

**RESULTS AND LESSONS LEARNT FROM THE POLICY
DIMENSION TO SUPPORT THE TRANSFORMATION TO
ECO-INDUSTRIAL PARKS OF GEIPP PHASE I**

MAY 2024

LESSONS LEARNT SERIES
Issue 5





Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

©2024

The designations employed and the presentation of material in this document do not imply the expression of any opinion whatsoever on the part of UNIDO and their governing bodies concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The views expressed in this document are those of the authors and do not necessarily reflect the views of UNIDO and its governing bodies.

RESULTS AND LESSONS LEARNT FROM THE POLICY DIMENSION TO SUPPORT THE TRANSFORMATION TO ECO-INDUSTRIAL PARKS OF GEIPP PHASE I

Based on project implementation in seven countries during Phase I of the
Global Eco-Industrial Parks Programme (2019 – 2023)



2024

CONTENTS

ACKNOWLEDGEMENTS	VI
ABBREVIATIONS	VII
EXECUTIVE SUMMARY	VIII
1 INTRODUCTION	11
1.1 ABOUT THIS REPORT	11
1.2 ABOUT GLOBAL ECO-INDUSTRIAL PARKS PROGRAMME.....	14
2 COLOMBIA	17
2.1 POLICY BASELINE	17
2.2 POLICY BARRIERS	20
2.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	20
2.4 EIP POLICY DEVELOPED DURING GEIPP I	21
3 EGYPT.....	24
3.1 POLICY BASELINE	24
3.2 CHALLENGES IN POLICY DEVELOPMENT	26
3.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	27
3.4 EIP POLICY DEVELOPED DURING GEIPP I.....	28
4 INDONESIA	30
4.1 POLICY BASELINE	30
4.2 POLICY GAPS AND BARRIERS.....	32
4.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	32
4.4 EIP POLICY DEVELOPED DURING GEIPP I.....	33
5 PERU	36
5.1 POLICY BASELINE	36
5.2 POLICY BARRIERS AND GAPS.....	37
5.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	38
5.4 POLICIES DEVELOPED DURING THE GEIPP I	39
6 SOUTH AFRICA.....	41
6.1 POLICY BASELINE.....	41
6.2 POLICY GAPS AND BARRIER	42
6.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	43
6.4 POLICIES DEVELOPED DURING THE GEIPP I	44
7 UKRAINE.....	46
7.1 POLICY BASELINE	46
7.2 POLICY GAPS AND BARRIER	47
7.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	47
7.4 POLICY DEVELOPED DURING GEIPP I	49
8 VIET NAM	52
8.1 POLICY BASELINE.....	52
8.2 POLICY GAP AND BARRIERS	54
8.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING	54
8.4 POLICIES DEVELOPED DURING GEIPP I	56
9 CONCLUSIONS AND LESSONS LEARNED	59



ACKNOWLEDGEMENTS

Acknowledgements to all national counterparts, international stakeholders and UNIDO team members who contributed to Phase I of the Global Eco-Industrial Parks Programme (2019-2023).

Special acknowledgements to governmental agencies in the GEIPP participating countries, including Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine, and Vietnam, which actively participated in and contributed to the policy development to support the transformation of industrial parks to eco-industrial parks.

The Global Eco-Industrial Parks Programme (GEIPP) is made possible by funding provided by the Swiss Government through the State Secretariat for Economic Affairs of Switzerland (SECO).



ABBREVIATIONS

A2F	Access to Finance
EIP	Eco-Industrial Park
ESCO	Energy Service Company
GEIPP	Global Eco-Industrial Parks Programme (UNIDO)
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Cooperation)
IDZ	Industrial Development Zone
IFC	International Finance Corporation (part of World Bank Group)
IP	Industrial Park
IZ	Industrial Zone
PPP	Public Private Partnership
RECP	Resource Efficient and Cleaner Production
SDG	Sustainable Development Goal
SEZ	Special Economic Zone
SME	Small and Medium-sized Enterprise
UNIDO	United Nations Industrial Development Organization
WBG	World Bank Group
ZF	Zona Franca



EXECUTIVE SUMMARY

This publication encapsulates the key findings and accomplishments of the Global Eco-Industrial Parks Programme (GEIPP). The report focuses on policy advancements achieved by seven participating countries during the first phase of the GEIPP (2019-2023), emphasising the critical role of government policies in driving sustainable industrial development through Eco-Industrial Parks (EIPs).

The synthesis of this report draws from comprehensive insights provided by Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine, and Vietnam, detailing their policy achievements and challenges in establishing EIPs within their respective contexts.

Key Insights and Achievements:

- » **Policy Impacts and Evolution:** The report underscores the significant influence of policies on the practical application of EIP approaches. It highlights instances where policy amendments have been essential to support the implementation of EIPs amid evolving environmental challenges and industrial practices.
- » **Government Support:** Governments play a pivotal role in facilitating EIP establishment by enacting regulations, providing technical guidance and incentives, and fostering community engagement. The report emphasises the importance of top-down support in planning, zoning, permit requirements, and climate change adaptation within industrial settings.
- » **Capacity Building and Assistance:** GEIPP interventions have been crucial in advising and building capacity among policymakers to incorporate EIPs into broader policy frameworks. This includes analysing existing regulations, identifying gaps, and tailoring interventions to local needs.

Country-Specific Policy Milestones:

- » **Colombia:** Release of a national technical standard for EIP and the inclusion of EIP into national regulations.
- » **Egypt:** Integration of EIP into "Egypt Vision 2030" and National Structural Reform Program.
- » **Indonesia:** Establishment of an Inter-Ministerial Forum to accelerate EIP development.
- » **Peru:** Enhancement of the National System of Industrial Parks (SNPI) and policy roadmap.
- » **South Africa:** Developing a comprehensive Industrial Parks policy with EIP core approaches.
- » **Ukraine:** Inclusion of EIP in the Government's Prioritized Action Plan.
- » **Vietnam:** Adopting the Vietnam Green Growth Action Plan and drafting EIP National Indicators.

The report highlights the collective efforts of GEIPP in enhancing policy landscapes to support sustainable industrial development through EIPs. It signifies a crucial step towards integrating EIP-enabling policies into mainstream practices, showcasing notable achievements and setting a



foundation for further advancements in subsequent phases. In subsequent chapters, the report delves deeper into the specific policy developments and amendments undertaken by each participating country, providing further insights and lessons for advancing EIP agendas globally.

Introduction

1



1 INTRODUCTION

1.1 ABOUT THIS REPORT

This report marks the fifth publication in the Lessons Learned series by the Global Eco-Industrial Parks Programme (GEIPP), dedicated to disseminating lessons learnt from the policy dimension of the first phase of the Global Eco-Industrial Parks Programme. The document provides information on the policy advancements accomplished by seven GEIPP-participating countries during the first phase of the GEIPP in 2019-2013. The synthesis of this report is derived from the reports prepared by Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine, and Vietnam to mark the closing of the GEIPP I.

As discussed in the fourth GEIPP Lesson Learned Report¹, it is evident that policies, whether present or absent, wield a substantial influence on the practical application of Eco-Industrial Parks (EIP) approaches in a given jurisdiction. There are instances where amendments to existing policies become imperative to provide substantial support for the implementation of EIP. At the same time, the dynamic interplay between environmental challenges and industrial practices requires continuous evolution and adaptation of policies. These amendments function as a crucial mechanism, aligning regulatory frameworks with the ever-changing landscape of sustainable industrial practices.

Acknowledging policies' impact underscores the importance of continuous evaluation and, when necessary, recalibration to ensure that EIPs can reach their full potential as drivers of sustainable industrial development. With a half-decade of project implementation, the present occasion proves suitable for presenting a report outlining the policy-related accomplishments.

Governments play a pivotal role in facilitating the establishment of Eco-Industrial Parks (EIPs) by enacting regulations, providing technical guidance, providing incentives, creating favourable market conditions, and fostering community engagement.

The previous publication of the Lessons Learned series also highlighted the potential critical roles of government agencies in supporting the EIP transformation through policy measures. The top-down government support is particularly essential in areas such as planning and zoning of industrial parks as well as permit requirements for their operations. Government policies are equally important in broadening requirements and incentives for industrial parks/firms to address and adapt to climate change. Circular economy activities promoting the safe reuse and recycling of industrial by-products and side will also require government facilitation through the enactment or even removal of certain policies. It is important to note that EIP policies can be promoted not necessarily through new policy instruments but can be mainstreamed through strengthening existing policies.

Yet, policymakers may not always be familiar with all the benefits of eco-industrial parks and how to support such development. This is where GEIPP-initiated advice and capacity building come into play. Through country-level intervention, GEIPP aims to actively promote and incorporate EIP into broader policy frameworks, enhancing its importance in various sectors at the national level.

To achieve this goal, GEIPP assists participating countries in analysing the current regulations and policies and the capabilities of institutions and service providers in transitioning to eco-

¹ Lessons Learned Issue 4: [The Eco-Industrial Park-Policy Nexus](#)



industrial parks. This also includes identifying gaps to tailor interventions to local interests, commitment levels, and needs.

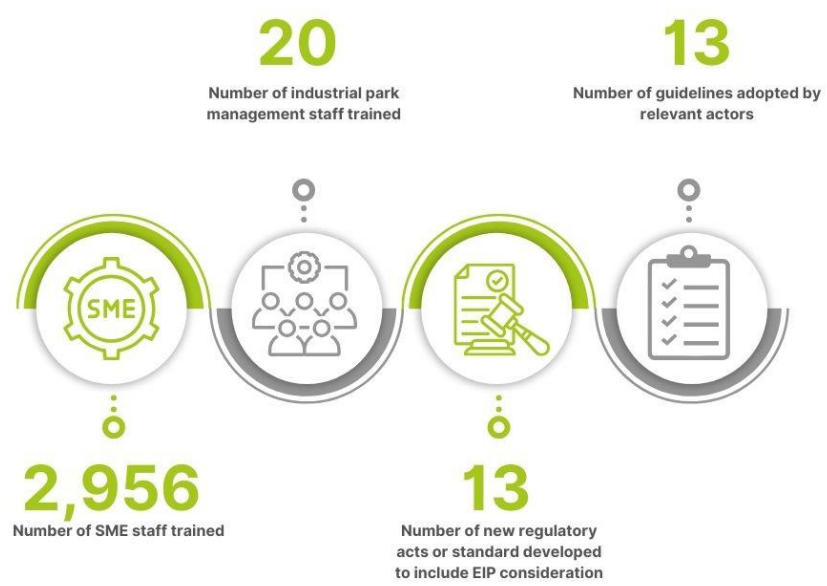
Throughout the first phase of GEIPP implementation, participating countries have experienced diverse levels of progress. Despite variations in the regulatory/ policy baseline situation and advancement, these efforts contribute significantly to establishing a more conducive policy landscape for eco-industrial parks in all GEIPP countries. This is evident in the formulation of the EIP policy roadmaps by participating countries, revised policies, and their successful resolution of identified regulatory barriers. The support of initiatives developed by the program, such as the EIP Policy Tool, facilitates this accomplishment.

This report will further outline the policy baseline, highlight specific challenges and barriers, and detail the progress achieved by participating countries. It's crucial to emphasise that each country has a distinctive policy landscape that necessitates a tailored approach. Most recent policy-related accomplishments from the participating countries at the closing of GEIPP I are detailed as follows²:

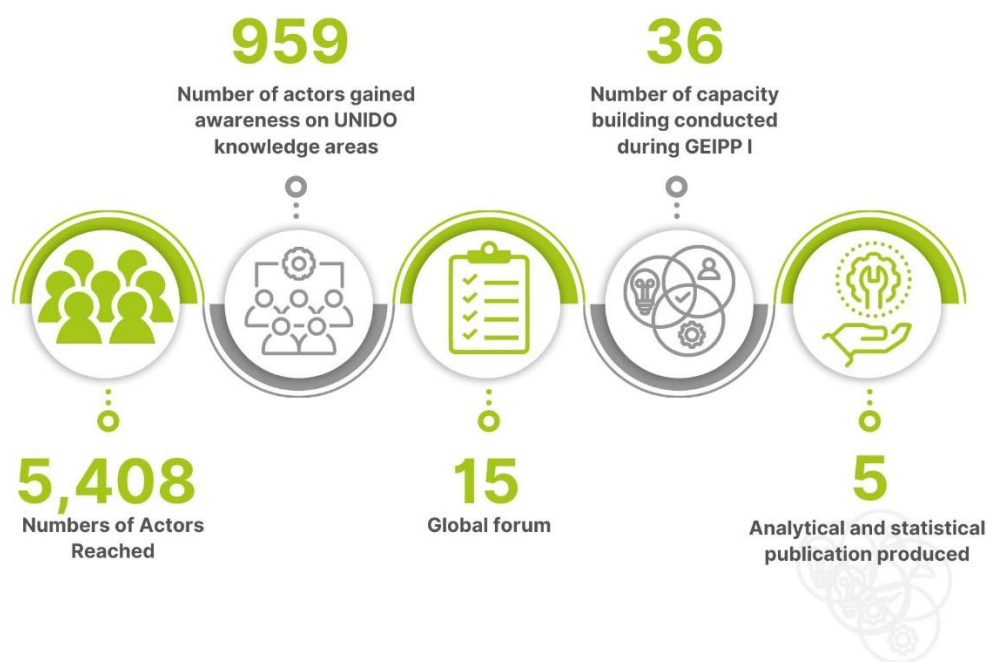
- » **Colombia:** Release of a national technical standard for EIP and the inclusion of EIP into national regulations.
- » **Egypt:** Integration of EIP into "Egypt Vision 2030" and National Structural Reform Program.
- » **Indonesia:** Establishment of an Inter-Ministerial Forum to accelerate EIP development.
- » **Peru:** Enhancement of the National System of Industrial Parks (SNPI)
- » **South Africa:** Developing a comprehensive Industrial Parks policy with EIP core approaches.
- » **Ukraine:** Inclusion of EIP in the Government's Prioritized Action Plan.
- » **Vietnam:** Adopting the Vietnam Green Growth Action Plan and drafting EIP National Indicators.

These achievements were also facilitated by a comprehensive capacity-building effort initiated by the programme. So far, the cumulative number of personnel from government agencies engaged in capacity building across seven participating countries during the initial stage of GEIPP implementation has reached 2,956 individuals. The GEIPP phase I implementation in all seven countries has also resulted in 20 amended policies, 13 standards developed or adopted to include EIP considerations, and 13 guidelines adopted by relevant actors. It also contributes to the collective endeavour to realise the desired outcome of incorporating EIP-enabling policies into mainstream practices.

² This report has been compiled based on the submissions provided by all participating countries of GEIPP for the Final Event marking the conclusion of GEIPP Phase I. The cut-off date for this report is December 2023, and therefore, any developments occurring after this date may not be reflected in this report.



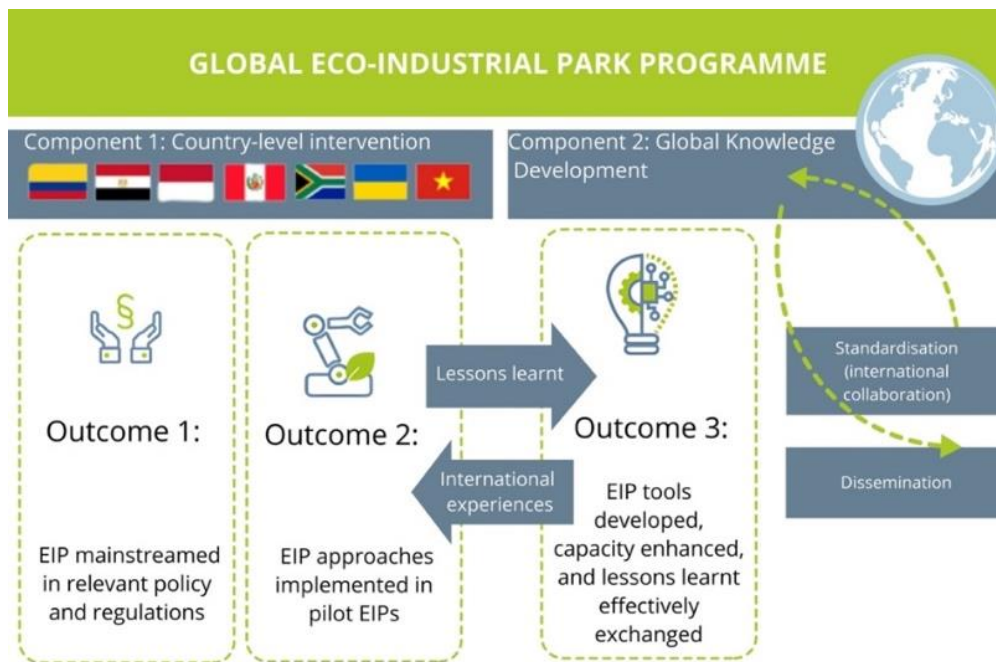
In this regard, the Global component of the GEIPP I has successfully reached a cumulative total of 5408 actors. Implementing the global component has resulted in 959 actors gaining awareness of UNIDO's knowledge areas. This includes 191 actors from governmental agencies, 101 from industrial park management, 129 from tenant companies, 351 from service providers, and 187 from other groups. These engagements were facilitated through 15 global forums and 36 capacity-building initiatives. The work of GEIPP Global has been effectively disseminated through 5 analytical and statistical publications.





1.2 ABOUT GLOBAL ECO-INDUSTRIAL PARKS PROGRAMME

Figure 1: Overview of the Global Eco-Industrial Parks Programme



The objective of the Global Eco-Industrial Parks Programme (GEIPP) is to demonstrate the viability and benefits of greening industrial parks by improving resource productivity and economic, environmental and social performances of businesses and thereby contributing to inclusive and sustainable industrial development in the participating developing and transition economies.

Component 1 (Country level interventions) implements tailor-made initiatives in seven countries: Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine and Viet Nam, including the incentivisation of EIPs in policies/ regulations as well as identification and implementation of EIP opportunities in selected industrial parks.

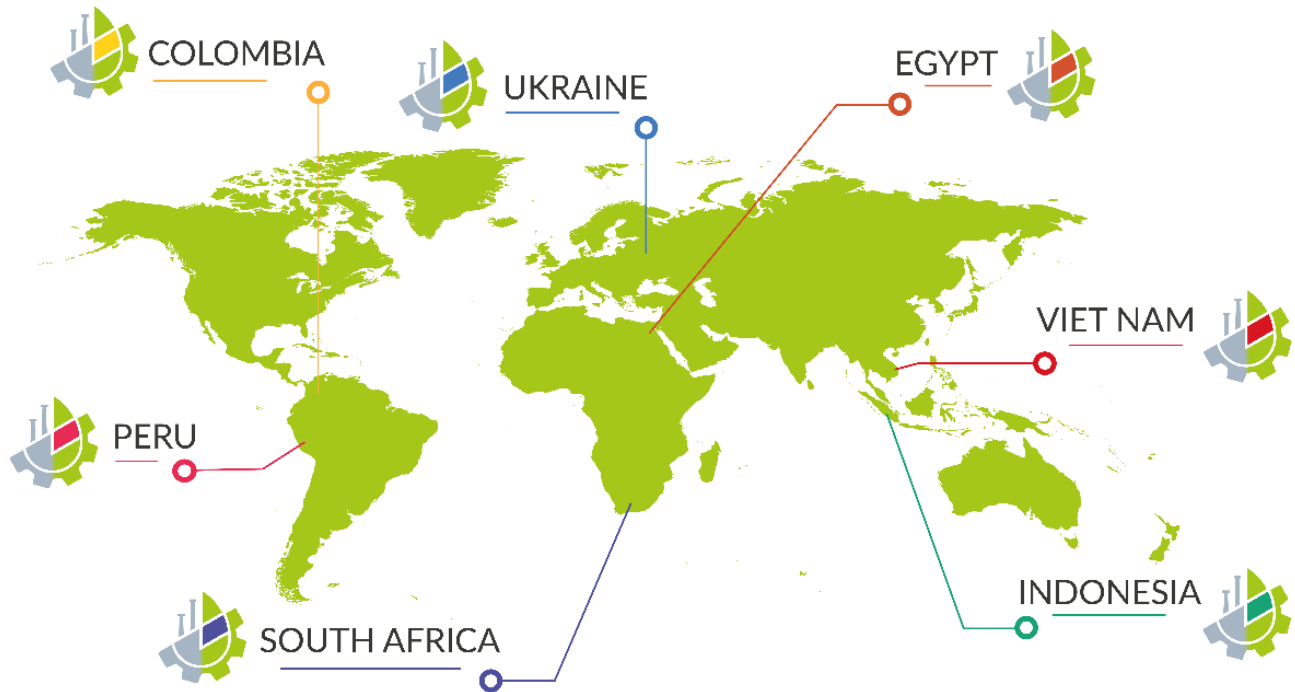
Component 2 (Global Knowledge Development) focuses on the development of specific EIP tools, providing methodological guidance and dissemination of good practices between GEIPP countries and lessons learnt from international experiences.

The Swiss government's funding through the State Secretariat for Economic Affairs of Switzerland (SECO) makes Phase I of the Global Eco-Industrial Parks Programme (2019-2023) possible.

In subsequent chapters, further insights into the development or amendment of EIP-related policies in each GEIPP-participating country will be further explored.



Figure 2. GEIPP participating countries



Colombia

2





2 COLOMBIA

2.1 POLICY BASELINE

Colombia currently possesses several necessary baselines to formulate enabling policies for Eco-Industrial Parks. These include the National Circular Economy Strategy, the National Policy on Comprehensive Solid Waste Management, Renewable Energies and Energy Efficiency, and the Climate Change Adaptation Policy. These initiatives cover a broad spectrum of sustainability facets, such as circular economy practices, reindustrialisation, waste reduction, and promoting sustainable production and consumption. These efforts are further strengthened by the vision outlined in the National Development Plan for 2022-2026.

Some of the critical laws and regulations that are relevant to EIPs in Colombia include:

- **National Development Plan:** The National Development Plan outlines the government's strategies and priorities for economic, social, and environmental development. It may include provisions related to promoting sustainable industrial practices, resource efficiency, and environmental protection.
- **National Circular Economy Strategy (ENEC):** The ENEC aims to promote a circular economy in Colombia by reducing resource extraction, minimising waste generation, and fostering sustainable production and consumption practices. It provides a strategic framework for implementing initiatives like EIPs.
- **Environmental Laws:** Colombia has various environmental laws that regulate pollution control, natural resource management, biodiversity conservation, and environmental impact assessments. These laws ensure that industrial activities, including those within EIPs, comply with environmental standards.
- **Industrial Regulations:** Regulations governing industrial activities, waste management, energy efficiency, and emissions control are essential for operating EIPs. Compliance with these regulations is crucial to ensuring sustainable and environmentally friendly industrial practices.
- **Land-Use Planning Laws:** Land-use planning laws and regulations play a significant role in determining the location, design, and development of industrial zones, including EIPs. These laws help ensure that industrial activities are appropriately zoned and integrated into the surrounding environment.

In Colombia, the hierarchy of law is structured as follows:

- **Political Constitution:** The Constitution is the supreme law of the land and serves as the foundation for all other laws and regulations in Colombia. It establishes the fundamental principles of the state, the organisation of government, and the rights and duties of citizens.
- **Laws:** Laws are enacted by the Congress of Colombia and must be in accordance with the Constitution. They cover various issues and provide specific regulations on various matters.
- **Decrees:** Decrees are issued by the President of Colombia or other executive branch authorities to regulate specific matters within the framework established by the Constitution and laws. There are different types of decrees, including legislative decrees and regulatory decrees.



- Resolutions: Resolutions are administrative acts issued by government agencies, ministries, or other administrative bodies to regulate procedural or technical aspects of a law or decree. They are subordinate to laws and statutes.

Figure 3. Legal hierarchy in Colombia

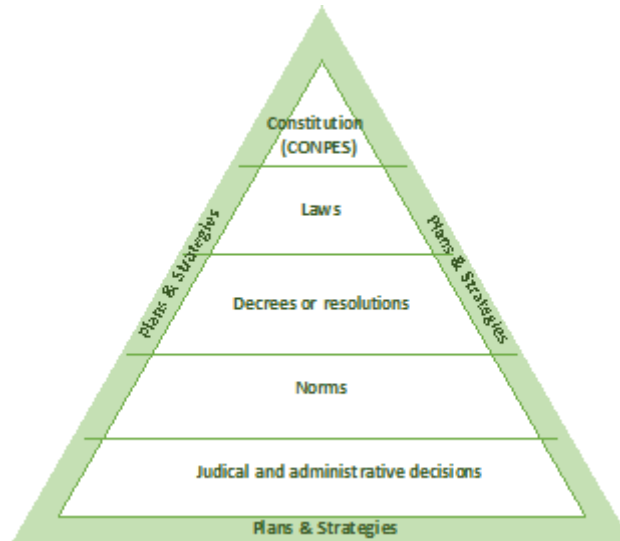


Table 1. The Policy Landscape Related to EIPs. Colombia

Constitution			
Law			
Law 109 of 1985 on Free Trade Zones	Law 388 of 1997 on territorial planning,	Law 430 of 1998 on environmental matters relating to hazardous wastes and other provisions.	Law 491 of 1999 established on Ecological Insurance
Article 1 of Law 1004 of 2005, which modifies the special regime of the free zone to stimulate investment	Law 1252 on hazardous waste and waste	Law 1333 of July 21, 2009 on the environment and natural resources protection	Law 1753 of 2015 sectoral plans for climate change adaptation
Decrees			
No. 2811 of 1974, the National Code of Renewable Natural Resources, regulated matters related to the use and exploitation of water resources	No. 948 of 1995 which regulates matters related to air and noise	No. 2233 of 1996 established the regime of the Export Processing Zones for Goods and Services	No. 2685 of 1999, amending customs legislation
No. 1729 of 2002, on the guidelines and phases for the	No. 1200 of 2004, which determines regional environmental	No. 4741 of 2005, which aims to prevent the generation of hazardous waste	No. 1362 of 2007, which aims to establish the requirements and procedure for the



management of watersheds	planning for sustainable development		Registry of Generators of Hazardous Waste or Waste
No. 3450 of 2008, which establishes measures to promote the efficient use of electric energy.	No. 4051 of 2007, which modifies aspects related to Free Trade Zones, partially modifying Decree 2685 of 1999.	No. 2372 of 2010, which regulates the National System of Protected Areas	No. 2820 of 2010, which determines the projects that require an environmental license and the competent authorities to grant them.
No. 3678 of 2010, which establishes the criteria for the imposition of the sanctions	No. 3930 of 2010 amends Decree Law 2811 of 1974 regarding the regulation of water resources, uses and qualities of water, and requirements for discharges to the ground and sewerage	No. 2820 of 2010, which determines the projects that require an environmental license and the competent authorities to grant it.	No. 1640 of 2012, regulates the management instruments for the planning, ordering and management of watersheds and aquifers
No. 1076 of 2015, through which the Single Regulatory Decree of the Environment and Sustainable Development Sector is issued.	No. 2147 of 2016, amending the Free Trade Zone regime	No. 1090 of 2018, which adds Decree 1076 of 2015, Single Regulatory Decree of the Environment and Sustainable Development Sector, in relation to the Program for the Efficient Use and Saving of Water.	No. 278 of 2021, which modifies the Free Trade Zone regime.
Resolutions			
Resolution 619 of 1997, on atmospheric emission permit	Resolution 90708 of 2013 on the limit values for exposure to electromagnetic fields generated by electrical installations	Resolution 0551 of 2009 on the requirements and evidence of the contribution of projects to the sustainable development	Resolutions 2733 of 2010 on the procedure for the national approval of programmes of activities (PoA) under the Clean Development Mechanism (CDM)
Resolution 2210 of 2018 on the use of the Colombian Environmental Mining Seal	Resolution 1111 of 2013 on the structure and content of the Program for the Efficient Use and Saving of Water and the Program for the Efficient Use and	Resolution 2254, on the ambient air quality standard.	Resolution No. 260 of 2011, on the rates for the collection of evaluation and monitoring services for licenses, permits, etc. authorizations and other environmental control



	Saving of Water simplified		and management instruments
--	----------------------------	--	----------------------------

2.2 POLICY BARRIERS

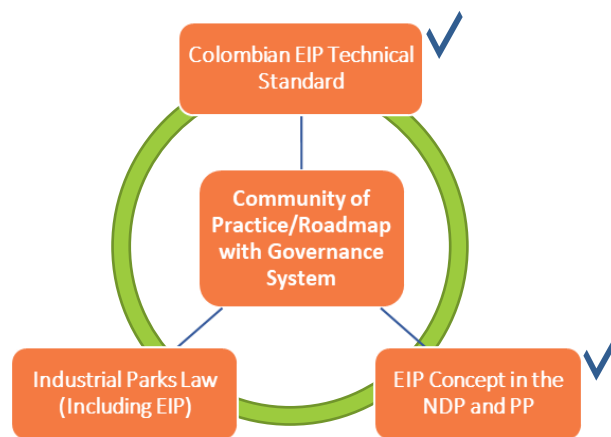
Colombia's comprehensive policy and regulatory set-up presents challenges in formulating effective policies for eco-industrial parks. The policy enhancement process requires "EIP" updates of existing policies and regulations rather than establishing EIP-specific policies. That said, there are discernible policy gaps in the environmental sector, necessitating a heightened focus on mitigating environmental and industrial impacts. Prioritising safeguarding healthy ecosystems, biodiversity, and adherence to global environmental regulations emerge as pivotal for crafting relevant national laws.

Colombia grapples with an expanding disconnect between industrial activities and neighbouring communities. Strategic policy interventions are imperative to cultivating improved social relationships and fostering better environmental stewardship. On the economic front, existing policies in Colombia could be fortified to confer strategic advantages for product exports. Despite some acknowledgement, Eco-Industrial Parks have not been fully integrated into public policy. This gap allows for additional development and consolidation within the national context.

2.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

The regulatory impact assessment conducted by GEIPP Colombia in 2021 identified three primary actions to create an enabling environment. These actions encompass the incorporation of Eco-Industrial Park (EIP) approaches into the National Development Plan, the enactment of a Law Decree on Industrial Parks to incentivise the transition toward EIP, and the establishment of a national technical standard to serve as a basis for assessing compliance with EIP standards within industrial parks.

Figure 4. Colombia's approach for integrating EIP in National Regulations



Policy instruments support on each other to secure the sustainability of EIP transformation in Colombia.

The diagram above illustrates three key actions undertaken by GEIPP Colombia to integrate the EIP approach into national regulations. Given the imperative to elevate the role of EIP within national policies aligning with the National Circular Economy Strategy, engagements with



strategic stakeholders have underscored the necessity for a more formal and strategic national EIP framework. This framework is essential for effectively transforming industrial parks into EIPs.

To facilitate this transformation, the EIP Community of Practice (CoP) was established. CoP meetings provide a platform to inform and initiate discussions among key stakeholders and government officials. These discussions primarily focus on the National Development Plan and aim to generate practical proposals addressing institutional framework gaps while highlighting the advantages of EIP for industrial parks and companies. Discussions held within the community of practice will also inform the development of national technical standards. The adoption and enforcement of these standards and strategic initiatives will be legally reinforced through the integration of the EIP approach into the new industrial parks legislation.

GEIPP Colombia has defined these concepts and strategies to ensure the long-term sustainability of EIP implementation throughout Colombia. In the event that Colombia graduates from the program, these approaches are anticipated to uphold the continuity of EIP implementation.

GEIPP played a key role in policy development by enhancing the capacity of government agencies and officials through effective capacity-building initiatives. In Colombia, the GEIPP team has successfully trained 302 individuals relevant to policy development during the first phase of the programme implementation in 2019-2023.

2.4 EIP POLICY DEVELOPED DURING GEIPP I

Key stakeholders in Colombia have recognised the significant potential of Eco-Industrial Park (EIP) development to yield positive outcomes. By integrating EIPs into the National Development Plan (NDP) and associated policies, strategies, and plans, these stakeholders aim to underscore sustainability, foster green growth, and advance circular economy objectives. Such policy promotion aligns seamlessly with sustainable development goals and holds promise for generating income, fostering the creation of green jobs, and catalysing economic growth.

The integration of EIPs into the NDP unfolded in two distinct phases: initially, by raising governmental awareness about sustainability and EIPs and, subsequently, by actively contributing as technical advisors to the NDP. Incorporating the EIP vision into the NDP further catalysed the formulation of a Colombian Technical Standard (NTC) tailored explicitly for EIPs. This standard assumes critical significance as it establishes the criteria and guidelines for EIP development, facilitating replication and scaling well beyond the confines of the GEIPP pilot parks.

Central to this process is the pivotal role played by the Colombian Institute of Technical Standards and Certification (ICONTEC), which orchestrated the various stages from planning to eventual publication of the NTC. Following the requisite approvals, the NTC was formally launched for public utilisation towards the end of 2023.

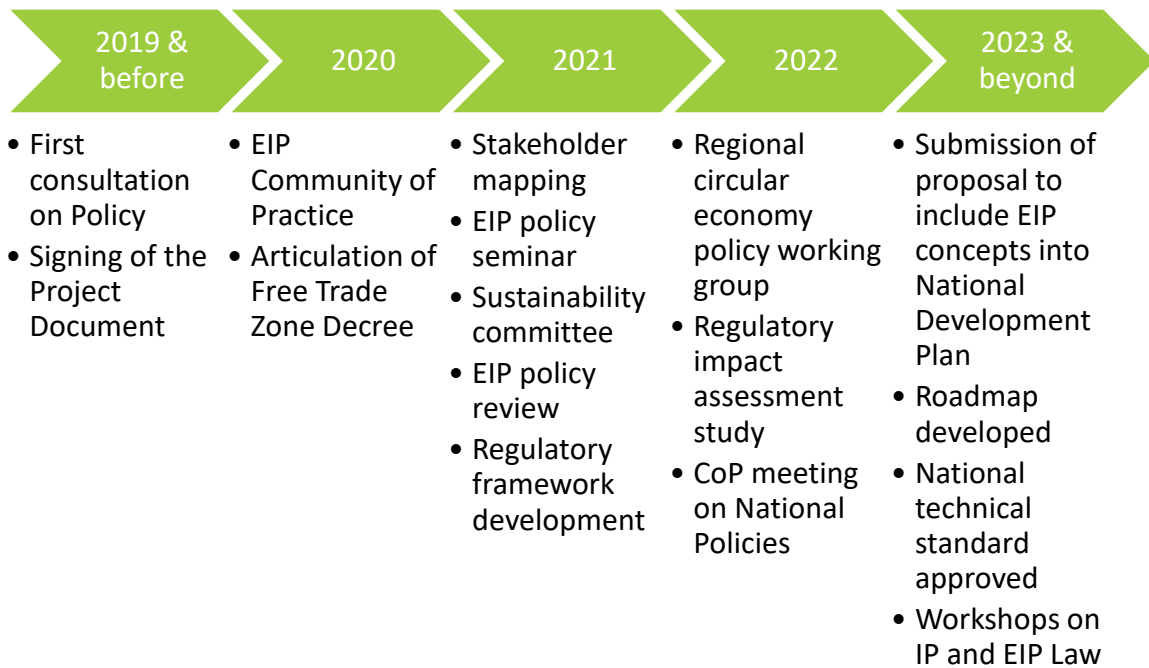
Besides the national technical standard designed as a foundation for implementing EIP, Colombia has witnessed various other policy advancements. Notable developments in Colombia include:

- An EIP-related public policy produced by the highest national planning authority, the National Council of Economic and Social Policy (CONPES), endorsed by the national government. More specifically, this public policy includes a clause stipulating that all Free Trade Zones must be transformed into Eco-Industrial Parks.



- The formulation of a proposal for the Industrial Parks law resulting from a collaborative effort involving the National Business Association of Colombia (Asociación Nacional de Empresarios de Colombia-ANDI), Free Trade Zones, industrial parks, resident companies, and Congresswoman Maria del Mar Pizarro. This proposal is slated for submission to the Congress of the Republic in 2024.
- The submission of a proposal to incorporate concepts of the Eco-Industrial Parks, Circular Economy, and Sustainable Industrial Development into the National Development Plan. The subsequent plenary session held by the National Congress demonstrated a willingness to engage in a comprehensive discourse on integrating these principles into the country's development agenda.

Figure 5. Timeline of EIP Policy Development in GEIPP Phase I-Colombia



EGYPT

3



3 EGYPT

3.1 POLICY BASELINE

Egypt's existing framework of regulations, laws, and policies potentially lays a foundation for the development of EIPs. This framework covers various aspects, including laws governing industrial development, investment, environmental protection, renewable energy, and employment conditions. Moreover, Egypt's national strategies, such as Egypt Vision 2030, the National Climate Change Strategy 2050, the Industry and Trade Development Strategy (2016-2022), and the Integrated Sustainable Energy Strategy (2035), provide essential frameworks to propel EIPs forward. These strategies not only facilitate EIP development but also enable the alignment of industrial growth with broader national goals and objectives.

Egypt's Vision 2030, launched in March 2015, represents a new strategy for sustainable development aligned with the United Nations 2030 Sustainable Development Agenda. The vision outlines Egypt's overarching goal of possessing a competitive, balanced and diversified economy driven by innovation and knowledge while emphasising justice, social integrity, and participation. It envisions a collaborative ecology that leverages local ingenuity and human capital to achieve sustainable development and enhance the quality of life for Egyptians, driven by a state-led process with the participation of all relevant stakeholders. This policy framework serves as a foundation for integrating and scaling up RECP initiatives and the development of EIPs in Egypt.

In addition to Egypt's Vision 2030, the Ministry of Industry and Trade's (MoTI) Industry and Trade Development Strategy (2016-2020) becomes another policy anchor to integrate Eco-Industrial Parks (EIPs) into future industrial strategies, aligning with Egypt's broader vision for sustainable development and economic diversification. The Green Economy Development Project within this strategy specifically supports industries that contribute to a green economy, emphasising low emissions and environmental dimensions such as waste recycling (both industrial and agricultural). The strategy prioritises enhancing exports that meet stringent environmental standards, which have become a primary export requirement.

Table 2. The Policy Landscape Related to EIPs. Egypt

Constitution				
Law				
Law 95/2018 on Establishment and Restructuring of IDA	Article 19 and 20 of Law 4/1994 as amended by Law 9/2009 on Industrial Development Permit	Law 15 for 2017 and its executive regulations Decree number 1082 for 2017 on the List of the Category C projects that requires preparation of a full EIA	Article 9 of Law 15/2017 on Investment Law	
Law 83/2002 on Special Zones Law	Article 35 of Law 4/1994 and article 34 of its ERs (amended by Decree 710/2012) and Annex 5 of the ERs on Ambient Air Quality	Article 36 of Law 4/1994 and article 37 of its ERs (amended by Decrees 710/2012) as well as Tables 23 and 24 of Annex 6 of the ERs on Gaseous Emissions	Article 40 of Law 4/1994 and article 42 of its ERs (amended by Decrees 710/2012 and 964/2015) on Article 42 of Law 4/1994 and article 44 of the ERs (Amended by Decree 710/2012) on Ambient Noise	



Article 61 of Law 48/1982 concerning Protection of Nile River and Water Streams on Water Resources Protection	Law 93/1962 and the amendment of its Executive Regulations issued by the Ministerial Decree No. 44/2000, Article 14 on Water Discharge	Articles 37 of the Environmental Law 9 of 2009 and Annex 11 of its modified Executive Regulations (1095 of 2015) on Solid Waste	Article 39 of Law 4 of 1994 on Solid Waste
Law 38 of 1967 on General Public Cleaning and Law No. 106 of 2012 amending a number of articles of Law 38, and its executive regulations (decree 134/1968) on solid waste.	Article 37 of Law 9 of 1994 and Article 38 on Solid Waste	Article 29 of Law No. 4 of 1994 on Hazardous Substances and Wastes	Article 31 of the ER of law 4/1994 on Hazardous Substances and Wastes
Article 33 of Law No. 4 of 1994 (amended by law 9/2009) on Hazardous Substances and Wastes	Law 203/2014 on Renewable energy	Law 12/2003, Labour Law, section 5 on Workers health and safety	Articles 43-45 of Law 4/1994 Workers health and safety
Law 87/2015 articles 48, 50 and 51 on Electricity	The new Draft Waste Law		
Code			
Labour Code 12/2003			
Decrees			
Presidential Decree 350/2005 on The structure, powers and responsibilities of IDA regarding industrial development	Presidential Decree 488/2000 on Establishment of IMC	Presidential Decree 330/2015 on Establishment of SCZONE	Articles 40, 41 of the Decree 211/2003 of Ministry of Manpower and Immigration (MOMI) on Solid Waste
PM Decree 964/2015 on Coal use for cement industries and fuel generation	Decree 211 of 2003, article 26 and 31 on Hazardous Substances and Wastes	Decree 3005 of 2015, article 14 on Hazardous Substances and Wastes	Decree 211/2003, article 31 on Storage of Raw Material and Products
Executive Regulations			
Article 41 of the modified Executive Regulations (1741/2005) on Solid Waste	Executive regulations (decree 134/1968) on solid waste.	Modified Executive Regulations 1741/2005 and 964/2015 on Solid Waste	Article 28 of the Executive Regulations of Law No. 4 of 1994 (amended in decree 1095/2011) on Hazardous Substances and Wastes



Annex 8 of the Executive Regulations of Law 4, 1994 (amended by Decree 1095 of 2011) on Workplace air quality

Annex 7 Executive Regulations of Law 4, 1994 on Workplace noise

3.2 CHALLENGES IN POLICY DEVELOPMENT

The terminology surrounding industrial development in Egypt presents some unique challenges. In Egypt, the term "industrial parks" is not widely used except when referring to industrial zones managed by private sector entities. Both the Ministry of Industry and Trade (MoTI) and its executive arm, the Industrial Development Authority (IDA), oversee officially designated areas managed by the public sector as "Industrial Zones." However, there is currently no common Arabic term designated by MoTI to encompass all spaces allocated for industrial development.

This lack of a singular term for Industrial Parks (IPs) in Egypt complicates the establishment of specific legal frameworks to regulate them, which hinders their direct connection with Eco-Industrial Parks (EIPs). The advocacy for EIPs remains limited due to minimal awareness of the concept, compounded by the uncommon usage of the term "industrial park" in Egypt. The legislation concerning industrial zones primarily focuses on enforcement rather than providing incentives for parks and companies to explore Eco-Industrial Park (EIP) opportunities.

Besides, the diverse range of industrial zones across the country and governance structure creates another stumbling block. For example, the existence of special fiscal and tax regimes in certain industrial parks, like special economic zones, investment zones, and free zones, further complicates investment and industrial development conditions. These complexities hinder the implementation of a standardised approach to EIP development across all industrial zones in Egypt.

To sum up, key challenges hindering EIP implementation in Egypt include:

1. Lack of clarity in the regulatory, development, and operational roles of key stakeholders, resulting in multiple entities being responsible for industrial park regulation, oversight, development, and operations. This includes IDA, New Urban Community Authority, and General Authority for Investment and Free Zones.
2. Lack of coordination among multiple ministries and laws addressing various elements of EIP, particularly in implementation, leading to park operators navigating disparate regulations independently, increasing bureaucracy and inefficiency.
3. Absence of an active framework or platform for policy dialogue and knowledge exchange, hindering communication, knowledge sharing, and collaboration among industrial zone operators and managers.
4. Inadequate focus on information sharing and benchmarking across industrial parks, which limits policymaking and planning capacities due to a lack of comparative data.

Currently, the Ministry of Industry and Trade (MoTI) and the Industrial Development Authority (IDA) are in the process of developing Egypt's Industrial Development and Trade Enhanced Strategy, which will address industrial zone management and operation. This presents a promising opportunity to incorporate EIP principles into Egypt's industrial development regulations in the next year of implementation.



3.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

To streamline the creation of policies that support the advancement of EIPs, a specialised working group has been formed. It consists of key stakeholders identified through a thorough stakeholder assessment. The working group includes representatives from diverse sectors, including government officials, industrial park developers, and industry representatives, as outlined in the figure below.

Figure 6. Member of specialised working group



This collective representation ensures a well-rounded perspective, considering various facets of EIP development and will remain integral at each policy development stage, ensuring smooth and successful execution.

GEIPP Egypt has undertaken proactive measures, given Egypt's limited prior experience in EIP initiatives and low awareness of effective interventions and best practices across the project lifecycle (including planning, design, operation, and maintenance). Specifically, 32 capacity-building workshops have been organised to enhance stakeholders' understanding and actively involve them in the EIP development process. To date, GEIPP Egypt has successfully trained 351 individuals from governmental agencies.

These workshops are tailored for distinct groups of stakeholders, including policymakers and park managers, to clarify the concept of EIP and its associated benefits. By providing targeted education and fostering engagement, the project seeks to empower stakeholders, enabling them to contribute meaningfully to the successful establishment and operation of EIPs in the Egyptian context.



3.4 EIP POLICY DEVELOPED DURING GEIPP I

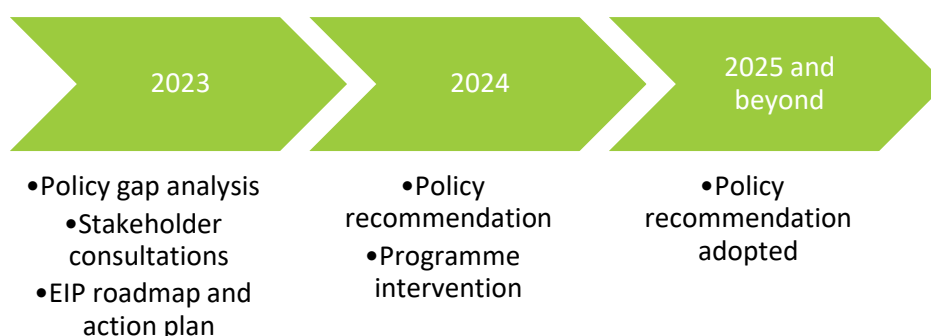
The first phase of GEIPP implementation concluded at the end of 2023. However, several countries, including Egypt, have yet to conclude this initial phase. The delay can be attributed to the impact of COVID-19 during the project's early stages, as well as various administrative hurdles that have impeded progress.

Given the complexity of governance structures in Egypt and the delay of project implementation, the finalisation of the EIP policy roadmap, vision, action plan, and policy recommendations to transform Egypt's Industrial Parks (IPs) into Eco-Industrial Parks (EIPs) can only be achieved towards the end of 2024. Egypt demonstrates a solid internal political will to integrate the concept of EIPs, as evidenced in Egypt's First Updated Nationally Determined Contribution (NDC) Report and existing national strategies.

Discussions surrounding EIP policy centre on incorporating targets for the number of EIPs, specific measures to enhance data collection and analysis systems for monitoring EIP performance, strengthening existing regulations through improved enforcement mechanisms, and developing additional green financial products to promote EIPs. Furthermore, beyond the EIP policy, it is imperative to issue a Prime Minister decree introducing EIP principles, industrial symbiosis, incentives, and criteria for designating industrial zones as EIPs.

A critical consideration in Egypt is establishing a clear governance structure for industrial parks and zones. Addressing these governance challenges requires comprehensive institutional reform. The government should designate an agency responsible for coordinating with stakeholders, including ministries, public institutions, park developers, operators, resident firms, business service providers, engineers, consultants, operations and maintenance professionals, equipment suppliers, financiers, academic institutes, and vocational training centres. This agency should be empowered and strengthened to develop EIP policies, manage EIP planning and budgets, oversee and monitor EIP framework implementation, and evaluate EIP feasibility studies submitted by industrial park developers and operators.

Figure 7. Timeline of EIP Policy Development in GEIPP Phase I-Egypt



INDONESIA

4



4 INDONESIA

4.1 POLICY BASELINE

Indonesia's potential for developing Eco-Industrial Parks (EIP) is supported by various policies and regulations. However, these provisions are dispersed among multiple agencies, presenting challenges for industry stakeholders. The current regulatory landscape concerning EIP covers various facets, including park management, spatial planning, industrial park instruments, and considerations related to environmental, social, and economic factors. Notably, regulations addressing social and economic factors are relatively scarce compared to those addressing other aspects.

A closer examination of Indonesia's policy framework showed that the majority of existing EIP-related regulations focus primarily on environmental concerns. Twenty regulations dedicated to environmental aspects, covering management and monitoring, energy, water and wastewater management, handling of toxic and hazardous materials, air quality, emissions control, and environmental protection and management.

The regulatory emphasis also extends to park management, which includes permits and space utilisation. However, there is a noticeable gap in addressing the social dimension within the existing framework. Currently, only a few regulations touch on social aspects, such as those related to the workforce, occupational health and safety, and community empowerment. Furthermore, the economic dimension is largely absent from the regulatory framework, resulting in a lack of legal mechanisms to establish essential incentives for EIP development.

In general, while Indonesia has a range of policies and regulations supporting the development of EIP, their fragmented distribution across agencies and the disproportionate focus on environmental aspects present hurdles for stakeholders. The limited coverage of social and economic factors within the regulatory framework underscores the need for a more comprehensive approach to foster sustainable industrial development.

Table 3. The Policy Landscape Related to EIPs. Indonesia

Constitution			
Law			
Law of the Republic of Indonesia Number 1 of 1970 on Occupational Safety	Law of the Republic of Indonesia Number 40 of 2004 on National Social Security System	Law of the Republic of Indonesia Number 13 of 2003 on Manpower	Law of the Republic of Indonesia Number 32 of 2009 on Environmental Protection and Management
Law of the Republic of Indonesia Number 3 of 2014 on Industry	Law of the Republic of Indonesia Number 23 of 2014 on Local Government	Law of the Republic of Indonesia Number 11 of 2020 on Job Creation	
Government Regulation			
Government Regulation of the Republic of Indonesia Number 79 of 2014 on National Energy Policy	Government Regulation of the Republic of Indonesia Number 14 of 2015 on National Industrial Development Master Plan 2015-2035	Government Regulation of the Republic of Indonesia Number 107 of 2015 on Industrial Business Permit	Government Regulation of the Republic of Indonesia Number 142 of 2015 on Industrial Park
Government Regulation of the Republic of	Government Regulation of the	Government Regulation of the	Government Regulation of the



Indonesia Number 88 of 2019 on Occupational Health	Republic of Indonesia Number 5 of 2021 on the Implementation of Risk-based Business Permit	Republic of Indonesia Number 21 of 2021 on Spatial Planning Implementation	Republic of Indonesia Number 22 of 2021 on Implementation of Environmental Protection and Management
Government Regulation of the Republic of Indonesia Number 28 of 2021 on Implementation of the Industrial Sector		Government Regulation of the Republic of Indonesia Number 22 of 2017 on National Energy General Plan	
Presidential Regulation			
Presidential Regulation of the Republic of Indonesia Number 59 of 2017 on Implementation of the Achievement of the Sustainable Development Goals		Presidential Regulation of the Republic of Indonesia Number 18 of 2020 on National Medium Term Development Plan 2020-2024	
Ministerial Regulation			
Regulation of the Minister of Industry of the Republic of Indonesia Number 40 of 2016 on Technical Guidelines for Industrial Park Development	Regulation of the Minister of Industry of the Republic of Indonesia Number 45 of 2019 on Procedures for Granting Industrial Parks Business Permits and Industrial Parks Expansion Permits in the Framework of Electronically Integrated Business Licensing Services	Regulation of the Minister of Industry of the Republic of Indonesia Number 1 of 2020 on Compilation of a Detailed Environmental Management Plan and Environmental Monitoring Plan For Industrial Companies That Are or Will Be Located in Industrial Parks	Regulation of the Minister of Industry of the Republic of Indonesia Number 30 of 2020 on Industrial Designation Area Technical Criteria
Regulation of Minister of Environment of the Republic of Indonesia Number 12 of 2009 on The Utilization of Rainwater.	Regulation of Minister of the Environment of the Republic of Indonesia Number 31 of 2009 on Guidance and Supervision of the Implementation of Environmental Management Systems, Ecolabelling, Clean Production, and Environmentally Insight Technology in the Regions	Regulation of Ministry of Environment and Forestry of the Republic of Indonesia Number 1 of 2021 on Company Performance Rating Program in Environmental Management	Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 4 of 2021 on List of Businesses and/or Activities Required to Have Environmental Impact Analysis, Environmental Management Efforts and Environmental Monitoring Efforts or Statement of Ability to Manage and Monitor the Environment
Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 6 of 2021 on Hazardous and Toxic Waste Management Procedures and Requirements	Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 14 of 2012 on Energy Management	Regulation of the Minister of National Development Planning of the Republic of Indonesia Number 7 of 2018 on Coordination, Planning, Monitoring, Evaluation, and	



		Reporting on the Implementation of the Sustainable Development Goals
--	--	--

4.2 POLICY GAPS AND BARRIERS

The main policy gaps hindering the implementation of Eco-Industrial Parks (EIP) in Indonesia and their potential solutions can be consolidated and summarised as follows:

- **Commitment, Policy, and Program Synergy Between Ministries:** To enhance the effectiveness of the EIP program, integrated guidelines that involve all stakeholders are critical. Establishing national regulations as a legal framework for planning, developing, monitoring, and evaluating EIPs in Indonesia is essential. Stakeholders engaged in EIP issues must harmonise their respective regulations concerning park management, environment, economy, and social performance.
- **Policy Integration and Implementation Gap:** The challenge lies in managing, aligning, and implementing policies due to the broad involvement of multiple ministries in this interdisciplinary effort. Ongoing efforts to accelerate EIP development in Indonesia are facilitated through coordination and collaboration among eleven ministries within the Inter-Ministerial Forum.
- **Ineffective Policy Enforcement and Incentivization:** Policy enforcement in Indonesia needs reinforcement, given the absence of robust budget monitoring mechanisms and adequate human resources for enforcement activities. Government incentives, which currently lack specificity and focus, especially concerning sustainable industrial development activities, must be optimised.

Crafting policies aligned with EIP principles presents notable challenges, such as addressing waste exchange and integrating new renewable energy sources into the power grid. Indonesia addresses these obstacles by prioritising dialogue, cooperation, alignment, and transparent information-sharing within inter-ministerial forums. The main policy gaps and their possible solutions to support EIP implementation in Indonesia can be consolidated and summarised as follows:

- **Commitment, policy, and program synergy between Ministries:** The EIP program guidelines must be integrated with all stakeholders. National regulations need to be established as a legal umbrella for planning, developing, monitoring, and evaluating EIP in Indonesia. Stakeholders related to EIP issues need to synergise their respective regulations in park management, environment, economy, and social performance.
- **The gap in Policy integration and implementation:** Policy management, alignment, and implementation continue to pose challenges, mainly attributable to the extensive involvement of multiple ministries in this cross-disciplinary endeavour. Efforts to expedite EIP development in Indonesia are underway through ongoing coordination and collaboration among the eleven ministries within the Inter-Ministerial Forum.
- **Ineffective policy enforcement and incentivisation:** Policy enforcement in Indonesia requires strengthening, given the absence of effective budget monitoring mechanisms and insufficient human resources for enforcement activities. The optimisation of government incentives remains necessary, as current applications are too general and lack specificity, particularly regarding sustainable industrial development activities.

4.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

Indonesia's EIP policy development process commenced with stakeholder mapping and gap analysis, followed by consultations to gather relevant stakeholders' input. Subsequently, efforts



were made to bolster national institutions to facilitate inter-ministerial dialogue supporting the EIP framework's implementation. The Inter-Ministerial Forum, comprising eleven ministries (see Figure X), actively addresses challenges by fostering collaboration and targeting areas where policies require improved integration, implementation, and enforcement. Through this platform, policymakers deliberate on fiscal and non-fiscal incentives to advance industrial development and promote sustainable industrial parks.

Figure 8. Members of Inter-ministireal working Group



The Inter-Ministerial Forum convenes coordination meetings at least twice a year. Up until the conclusion of the GEIPP I in December 2023, four Inter-Ministerial Roundtable Forums have been organised in Indonesia to discuss key topics, including:

1. Synchronisation of Eco-Industrial Park (EIP) development policies, waste management, energy conservation, and fiscal incentives.
2. Hazardous waste management and wastewater management in industrial parks.
3. Renewable energy and energy efficiency.
4. Social and economic benefits of implementing the EIP approach.

The outcomes of these discussions informed the draft Government Regulation regarding industrial zoning, which includes provisions related to EIP and its implementation. This discussion will also consolidate the development of national EIP indicators, which is being conducted in parallel with enabling policies.

GEIPP Indonesia has optimised policy development by conducting structured stakeholder meetings and discussions, thereby enhancing the capacities of government agencies and officials through successful capacity-building initiatives. To date, GEIPP Indonesia has effectively trained 864 individuals in policy development.

4.4 EIP POLICY DEVELOPED DURING GEIPP I

The Inter-Ministerial Forum was officially authorised through the Decree of the Minister of Industry Number 3174 of 2022 on the Inter-Ministerial Forum for the Acceleration of EIP Development in Indonesia. This decree serves as a guideline and a legal framework for activities within the Forum.



The objectives outlined in the Decree include fulfilling the government's commitment to the implementation of the 2030 Agenda for Sustainable Development Goals, supporting the realisation of EIPs in Indonesia in cooperation with the United Nations Industrial Development Organization (UNIDO), identifying and disseminating government strategic programs related to EIP development, discussing opportunities and challenges in EIP program development, and synergising relevant stakeholders in a national cooperation forum.

Following the fourth Inter-Ministerial Forum, Indonesia is actively developing a comprehensive national framework for Eco-Industrial Parks (EIPs) under the leadership of the Ministry of Industry (MoI). This framework aims to integrate principles from the International EIP Framework into Indonesia's legal and regulatory structure. The collaborative development process involves gathering stakeholder input through workshops, consultations, and discussions.

The resulting EIP framework will serve as a guiding document for the government, industrial park operators, businesses, and other stakeholders involved in EIP conception and execution. This inclusive approach ensures that the framework not only aligns with international best practices but also considers the perspectives and interests of those directly engaged in industrial park development and operation in the country. Furthermore, the framework aims to enhance transparency and accountability by enabling comprehensive reporting on the status and achievements of EIPs across all stakeholders.

In addition to the planned national-level regulation, EIP considerations have been incorporated into other evaluation materials published by the Ministry of Environment and Forestry and the Ministry of Industry. These include the Company Performance Rating Program in Environmental Management (PROPER) to assess environmental performance at the company level and the Green Industry Standard (SIH) to evaluate sector-wide environmental practices in industries.

Figure 9. Timeline of EIP Policy Development in GEIPP Phase I-Indonesia



PERU

5



5 PERU

5.1 POLICY BASELINE

Table 4. The Policy Landscape Related to EIPs. Peru

Constitution of Peru (1993)				
Organic Law of the Peruvian State				
Organic Law of Municipalities	Organic Law of the Executive Power	Organic Law of the Judiciary	Organic Law of Regional Governments	Organic Law of the Legislative Power
Policies				
National Environmental Policy	Territorial Planning Policy	National Foreign Trade Policy	National Housing and Urbanism Policy to 2030	
National Competitiveness and Productivity Policy	National Industrial Development Policy		National Agriculture Policy 2021-2030	
Plan, Laws, and Regulations				
General environmental law	National Plan for Productive Diversification	Environmental Management Regulation for Manufacturing and Internal Trade	National Competitiveness and Productivity	Law on the development of Techno-ecological Industrial Parks
Territorial Conditioning and Sustainable Urban	Ecological and Economic Zoning Regulation	National System of Industrial Parks	Plan National Industrial Parks Strategy	

The incorporation of environmental protection into the Peruvian legal system has been a fundamental aspect outlined within the highest legal frameworks of the country. This objective is notably articulated in the Constitutions of 1979 and 1993. In recent years, the focus on environmental considerations in industrial activities has steadily intensified, leading to the issuance of more comprehensive regulations. Peruvian environmental legislation encompasses a broad spectrum of legal provisions at national, regional, and local levels, including international treaties, constitutional articles, laws, decrees, and resolutions. These legal instruments directly or indirectly impact the environment and quality of life.

Presently, two primary regulatory frameworks address industrial park development: the National Strategy for Industrial Park (NSIP) development and the Circular Economy Roadmap (CERM). The NSIP, established in 2015, promotes industrial development through the planning and establishment of IPs aligned with territorial strategies. The regulatory framework was further solidified with the enactment of Decree No. 1115, defining general industrial park guidelines and the structure of the NSIP.



Supreme Decree No. 005-2020-PRODUCE introduced the National Strategy for Industrial Park Development, aimed at fostering a conducive business environment in Peru. This strategy seeks to support industrial park development for sustainable urban growth and implement policies for long-term sustainability. However, this strategy lacked a comprehensive approach towards sustainable and inclusive development with a notable absence of the Eco-Industrial Parks (EIPs) concept.

The Circular Economy Roadmap (CERM) outlines a sectoral strategy focusing on Sustainable Industrial Production, Sustainable Consumption, Waste Utilization and Management, and Innovation and Financing. The roadmap aims to incentivise circular economy practices in industrial production by 2025, emphasising product durability, reusability, and recyclability. Efforts are underway to maximise recycling and utilise waste as a resource or energy source, including innovation funding, showcasing best practices, and supporting circular economy initiatives in small and medium-sized enterprises.

5.2 Policy barriers and gaps

Despite already establishing a policy framework that serves as a foundation for further policy development, Peruvian regulation currently lacks a clear emphasis on sustainability. The regulations and policies should be expanded, particularly in defining and implementing EIPs. To address this, the NSIP and CERM should be enhanced with additional legislation. This would ensure that EIPs become more competitive, streamline approval processes, and increase key stakeholders' awareness of the importance of integrating measures for a more sustainable industry. This would encourage the further transition of IPs into EIPs.

Barriers preventing the development and implementation of EIPs can be of different origins, among others:

- Complicated system to obtain permits and authorisations.
 - The lack of coordination between the ministries involved PRODUCE (Ministry of Production), MINAM (Ministry of Environment), and Housing and Construction (Ministry of Housing and Construction) have different views on the environmental impact assessment (EIA).
 - Another common concern is the municipality's criteria for issuing permits such as construction and operating licences, etc. There is a risk of non-transparent processes linked to the capacity to enforce environmental and administrative regulations as well as the limited capacity to plan areas for the industrial sector and industrial land designation adequately.
- Lack of supportive financial and non-financial incentives
 - When an IP is built, companies buy the land, but some do not set up their operations in the IP because of a lack of incentives and regulatory enforcement.
- Lack of technical capacity building and innovation
 - The government has funds to support industrial development, research, and innovation. However, it is difficult for companies and IPs to access them.
- Lack of communication and research



- IP and companies have limited experience and knowledge of social responsibility programs and complicated relationships with municipalities.

Interest among stakeholders at different levels in developing EIP policy is evident, yet enhanced communication and coordination are imperative. Crucial aspects to tackle these barriers encompass governance structures, transparent application procedures, and incentives. Policy attention must also be directed towards community engagement, sustainable services, climate change mitigation, digitalisation, and education.

5.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

To facilitate the development of supportive policies for EIPs in Peru, the GEIPP program has undertaken a comprehensive analysis of stakeholders' roles and contributions, coupled with an assessment of regulatory gaps, to strengthen the overall framework. Policy development in Peru has benefited from the establishment of the EIP Community of Practice (COP). This COP functions as a transparent platform for communication, consensus-building, and regular monitoring of indicators to expedite the transition to EIPs. Members of the EIP Community of Practice, comprising actors from both private and public sectors, have undergone rigorous training to foster collaboration and facilitate knowledge exchange. The forum has resulted in the formation of a specialised high-level working group, enabling collective decision-making and efficient coordination efforts. Up until the conclusion of the GEIPP I, Peru has actively trained 244 stakeholders relevant to policy development.

The policy development process in Peru typically unfolds through six stages:

1. **Decision-making:** This involves initiating the creation or modification of policies, regulations, or legislation in response to recognised public issues.
2. **Initial Evaluation:** This phase includes documenting regulatory impact analysis ex-ante when applicable. A statement of reasons is developed to provide the technical foundation of the regulatory proposal. This entails an analysis of the standard's quantitative and qualitative impacts and its effects on the validity of national legislative norms.
3. **Submission of Technical Support Reports:** The regulatory proposal is accompanied by technical support reports submitted for evaluation and approval by the Ministry of Production.
4. **Public Consultation:** Draft policies, regulatory frameworks, or legislative initiatives are published for public comment. This stage involves consultations with interested parties and concludes with a final evaluation.
5. **Review and Assessment:** Other sectors involved in the regulatory proposal conduct a review, including internal review and approval processes.
6. **Approval and Publication:** The regulatory proposal is presented to the Board of Ministers for approval and subsequently endorsed by the President of the Republic. The final version is then published in the Peruvian Official Gazette, *El Peruano*.

This approach enables the GEIPP team to provide relevant stakeholders with draft proposals of regulations, effectively contributing to the formulation and implementation of policies supporting the transition of industrial parks into EIPs (Eco-Industrial Parks) in the country.

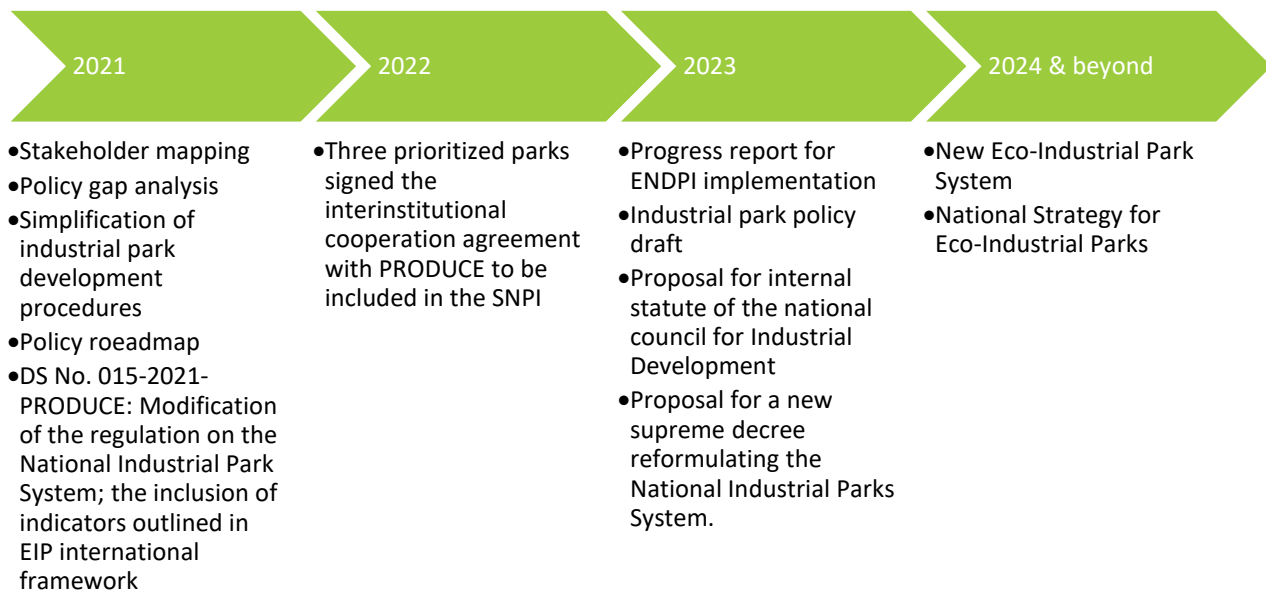


5.4 POLICIES DEVELOPED DURING THE GEIPP I

The effort to integrate EIP concepts into the National System of Industrial Parks (Spanish: Sistema Nacional De Parques Industriales-SNPI) has been thoroughly documented, leading to targeted initiatives aimed at fortifying the existing regulations and addressing pertinent challenges. As a result of the implementation of GEIPP I, several regulatory instruments have been introduced and modified. They include:

- Supreme Decree No. 015-2021-PRODUCE, modifying the Regulations of the National System of Industrial Parks.
- Ministerial Resolution No. 0204-2021-PRODUCE, approving the Guidelines for promoting and sustainable management of Industrial Parks within the National Industrial Parks System.
- Supreme Decree No. 016-2022-PRODUCE, updating the National Industrial Development Policy.
- Ministerial Resolution No. 193-2023-MINAM, amending the First Update of the List of Inclusion of Investment Projects subject to the National Environmental Impact Assessment System (SETA).

Figure 10. Timeline of EIP Policy Development in GEIPP Phase I-Peru



Under the leadership of the Ministry of SMEs and Industry, a high-level working group formulated a National Strategy for EIP, extending SNPI benefits to both existing and future Industrial Parks (IPs). Up until the conclusion of the GEIPP I, another revised proposal for modifying the Supreme Decree regulating the Industrial Parks National Strategy (IPNS) has been submitted to PRODUCE. This initiative also entailed the creation of guidelines outlining the procedure for determining the national relevance of an industrial park. It proposed amendments to the IPNS regulations to allow for the inclusion of free trade zones within the IPNS framework.

SOUTH AFRICA

6





6 SOUTH AFRICA

6.1 POLICY BASELINE

Table 5. The Policy Landscape Related to EIPs. South Africa

Constitution of South Africa-Bill of Rights				
National Acts				
National Building Regulations and Building Standards Act	Preferential Procurement Policy Framework Act	National Environmental Management: Waste Act	National Environmental Management: Air Quality Act	Special Economic Zones Act
National Water Act	Occupational Health and Safety Act	Basic Conditions of Employment Act	Employment Equity Act	
Policies				
Industrial Policy Action Plan	National Preferential Procurement Policy Framework	National Water Resource Policy		
Carbon Tax Policy	White Paper on Energy Policy	National Transport Policy		
White Paper on Renewable Energy	Trade Policy and Strategy Framework			
Strategies and Plans				
Economic Development	Industrial Development	Social Development	Environment and Resource Management	
<ul style="list-style-type: none"> • New Growth Path Framework • National Development Plan 2030 • National Spatial Development Framework • National Strategy for Sustainable Development • National Freight Logistics Strategy • 10 Year Innovation Plan • Green Transportation Strategy 2018-2050 	<ul style="list-style-type: none"> • Industrial Parks Revitalisation Programme 	<ul style="list-style-type: none"> • National Skills Development Plan 2030 • Broad Based Black Economic Empowerment • Expanded Public Works Programme 	<ul style="list-style-type: none"> • National Climate Response White Paper • National Waste Management Strategy 2020 • National Water Policy • National Water Resource Strategy 	

South Africa has outlined a commitment to sustainable economic development through key policy documents like the National Development Plan (NDP), Innovation Plan, and the National Strategy for Sustainable Development and Action Plan (NSSD). Emphasising a low-carbon, resource-efficient, and pro-employment path, the NDP serves as a foundation for national government focus areas.



The regulatory environment is governed by various national acts, policies, and plans, with the Constitution prioritising ecologically sustainable development. South Africa has implemented strategies and sector plans to reduce greenhouse gas emissions, including the Integrated Resource Plan, Energy Efficiency Strategy, Industrial Policy Action Plan (IPAP), Green Transport Strategy, and more. Steps to decarbonise the electricity sector, such as the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP), contribute to establishing and growing Eco-Industrial Parks (EIPs).

The Department of Trade, Industry, and Competition (dtic) has led efforts in developing green industries, supporting renewable energy, resource efficiency, and a circular economy, and aligning industrial policy with environmental goals. The Industrial Park Revitalisation Programme (IPRP) draft policy framework, developed by the dtic, includes the EIP program, which aims to support regional industrial development.

South Africa has implemented a comprehensive set of strategies, policies, and sector plans within key sectors of the economy to reduce the rise in GHG emissions and achieve meaningful reductions. These include, among others, the Integrated Resource Plan, the Energy Efficiency Strategy, the Industrial Policy Action Plan (IPAP), the Green Transport Strategy, the Climate Change Adaptation and Mitigation Plan for the South African Agricultural and Forestry Sectors and the National Waste Management Strategy.

The dtic has provided leadership for developing green industries, with building blocks to support renewable energy, resource efficiency, the circular economy, e-mobility and an increasing focus on aligning industrial policy with environmental objectives. The dtic drafted the Industrial Park Revitalisation Programme (IPRP) draft policy framework, which outlines the guiding actions pertaining to this programme, with the EIP programme as one of the core aspects supported by the IPRP.

This aims to incorporate a clear action plan for Industrial Parks in South Africa, which will support and facilitate regional industrial development. Furthermore, it is catalysed by the work in the IPRP program. IPs are also positioned to roll out and further expand on Green Economy activities that have been taking place over the last decade.

6.2 POLICY GAPS AND BARRIER

South Africa has various policy documents supporting the shift towards sustainable development. Still, there's a lack of a unified national vision for Eco-Industrial Parks (EIPs), and the green economy is viewed as a separate sector in industrial policy. Although there is coherence in policy areas like renewable energy and waste management, the overall industrial policy remains conventional from a green economy perspective.

The identified policy gaps include the absence of a high-level vision for EIPs aligned with the national context, challenges in policy integration and implementation despite existing coordination channels, and insufficient enforcement and incentivisation measures. The main policy gaps and their possible solutions to support EIP implementation in South Africa can be consolidated and summarised as follows:

- **Lack of high-level vision for EIPs and alignment with national context**

There is no national vision for EIPs in the existing policies and legislation, and sustainable development and the green economy are seen as a stand-alone sector in industrial policy.



- **Gaps in policy integration and implementation**

There are numerous official channels to facilitate the coordination and alignment of public policy, such as the Forum of South African Directors-General, the Economic Sectors, and the Employment and Infrastructure Development Cluster (ESEID). However, despite these channels, the management, alignment and implementation still need to be improved.

- **Ineffective policy enforcement and incentivisation**

Policies do include enforcement measures and legislation. However, financial and human resources capabilities to execute the enforcement often need to be improved. There needs to be formalised incentives for companies regarding green development and compliance with sustainable development measures.

In South Africa, there is a notable absence of specific policies or legislation governing industrial parks, contrasting with the governance structure provided by the Special Economic Zones (SEZs) Act 16 of 2014 for Special Economic Zones. Recognising the importance of integrating Eco-Industrial Park (EIP) principles, the Department of Trade, Industry, and Competition (dtic) has incorporated them into its evolving Industrial Parks Policy Framework, initially drafted in 2017. To advance the adoption of EIP principles nationwide, the dtic has launched a national EIP program aimed at enhancing awareness and promoting these principles. This program is executed by the Regional Industrial Development Chief Directorate.

6.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

In South Africa, the development of any policy is subject to the Socio-Economic Impact Assessment System (SEIAS), overseen by an interdepartmental steering committee. This process ensures that policies align with national priorities, measuring impact across key dimensions, including social cohesion and security, economic inclusion, economic growth, and environmental sustainability. The process typically involves drafting a policy framework, followed by a green paper, a white paper, and finally, the acceptance and approval of the policy or act, supplemented by guidelines and regulations. This process can span anywhere from one to five years.

The primary mechanism for engaging stakeholders in the Eco-Industrial Park (EIP) space is the EIP Roundtable, established in 2020. This platform convenes stakeholders to share project information, exchange knowledge, identify synergies, and foster collaboration. The Roundtable also coordinates, facilitating alignment and minimising duplication of efforts. To date, it has facilitated three joint projects among participants and fostered numerous collaborations and partnerships.

The EIP Roundtable meets monthly, with sixteen sessions held thus far, predominantly online. Discussions cover various topics such as renewable energy, microgrids, waste management, and the utilisation of EIP tools like the Water Stewardship Guide. The mailing list for the Roundtable has grown to over 400 recipients, including industrial park management, companies, industry associations, government departments, municipalities, service providers, research institutions, and academic institutions.

Another avenue for engaging EIP stakeholders is the annual National EIP Day, hosted by the National Cleaner Production Centre (NCPC) at the CSIR International Conference Centre (ICC). Additionally, local forums, such as the Ekandustria Resource Efficiency and Cleaner Production (RECP) forum, are utilised to engage stakeholders at the park level whenever feasible.

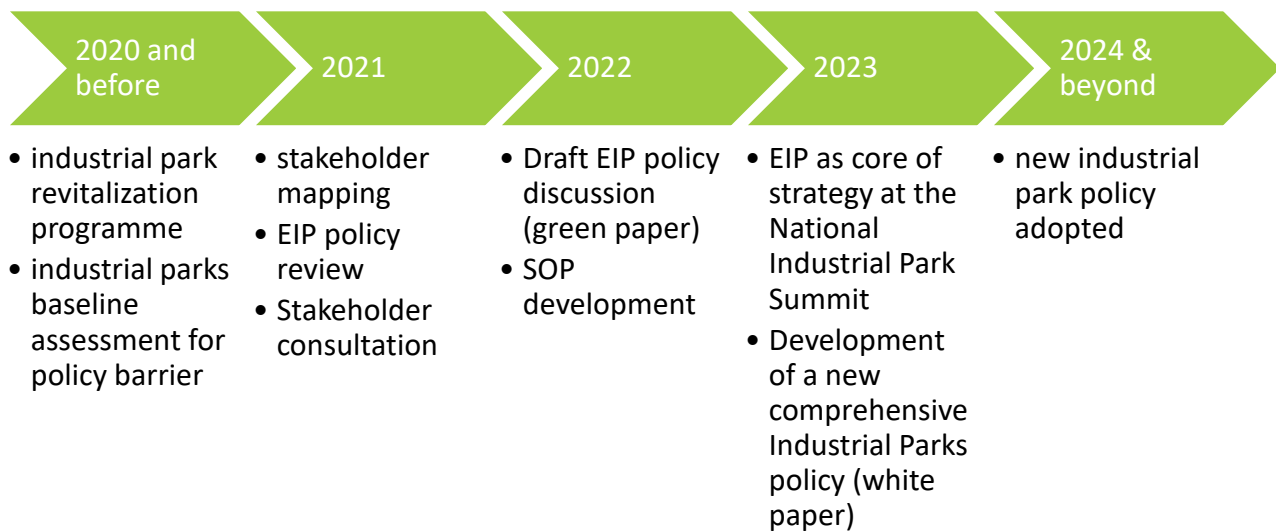


6.4 POLICIES DEVELOPED DURING THE GEIPP I

A significant outcome of utilising the EIP Policy Tool was the recognition of the necessity to incorporate the sustainability objectives of Eco-Industrial Parks into the Industrial Parks Revitalization Programme. This integration of sustainability into Industrial Parks is pivotal in steering South Africa's industrial development towards a greener path. This initiative has been embraced by both the Department of Trade, Industry, and Competition (dtic) and the National Treasury, with it being embedded in their respective programs and the revamped approach for industrial parks across the country.

The Industrial Parks Policy Framework, which serves as a foundational document for all industrial park-related endeavours, has been developed, including a green paper drafted in 2022, with input from the Global Eco-Industrial Parks Programme (GEIPP).

Figure 11. Timeline of EIP Policy Development in GEIPP Phase I-South Africa



EIP principles have been woven into the criteria for evaluating applications under dtic's industry incentives, as well as incorporated into the Monitoring and Evaluation Framework for industrial spaces and the measurement framework for EIP support.

Although no specific EIP policies have been developed during the Global Eco-Industrial Parks Programme (GEIPP) Phase 1, the approach has been incorporated into various dtic outputs. The National Treasury, through the Cities Support Programme, has also embraced the EIP approach for metropolitan municipalities, shaping the reimagined industrial park program.

The recognition of the central role of the EIP approach in national industrial space endeavours was further underscored at the National Industrial Parks Summit in April 2023, reflecting significant progress since 2017.

Furthermore, additional technical-policy guidelines for industrial park operations, such as Water Stewardship and Sustainable Water Use, as well as Industrial Park Master Planning, have been developed, incorporating EIP approaches into their guidance.

Ukraine

7



7 UKRAINE

7.1 POLICY BASELINE

The implementation of the industrial park regulatory instrument in Ukraine commenced following the adoption of the Concept of the Creation of Industrial Parks in 2006. This concept outlined the necessity of establishing a network of state and regional industrial parks (IPs) in response to the escalating urbanisation in Ukraine.

The foundational principles for IP creation adhere to the basic Law on Industrial Parks (IP Law). State support is extended to greenfield-type IPs officially registered by the Ministry of Economy of Ukraine (MinEconomy). The IP Law aims to foster economic development, enhance the competitiveness of territories, boost investment activities, generate new employment opportunities, and develop modern production and market infrastructure.

The policy landscape in Ukraine includes constitutional, government, and ministerial levels, with regional strategies focusing on industrial parks. The alignment of national priorities with EIP principles is evident in Ukraine's commitment to SDGs, the European Green Deal, and the National Economic Strategy for a circular economy by 2030.

Table 6. The Policy Landscape Related to EIPs. Ukraine

Constitution of Ukraine				
Highest Parliament Level				
Law of Ukraine "On industrial parks"	Law of Ukraine "On waste"	Law of Ukraine "On energy efficiency"	Law of Ukraine "On energy market"	Law of Ukraine "On alternative energy sources"
Government Level				
National Strategy on Industrial parks development for the period until 2030	National Strategy on regional development for the period from 2021 until 2027	National Economy Strategy for the period until 2030	National Strategy on Sustainable development for the period until 2030	National Strategy on Waste management for the period until 2030
Ministerial Level				
Decree of the Ministry of Economy of Ukraine on the establishment of the Interdepartmental working group on EIP policy development in Ukraine	Decree of the Ministry of Social Politics of Ukraine on the establishment of the Interdepartmental working group on ensuring equal rights and opportunities for women and men		Decree of the Ministry of Education and Science of Ukraine on facilitation the awarding among the universities in 2023-2024	
Regional Level				
Sumy regional development strategy for the period from 2022 until 2024	Transcarpathian regional development strategy for the period from 2022 until 2024		Kyiv regional development strategy for the period from 2022 until 2024	

Since the enactment of the IP law, there has not been a significant increase in the development of IPs in Ukraine. This lack of progress can be attributed to a shortage of financial incentives, the economic crisis resulting from the Russian Federation's military aggression towards Ukraine in



2014, the impact of COVID-19, and the full-scale invasion of the Russian Federation into Ukraine in 2022. Despite the existence of IPs in Ukraine for a decade, with up to 70 IPs established as of 2023, their impact on the economy has yet to be realised.

7.2 POLICY GAPS AND BARRIER

Ukraine is in the process of transitioning to a green economy, but it faces various barriers in the development of Eco-Industrial Parks (EIPs). In the context of GEIPP Ukraine, regulatory barriers stem from a need for national priorities. The absence of a national vision, planning, and support for IP development, along with insufficient environmental and social requirements and policies for clean technology adoption, creates a need for standardised national regulatory guidance.

Technological and socio-economic challenges involve a need for more incentives, low financial returns, and limited community engagement. Insufficient support for reducing industrial pollution and managing waste, coupled with complex and bureaucratic procedures for infrastructure development, adds to the financial burden. State support restrictions, high taxes, and local authorities' reluctance further hinder IP development.

Institutional and organisational barriers impede authorities, communities, and businesses due to a need for more awareness about EIP benefits. The introduction of the EIP policy in Ukraine presents an opportunity to build upon existing regulations for IPs by incorporating additional rules, support, and criteria in line with the International EIP framework.

The Ministry of Economy expects that IPs and EIP will function as pivotal development hubs for Ukraine's economy. Consequently, a comprehensive state strategy is necessary to guarantee access to infrastructure, logistics, workforce, and tax and customs incentives. This strategic approach aims to foster uninterrupted business operations and address job shortages, especially during times of conflict.

7.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

The ineffective development of IPs in Ukraine, coupled with the country's substantial level of industrial pollution and waste accumulation, has provided the entry point for the adoption of the eco-industrial park (EIP) model.

Developing an effective national Eco-Industrial Parks (EIP) policy in Ukraine to bridge the gaps and overcome barriers is grounded in the following key components:

- **Governance:** This involves establishing institutions with defined responsibilities and functions dedicated to implementing reforms, developing frameworks, and providing support for their execution.
- **Mandating:** This focuses on regulatory instruments related to the framework and requirements for Environmental Impact Policies, encompassing planning, monitoring, control, and enforcement.
- **Economic Instruments:** This aspect involves providing incentives and support at both national and local levels to encourage compliance and participation.
- **Information Instruments:** Raising awareness is crucial, emphasising the benefits of resource efficiency, cleaner production, and relevant environmental aspects. This includes educating on environmentally beneficial or harmful behaviours, the effects of pollution, and the advantages of conservation. Additionally, promoting the attraction of investments in clean technologies.



In the process of creating and mandating regulatory instruments, developing a national approach for EIPs, and updating the EIP policy framework for integration into existing national policies and regulations, the following steps are essential:

- **Engage Stakeholders and Secure Commitment:** This involves stakeholder mapping and engagement, defining policy vision and goals, and implementing capacity-building and awareness-raising initiatives.
- **Diagnostics:** Conduct technical analyses of IPs, policy and regulatory assessments, institutional analyses, and financial needs assessments.
- **Develop and Adopt a Governmental EIP Roadmap:** This step encompasses policy and regulatory reform, establishing governance structures, coordinating agencies, and determining financing mechanisms.
- **Launch, Monitor, and Evaluate:** Implement monitoring, reporting, verification, and scale-up activities to mainstream EIP programs effectively.

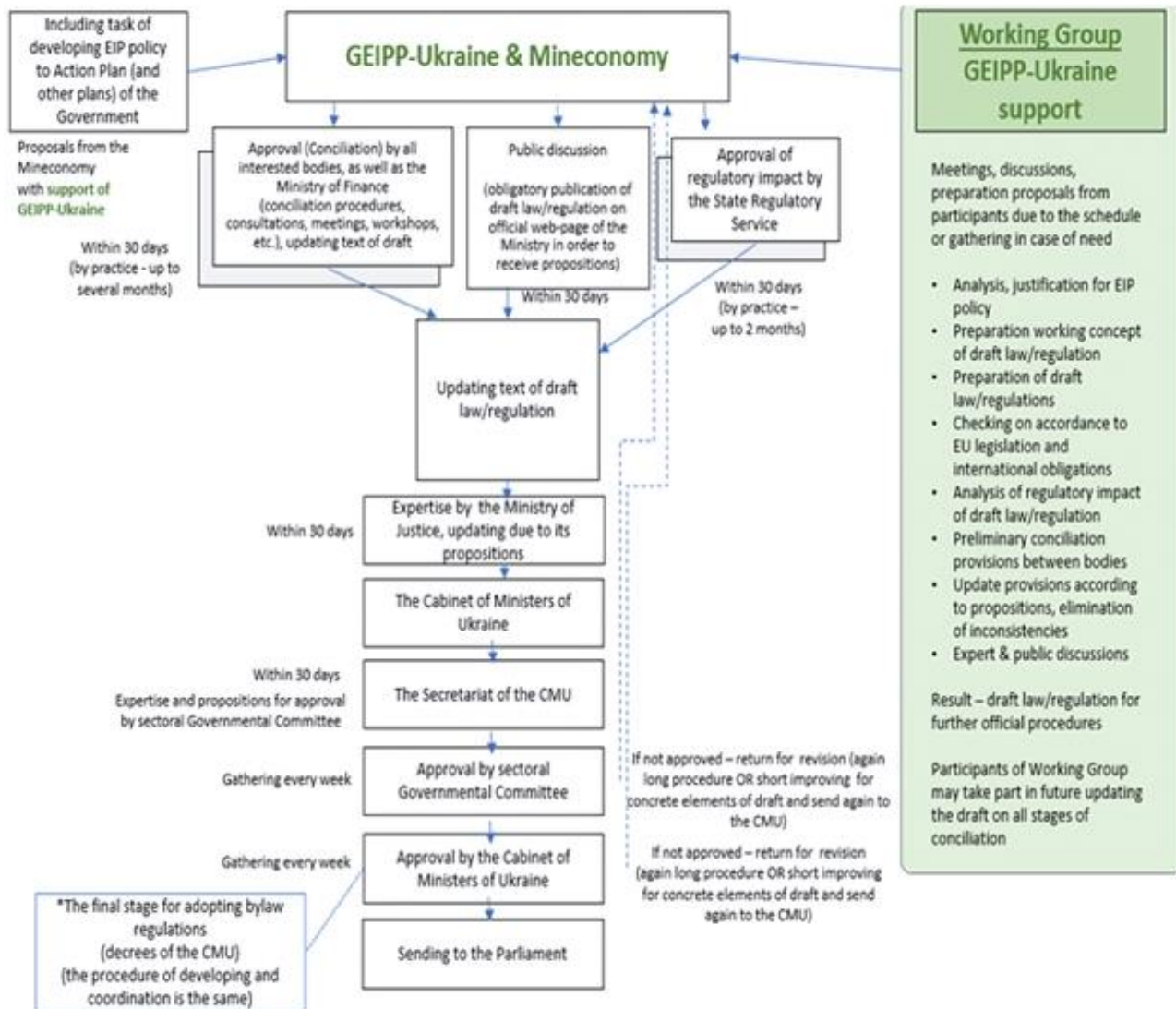
During the 4th Meeting of the Interdepartmental Working Group for EIP policy development in Ukraine, the draft EIP Law was discussed. This comprehensive law encompasses the definition of EIP and essential criteria for EIP and delineates the powers of relevant authorities to approve detailed criteria for EIPs.

The draft amendments further address critical issues, such as including EIPs in the National Register database and deregulating economic relations related to the production, supply (distribution), and use of resources (materials, energy, water, etc.) and wastes within EIPs. Notably, the amendments extend to the Laws of Ukraine concerning "On Waste," "On Heat Supply," and "On the Electricity Market," with the overarching goal of introducing industrial symbiosis.

To support the policy development, GEIPP Ukraine has effectively trained 436 individuals from governmental agencies.



Figure 12. procedure for proposing new laws for parliamentary approval



7.4 POLICY DEVELOPED DURING GEIPP I

In 2021, the national government endorsed a legal framework outlining provisions for financing industrial park (IP) infrastructure through government funds. However, in 2022, the allocated UAH 400 million (equivalent to 11 million USD) from the state budget for co-financing IP infrastructure development could not be disbursed due to circumstances related to the Ukraine military conflict.

In February 2023, the Government of Ukraine issued Decree 176p, officially adopting the Strategy for the Development of Industrial Parks until 2030. This strategic vision aims to leverage industrial parks as drivers of economic growth, with a focus on transitioning towards the eco-industrial park (EIP) model. GEIPP Ukraine played an active role in providing input for this strategy and its

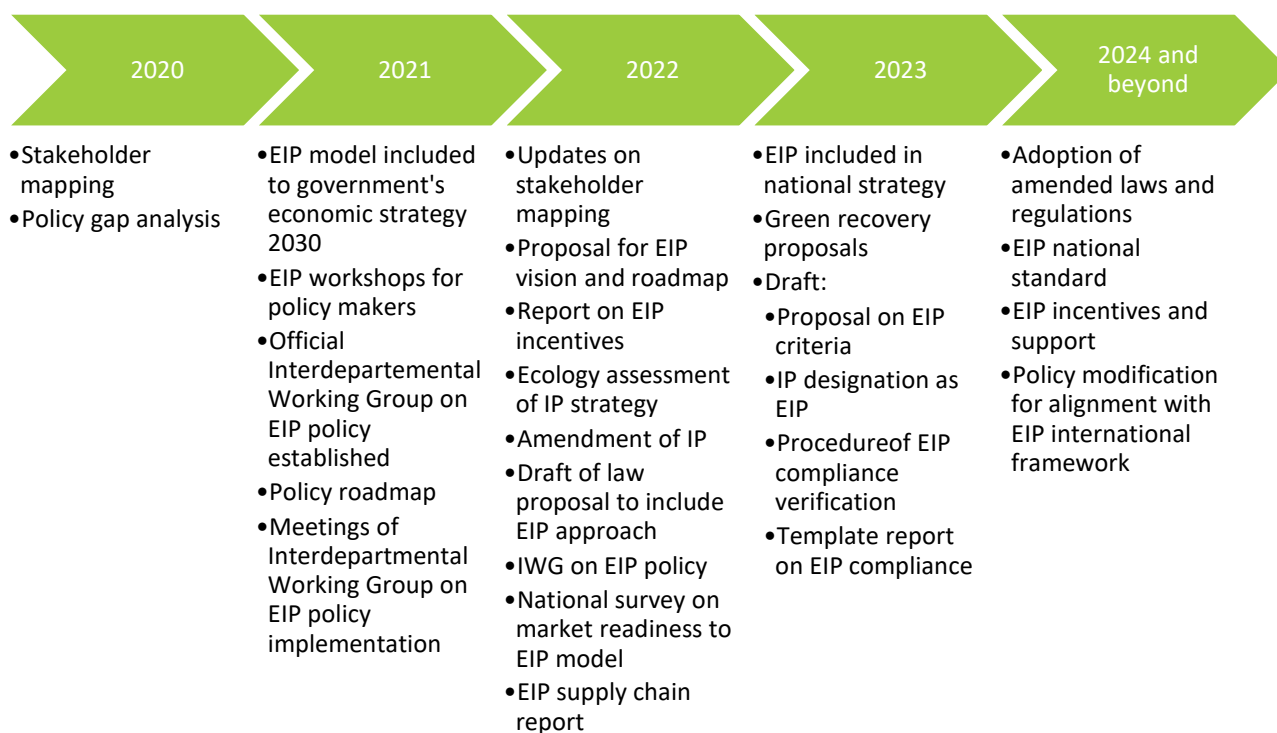


accompanying operational plan for the next three years by embedding EIP principles, definitions, and support programs.

At the national level, the Strategy and Operational Plan serve as official documents establishing Ukraine's eco-industrial park policy. The Strategy sets out goals and principles for integrating the EIP concept, while the Operational Plan outlines specific tasks for national and regional institutions. These tasks direct them to formulate relevant regulations and introduce incentives conducive to the development of eco-industrial parks across Ukraine.

In March 2023, the Government of Ukraine enacted Decree No. 221-p, approving the Government's Priority Action Plan for 2023. This decree specifically addresses the implementation of the eco-industrial park concept by proposing amendments to related laws. Subsequently, the Ministry of Economy of Ukraine initiated formal approval procedures for policy amendments, focusing on integrating the Eco-Industrial Park (EIP) concept into the Law of Ukraine on Industrial Parks and other relevant legislation. The Ministry has officially submitted the draft EIP Law to competent authorities for review and further consideration, representing a consolidated version of the proposed amendments.

Figure 13. Timeline of EIP Policy Development in GEIPP Phase I-Ukraine



VIET NAM 8



8 VIET NAM

8.1 POLICY BASELINE

Viet Nam has established a comprehensive legal and policy framework for industrial parks designed to provide a structured and conducive environment for industrial development. This framework is governed by a hierarchy of legal instruments, starting with laws passed by the National Assembly, followed by decrees, prime ministerial decisions, ministerial circulars, and decisions made by local authorities. Its primary objectives are to attract investment, ensure the welfare of society, protect the environment, and promote cleaner and more sustainable industrial production practices.

This comprehensive framework encompasses several essential elements:

- **Central-Level Regulations:** At the national level, some regulations cover various aspects of IP development. These include laws governing investment, which outline the procedures and incentives for investors. Planning regulations provide a roadmap for the systematic development of IPs, while land use regulations define the allocation and management of land within these areas. Environmental protection measures are in place to safeguard the natural surroundings, and policies encourage industries to adopt cleaner and more energy-efficient production methods. Additionally, there are initiatives to reduce greenhouse gas emissions, aligning with global environmental goals.
- **Local-Level Regulations:** Local authorities play a crucial role in implementing IP policies. They have the flexibility to adapt national-level regulations to suit the specific needs of their regions. Local regulations cover planning at the provincial and municipal levels, land use policies that address the particular land requirements of IPs, and the identification of sectors and industries that are most attractive for investment within their jurisdictions.

These elements form a comprehensive legal and policy framework set out to attract investors and promote responsible and sustainable industrial development in Vietnam's Industrial Parks.

Vietnam has enacted a comprehensive array of legal documents, policies, and strategies aimed at tackling climate change, safeguarding the environment, and fostering sustainable development. Notable initiatives include the National Strategy on Sustainable Development, the National Strategy on Climate Change, and the Vietnam Green Growth Strategy for the period 2011-2020, extending its vision towards 2050. Additionally, in the realm of industrial development, Vietnam has devised the Vietnam Industrial Development Strategy, outlining objectives up to 2025, with a strategic vision reaching 2035. Furthermore, specific legislation has been established for distinct industrial sectors, such as the Electricity Law, the Mineral Law, and the Petroleum Law.

The country encourages using clean and renewable energy sources and strives to minimise greenhouse gas (GHG) emissions. It also emphasises sustainable production and consumption practices. A significant milestone in Vietnam's journey towards sustainable industrial development was reached in 2018 when Decree 82/2018/ND-CP introduced the concept of "Eco-Industrial Parks" and associated criteria into the legal framework. Based on the new evidence available, in 2022, Decree 82/2018/ND-CP was replaced by Decree 35/2022/ND-CP.



Table 7. The Policy Landscape Related to EIPs. Viet Nam

Constitution of Vietnam				
National Laws				
Investment	Land	Real Estate Business	Planning	Construction
Economical and efficient use of energy	Environmental protection	Labor code	Water resources	Chemical
Decrees of Government				
Management of industrial parks and economic zones	Elaboration of several articles of the Law on Environmental Protection		Detailing the implementation a number of articles of the Law on Water resources	
Elaboration of the Law on planning	Industrial encouragement		Regulates policy for industry promotion in which clean product is entitled to use budget for industry promotion	
Details on number of articles of the land law	The drainage and treatment of wastewater		Providing guidelines for the implementation of certain articles of the Law on Chemicals	
Decision of Prime Minister				
Roadmap for SDG achievement in Vietnam	National strategy on green growth		Roadmap for SDG achievement in Vietnam until 2030	
National Action Plan for Sustainable Consumption and Production (SCP) for period 2021-2030	Approving the national strategy for climate change		Enhance control of investment projects utilized intensive energy and resources having negative impact to environment	
Approved strategy for renewable energy in Vietnam to 2025, vision to 2050	Regulated incentive mechanism for development of solar energy in Vietnam		National program on economical and efficient use of energy for period of 2019-2030	
Circular of the Minister				
National technical regulation on construction planning	National technical regulation on Industrial waste water		National technical regulation on surrounding environmental quality (air, water, soil)	
National Technical regulation on Industrial Emission of Inorganic Substance and Dust	Stipulates planning and reporting implementation of plans for energy efficiency and conversion, implementation of energy audit		Elaborating some articles of the government's decree on guidelines for the Law on Environmental Protection	
Decisions of Local Authority				
The list of industries encouraged to attract investment and restricted from attracting investment	Local industrial development planning		Land use planning	



8.2 POLICY GAP AND BARRIERS

While there are existing conducive conditions, the adoption of the EIP model in Viet Nam encounters various obstacles, legal gaps, and execution challenges. The primary policy gaps and potential solutions to bolster EIP implementation in Viet Nam can be consolidated and summarised as follows:

- **Limited Awareness and Understanding:** One significant obstacle is the insufficient awareness and understanding of Eco-Industrial Parks (EIPs) among stakeholders in both the public and private sectors. This lack of awareness can hinder the widespread adoption of EIP practices.
- **Regulatory Gaps:** Despite existing legal frameworks supporting cleaner production, energy efficiency, recycling, wastewater and solid waste reuse, and renewable energy development to implement the EIP model in Viet Nam, there persist gaps and inconsistencies between regulations in various Vietnamese laws. These disparities create challenges for investors and EIP developers in Viet Nam.
- **Lack of Policies for Stakeholder Engagement and Investment:** Current policies in Viet Nam may not effectively encourage the active participation of stakeholders, including local communities, environmental organisations, and private investors, in investing in and developing EIPs. The absence of policies that promote and provide a legal framework for such collaborations can hinder the promotion of EIPs and create a sustainable investment environment.
- **Absence of Clear Guidance:** Implementing, converting, establishing, and certifying EIPs in Viet Nam requires improvement due to a lack of precise guidance.

Despite the existence of legal frameworks and policies supporting cleaner production, energy efficiency, recycling, wastewater and solid waste reuse, and renewable energy development to implement the EIP model in Viet Nam, there are still gaps and inconsistencies between regulations in different Vietnamese laws, creating difficulties for investors and EIP developers when carrying out symbiotic industrial activities and converting existing industrial zones into EIPs.

Further, current policies in Viet Nam may not ensure the active participation of various stakeholders, such as local communities, environmental organisations, and private investors, in investing in and developing EIPs. The absence of policies that promote and provide a legal framework for such collaboration can delay the promotion of EIPs and hinder a sustainable investment environment.

8.3 PROCESS FOR EIP POLICY DEVELOPMENT AND CAPACITY BUILDING

Following the initiation of its implementation, GEIPP Vietnam undertook a comprehensive review and analysis of Vietnam's existing policies to identify gaps in programs and procedures related to the development of Environmentally Intelligent Parks (EIPs). Specifically, the project scrutinized regulations outlined in Decree 82/2018/ND-CP and related provisions, alongside an assessment of current policies to pinpoint deficiencies and barriers hindering the implementation of the EIP model in Vietnam. The project focused on specific policies related to:

- » Resource efficiency and cleaner production
- » Water use and reuse
- » Renewable energy
- » Hazardous chemical management



- » Waste management, recycling, and reuse of waste materials
- » Environmental policies and social responsibility regulations
- » Industrial land management policies

Additionally, the project compared Vietnam's regulations against the International Framework on Eco-Industrial Parks, identifying gaps in national EIP standards. To ensure practicality, the project also examined challenges and lessons learned from 18 cases of urban-industrial symbiosis from a previous GEF-SECO Project on EIP development in Vietnam.

Based on this comprehensive review process, the project identified the need for supplementary regulations and highlighted policies requiring enhancement in Vietnam to support EIP development. Subsequently, the project conducted research and drafted policy analysis reports, organizing workshops to gather input from scientists, organizations, consultants, relevant ministries, local industrial park management boards, investors, and enterprises. These activities provided opportunities for stakeholders to discuss topics related to EIPs, Resource Efficient and Cleaner Production (RECP), Industrial Symbiosis, Urban-Industrial Symbiosis (Urban-IS), and green finance support for businesses transitioning to EIPs. To date, 54 events have been organized, involving 2,083 participants.

The objective was to provide policy recommendations to the Vietnamese Government and relevant ministries to improve Vietnam's policy framework. Specifically, the critical stakeholders identified for the implementation of EIP policies in Vietnam, are outlined as follows:



The project leveraged stakeholder roles in EIP policy development by gathering input and feedback from Inter-ministerial Working Group to address regulatory barriers. This approach contributed to the transition of EIPs toward a circular economy, as reflected in Decree No. 08/2022/ND-CP. The EIP approach has further integrated EIPs into various policies, including the

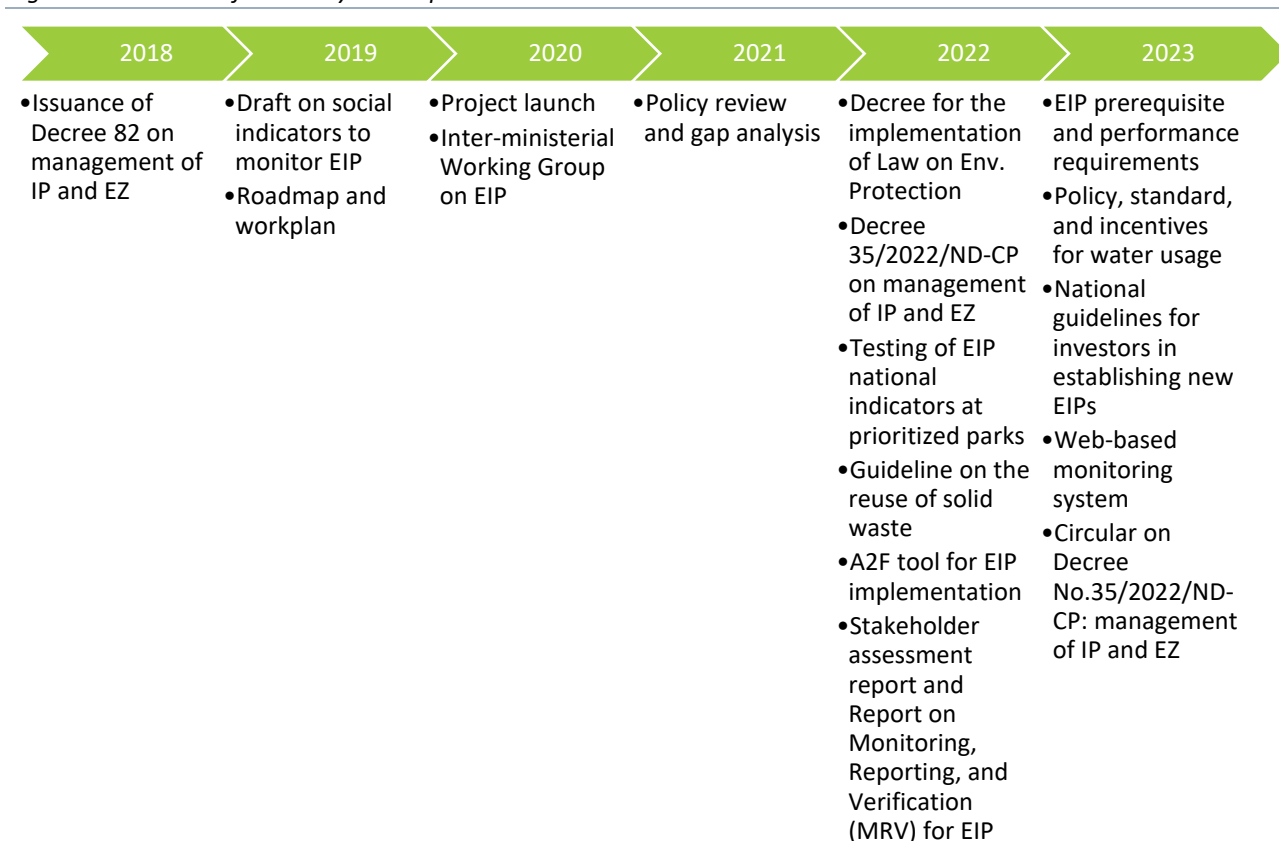


Sustainable Production and Consumption Strategy to 2030, the National Green Growth Strategy, the Scheme on Circular Economy Development, and the COP26 Action Plan.

As a result of these efforts, with contributions from the project and other organizations, the Vietnamese Government issued Decree 35/2022/ND-CP in 2022, replacing Decree 82/2018/ND-CP. This issuance marks a significant success in supporting the development of EIP policies facilitated by the project.

8.4 POLICIES DEVELOPED DURING GEIPP I

Figure 14. Timeline of EIP Policy Development in GEIPP Phase I-Viet Nam



The project has supported the Vietnamese government in addressing the missing legal foundations and identifying key policy recommendations for developing and implementing EIPs in Viet Nam. The following list presents the policy-related outcomes during the GEIPP I:

- Amendment of Decree 82/ND-CP to Decree No. 35/2022/ND-CP dated May 28, 2022, which regulates and creates conditions for EIP transition and establishment of new EIPs in Viet Nam;
- Developed guidelines to support the relevant government agencies in regulating solid waste reuse and wastewater reuse in industrial settings towards the operationalisation of Decree 35, including a review of the current legal status and international best practices. This will inform the Ministry of Natural Resources and Environment to issue more detailed guidance on waste treatment, reuse and recycling as defined in Article 58 of Decree 35;



- Supported the Integration of EIPs into relevant policies: Sustainable Production and Consumption Strategy to 2030; National Green Growth Strategy and Action Plan for the period 2021-2030, with a vision to 2050; Scheme on circular economy development in Vietnam; and Scheme on tasks and solutions to implement the results of the COP26;
- Promoted the transformation of the EIP towards a circular economy in Decree No. 08/2022/ND-CP dated 10 January 2022;
- Developed a stakeholder assessment report and a report on monitoring, reporting and verification (MRV) responsibilities of EIP requirements;
- Developed National Guidelines for investors for establishing new EIPs (greenfield);
- Contributing to the development of Circular Guiding Decree No. 35/2022/ND-CP on the management of industrial parks and economic zones, specifically in defining the criteria for EIPs and providing guidance on the certification of EIPs and eco-enterprises in Vietnam.

CONCLUSION AND LESSONS LEARNED

9





9 CONCLUSIONS AND LESSONS LEARNED

Outcome 1 of the Global Eco-Industrial Park Programme aims to actively promote and incorporate EIP into broader policy frameworks, regulations and action programs, enhancing their importance in various sectors and supporting EIP uptake and replication at the national level. Therefore, this Lessons Learned issue is dedicated to disseminating outcomes derived from the policy dimension of the first phase of the Global Eco-Industrial Parks Programme. The document provides information on the policy advancements accomplished by seven GEIPP-participating countries over five years.

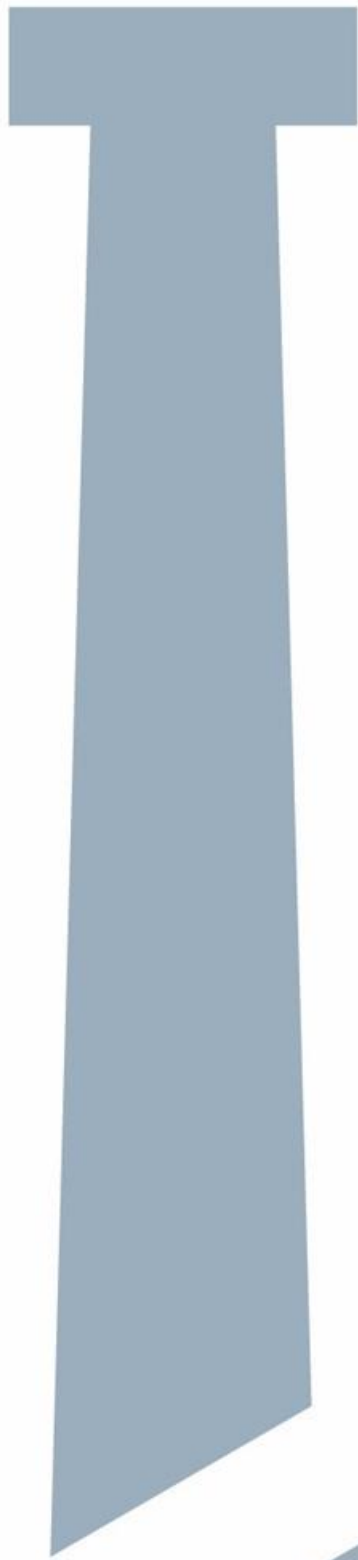
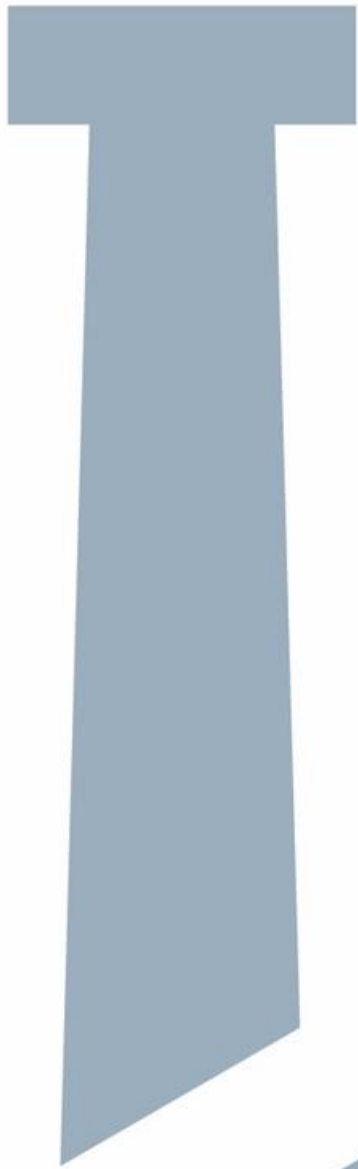
Based on the reports prepared by Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine, and Vietnam, lessons learned from the first phase of GEIPP on policy development can be summarised as follows:

- **Collaborative Engagement is Key:** The successful development of policies under the Global Eco-Industrial Park Programme highlighted the importance of collaborative engagement. Involving stakeholders from diverse backgrounds, including government agencies, industry experts, and local communities, facilitated a more comprehensive and inclusive policy framework. More importantly, the establishment of a semi-formal structure for discussing the needs and solutions can be highlighted as a key recommendation. This can take different forms, such as the Community of Practices in Colombia and Peru and the EIP Roundtables in South Africa.
- **Tailoring Policies to Local Contexts:** The seven participating countries demonstrated the significance of tailoring eco-industrial park policies to local contexts. Adapting strategies and guidelines to the unique socio-economic and environmental characteristics of each region ensured greater relevance and effectiveness. Recognising the dynamic nature of industrial landscapes, the policies developed through the program embraced flexibility and adaptability. This approach allowed for timely adjustments to emerging.
- **More is not always Better:** Policymakers often perceive increased regulation as the solution for success, yet this approach may not always be effective when aiming to foster cooperation within semi-controlled systems such as industrial parks. Additionally, due to variations in regulatory cultures and baselines, the introduction of additional legal instruments to promote Eco-Industrial Park (EIP) development may not necessarily yield favourable outcomes. The integration of EIP principles into existing legislation can be equally significant. In certain scenarios, the removal of existing regulations may be more conducive to advancing EIP approaches than the creation of new ones.
- **Capacity Building as a Foundation:** The necessity of providing training to policymakers and technical entities, including industrial parks and companies, has become a fundamental aspect in effectively implementing Eco-Industrial Park (EIP) policies. Investing in training and capacity-building initiatives for government personnel not only improves their comprehension of eco-industrial concepts but also cultivates a culture of sustainability within governmental agencies. Essential for replicating and scaling up EIP approaches is the presence of a proficient community of EIP service providers who can support the numerous industrial parks in their operation.



- **Continuous Stakeholder Communication:** Maintaining open and continuous communication with stakeholders played a crucial role in the success of policy development. Regular consultations, feedback mechanisms, and transparent communication channels helped build trust and fostered a sense of collective ownership.
- **EIP policies should be encouraging:** The regulations on industrial operations are the basis for operational permits and alike. EIPs aspiring industrial parks are already operating beyond such minimum standards. Encouraging EIP development incentives of positive rather than controlling- types should be promoted as part of EIP advancing policies. These policies can include training and knowledge dissemination by industry support institutions, as well as the provision of tax or other financial benefits for EIP investments.
- **Recognition of EIPs** Practically all GEIPP I priority parks have, at some point during their EIP journey, requested recognition for their efforts. Industrial parks aim to leverage this recognition for various aspects of their business development, including attracting high-quality tenants, establishing sectoral clusters with global reach and community involvement, and pursuing incentives such as tax benefits. Some GEIPP countries have already implemented policies to support standardisation, certification, and recognition, aligning with this demand. These supportive policies and initiatives are anticipated to expedite the replication of EIP practices among aspiring industrial parks.
- **Knowledge Sharing and Transfer:** The importance of knowledge sharing and transfer between participating countries emerged as a key lesson. Establishing platforms for the exchange of best practices, lessons learned, and successful case studies facilitated a more efficient policy development process. Integrating public awareness and advocacy components into policy development proved essential. Educating the public on the benefits of eco-industrial parks created a supportive environment and enhanced the overall success and acceptance of the policies.
- **EIP Policy development is a key part of the Circular Economy policy**

Successful EIP policies are key parts of the Circular Economy policy package. EIP is one of the few successful industrial circular economy approaches. It increases through cooperative approaches to the input material and energy needs, makes use of service synergies for co-ownership and use of assets, and provides tools for joint service, maintenance and monitoring, as well as side-stream utilisation and management. Ultimately, adopting EIP approaches can support the greening of value chains, as well as improve resource management and conservation, through their focused circular economy interventions.



Contact details

EIP@unido.org