principles.

b) Cybersecurity

A networked economy is more vulnerable to systemic network failures of the Internet or power grid, which could bring the economy to a grinding halt. As well as protecting the privacy and safety of individual users, it is vital that potential threats to national security and industrial competitiveness are minimized. The number of cyberattacks around the world is rising, ranging from full scale nation-state commercial espionage and state-sponsored hacking through to malware, ransomware, identity theft or phishing, and scams. Disrupting the networked economy could become the focus of deliberate acts of cyber-warfare and terrorism. The threshold for this indicator is whether the MNE has cybersecurity guidelines in place.

c) Public health

To protect human health, radio wave exposure levels from products and network solutions must be kept within established safety limits, while sedentary lifestyles could

contribute to the growing global burden of Non-Communicable Diseases (NCDs). The MNE's proposal shall indicate the possible radio wave exposure. The threshold for this indicator is radio frequency exposure in the range from 3 kHz to 300 GHz.

d) Electronic Waste and Carbon Emissions

FDI project proposals with clear plans to reduce waste and responsibly recycle or otherwise dispose of the remaining waste should receive a positive score on this indicator. Depending on the nature of the project, waste may range from extremely hazardous (mercury in mine tailings) to simply costly and bothersome to collect, dump and decompose. Growth in global ownership of digital devices, rapid product turnover and inadequate waste processing have led to accumulation of dangerous electronic waste; and while ICT can reduce carbon emissions in other sectors, it must also reduce its own emissions, focusing on energy performance. Waste reduction lessens stress on land resources while decreasing potential air and water pollution. Step (Solving the E-Waste Problem) is an international initiative comprising manufacturers, recyclers, academics, governments, and other organizations committed to solving the world's e-waste problem. The threshold for this indicator is whether the MNE follows the Step initiative.

e) Digital Exclusion

To ensure the benefits of the networked society are equally shared, it is crucial that special consideration is given to vulnerable groups, such as the elderly, those in remote communities where connectivity is poor as well as those who lack digital skills. These groups may need additional support and capacity-building to ensure digital inclusion. The threshold for this indicator is whether the MNE has special programs to raising digital literacy.

f) Child Protection and the Internet

Using the Internet provides children worldwide with opportunities but also risks. The ICT industry has a role to play in protecting child safety in the online world including child sexual abuse.

As a more vulnerable population, children require specific attention to ensure safety online, including issues such as child sexual abuse and cyberbullying. The MNE could act against child sexual abuse online in a variety of ways, including designing tools which identify images verified by law enforcement authorities as child sexual abuse images. The threshold for this indicator is whether the MNE adopts the Child Online Protection Guidelines[5].

6. OBSTACLES TO ACHIEVE SUSTAINABLE FDI INDICATORS

Despite the measures being taken to improve a more sustainable investment climate in developing countries, there are certain barriers in the country that impede FDI. As a result, inconsistent actions between different levels of government, as well as the lack of a unified strategy to attract state and local authorities, have arisen. The other important issue is measuring sustainable development which this paper has tried to address. However, there are some challenges to implement sustainable FDI indicators. These challenges include lack of political goodwill, poor accountability and transparency, lack of vertical and horizontal coordination; lack of sustainable development policy; lack of data availability; lack of resources for effective monitoring and evaluation, and lack of financial resources.

a) Political Goodwill

Policy change alone does not result in implementation. Ongoing political and public support is essential. At the highest level, political support for sustainable development indicator is crucial for setting strategic direction, securing planning resources, and enforcing implementation. However, political challenges can be monumental. It is at the implementation stage that policy reforms come face to face with politically challenging realities, in particular resistance from affected sectors or concerns over politically unpopular decisions. By establishing a structured and transparent decision-making process that incorporates environmental, social, and economic costs and benefits, more informed trade-offs can be made. Therefore, there is a need for more consultations with the government to explain the necessity of having sustainable FDI indicators.

[5] https://www.itu.int/en/ITU-D/Cybersecurity/Pages/COP.aspx

b) Monitoring, Reporting and Accountability

To effectively close the gap between what is and the ideal, in monitoring, reporting and accountability, policies at all levels must be assessed for efficiency and effectiveness. Systematic monitoring, evaluation, reporting and accountability must occur at different levels, including the national and subnational. There should be clear incentives or disincentives for compliance or non-compliance with the indicators. In order to effectively carry out monitoring, evaluation, and reporting functions, it is necessary to allocate adequate resources to collect data, build personnel capacity, develop tools, mobilize equipment, and share data across sectors and borders. It is important to constantly review existing FDI projects to ensure continued adherence to the indicators.

c) Vertical and Horizontal Collaboration

Mainstreaming development indicators into national planning and implementation at both national and subnational levels requires innovative governance arrangements and practices that integrate vertical and horizontal collaboration. Strong horizontal collaboration between the national body and the different sectors of the economy including finance, environment, and social departments among others is critical. At the same time, vertical relationships exist between the national body and other subnational bodies including the states, provinces, districts, cities, and communities.

Certain factors are found to be responsible for effective collaboration to occur at the vertical level. These include coordinated approaches in planning and implementation, access to information, space for participation of all actors, empowerment of communities to implement priority actions, application of subsidiarity principle, capacity building at community levels, and raising of awareness at all levels. Similarly, integrated development planning with respect to horizontal collaboration is realized when issues identified at lower levels (subnational) are fed upwards to national levels.

d) Sustainable Development Policy

It is key for countries to set their SDGs and priority sectors prior to implementing the indicators. There could be various reasons for the lack of such policies which are

mainly political and economic obstacles. Political obstacles are: (i) broad and formal understanding of SDGs and its importance, without leadership and ownership in the process towards achieving them; (ii) inconsistent actions between different levels of government, as well as the lack of a unified strategy between central and local government authorities; (iii) weak governance, meaning lack of institutional capacity of relevant state bodies and lack of transparency in the decision-making process; (iv) corruption; (v) opportunistic trade-off for both government and business between profit maximization and sustainability. Economic obstacles are: (i) lack of financial resources to achieve the SDGs; (ii) low sustainability in official development assistance and FDI that are important sources of financing for development; (iii) economic slowdown caused by external factors; (iv) environment degradation and natural disasters harming the socio-economic situation.

e) Multi-stakeholder Processes and Participation

To move toward implementation of these indicators, it is necessary first to develop a guideline or institutional framework for stakeholder engagement in the process. This guideline should specify who will be involved in the process, their roles, tenure, and mandates. National Councils for Sustainable Development should be created in countries where they do not exist and strengthened in other countries where they do. Such councils should be institutionalized with multi-stakeholders drawn from well-informed experts. There should be an awareness and education drive by the council to ensure that all stakeholders are well-informed and aware of the activities of the council. The councils should have a robust power devolution system and a harmonized committee to coordinate different sectors that are doing similar activities for sustainable development.

f) Data Availability

Date availability could be another obstacle to the effective implementation of sustainable FDI indicators. Measuring some of the indicators require reliable and accurate statistical data that may not always be available, especially when it comes to regional data availability. Therefore, countries need to check on available data or ways to obtain the data for measurement before adopting a specific indicator. For the indicators proposed in this study all required data can be sourced from the investing

company, national and local authorities, international organizations, independent audit reports, and available statistical sources.

g) Financial Resources

Governments in developing countries may experience a chronic fiscal deficit that hampers the financing of their development needs. They usually allocate budgets to priority needs such as salaries and social payments. Therefore, governments may consider the establishment of a set of indicators as an additional expenditure and burden to the budget which is already very tight. As a result, they may feel reluctant to allocate additional funds for this purpose in the budget.

7. CONCLUSIONS AND RECOMMENDATIONS

This paper aims to increase the capacity of government policymakers and representatives of the private sector to assess inward FDI to ensure that it is aligned with their sustainable development objectives. It has therefore conceptually developed a set of general and sector-based sustainability indicators that can be tailored by countries according to their development priorities and plans. It encourages countries to use a weighted, quantitative approach to assess FDI projects to better enable them to directly make comparisons between different factors regarding a respective FDI project's costs and benefits for that specific host country. The score given to each indicator in different sectors will increase the transparency of how a FDI project is assessed.

The indicators developed in the paper are clustered under the economic, environmental, social and governance dimensions of sustainable development, and cover sectors such as agriculture, mining, manufacturing, food, oil refinery and chemicals, electricity generation and distribution, tourism and hospitality, telecommunications, and financial services. Since the level of importance of SDGs differ from one sector to the other, this paper has assigned different weights to different clusters depending on the sector. Also, to provide consistency in the assessment, a different threshold was defined for different indicators. The answers to those indicators are binary and translated into different scores depending on the sector.

The main target of this paper is inward investment by MNEs, but the indicators may also be adapted for other cross-border or even domestic investments. Many of the indicators may prove particularly useful to help evaluate domestic investment proposals that might be considered for financial or other new business incentives.

The indicators also help to match priority development goals more transparently with the promotion and approval of new FDI projects. In doing so, the approach may additionally serve to encourage foreign corporations to consider enhancing the sustainable development impacts of their proposed FDI projects, even above the commercial sustainability that must be a project's own minimum requirement.

While further analysis on adding more indicators and policy contexts is required, a general and sector specific sustainable investment indicators sheds some light on the relationship between FDI and specific outcomes for host country, triggering dialogue and facilitating the identification of policy priorities and possible trade-offs.

Overall, for achieving the SDGs the country's authorities need to establish an enabling environment for the attraction of various types of finance, private local, and private international. In this regard, good governance, which is efficient, effective is very important. The Sustainability indicators for monitoring and evaluating the contribution of FDI towards achieving SDGs can, at the same time, help ensure transparency and accountability of Governments in achieving their priority SDGs.

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ANNEX A. FDI RELATED SDGS

SDGs	Targets
Goal 5 Achieve gender equality and empower all women and girls	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life 5.C Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all	7.1 Ensure universal access to affordable, reliable and modern energy services 7.2 Increase substantially the share of renewable energy in the global energy mix 7.3 Double the global rate of improvement in energy efficiency
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

SDGs	Targets
	8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
Goal 10 Reduce inequality within and among countries	10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality 10.B Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes
Goal 13 Take urgent action to combat climate change and its impacts	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries 13.2 Integrate climate change measures into national policies, strategies and planning
Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and	16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all 16.5 Substantially reduce corruption and bribery in all their forms 16.6 Develop effective, accountable and transparent institutions at all levels

SDGs	Targets
build effective, accountable and inclusive institutions at all levels	16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels
Goal 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection 17.3 Mobilize additional financial resources for developing countries from multiple sources 17.5 Adopt and implement investment promotion regimes for least developed countries 17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed 17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

ANNEX B. GENERAL SUSTAINABILITY INDICATORS

Clusters	Indicators	Threshold	Definition	Weight
ECONOMIC	Job Creation	(0) Less than 3 jobs created for every million USD of capital expenditure (2) More than 3 jobs created for every million USD of capital expenditure	Number of jobs created	0.1
	Capital Investment	(0) FDI inflows minus capital and profit repatriation is positive in the first 3 years (1) FDI inflows minus capital and profit repatriation is positive between the year 3-5 (2) FDI inflows minus capital and profit repatriation is positive after 5 years	FDI inflows minus capital and profit	0.1
	Direct Payments	(0) Direct payment over 3 years period is less than 5% of total cost of the FDI project. (2) Direct payment over 3 years period is more than 5% of total cost of the FDI project.	Payment to the host country including taxes, royalties and other compulsory agreed entrance payments	0.1
	Technology Transfers	(0) There is no technology transfer in a form of sharing production specifications and quality control methodology with local suppliers; licensing patented products or processes to local companies; loan or lease of equipment; and knowledge taken away by employees to start their own businesses (2) There is technology transfer in a form of sharing production specifications and quality control methodology with local suppliers; licensing patented products or processes to local companies; loan or lease of equipment; and knowledge taken away by employees to start their own businesses	Transfer mechanisms include in-house training for local employees; workshops or mentoring programs open to suppliers or other local businesses; sharing production specifications and quality control methodology with local	0.1

Clusters	Indicators	Threshold	Definition	Weight
			suppliers; licensing patented products or processes to local companies; and loan or lease of equipment	
	Investment in Infrastructure	(0) Less than 10% of the investment capital for a foreign investment project is allocated for the construction of basic infrastructure on the project site (2) At least 10% of the investment capital for a foreign investment project is allocated for the construction of basic infrastructure on the project site.	Part of investment capital of a foreign investment project is allocated for the construction of basic infrastructure on the project site (roads, electric grids, bridges etc.)	0.1
ENVIRONMENTAL	Resource Management	(0) the lack for conservation, protection or recycling technique within an FDI project for the project site (2) mechanisms for conservation, protection or recycling technique within an FDI project for the project site	Presence of a conservation, protection or recycling technique within an FDI project for the project site	0.1
	Pollution Controls	(0) the lack of commitments for pollution controls similar to the one existed in its home country as well as industry “best practices” (2) presence commitments for pollution controls similar to the one existed in its home country as well as industry “best practices”.	Commitments for pollution controls similar to the one existed in its home country as well as industry “best practices”.	0.1

Clusters	Indicators	Threshold	Definition	Weight
	Co2 Emissions	(0) The proposed FDI project generate more CO2 emissions per unit of output compared to the host country level in the IEA database (2) The proposed FDI project generate less CO2 emissions per unit of output compared to the host country level in the IEA database for the latest year available.	Comparing the generated CO2 emissions per unit of output compared to the host country level in the IEA database	0.1
	Renewable Energy	(0) Less than 50% energy use for the project is derived from renewable energy sources (2) More than 50% energy use for the project is derived from renewable energy sources.	Energy use for the project being derived from renewable energy sources	0.1
	Environmental Protection Budget	(0) The MNE has allocated less than 1% of the total cost of the project to environmental protection (2) The MNE has allocated more than 1% of the total cost of the project to environmental protection	Allocation of a certain budget by the MNEs to environmental protection	0.1
SOCIAL	Skills Enhancement	(0) Less than 50% of local workers at every career level have been trained annually by the MNE (1) More than 50% of local workers at every career level have been trained annually by the MNE (2) More than 50% of local workers at every career level have been trained annually by the MNE and part of the training include training other than on the site training.	Number of workers trained and type of trainings by MNEs under a skills enhancement programme	0.08
	Labor Rights	(0) The MNE's proposal does not make commitments to key labor rights including freedom of association, collective bargaining, non-discrimination and workplace safety (2) The MNE's proposal makes	MNE's commitments to key labor rights including freedom of association, collective bargaining,	0.08

Clusters	Indicators	Threshold	Definition	Weight
		commitments to key labor rights including freedom of association, collective bargaining, non-discrimination and workplace safety	non-discrimination and workplace safety	
	Healthcare Coverage	(0) The foreign company provides healthcare coverage for less than 80% of its employees (2) The foreign company provides healthcare coverage to least 80% of its employees	MNE providing adequate medical support to their workers	0.08
	Wage	(0) MNE pays below the median wage in the host country for the jobs it proposes to create (2) MNE pays above the median wage in the host country for the jobs it proposes to create	Wages that the MNEs set to pay host country workers	0.08
	Skill Intensity	(0) The number of skilled occupations in the proposed FDI project is less than 25% of the total occupations in that project (2) The number of skilled occupations in the proposed FDI project is more than 25% of the total occupations in that project	Skill intensity is defined as the share of skilled occupations (managers, professional and technicians) in total occupations	0.08
	Gender Employment Equality	(0) The number of female workers proposed in FDI project is less than the number of male workers (2) The number of female workers proposed in FDI project is similar to the number of male workers	Number of female workers proposed in the FDI project compared to the number of male workers	0.08

Clusters	Indicators	Threshold	Definition	Weight
GOVERNANCE	Responsible Business Conduct	(0) MNE has not adopted a particular set of internationally recognized standards or principles of RBC, such as the OECD Guidelines for MNEs, the United Nations Global Compact and United Nations Guiding Principles on Business and Human Rights (2) MNE has adopted a particular set of internationally recognized standards or principles of RBC, such as the OECD Guidelines for MNEs, the United Nations Global Compact and United Nations Guiding Principles on Business and Human Rights.	Adoption of International Standards of Responsible Business Conduct.	0.1
	Transparency	(0) The MNEs has not committed to an independent audit at least once every 2 years (2) The MNEs has committed to an independent audit at least once every 2 years	External transparency through monitoring, auditing or personnel systems facilitates beneficial access to information regarding corporate policies and operations	0.1
	Local Management	(0) Less than 1/3 of the total management composition being local managers (2) At least 1/3 of the total management composition being local managers	Representation of host country specialists in management	0.1
	Supply Chain Standards	(0) There is no linkage of a domestic company to a foreign investor's international supply chain (2) There is at least one linkage of a domestic company to a foreign investor's international supply chain.	Linkage of a domestic company to a foreign investor's international supply chain	0.1

Clusters	Indicators	Threshold	Definition	Weight
	Stakeholder Dialogue	(0) There is no site visit and consultation local stakeholders prior to establishing of the project and once a year thereafter (2) There is site visit and consultation local stakeholders prior to establishing of the project and once a year thereafter	Mechanism for corporate contact and communication with local stakeholders, both to keep them informed and to monitor and respond to local concerns	0.1

ANNEX C. SECTOR-BASED SUSTAINABILITY INDICATORS

Agriculture

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.069
	Capital Investment	Same as Annex B	0.069
	Direct Payments	Same as Annex B	0.069
	Technology Transfers	Same as Annex B	0.069
	Investment in Infrastructure	Same as Annex B	0.069
	Land Productivity	(0) Land productivity is less than 8% (1) Land productivity is between 8% to 15% (2) Land productivity is more than 15%	0.069
	Risk Mitigation Mechanisms	(0) The MNE does not have access to availed credit, availed insurance or on farm diversification (2) The MNE has access to availed credit, availed insurance or on farm diversification	0.069
Environmental	Resource Management	Same as Annex B	0.072
	Pollution Controls	Same as Annex B	0.072
	Co2 Emissions	Same as Annex B	0.072
	Renewable Energy	Same as Annex B	0.072
	Environmental Protection Budget	Same as Annex B	0.072
	Soil Degradation	(0) The FDI proposal could cause soil erosion, reduction in soil fertility, salinization of irrigated land or waterlogging (2) FDI proposal does not cause soil erosion, reduction in soil fertility, salinization of irrigated land or waterlogging	0.072
	Water	(0) The Groundwater Balance is negative (2) The Groundwater Balance is positive	0.072
	Management of Pesticide	(0) MNE does not adhere to the International Code of Conduct on Pesticide Management (2) MNE adheres to the International Code of Conduct on Pesticide Management	0.072
	Organic Certificate	(0) MNE has not secured the organic certification status from FAO (2) MNE has	0.072

		secured the organic certification status from FAO	
Social	Skills Enhancement	Same as Annex B	0.10
	Labor Rights	Same as Annex B	0.10
	Healthcare Coverage	Same as Annex B	0.10
	Wage	Same as Annex B	0.10
	Skill Intensity	Same as Annex B	0.10
	Gender Employment Equality	Same as Annex B	0.10
Governance	Responsible Business Conduct	Same as Annex B	0.04
	Transparency	Same as Annex B	0.04
	Local Management	Same as Annex B	0.04
	Supply Chain Standards	Same as Annex B	0.04
	Stakeholder Dialogue	Same as Annex B	0.04

Mining

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.092
	Capital Investment	Same as Annex B	0.092
	Direct Payments	Same as Annex B	0.092
	Technology Transfers	Same as Annex B	0.092
	Investment in Infrastructure	Same as Annex B	0.092
	Rate of reinvestment	(0) Less than 20% of generated profit is allocated for reinvestment by MNE (2) At least 20% of generated profit is allocated for reinvestment by MNE	0.092
Environmental	Resource Management	Same as Annex B	0.107
	Pollution Controls	Same as Annex B	0.107
	Co2 Emissions	Same as Annex B	0.107
	Renewable Energy	Same as Annex B	0.107
	Environmental Protection Budget	Same as Annex B	0.107
	Environmentally Sustainable Technologies	(0) The MNE does not use environmentally sustainable technologies (2) The MNE uses environmentally sustainable technologies	0.107
	Conservation and Clean Up	(0) There are no adequate and binding measures in the investment agreement for cleaning up the site (2) There are adequate and binding measures in the investment agreement for cleaning up the site.	0.107
Social	Skills Enhancement	Same as Annex B	0.057
	Labor Rights	Same as Annex B	0.057
	Healthcare Coverage	Same as Annex B	0.057
	Wage	Same as Annex B	0.057
	Skill Intensity	Same as Annex B	0.057
	Gender Employment Equality	Same as Annex B	0.057
	Research and Development	(0) Less than 5% of the annual profit is allocated for R&D (1) Between 5-10% of the	0.060

Clusters	Indicators	Threshold	Weight
		annual profit is allocated for R&D (2) More than 10% of the annual profit is allocated for R&D	
Governance	Responsible Business Conduct.	Same as Annex B	0.060
	Transparency	Same as Annex B	0.060
	Local Management	Same as Annex B	0.060
	Supply Chain Standards	Same as Annex B	0.060
	Stakeholder Dialogue	Same as Annex B	0.060

Manufacturing

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.167
	Capital Investment	Same as Annex B	0.167
	Direct Payments	Same as Annex B	0.167
	Technology Transfers	Same as Annex B	0.167
	Investment in Infrastructure	Same as Annex B	0.167
	Production Growth	(0) Annual Production Growth is less than 10% (2) Annual Production Growth is more than 10%	0.167
Environmental	Resource Management	Same as Annex B	0.080
	Pollution Controls	Same as Annex B	0.080
	Co2 Emissions	Same as Annex B	0.080
	Renewable Energy	Same as Annex B	
	Environmental Protection Budget	Same as Annex B	0.080
Social	Skills Enhancement	Same as Annex B	0.050
	Labor Rights	Same as Annex B	0.050
	Healthcare Coverage	Same as Annex B	0.050
	Wage	Same as Annex B	0.050
	Skill Intensity	Same as Annex B	0.050
	Gender Employment Equality	Same as Annex B	0.050
	Work Safety	(0) The FDI proposal does not contain credible commitments to work safety or a dedicated budget for protective gears (2) The FDI proposal contains credible commitments to work safety and a dedicated budget for protective gears	0.050
	Fulltime Employment	(0) The length of employment contract for 80% of the employees is at least 12 months (2) The length	0.050

Clusters	Indicators	Threshold	Weight
		of employment contract for 80% of the employees is at least 12 months	
Governance	Responsible Business Conduct	Same as Annex B	0.040
	Transparency	Same as Annex B	0.040
	Local Management	Same as Annex B	0.040
	Supply Chain Standards	Same as Annex B	0.040
	Stakeholder Dialogue	Same as Annex B	0.040

Food

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.1
	Capital Investment	Same as Annex B	0.1
	Direct Payments	Same as Annex B	0.1
	Technology Transfers	Same as Annex B	0.1
	Investment in Infrastructure	Same as Annex B	0.1
Environmental	Resource Management	Same as Annex B	0.14
	Pollution Controls	Same as Annex B	0.14
	Co2 Emissions	Same as Annex B	0.14
	Renewable Energy	Same as Annex B	0.14
	Environmental Protection Budget	Same as Annex B	0.14
Social	Skills Enhancement	Same as Annex B	0.1
	Labor Rights	Same as Annex B	0.1
	Healthcare Coverage	Same as Annex B	0.1
	Wage	Same as Annex B	0.1
	Skill Intensity	Same as Annex B	0.1
	Gender Employment Equality	Same as Annex B	0.1
	Product Lines	(0) The MNE proposal does not give primacy to healthy, nutritious, and sustainable diets and products, especially concerning children and other vulnerable groups (2) The MNE proposal gives primacy to healthy, nutritious, and sustainable diets and products, especially concerning children and other vulnerable groups	0.1

Clusters	Indicators	Threshold	Weight
Governance	Responsible Business Conduct.	Same as Annex B	0.02
	Transparency	Same as Annex B	0.02
	Local Management	Same as Annex B	0.02
	Supply Chain Standards	Same as Annex B	0.02
	Stakeholder Dialogue	Same as Annex B	0.02

Oil Refinery and Chemicals

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.120
	Capital Investment	Same as Annex B	0.120
	Direct Payments	Same as Annex B	0.120
	Technology Transfers	Same as Annex B	0.120
	Investment in Infrastructure	Same as Annex B	0.120
Environmental	Resource Management	Same as Annex B	0.089
	Pollution Controls	Same as Annex B	0.089
	Co2 Emissions	Same as Annex B	0.089
	Renewable Energy	Same as Annex B	0.089
	Environmental Protection Budget	Same as Annex B	0.089
	Carbon Resiliency	(0) The MNE does not have internal shadow prices on companies' carbon emissions (2) The MNE has set internal shadow prices on companies' carbon emissions	0.089
	Climate Change	(0) The MNE does not participate in UN-supported national reduce emissions from deforestation and forest degradation (REDD+) (2) The MNE is participating in UN-supported national reduce emissions from deforestation and forest degradation (REDD+)	0.089
	Flaring	(0) The MNE does not have measures in place to reduce the flaring of associated gas (2) The MNE has placed measures to reduce the flaring of associated gas	0.089
	Carbon Capture and Storage	(0) MNE's proposal does not have CCS measures in place (2) MNE's proposal has CCS measures in place	0.089

Clusters	Indicators	Threshold	Weight
Social	Skills Enhancement	same as Annex B	0.067
	Labor Rights	Same as Annex B	0.067
	Healthcare Coverage	Same as Annex B	0.067
	Wage	Same as Annex B	0.067
	Skill Intensity	Same as Annex B	0.067
	Gender Employment Equality	Same as Annex B	0.067
Governance	Responsible Business Conduct	Same as Annex B	0.040
	Transparency	Same as Annex B	0.040
	Local Management	Same as Annex B	0.040
	Supply Chain Standards	Same as Annex B	0.040
	Stakeholder Dialogue	Same as Annex B	0.040

Electric Power

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.100
	Capital Investment	Same as Annex B	0.100
	Direct Payments	Same as Annex B	0.100
	Technology Transfers	Same as Annex B	0.100
	Investment in Infrastructure	Same as Annex B	0.100
Environmental	Resource Management	Same as Annex B	0.117
	Pollution Controls	Same as Annex B	0.117
	Co2 Emissions	Same as Annex B	0.117
	Renewable Energy	Same as Annex B	0.117
	Environmental Protection Budget	Same as Annex B	0.117
	Environmental Damage Control	(0) The FDI project does not follow the construction safety standards and environmental damage control during the construction and operation of the power station (2) The FDI project follows the construction safety standards and environmental damage control during the construction and operation of the power station	0.117
Social	Skills Enhancement	Same as Annex B	0.067
	Labor Rights	Same as Annex B	0.067
	Healthcare Coverage	Same as Annex B	0.067
	Wage	Same as Annex B	0.067
	Skill Intensity	Same as Annex B	0.067
	Gender Employment Equality	Same as Annex B	0.067

Clusters	Indicators	Threshold	Weight
Governance	Responsible Business Conduct	Same as Annex B	0.080
	Transparency	Same as Annex B	0.080
	Local Management	Same as Annex B	0.080
	Supply Chain Standards	Same as Annex B	0.080
	Stakeholder Dialogue	Same as Annex B	0.080

Financial Services

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.160
	Capital Investment	Same as Annex B	0.160
	Direct Payments	Same as Annex B	0.160
	Technology Transfers	Same as Annex B	0.160
	Investment in Infrastructure	Same as Annex B	0.160
Environmental	Resource Management	Same as Annex B	0.033
	Pollution Controls	Same as Annex B	0.033
	Co2 Emissions	Same as Annex B	0.033
	Renewable Energy	Same as Annex B	0.033
	Environmental Protection Budget	Same as Annex B	0.033
	Green Bond	(0) The financial institute invests less than 20% of its portfolio in green bonds (2) The financial institute invests more than 20% of its portfolio in green bonds	0.033
Social	Skills Enhancement	Same as Annex B	0.075
	Labor Rights	Same as Annex B	0.075
	Healthcare Coverage	Same as Annex B	0.075
	Wage	Same as Annex B	0.075
	Skill Intensity	Same as Annex B	0.075
	Gender Employment Equality	Same as Annex B	0.075
	Socially Responsible Investment (SRI)	(0) The MNE does not use Socially Responsible Investment (SRI) to screen investment (2) The MNE used Socially Responsible Investment (SRI) to screen investment	0.075
	Sustainable Credit Risk Assessment	(0) The financial institute does not perform sustainable credit risk assessment in lending money to its clients (2) The financial institute	0.075

Clusters	Indicators	Threshold	Weight
		performs sustainable credit risk assessment in lending money to its clients.	
Governance	Responsible Business Conduct	Same as Annex B	0.080
	Transparency	Same as Annex B	0.080
	Local Management	Same as Annex B	0.080
	Supply Chain Standards	Same as Annex B	0.080
	Stakeholder Dialogue	Same as Annex B	0.080

Tourism and Hospitality

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.100
	Capital Investment	Same as Annex B	0.100
	Direct Payments	Same as Annex B	0.100
	Technology Transfers	Same as Annex B	0.100
	Investment in Infrastructure	Same as Annex B	0.100
	Number of Tourists	(0) There are less than 100 tourists each year for every 1 million dollar of investment (2) There are more than 100 tourists each year for every 1 million dollars of investment.	0.100
	Amount of Money Spent per Tourist	(0) The tourist spends less than $1000 USD each week (2) The tourist spends more than $1000 USD each week	0.100
Environmental	Resource Management	Same as Annex B	0.067
	Pollution Controls	Same as Annex B	0.067
	Co2 Emissions	Same as Annex B	0.067
	Renewable Energy	Same as Annex B	0.067
	Environmental Protection Budget	Same as Annex B	0.067
	Environmental Damages	(0) The tourist causes environmental damage of more than $100 per year (2) The tourist causes environmental damage of less than $100 per year	0.067
Social	Skills Enhancement	Same as Annex B	0.117
	Labor Rights	Same as Annex B	0.117
	Healthcare Coverage	Same as Annex B	0.117
	Wage	Same as Annex B	0.117
	Skill Intensity	Same as Annex B	0.117
	Gender Employment Equality	Same as Annex B	0.117
Governance	Responsible Business Conduct	Same as Annex B	0.040

Clusters	Indicators	Threshold	Weight
	Transparency	Same as Annex B	0.040
	Local Management	Same as Annex B	0.040
	Supply Chain Standards	Same as Annex B	0.040
	Stakeholder Dialogue	Same as Annex B	0.040

ICT

Clusters	Indicators	Threshold	Weight
Economic	Job Creation	Same as Annex B	0.120
	Capital Investment	Same as Annex B	0.120
	Direct Payments	Same as Annex B	0.120
	Technology Transfers	Same as Annex B	0.120
	Investment in Infrastructure	Same as Annex B	0.120
Environmental	Resource Management	Same as Annex B	0.067
	Pollution Controls	Same as Annex B	0.067
	Co2 Emissions	Same as Annex B	0.067
	Renewable Energy	Same as Annex B	0.067
	Environmental Protection Budget	Same as Annex B	0.067
	Electronic Waste and Carbon Emissions	(0) MNE does not follow the Step initiative (2) MNE follows Step initiative	0.067
Social	Skills Enhancement	Same as Annex B	0.064
	Labor Rights	Same as Annex B	0.064
	Healthcare Coverage	Same as Annex B	0.064
	Wage	Same as Annex B	0.064
	Skill Intensity	Same as Annex B	0.064
	Gender Employment Equality	Same as Annex B	0.064
	Privacy	(0) The MNE dos does not adhere to the OECD Recommendation on Internet Policy Making Principles (2) The MNE adheres to the OECD Recommendation on Internet Policy Making Principles	0.064
	Cybersecurity	(0) MNE does not have cybersecurity guidelines in place (2) MNE has cybersecurity guidelines in place	0.064

Clusters	Indicators	Threshold	Weight
	Radio Frequency	(0) The radio frequency generated by the MNE is not in the range from 3 kHz to 300 GHz (2) The radio frequency generated by the MNE is in the range from 3 kHz to 300 GHz	0.064
	Digital Exclusion	(0) MNE does not have special programs to raising digital literacy (2) MNE has special programs to raising digital literacy	0.064
	Child Protection and the Internet	(0) MNE has not adopted the OECD Child Online Protection Guidelines (2) MNE has adopted the OECD Child Online Protection Guidelines	0.064
Governance	Responsible Business Conduct	Same as Annex B	0.060
	Transparency	Same as Annex B	0.060
	Local Management	Same as Annex B	0.060
	Supply Chain Standards	Same as Annex B	0.060
	Stakeholder Dialogue	Same as Annex B	0.060

ANNEX D. PREVIOUS STUDIES

Title, Author and Organisation	Focus	Methodology
FDI Index from Project Assessment Matrix 2012: Prof. J. Kline, Georgetown University. (As part of the Millennium Cities Initiative within the Earth Institute, Columbia University)	The index is to be used by host countries to grade the sustainability of a prospective FDI by a given MNE. Among a set of 'priority development objectives' (PDOs), the host country is to choose what it determines to be the 10 most important. It then evaluates how the FDI meets or fails to meet the PDOs.	With respect to each PDO, the FDI is given a score between -5 and +5. Weightings of 3, 2 and 1 are given to the scores for the top 5 most important PDOs, the 5 next most important PDOs, and the rest of the PDOs respectively.
FDI Contribution Index 2012: World Investment Report	This index measures the "development impact of FDI in the host economy" (WIR, 2012, p.31), and so it is an index attributed to the set of FDI in a country, rather than to a particular instance of FDI. It considers 7 economic variables derived from the Manual on Statistics of International Trade in Services (2010) and/or the G20 in its work with UNCTAD and others in	As percentages of the host country totals, the 7 variables are: GDP (value added), employment, wages and salaries, exports, R&D expenditures, capital formation and tax payments. Instead of giving countries indicator scores, they are ranked and placed in quartiles for each variable, with the overall ranking being given by the average of the percentile rankings.

Title, Author and Organisation	Focus	Methodology
	developing a list of indicators of sustainable development.	
Indicative List of FDI Sustainability Characteristics October 2017: K. Sauvant, H. Mann. As part of the E15 Initiative by ICTSD and WEF.	This study has created a list called 'sustainability characteristics. This does not create a method for grading an FDI with respect to each sustainability characteristic, with a view then to determining an overall indicator score.	This study identifies 8 sources of sustainability characteristics: international investment agreements (IIAs), non-binding intergovernmental instruments (UN Guiding Principles, etc.), criteria used by host countries (policies, acts, etc.), criteria used by home countries (OPIC standards, etc.), standards or intergovernmental organisations (IFC and ADB standards, etc.), voluntary global business codes of international business organisations (ICC guidelines, etc.), voluntary standards of private institutional investors (ACTIAM standards, etc.), voluntary industry codes (ICMM 10 principles for sustainable mining, etc.), voluntary company codes (Apple, BP, etc.), voluntary models and codes of NGOs (International Institute for Sustainable

Title, Author and Organisation	Focus	Methodology
		Development, etc.). From these, the study determines a set (of the same nature as that contained in the appendix) of sustainability characteristics, and then determine the subset of "common FDI sustainability characteristics" that have 50% or more coverage (mentions) in at least 4 of the 8 sources.
Standard & Poor's ESG Weighted Indices (ESG: Environment, Social, Governance) Among these are: 1) S&P ESG India Index 2) S&P ESG Factor Weighted Index Series	These all represent market indices, reflecting the share prices of the constituent companies. The focus in these studies are companies rather than to FDI.	Companies must complete one screening test relating to governance and one relating to environmental and social practices. The ESG scores are primarily based off RobeccoSAM Corporate Sustainability Assessment (CSA) scores. The RobeccoSAM questionnaires are sector-specific, detailed and are generally confidential.

Title, Author and Organisation	Focus	Methodology
FDI Qualities Indicators: Measuring the sustainable development impacts of investment OECD (2019)	This project aims to provide governments with relevant instruments to quantify the FDI qualities.	OECD identifies five "FDI qualities indicators", namely productivity-innovation, skills, job quality, gender and carbon footprint. These were selected on the basis of an assessment of how FDI can contribute to specific sustainable development goals.
Toward Common Metrics and Consistent Reporting of Sustainable Value Creation World Economic Forum (2020) (WEF, 2020)	WEF has identified a common, core set of ESG metrics and recommended disclosures for all companies to report on, across sectors and geographies. The objective of this study is for companies to report on these metrics in their mainstream disclosures to provide a more accurate representation of a company's performance, risk management capabilities and ability to generate long-term value for all stakeholders.	The study has been organized into four pillars – Principles of Governance, Planet, People and Prosperity. Each pillar comprises themes, based on existing standards and reporting frameworks. Each theme is critical to a comprehensive understanding of its pillar and comprises several sub-themes, each of which has one or more corresponding proposed metrics or disclosures to measure corporate performance.

ARTNeT on FDI

The Asia-Pacific Research and Training Network on FDI - ARTNeT - is an open network of policymakers, practitioners, academics, and other experts working on FDI in the Asia-Pacific region. Since its inception, ARTNeT aims to increase the amount of high quality, topical and applied research in the region by harnessing existent research capacity and developing new capacities. ARTNeT also focuses on communicating these research outputs for policymaking in the region including through the ARTNeT on FDI Working Paper Series which provide new and policy–relevant research on topics related to FDI. The views expressed in this publication are those of the authors and do not necessarily reflect the views of the United Nations and ARTNeT secretariat or ARTNeT members.

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