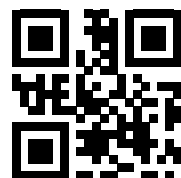




# Annual Report 2023





## PREFACE

In 2023, the world economy, in general, and the domestic economy, in particular, faced many difficulties and challenges. Such declined aggregate demand, increased protection barriers and increased trade remedies have significantly affected the country's production and export activities.

In that context, optimizing the production process, saving input costs such as electricity, water, and raw materials, and reducing greenhouse gas emissions, etc. are issues that businesses must put first.

With the principle of "Cooperation for sustainable development", over the past 25 years, since its establishment in 1998, Viet Nam Cleaner Production Centre Co. Ltd. (VNCPC) has continuously accompanied and provided technical support to thousands of businesses of many sizes and forms of ownership, both inside and outside industrial zones towards sustainable production.



In this annual report, VNCPC would like to respectfully introduce to you the results of the activities implemented in 2023.

Contributing to our success over the years is the companionship and support of international organizations and donors, including EU, SECO, UNIDO, WB, WWF, IDH, etc. and ministries and branches such as the Ministry of Industry and Trade, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development, Ministry of Education and Training, Ha Noi University of Science and Technology, etc. On this occasion, VNCPC would like to express its sincere thanks to its partners and hope that cooperation and trust will continue to be maintained in the future.

*Director of VNCPC*

A handwritten signature in blue ink, appearing to read "Thinh" with a stylized flourish below it.

Dr. Le Xuan Thinh

## ABBREVIATIONS

<b>CbD</b>	Clean by Design
<b>CP</b>	Cleaner Production
<b>DOIT</b>	Department of Industry and Trade
<b>GG</b>	Green Growth
<b>GHG</b>	Greenhouse gas
<b>GIZ</b>	German Agency for International Cooperation
<b>IDH</b>	The Sustainable Trade Initiative organization
<b>EIP</b>	Eco- industrial park
<b>IFC</b>	The International Finance Corporation
<b>IP</b>	Industrial park
<b>IS</b>	Industrial symbiosis
<b>MARD</b>	Ministry of Agriculture and Rural Development
<b>MOIT</b>	Ministry of Industry and Trade
<b>MONRE</b>	Ministry of Natural Resources and Environment
<b>MSMEs</b>	Micro-, small and medium-sized enterprises
<b>RECP</b>	Resource Efficient and Cleaner Production
<b>SCP</b>	Sustainable Consumption and Production
<b>SECO</b>	Swiss State Secretariat Economic Affairs
<b>UNIDO</b>	United Nations Industrial Development Organization
<b>WB</b>	World Bank

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## MISSION

In line with the principle “Partnerships for Sustainable Development” as a not-for-profit organization, VNCP brings added values to clients through advanced scientific and technological services to contribute to the promotion of sustainable production and consumption. VNCP has created a friendly working environment with the best conditions for the team to develop their professional competencies and interpersonal skills.

## VISION

With the desire to build a sustainable future, VNCP strives to become the leading organization in Viet Nam and the region to provide both scientific and technological services in industry, agriculture and services on Resource Efficient and Cleaner Production, as well as climate change adaptation.

## CORE VALUES

Dedicated - Innovated - Responsible for Sustainable Production and Consumption  
 Respect - Share - Eager to learn - Partnerships for mutual development.



VNCP is a regular member of the Global Network for Resource Efficient and Cleaner Production (RECPnet) which has been jointly established by UNIDO and UNEP.



VNCP is a member of Bach khoa Ha Noi Technology Investment and Development One Member Company Limited (BK-Holdings - Ha Noi University of Science and Technology).

## SERVICES

- Resource Efficient and Cleaner Production;
- Energy efficiency and energy audit;
- Greenhouse gas (GHG) inventory and emission reduction;
- Transformation into and development of Eco-industrial park;
- Supporting access to green financial sources; and
- Sustainable development reporting to partners.



### **Vietnam Cleaner Production Centre Co. Ltd.**

**Address:** 3<sup>rd</sup> Floor, Building B, No.125 Hoang Van Thai,  
Khuong Trung Ward, Thanh Xuan District, Ha Noi

**Tel:** (84-24) 3868 4849

**Email:** [vncpc@vncpc.org](mailto:vncpc@vncpc.org)

**Website:** [vncpc.org](http://vncpc.org)

## PROMOTION OF SUPPLY AND DEMAND FOR ECO-FAIR AGRI-FOOD PROCESSING PRODUCTS IN VIET NAM

The objective of the “Promotion of supply and demand for eco-fair agri-food processing products in Vietnam (Eco-fair)” project is to contribute to supporting Micro-, small and medium-sized enterprises (MSMEs) in Viet Nam to improve production processes, improve product quality in the period of international integration, and at the same time change perceptions and trust of the community for domestic products. Agri-food processing enterprises and consumers will receive useful practical knowledge about sustainable consumption and production (SCP) through free online courses and direct consultation.

### GENERAL INFORMATION

**Donor:** European Union (EU)

**Implementing partners:**

Vietnam Rural Industries Research and Development Institute (VIRI)  
Center for Creativity and Sustainability Study and Consultancy (CCS)  
Funzilife Oy (Funzi)  
VNCPC

**Duration:** 04/2020 - 05/2023

**Sectors:** Processing of meat, seafood, rice, cashew, fruit and vegetable

**Region:** Viet Nam

**Contact:** Nguyen Le Hang

**Email:** hang.nl@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 14



*Eco-fair product introduction to clients*



## Main activities of the project

- Compiling and disseminating online courses on SCP;
- Raise awareness for consumers through online training, and build a network of ambassadors to create change in the community;
- Stimulating SCP through retailers of eco-fair products;
- Capacity building for 1,000 MSMEs in the field of agricultural product processing through online courses;
- Raise awareness of ecological products - equity and circular economy policy in the process of agricultural product processing;
- Quickly assess in the field, and find opportunities to support 200 MSMEs to produce more sustainably;
- An in-depth assessment of RECP for 50 MSMEs helps find opportunities to save on production costs, lower product costs, and increase access to domestic and foreign markets; and
- Training for MSMEs on procedures and opportunities to access green financial resources, and helping businesses in need to make records to access capital sources.

## Activities in 2023

- Conducted field trips locally to continue supporting 28 MSMEs to identify and apply electricity use solutions, heat use, water use, raw material use, waste management, etc. It brought the total number of businesses supported in 3 years to 200;
- Conducted in-depth RECP assessment for 32 enterprises. Thus, during the project implementation period, 50 MSMEs received in-depth consultancy on saving production costs, lowering product costs and increasing opportunities to access the market;
- Trained and supported connecting 20 MSMEs with loan needs to appropriate credit institutions and provided guidance on preparing loan applications; and
- Jointly developed a final project report summarizing 03-years implementation process, outcomes and results submitted to the sponsor.



*In-company RECP consultancy*

## CONSULTANCY SERVICE ON DEVELOPING THE GREEN GROWTH ACTION PLAN FOR INDUSTRIAL SECTORS AND INTEGRATING INTO THE SYSTEM OF STRATEGIES, MASTER PLANS, AND SOCIO-ECONOMIC DEVELOPMENT PLANS AT PROVINCIAL AND CITY LEVELS FOR 2021 - 2030 PERIOD

Playing the role of a general advisory agency for the Government, the Ministry of Planning and Investment (MPI) has developed and issued Guidelines for developing the Green Growth Action Plan (GG-AP) and integrating GG into strategies, master plans, and socio-economic development plans at all levels (Decision No. 600/QĐ-BKHDT dated 04/07/2023) to serve as a basis for ministries, sectors and localities to implement. At the same time, MPI coordinated with partners to organize a series of training activities to (i) improve the GG capacity for localities in the North - Central - South regions; (ii) provide guidance on developing the GG-AP and integrating GG that are feasible and convenient in monitoring, evaluating and increasing the accessibility of local green projects to financial sources from development partners/financial institutions; and (iii) contribute to realizing the socio-economic development strategy for 2021 - 2030 to achieve the national goal of “net zero” emissions by 2050.

### GENERAL INFORMATION

**Donor:** German Agency for International Cooperation (GIZ), under Macroeconomic Reforms/GG Programme

**Implementing partners:**

The Department of Science, Education, Natural Resources and Environment (DSENRE) under MPI VNCPC

**Duration:** 10/2022 - 08/2024

**Sector:** Industrial sector

**Region:** Viet Nam

**Contact:** Le Xuan Thinh

**Email:** [thinh.lx@vncpc.org](mailto:thinh.lx@vncpc.org)

**Tel:** (84-24) 3868 4849 - ext 28



*Training to improve capacity on GG in Hai Phong City*

## Main activities of the service

- Developing the Guidelines for developing the GG-AP and integrating GG for industrial sectors into strategies, master plans and socio-economic development plans of ministries, sectors and localities for the 2021 - 2030 period; and
- Deploying training activities for improved GG capacity for localities.

## Activities in 2023

- Coordinated, exchanged and got consensus with experts in charge of other sectors on the cross-cutting contents during group working sessions on the Guidelines development;
- Developed and commented on agenda, contents and materials for GG training events for localities;
- Joint deploying training workshops on “Developing the GG-AP and integrating GG into strategies, master plans, and socio-economic development plans in the province” for relevant authorities country-wide:

Region	Duration	Location
The North	22-23/06/2023	Hai Phong City
The Central	26-27/05/2023	Da Nang City
The South	08-09/06/2023	Can Tho City

- Supported the development of a GG-AP in the 2021 - 2030 period for Da Nang City.

## Next step

- Supporting Hai Phong City to develop the GG-AP and list of GG investment projects in the 2021 - 2030 period, specifically industrial sector.



*Presentations by VNCPC at training workshops*

## POLICY REVIEW, RECOMMENDATION PROPOSAL AND DEVELOPMENT OF AN ONLINE INFORMATION REPOSITORY ON BIOCHAR IN VIET NAM

The project is implemented to disseminate and promote the achievements and results of the UNIDO's pyrolysis project in Viet Nam in recent years (2016 - 2023) and contribute to launching the interministerial biochar working group (BWG), especially in the agricultural sector. Thereby sharing information and coordinating all the relevant ongoing initiatives and projects on biochar under one roof, to raise awareness, explore and create synergies towards biochar market development in Viet Nam.

The project includes 3 main components, which are (i) developing a policy review and recommendation report on biochar in Viet Nam; (ii) establishing and regularly updating an online information repository (website) about biochar; and (iii) organizing a specialized consultation workshop.

### GENERAL INFORMATION

**Donor:** State Secretariat for Economic Affairs (SECO)

**Host Institution:** United Nations Industrial Development Organization (UNIDO)

**Implementing partners:**

VNCPC

International Support Group (ISG) under the International Cooperation Department (ICD) of Viet Nam's Ministry of Agriculture and Rural Development (MARD)

**Duration:** 10/2023 - 04/2024

**Region:** Viet Nam

**Contact:** Do Thi Diu

**Email:** diu.dt@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 32



Overview of the website [biocharvietnam.org](http://biocharvietnam.org)

## Main activities of the service

- Developing a policy review and recommendation report on biochar in Viet Nam through the following activities: (i) review and assess national policies and programs related to production and usage of biochar; (ii) propose policy recommendations and consultations to best formulate the policy frameworks and guiding documents to enable the biochar market in the country, and; (iii) Identify and present a network list of the relevant stakeholders, with a focus on policy-makers;
- Establishing a biochar-specialized website consisting of communication materials in both English and Vietnamese produced by UNIDO and partners over the past few years, and by other related on-going projects and initiatives in Viet Nam. This online platform aims to provide basic knowledge and practical experiences in the domestic and international biochar sectors, and thereby, connect relevant stakeholders in Viet Nam; and
- Conducting consultation activities to collect feedback and suggestions for finalizing the “Policy Review and Recommendation Report on Biochar in Viet Nam” (Policy Report). It is also an opportunity to introduce the online information repository on biochar built by UNIDO, VNCPC and partners.

## Activities in 2023

- The draft Policy Report has been developed, submitted and received feedback from UNIDO;
- The biochar website has been developed and updated with relevant information at [biocharvietnam.org](http://biocharvietnam.org). It is an online information repository about biochar in Viet Nam aiming at sharing knowledge, lessons learned and initiatives in biochar research, production and trade activities across the country; and
- A physical consultation meeting was held in Ha Noi on 18/03/2024 to gain feedback for the Policy Report finalization. The meeting attracted nearly 30 participants who are policymakers and key stakeholders in the biochar sector in Viet Nam.

## Next step

- To further improve the biochar website and ensure monthly updates within 02 years (04/2024 – 04/2026).



*Consultation workshop in Ha Noi*



## VESTERGAARD - CLEANER PRODUCTION ASSESSMENT FOR 6 FACTORIES IN VIET NAM

PermaNet® long-lasting insecticidal nets from Vestergaard play a leading role in the fight against malaria. Vector control is the main way to prevent and reduce malaria transmission. To date, more than 800 million nets have been produced by Vestergaard. Currently, about 60 million nets are produced every year at 12 production sites, exclusively in Viet Nam. With the desire to meet international standards and best practices to reduce the environmental and social impacts, the project is focused on undertaking Cleaner Production Assessments (CPAs) at 6 factories to understand the status of the current production process and its impact now and then, thereby reducing the impact on air, water, and land pollution through reduction of impacts on waste, water, energy, resource consumption, etc.

### GENERAL INFORMATION

**Donor:** Vestergaard

**Implementing partners:** dss+, VNCPC

**Duration:** 01/08/2023 - 31/01/2024

**Sector:** Textile (PermaNet® production)

**Region:** Viet Nam

**Contact:** Dinh Manh Thang

**Email:** thang.dm@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 25



*The workshop of the participating company*

## Main activities of the project

- Raise awareness of management and staff with RECP concepts and methodologies;
- Promote RECP options to reduce energy and material consumption in production lines, including expected reductions in energy, material, water, and chemical consumption;
- Reduce greenhouse gas emissions (GHG) and minimize waste in the environment; and
- Establish a plan to implement the identified RECP options for each company.

## Activities in 2023

- Conduct a CPA trip at 6 Vestergaard supplier factories in Viet Nam (including both newly joined ones and past participants);
- For implemented factories, activities included reviewing, measuring, and checking all opportunities proposed during the last work in 2021 - 2022 and proposing new solutions (if identified);
- For new participants, an overall CPA has been conducted for the entire factory to provide experts' opinions and suggestions on energy and resource efficiency improvement.
- All companies achieved significant resource savings, especially the following 3 companies:

Factory	Implemented/ proposed solutions	Savings (mil. VND/year)
10/10 Textile Joint Stock Company – Co Bi Factory	7/14	570
Phuc Yen Production – Service – Trading Co.Ltd.,	7/11	770
Branch of Huu Nghi II Trading Co.Ltd., (in Hung Yen)	6/9	990



*Participating companies achieved significant resource savings*

## DEVELOPMENT OF TECHNICAL GUIDELINES FOR PLASTICS AND RESIN PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR IN HA NOI

The assignment is a part of the project “Development and dissemination of technical guidelines for plastics and resin pellets leakage prevention from factories and informal recycling sector in the ASEAN” funded by the Economic Research Institute for ASEAN and East Asia (ERIA). The overall objective of the proposed project is to contribute to preventing the plastics and resin leakage into marine environment through the promotion of proper best practices and guidelines at resin producing factories and informal recycling facilities in ASEAN Member States. The project runs in 06 ASEAN cities, namely Manila & Iloilo cities in the Philippines, Vientiane in Lao PDR, Ha Noi in Viet Nam, and Pattaya city & Nonthaburi in Thailand.

### GENERAL INFORMATION

**Donor:** The Economic Research Institute for ASEAN and East Asia (ERIA)

**Implementing partners:**

Regional Resource Centre for Asia and the Pacific (RRC.AP), at Asian Institute of Technology (AIT) - Thailand

VNCPC

**Duration:** 05/2022 - 10/2023

**Sector:** Plastic waste recycling

**Region:** Viet Nam

**Contact:** Do Thi Diu

**Email:** diu.dt@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 32



*Workshops and field trips to craft villages in Ha Noi*





## Main activities of the service

- Development of situation assessment report on the status and plastic leakages related to operations of informal recycling actors and the plastic industry;
- Development and update of context-specific draft guidelines/manual and best practices for preventing plastics (by informal recyclers) and pellet losses by factories;
- Submission of final guidelines/manual in English and in Vietnamese versions; and
- Participation in knowledge dissemination and capacity-building workshop.

## Activities in 2023

- Conducted literature review on (i) relevant policies and laws; (ii) institutional framework and stakeholders in plastic waste management and recycling; (iii) plastic value chain and plastic recycling material flow; and (iv) current status of recycling technology and environmental - economic - social impacts of plastic recycling activities (both in the formal and informal sectors);
- Investigated and interviewed relevant parties in the field of plastic waste management and recycling;
- Carried out field surveys of the operating procedures at plastic collection and recycling facilities in Ha Noi;
- Developed and finalized the situation assessment report on plastic waste management and leakage related to informal recycling activities in Ha Noi;
- Developed the technical guidance relevant to the local context and solutions to prevent plastics and resin pellets leakage from recycling facilities;
- Organized an in-country stakeholder consultation cum expert review workshop on preventing plastic and pellet leakages from informal and formal recycling sector on 28/03/2023 in Ha Noi, in both online and offline mode. The workshop included field visit activity at Trieu Khuc Plastic Recycling Craft Village; and
- Participated in the ASEAN Regional Workshop held on 28-29/09/2023, in Pattaya. The workshop aimed to share the project's results and lessons learned, and discuss solutions by sharing experiences and disseminating best practices among stakeholders in preventing plastic debris leakage from factories and the informal recycling sector in ASEAN.



*Workshop in Pattaya City*

## PROVISION OF TRAINING AND CONSULTANCY SERVICES TO IDENTIFY RESOURCE EFFICIENCY AND INDUSTRIAL SYMBIOSIS INTERVENTIONS IN DEEP C AND AMATA INDUSTRIAL PARK IN VIET NAM

This assignment is part of the SECO-funded project "Eco-industrial park (EIP) intervention in Viet Nam - Perspective from Global EIP Programme (GEIPP)" which is currently being implemented by UNIDO in the developing and transition countries. In Viet Nam, it is jointly implemented by MPI (as the government coordinating agency) and UNIDO in the 2020 - 2024 period. The project's objective is in line with that of GEIPP, to demonstrate the viability and benefits of EIP approaches in scaling up resource productivity and improving economic, environmental, and social performances of businesses and, thereby, contributing to inclusive and sustainable industrial development in Viet Nam. The targeted IPs are Deep C (Hai Phong City) and Amata (Dong Nai Province) together with their resident companies.

### GENERAL INFORMATION

**Donor:** SECO

**Leading partners:** MPI (PMU) and UNIDO

**Implementing partners:** VNCPC, dss<sup>+</sup>

**Duration:** 09/2021 - 04/2024

**Sector:** Industry

**Region:** Viet Nam

**Contact:** Vu Nang Nam

**Email:** nam.vn@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 16



*Urban IS option feasibility review meeting with stakeholders*

## Main activities of the assignment

Provide support to enterprise participants of the project with the following activities:

- Capacity building on RECP, IS, and the EIP concept at the level of the IP;
- Quick RECP assessment and guidance on identifying wastes in the production process, improvement opportunities to optimize profits, reduce production costs, and save raw materials, energy, water and chemicals;
- Development of feasibility studies for selected RECP, and IS interventions; and
- Accessing financing sources for IS interventions.

## Activities in 2023

- Monitored results of the RECP assessment component at the participating enterprises:

IP	Nr. of participating companies	Nr. of RECP opportunities		Savings (bil. VND/year)	Reduced GHG (ton CO <sub>2</sub> eq/year)
		proposed	implemented		
Deep C	19	138	52	7.5	1,425.8
Amata	18	160	59	3.7	1,377.8

- Assisted IPs in identifying and implementing IS opportunities:

IP	Type	Nr. of IS opportunities			
		identified	feasibilities studied	agreed for implementation	implemented
Deep C	IS	15	6	3	0
	Urban IS	7	5	2	1
Amata	IS	13	5	4	0
	Urban IS	7	4	2	0

## Next steps

- VNCPC and financial experts continue to support businesses/IP developers implementing proposed RECP/IS solutions;
- VNCPC and policy experts complete policy recommendation reports to develop EIP in Viet Nam;
- Collect data, evaluate and build a waste management system for Deep C and Amata IP.

## RENEWABLE ENERGY FOR THE VIET NAM'S TEA SECTOR

The project aims to design and assess the feasibility and to recommend the implementation roadmap for the application of a pilot integrated agrivoltaics, pyrolysis and biochar system in the tea-producing area of Anh Son District, Nghe An Province, towards building a sustainable tea farming and production model according to the circular economy model for Viet Nam.

### GENERAL INFORMATION

**Donor:** Renewable Energy, Energy and Resource Efficiency Promotion in Developing and Transition Countries (REPIC) Platform

**Implementing partners:**

Center for International Industrial Solutions under Zurich University of Applied Sciences (ZHAW)  
– Switzerland (Project lead)

Kaskad-E GmbH (Switzerland)

ZHAW Institute of Natural Resource Sciences (Switzerland)

REM Tec s.r.l (Italy)

Institute for Circular Economy Development (ICED) under Viet Nam National University Ho Chi Minh City

Nghe An Tea Development JSC. under Song Lam Cooperation  
VNCPC

Vina Viet Hien One Member Co., Ltd

Soils and Fertilizers Research Institute (SFRI) under Viet Nam Academy of Agricultural Sciences (VAAS)  
Bach Khoa Solar Energy Development and Investment JSC. (SolarBK)

**Duration:** 01/2023 - 02/2025

**Sector:** Renewable energy, green tea

**Region:** Viet Nam

**Contact:** Do Thi Diu

**Email:** diu.dt@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 32



*Field trip to  
Anh Son  
District*

## Main activities of the service

The project consists of 04 main work packages (WP), including 03 technical WPs and 01 integration WP.

- WP 1: Application of pyrolysis technology for heat and biochar production from acacia wood chips;
- WP 2: Assessment of (i) biochar properties and quality, (ii) soil health before and after biochar amendment (focus on carbon storage, water retention capacity and nutrient content), and (iii) impact on tea quality and yield;
- WP 3: Application of agrivoltaics to provincial tea growing settings (slope, solar radiation, soil, etc.) and assessment of impacts on tea quality and yield;
- WP 4: Knowledge integration, business model design and implementation roadmap development based on inputs from WPs 1 to 3.

## Activities in 2023

- Took part in project kick-off meeting at the end of 02/2023;
- Participated in a field trip in the project area from 05-10/02/2023 in Anh Son District to meet and exchange information to better understand project activities and the areas of expertise of each partner in charge. The project team worked with the Board of Directors and other representatives of Nghe An Tea Development JSC, visited various locations and met farmers and local authorities to gain knowledge about the current status and production needs, specific characteristics of tea farming and promote the project at the local level;
- Participated in a study tour to learn from the experiences of international partners operating in the field of renewable energy (pyrolysis technology, agro-photolysis) and organic production in Switzerland and Italy taking place on 03-09/09/2023; and
- Supported Vina Viet Hien Company in deploying the pyrolysis work package (WP 1) and reporting the results to the project team.

## Next steps

- Continue to support Vina Viet Hien Company in deploying the pyrolysis WP in the project;
- Together with the project team to develop a project proposal for the pilot phase and replicate this renewable model in tea farming in Viet Nam; and
- Sharing project results and connecting with national stakeholders.



*The study tour in Switzerland and Italy*

## PROVISION OF TRAINING AND CONSULTANCY SERVICES TO IDENTIFY RESOURCE EFFICIENCY AND INDUSTRIAL SYMBIOSIS INTERVENTIONS IN HIEP PHUOC INDUSTRIAL PARK IN VIET NAM

This assignment is part of the SECO-funded project "EIP intervention in Viet Nam - Perspective from Global EIP Programme (GEIPP)" which is currently being implemented by UNIDO in the developing and transition countries. In Viet Nam, it is jointly implemented by MPI (as the government coordinating agency) and UNIDO in the 2020 - 2024 period. The project's objective is in line with that of GEIPP, to demonstrate the viability and benefits of EIP approaches in scaling up resource productivity and improving economic, environmental, and social performances of businesses and, thereby, contributing to inclusive and sustainable industrial development in Viet Nam. Hiep Phuoc IP (Ho Chi Minh City) and their resident companies are selected to join this part of the project.

### GENERAL INFORMATION

**Donor:** SECO

**Leading partner:** MPI (PMU) and UNIDO

**Implementing partners:**

VNCPC

dss+

Natural Resources and Environment Consulting Center (NREC)

**Duration:** 09/2021 - 04/2024

**Sector:** Industry

**Region:** Viet Nam

**Contact:** Vu Nang Nam

**Email:** nam.vn@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 16



*Urban IS option feasibility review meeting with stakeholders*



## Main activities of the assignment

Provide support to enterprise participants of the project with the following activities:

- Capacity building on RECP, IS, and the EIP concept at the level of the IP;
- In-depth RECP assessment and guidance on identifying wastes in the production process, improvement opportunities to optimize profits, reduce production costs, and save raw materials, energy, and water; and
- Development of feasibility studies for selected RECP and IS interventions as well as the implementation plan towards the EIP model.

## Activities in 2023

- Monitored results of the RECP assessment component at the participating enterprises:

IP	Nr. of participating companies	Nr. of RECP opportunities		Savings (bil. VND/year)	Reduced GHG (ton CO <sub>2</sub> eq/year)
		proposed	implemented		
Hiep Phuoc	31	305	105	23.5	5,980.2

- Assisted IPs in identifying and implementing IS opportunities:

IP	Type	Nr. of IS opportunities			
		identified	feasibilities studied	agreed for implementation	implemented
Hiep Phuoc	IS	14	7	4	0
	Urban IS	7	4	3	0

## Next steps

- VNCPC and financial experts continue to support businesses/IP developers implementing proposed RECP/IS solutions.
- VNCPC and policy experts complete policy recommendation reports to develop EIP in Viet Nam;
- Collect data, evaluate and build a waste management system for Hiep Phuoc IP.

## CLEAN BY DESIGN PROGRAM

The program was initiated by the Apparel Impact Institute (Aii) in 2018 under the name "Race to the Top" originally. Since 2021, the program has cooperated with the Sustainable Trade Initiative (IDH) and changed its name to "Clean by Design" (CbD).

The goal of the program is to reduce the environmental impact of the global textile and garment industry through energy-saving, resource-efficient solutions, thereby helping businesses reduce costs and environmental impact.

### GENERAL INFORMATION

**Donor:** Aii, IDH

**Implementing partner:** VNCPC

**Duration:** 2021 - 2023

**Sectors:** Textile, footwear, garment

**Region:** Viet Nam

**Contact:** Dinh Manh Thang

**Email:** [thang.dm@vncpc.org](mailto:thang.dm@vncpc.org)

**Tel:** (84 -24) 3868 4849 - etx 25



*Energy-saving solutions implemented for air conditioners*



## Main activities of the program

- Meeting between IDH, Aii, a team of consultants, brands and factories to introduce and provide information about the program;
- Perform assessment activities/mission at the factories, work with factories manager/leader, evaluate production lines and key energy/fuel/water consumption points, write reports;
- Assist factories in developing action plans. During the factory deployment (3 to 5 months), the team of consultants continue to provide technical support via phone and email;
- Guide the factories's technical team to implement additional solutions depending on the factory's needs and inquiries related to the plan from the initial report and the opportunity overview; and
- Organizing training seminars providing knowledge on energy saving and resource efficiency in production to factories.

## Activitises in 2023

- As of 09/2023, the project has completed the full assessment and support for improving energy and resource efficiency at 11 factories and the first assessment for 01 newly-participating factory.

Total investment	18.06 bil. VND
Savings	40.59 bil. VND/year
Saved electricity	10,738,080 kWh/year
Saved firewood	20.5 ton/year
Saved and reduced coal burning (by replacing coal with 8,629 tons of pressed firewood)	11,281 ton/year
Saved water	1,348,011 m <sup>3</sup> /year
Reduced GHG emissions	38,323 ton CO <sub>2</sub> eq/year
Reduced wastewater	1,348,011 m <sup>3</sup> /year

## Next step

- Complete full CbD assessment for the newly-participating factory.

## PROVISION OF SERVICES FOR THE DEVELOPMENT AND IMPLEMENTATION OF AN ECO- INDUSTRIAL PARKS TRAINING PROGRAMME FOR POLICY MAKERS AND FOR PRACTITIONERS IN VIET NAM

The EIP Training Programme aimed at building awareness amongst the key stakeholder groups, sharing and exchanging experiences and knowledge related to EIP deployment, EIP policy, identification and implementation of EIP interventions, etc., based on existing UNIDO, World Bank and GIZ materials.

It covers a range of EIP topics for strengthening the capacity and addressing the needs of EIP policy-makers as well as EIP service providers, with a balanced mix of theory, practical examples and interactive exercises. The training program helps participants network effectively and benefit from peer learning to deliver high-quality and value-added EIP services in response to the needs of enterprises and organizations in Viet Nam.

### GENERAL INFORMATION

**Donor:** SECO

**Implementation organization:** UNIDO

**Implementing partners:** VNCPC, dss<sup>+</sup>

**Duration:** 04/2023 - 12/2023

**Sector:** Training

**Contact:** Do Thi Diu

**Email:** diu.dt@vncpc.org

**Tel:** (84-24) 3868 4849 – ext. 32



*Online EIP training on the Zoom Meeting platform*

## Main activities of the service

- Development of training materials on (i) EIP policy enforcement and (ii) identification and implementation of EIP opportunities at IPs based on the existing UNIDO and WB materials for IP managers, company managers, management authorities and service providers;
- Organize and run the 02 online courses (one for policy-makers and the other for EIP practitioners) over 02 months from 10 - 12/2023, consisting of six 02 hours-lasting training modules (a total of 12 hours for the entire program). Each module was delivered twice, allowing participants to choose the most convenient time slot. Those, who complete this free training programme successfully, would receive a Certificate of Completion from UNIDO.

## Activities in 2023

- Developed the list of different targeted groups, including government agencies in charge of IP management, policymakers and managers in EIP application and implementation, private sectors (IP developers and tenants), educational institutions, civil society organizations, and sustainable development consultants;
- Developed the pre-training questionnaire to understand the current status of EIP awareness and implementation in Vietnam and the training needs of target groups;
- Designed 02 separate training agendas for 02 training courses corresponding to 02 targeted groups of trainees, which are (i) policymakers and (ii) EIP practitioners. The training agendas and materials suited the program audiences' actual needs thanks to the survey results;
- Participated in the training materials preparation and finalization;
- Selected appropriate candidate trainees for the 02 training courses and sent official invitations to the selected ones; and
- Organized and delivered 02 online training courses on the Zoom Meeting platform, consisting of 12 sessions (6 modules \* 2 times) on appropriately scheduled dates. A total of 82 people participated in the Program, including 40 participants in the policymakers training course and 42 participants in the other course for EIP practitioners in Viet Nam. The completion rate of the Training Program, which participated in at least 5 of 6 training sessions, reached 75%.



*Speakers' presentations in the programme*

## TECHNICAL AND FINANCIAL FEASIBILITY STUDY FOR WASTEWATER RECYCLING IN A TEXTILE COMPANY

The study aims to analyse and propose a plan for improving and upgrading the existing wastewater recycling system to meet the business's water supply requirements for production.

### GENERAL INFORMATION

**Donor:** WWF-Viet Nam

**Implementing partner:** VNCPC

**Duration:** 11/2023 - 04/2024

**Sector:** Denim fabric

**Location:** Nam Dinh Province

**Contact:** Le Van Tung

**Email:** tung.lv@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 34



*Feasibility study for wastewater recycling in a denim company*

## Main activities of the assignment

- Carry out feasibility studies for the wastewater recycling project, including:
  - Collect relevant data;
  - Analyze and modelling;
  - Develop concept design for the recycling wastewater unit;
  - Call for and evaluate quotations from vendors; and
  - Compile the feasibility study report.
- Provide technical support based on the feasibility studies for implementation of the wastewater recycling system; and
- Providing distance technical support (via phone/email) to the company's queries about the report developed.

## Activities in 2023

- Completed data collection and analysis; and
- Prepared a feasibility study report on a wastewater recycling system.



*Existing wastewater recycling tank*

## ORGANIZE BASIC TRAINING COURSES ON SUSTAINABLE CONSUMPTION AND PRODUCTION FOR MANAGEMENT AND CONSULTING UNITS

The assignment is part of activities under the National Action Program on SCP in the 2021 - 2030 period. It aims at training officials of the Departments of Industry and Trade (DOITs) and Centers for Industrial Promotion and Development Consulting of provinces and cities for awareness raising and improved management for promoting SCP and building an effective network of SCP experts country-wide.

### GENERAL INFORMATION

**Donor:** Department of Energy Efficiency and Sustainable Development - MOIT

**Implementing partner:** VNCPC

**Duration:** 06/2023 - 12/2023

**Sector:** Local industrial authorities and consultancy

**Region:** Viet Nam

**Contact:** Le Van Tung

**Email:** tung.lv@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 34



*SCP training courses in the North, the Central and the South*

## Main activities of the assignment

Build a network of SCP by:

- Surveys of the operational status of SCP network;
- Developing a list of experts in the field of SCP;
- Analyzing and evaluating the current status of SCP network; and
- Proposing directions for developing the SCP network.

Organize 03 basic training courses for officials of the DOITs and consulting units by:

- Determining the scale, list of students and form of training;
- Preparing training content and lectures; and
- Organizing 03 basic training courses for officials of the DOITs, Centers for Industrial Promotion and Industrial Development Consulting and consulting units.

Organize surveys, evaluate training programs and create networks on SCP, including:

- A survey of SCP training program;
- SCP training program evaluation; and
- Maintaining a network of experts and complete training materials.

## Activities in 2023

- Fulfilled 03 training courses in 3 regions with 113 participating experts from DOITs, Centers for Industrial Promotion and Industrial Development Consulting and consulting units.

Region	Duration	Location	Participants	Cities/Provinces
The North - North Central	21-22/09	Ha Noi	37	20
The Central - Highlands	12-13/10	Da Nang	20	16
The Southern	16-17/11	Ho Chi Minh City	56	18

- Training evaluation reports submitted. All training contents received high appreciation from participants, especially those under the sustainable production topic (such as energy assessment, chemical management, industrial symbiosis, etc.) and interaction activities.



## VIETNAM FOOTWEAR AND APPAREL CIRCULARITY STUDY

The “Mekong Climate-Smart Manufacturing Advisory Program” of the International Finance Corporation (IFC), a member of the WB Group, aims to develop and invest in the footwear and apparel circularity value chain in Viet Nam, with stages ranging from early-stage project development and advisory support to those needing immediate investment.

The assignment targets to develop a market study to facilitate circular economy practices of the footwear and apparel sectors in Viet Nam with the ultimate objective being to identify a business case to leverage the circularity of the post-manufacturing waste generated from these sectors and to facilitate the establishment of recycling hub(s) or any other feasible engineered solutions to move the sectors towards a circularity pathway.

### GENERAL INFORMATION

**Donor:** IFC

**Implementing partners:** Adelphi and VNCPC

**Duration:** 09/2023 - 03/2024

**Sectors:** Textile-garment, leather-footwear, and wastes management

**Regions:** Viet Nam

**Contact:** Nguyen Le Hang

**Email:** hang.nl@vncpc.org

**Tel:** (84-24) 3868 4849 - ext 14



*Textiles and footwear are 2 out of Viet Nam's top 5 export products*



### Main activities of the project

- Analytical work on footwear and apparel value chain mapping and circularity market to cover (i) post-industrial waste material flow analysis; (ii) value chain mapping including the supply and demand for the recyclable and recycled post-manufacturing waste; (iii) targeted national/provincial regulatory and operational gap analysis in Viet Nam related to waste management; and (iv) assessment of investment size required for the recycling of post-manufacturing waste of the 02 sectors;
- Engage with stakeholders across the value chain to validate results and data; and
- Support IFC in identifying the investment opportunity for recycling of post-industrial material waste from these sectors and help develop a business case and value proposition for the recycling hub(s).

### Activities in 2023

- Assessment of legislation and enforcement related to waste management and recycling to propose some recommendations for promoting waste circularity;
- Collection of sectorial data related to post-production waste generation and current management, recycling and treatment methods;
- Stakeholder interviews and surveys, including brands, manufacturing businesses, associations, and appropriate recycling technology suppliers; and
- Material flow analysis and geographical factors related to recycling hubs.

### Next step

- Complete the 03 component reports to be submitted to IFC.

## DONORS & NETWORKS - PARTNERS

### CƠ QUAN TÀI TRỢ - MẠNG LƯỚI - ĐỐI TÁC



Tính đến tháng 4/2019, UNIDO có 170 quốc gia thành viên. Nhiệm vụ của UNIDO là xúc tiến và thúc đẩy phát triển công nghiệp bền vững ở các nước thành viên.

As of April 2019, 170 states are member of UNIDO. The mission of UNIDO is to promote and accelerate inclusive and sustainable industrial development in member states.



RECPnet là mạng lưới toàn cầu về Hiệu quả tài nguyên và Sản xuất sạch hơn nhằm thúc đẩy việc ứng dụng RECP và điều chỉnh thích nghi tại các nước đang phát triển và các nền kinh tế chuyển đổi.

RECPnet is the global network for promoting the widespread adaptation and adoption of Resource Efficient and Cleaner Production in developing and transition economies.



UNEP là cơ quan điều phối các hoạt động môi trường của Liên hiệp quốc, hỗ trợ các nước đang phát triển trong việc thực hiện các chính sách và các cách làm hợp lý về môi trường.

UNEP is the United Nations' coordinating agency for environmental activities, supporting developing countries in implementing environmental policies and practices.



Sứ mệnh của Aii là xác định, tài trợ và nhân rộng các giải pháp chất lượng đã được chứng minh để thúc đẩy các tác động tích cực trong ngành dệt may và da giày.

Aii's mission is to identify, fund and scale proven quality solutions to accelerate positive impact in the footwear and textile industry.



CTCN thúc đẩy chuyển đổi nhân rộng các công nghệ môi trường an toàn hướng tới sự phát triển các bon thấp và ứng phó với biến đổi khí hậu tại các nước đang phát triển.

The CTCN promotes the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development at the request of developing countries.



GEF được thành lập năm 1992, giúp giải quyết các vấn đề môi trường cấp bách. Hiện GEF đã trở thành đối tác của 183 quốc gia, các tổ chức quốc tế, tổ chức xã hội dân sự và khu vực tư nhân để giải quyết các vấn đề môi trường toàn cầu.

GEF was established in 1992, which helped solve urgent environmental problems. GEF has now become a partner of 183 countries, international organizations, civil society organizations and the private sector to resolve global environmental issues..



Với 189 quốc gia thành viên và văn phòng tại hơn 130 địa điểm, Nhóm Ngân hàng Thế giới là một đối tác toàn cầu độc đáo hoạt động vì các giải pháp bền vững nhằm giảm nghèo và xây dựng sự thịnh vượng chung ở các nước đang phát triển.

With 189 member countries and offices in over 130 locations, the World Bank Group is a unique global partnership working for sustainable solutions that reduce poverty and build shared prosperity in developing countries.