

MINISTRY OF INDUSTRY AND TRADE

Draft

**NATIONAL ACTION PLAN ON SUSTAINABLE
CONSUMPTION AND PRODUCTION 2020 – 2030**

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Outline

Draft NATIONAL ACTION PLAN FOR SUSTAINABLE CONSUMPTION AND PRODUCTION	
2020 – 2030	1
Acronyms and Abbreviations.....	4
1. Current Status of SCP and its Contribution to Sustainable Development in Vietnam.....	6
1.1. Review of the Target Indicators for the Current NAP on SCP (2016 – 2020).....	6
1.1.1. Improve policy and mechanisms to implement sustainable production and consumption	6
1.1.2. Reduce waste in distribution activities.....	6
1.1.3. Gradually increase the percentage of sustainable products in the total key export products volume of Vietnam.....	7
1.1.4. Provide sufficient information to consumers about sustainable products.....	7
1.1.5. Reduce, Reuse, Recycle (3Rs).....	7
1.1.6. Recommendations for the target indicators setting for the period of 2020 – 2030.....	8
1.2. Review of the Implementation Progress for Current NAP on SCP (2016–2020).....	8
1.2.1. Progress on Task 1 “Develop and improve legal framework and policies to implement sustainable production and consumption”	8
1.2.2. Progress on Task 2: “Promote production and economic restructure toward sustainability”	17
1.2.3 Progress on Task 3: Greening distribution system and develop supply chain of sustainable products.....	26
1.2.4 Progress on “Improving market access and promoting export of key products of Vietnam towards sustainability.....	30
1.2.5. Progress on Task 5 “Changing consumption behavior toward sustainability and boost sustainable lifestyles”	33
1.2.6. Progress on Task 6 “Implementation of waste reduction, reuse and recycling	37
1.3 Lessons learned from these implementation results for the proposed NAP SCP (2020-2030)	40
2. International trends and experience in SCP	43
2.1. China	43
2.2. Germany.....	44
2.3. Japan	45
2.4. Republic of Korea.....	46
2.5. Malaysia.....	47
2.6. Sweden	48
2.7. Other ASEAN Countries.....	48

2.8. Examples of Program from Other Countries	50
2.9. The Framing of SCP for Vietnam from International Trends.....	52
3. Rationale for a National Action Program on SCP for the period 2020–2030.....	53
3.1. The need to continue to build on the NAP on SCP (2016-2020).....	53
3.2. Political backing.....	53
3.3. Legal basis.....	53
3.4. Perspectives and National Context.....	55
3.5. Principles.....	55
3.6. Vision	55
3.6.1 Overall objectives	55
3.6.2. Detailed Targets and Indicators (Impact Indicators).....	56
3.7. Main Programs.....	58
3.7.1. Sustainable Production.....	58
3.7.2. Sustainable Consumption.....	60
3.7.3. Promotion of Sustainable Consumption and Production for Stakeholder Actions...	62
3.8. Mobilize Financial Resources.....	65
3.9 Monitoring and Evaluation	65
3.9.1. Indicators for monitoring and evaluation	65
3.9.2. Monitoring and evaluation methodology	65
3.9.3. Implementation mechanism.....	65
3.10. Organization of implementation arrangements.....	66
3.10.1 Inter-agency coordination	66
3.10.2 Responsibilities of ministries and agencies	66
3.8.3. Local responsibilities for provincial governments.....	68
Appendix. Roadmap for Implementation of Concrete Activities.....	70

Acronyms and Abbreviations

3Rs	reduce, reuse, recycle
10YFP	ten-year framework program for SCP
ASEM	Asia-Europe Meeting
CIF	cost including freight
CP	cleaner production
CSI	Sustainable Business Index
DoIT	Department of Industry and Trade
EDC	Earth Day Compostable
EPR	extended producer responsibility
EU	European Union
FDI	foreign direct investment
FOB	free on board
FTA	free trade agreement
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
HLPF	High Level Political Forum
IZ	industrial zone
KEITI	Korea Environmental Industry and Technology Institute
MARD	Ministry of Agriculture and Rural Development
MoC	Ministry of Construction
MoET	Ministry of Education and Training
MoF	Ministry of Finance
MoIT	Ministry of Industry and Trade
MoNRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
NAP	National Action Program
NGO	nongovernmental organization
NTPP	National Trade Promotion Program
ODA	official development assistance
OECD	Organization for Economic Cooperation and Development
Q&A	questions and answers
R&D	research and development
RoHS	restriction of hazardous substances
S&T	science and technology
SCP	sustainable consumption and production
SDG	sustainable development goal

SME	small and medium enterprise
TOE	tons of oil equivalent
TPP	Trans-Pacific Partnership
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
VAT	value-added tax
VBCSD	Business Council for the Advancement of Women
VCCI	Vietnam Chamber of Commerce and Industry
VNR	voluntary national review
WEEE	waste electrical and electronic equipment
WTO	World Trade Organization

1. Current Status of SCP and its Contribution to Sustainable Development in Vietnam

1.1. Review of the Target Indicators for the Current NAP on SCP (2016 – 2020)

1.1.1. Improve policy and mechanisms to implement sustainable production and consumption

- **The percentage of enterprises applying clean technology and sustainable technology in intensive energy consumption and environmental pollution sectors reach 60-70%:** It is possible (100%) for newly invested enterprises in selected sectors e.g. fertilisers and pesticides manufacturing, pulp and paper mills, cement, coal mining, minerals exploration and processing, thermal power plants, sugarcane mills, textile dyeing industries; By 2030, 60-70 % existing enterprises in those sectors will complete roadmaps for technological innovation to apply clean technology⁽⁵⁾;
- **50% of manufacturing enterprises apply cleaner production and energy saving solutions; pilot application and gradually expand ecological innovation for enterprises, industrial parks, industrial zones and industrial clusters:** According to survey data from the Ministry of Industry and Trade to implement the objectives of the Cleaner Production Strategy with 63 Departments of Industry and Trade and 9012 industrial enterprises: In 2010 there were 11% of enterprises and in 2015, 32% of enterprises reported applying cleaner production. According to a recent survey conducted by MOIT from 36 Departments of Industry and Trade (DOIT) in 36 provinces, only 11 DOIT can select the number of enterprises applying cleaner production solutions with the proportion ranging from 15% to 40%. Therefore, it is very difficult to achieve the desired result (50%) in the short period, which requires more drastic measures such as strengthening the detailed cleaner production assessment of businesses and increasing communication program on benefit of cleaner production to businesses.
- **Increase in contribution of green sector, environmental industry sector and waste recycle sector in GDP up to 42%-45%:** So far, there is no statistical data on the contribution of green industries, environment industry, waste recycling in GDP, so it is impossible to assess the level of achievement of this target. However, it can be seen so far there are many scientific research works and new policies which support the development of green, environmental industry and waste recycle sectors. These are also premises for the implementation of these activities at all levels and branches.

1.1.2. Reduce waste in distribution activities

- **50% of the enterprises in distribution sector are trained and implement cleaner production and energy-saving solutions:** There are no statistics nor specific reports on the percentage of enterprises in the distribution sector which are trained and implement cleaner production and energy-saving solutions. In fact, there are not many cleaner production programs for enterprises in distribution sector. Possible data availability regarding number of enterprises applied CP and EE in RECP training-specialized organisations (VNEEP-MOIT, VNPCC) mainly focus in production enterprises. To achieve this, distribution sectors need to be addressed and included.
- **Reduce 65% of non-eco-friendly bags in the supermarkets and shopping malls, and 50% at the traditional markets (in comparison with the year 2010):** So far, there is no statistical data on reduction of non-eco-friendly bags at supermarkets, shopping malls and traditional markets. However, there are a lot of campaign activities to raise awareness about environmental protection in production, solutions to greening distribution systems, programs to advocate and propagate supermarkets and shopping malls to limit the use of non-eco-friendly

bags replacement with environmentally-friendly products which have been widely implemented throughout the country and especially across major cities. Therefore, target from 2020 to 2025 should be changed by giving purposes that plastic bags in shopping malls and supermarkets will not be given free to customers; or by 2030, 100% supermarkets and shopping malls will prohibit plastic bags.

- **Apply green distribution certification to distributors; successfully develop and gradually expand sustainable supply chains to key products in the economy:** The supply chain of safe agricultural, forestry and fishery product is certified according to Decision No. 3075 / QD-BNN-QLCL July 20, 2016 by Ministry of Agriculture and Rural Development, and since, 63/63 provinces and cities have developed the supply chain model with 1249 chains, 1450 products, and 3,181 sale locations with quality-controlled products. These products have been stamped with information about the applied standard (VietGAP, HACCC, food safety requirements) and original information. In addition, numerous research and guidelines have been developed for green retail distribution system, sustainable supply chain for Vietnam's beverage industry, sustainable supply chain for the Vietnamese industry and environmental management in distribution sector.

1.1.3. Gradually increase the percentage of sustainable products in the total key export products volume of Vietnam

- **Provide information, instructions and support application of sustainable management systems, sustainable standards to meet environmental requirements of importing countries by Vietnam's export enterprises:** It is possible since Vietnam is member of WTO, TPP and FTAs, and most relevant information, requirements, guidelines are made available to exporters. Also, National Program on trade promotion is led by MOIT; Fair trade certification is presently under development for key export products e.g. coffee, handicraft, and agro products

1.1.4. Provide sufficient information to consumers about sustainable products

- **Increase percentages of sustainable products in the public purchasing; improve legal framework and guidance about implementation of sustainable public procurement:** GPP is now on the stage "urge to apply" due to inconsistency /gap in legal framework for GPP. Directive No. 13 / CT-TTg dated April 4, 2017 of the Prime Minister was issued to promote and increase the use of domestically-produced materials and goods. However, the green public procurement has not really been promoted. Due to the Bidding Law and the implementation Decree of Vietnam's Bidding Law, the bidding procedures and requirements, the preferential conditions for contractors, do not yet contain public procurement regulations, so it is difficult to propose a legal basis for Green Public Procurement based on the Bidding Law. Besides, there is no clear guideline on GPP. The GPP guideline is now under development by MONRE and KEITI (under Asia Pacific GPP Partnership Project).

1.1.5. Reduce, Reuse, Recycle (3Rs)

90% scraps of plastic bag, paper, oil, iron and steel shall be recycled; and(b) 85% urban solid waste shall be recycled, reused, produce energy or organic fertilizer; 75% non- hazardous industrial solid waste shall be collected for reusing and recycling, and 50% construction solid waste generated from urban areas shall be collected for reusing or recycling.

- **90% of paper waste and waste oil will be recycled; 75% of common industrial solid waste is recovered for reuse and recycling:** In the industrial zones, the collection rate of solid waste is approximately 90% and most of this collected waste is sent for reuse or recycling. Therefore, this ratio is feasible for industrial parks when transfer to eco-industrial parks and symbiosis industry in the direction of circular economy. Due to the centralized production model, industrial zones have more advantages in waste management, because the rate of solid waste

collection in this area is higher than that of industrial clusters and outside industrial clusters. In industrial zones, solid waste is likely to be recycled and reused to the maximum extent. Outside the industrial zones, there are currently no data to assess this indicator.

- **85% of urban solid waste is reused, recycled, recovered for energy or compost:** This target is not feasible because the rate of reuse and recycling is only 10% in big cities; 75% of collected urban solid waste is treated by landfilling. Nylon bags in big cities account for 7-10% of the total solid waste generated (7-8% in Hanoi and 10% in Ho Chi Minh City (6). Based on the scenarios that rate of solid waste collection will reach 95-100% in 2030, the rate of 85% set in the target can be achieved by: (i) 75-80% of solid waste will be composted or incinerated for energy recovery (ii) 8-10% (nylon bags) are collected for recycling.
- **50% of construction solid waste in urban areas will be recovered for reuse and recycling:** construction solid waste accounts for 20-25% of urban solid waste and will continue to increase in big cities with high growth rate of development. Construction waste is consisted of sands, rubble, glass, concrete and metal and have high recyclability. However, the rate of collection and treatment of construction solid waste is still low, especially for small works and households scale, and is often landfilled with domestic solid waste. In fact, if the construction solid waste would be collected properly, recycling rate can reach up to 90%. The problem is that it has to build enough treatment plants for construction waste to serve the purpose for reuse and recycling of construction waste. In addition, it is necessary to have appropriate policies to improve the recovery rate of construction wastes, ensuring that the construction waste recycling plants have the capacity to operate as designed.

1.1.6. Recommendations for the target indicators setting for the period of 2020 – 2030

- The new indicators should be divided by outcome indicators and impact indicators. Outcome indicators directly measure whether each activity proposed in the NAP are completed or not by the implementers. Impact indicators are towards the broader goals of the NAP when the outcome indicators are achieved.
- Indicators should be realistic based on the baseline data collection depends on the data availability. The terms in the target indicators should be clearly defined and quantified in order to measure the progress. If baseline data is yet possible, a part of the task for the period 2020 – 2030 is to enhance the capacity of government, research institutes and industries to improve the data.
- Regular monitoring and evaluation of the outcome and impact indicators should be assigned to different responsible ministries to measure the progress of implementation.

1.2. Review of the Implementation Progress for Current NAP on SCP (2016–2020)

This review of the programs under the current NAP on SCP (2016–2020) is based on the implementation reports by provincial governments submitted to MoIT, studies conducted by MoIT, literature review on the policy framework, and interviews of key stakeholders.

1.2.1. Progress on Task 1 “Develop and improve legal framework and policies to implement Sustainable Production and Consumption”

The review on the current legal framework and policies to implement sustainable production and consumption is summarized in Table 1.

Table 1: Overview on SCP-related legal and policy frameworks in Vietnam

Area related to SCP	Name	Instrument	Details	Drafting Body
Sustainable Development	National Action Plan to Implement the 2030 Agenda for Sustainable Development No. 622/QĐ-TTg (2017)	Action Plan	Implementation 2030 Agenda	Central Government (CG)
	Roadmap for the Implementation of Vietnam's Sustainable Development Goals by 2030 Decision 681/QĐ-TTg June 4 (2019)	Roadmap	Implementation of 2030 Agenda	CG
	Guiding the enterprise income tax policy for environmental protection activities prescribed in Decree No. 19/2015 / ND -CP (2015) of the Government detailing the implementation of a number of articles of the Law on Environmental Protection Circular No. 212/2015 / TT-BTC (2015)	Circular by Ministry of Finance?	Tax preference	MoF
	Guiding the lending with preferential interest rates, post-investment interest rate support from Vietnam Environment Protection Fund Circular No. 03/2017 / TT-BTNMT (2017)	Circular by Ministry of Finance?	Preferential interest rate	MoNRE
Waste Management	Strategy on National Integrated Management of Solid Waste in 2025 with a vision to 2050 QSETTLEMENT No. No. 2149/QĐ-TTg (2009)	Strategy	Integrated solid waste management	CG
	National Strategy on Climate Change Decision No. 2139/2011/QĐ-TTg (2011)	Strategy	Waste minimization, 3R	CG
	Regulations on the Recovery and Processing Waste Products No. 34/2017 / TT-04 BTNMT (2017)	Regulation	Waste recovery and processing	MONRE
	Regulation on Scrap Import in Border No. 01/2019 / TT-BCT (2019)	Regulation	Waste import	MOIT
	List of Scraps temporarily suspended from trading in temporary import for re-export and broader transfer. No. 41/2018 / TT-BCT (2018)	Regulation	Scrap control	MoIT
	National Strategy for Integrated Management of Solid Waste to 2020 and a vision to 2030	Strategy	Solid waste	MoC
	Management of industrial parks and economic zones Decree No. 82/2018 / ND-CP (2018)	Decree	Industrial parks and economic zones	CG
Resource Management	Strategy on sustainable exploitation and use of natural resources and environmental protection (2020 – 2030) Decision No. 1570 / QĐ-TTg (2013)	Strategy	Natural resources use and exploitation	CG
	Vietnam Coastal Management Strategy to 2020, with a vision to 2030 No. 2295 / QĐTTg (2014)	Strategy	Coastal management	CG
	Mineral Law and Decree No. 68-CP	Law and decree	Mineral resource management	National Assembly (NA)
	Law on Water Resources No. 17/2012 / QH13	Law	Water resource management	NA
	Renewable energy development strategy in Vietnam until 2030 with a vision to 2050	Strategy	Renewable energy	CG

	No. 2608 / QD-TTg (2015)			
	Mechanism for planning, appraisal and approval of wind power projects No. 32/2012 / TT-BCT (2012) and No. 6/2013 / TT-BCT (2013)	Circular of Ministry	Wind power	CG and MOIT
	Mechanism to support the development of power projects from solid waste Decision No. 31/2014 / QD-TTg (2014) and Circular of the Ministry of Industry and Trade No. 32/2015 / TT-BCT (2015)	Circular of Ministry	Waste to energy	CG and MoIT
	Mechanism to support the development of biomass power projects Decision No. 24/2014 / QD-TTg (2014) and the Ministry of Industry and Trade's Circular No. 29/2014) 2015 / TT-BCT (2015)	Circular of Ministry	Biomass power	CG and MoIT
	Decision specifying the list of means and equipment subject to energy labelling and applying the minimum energy efficiency Decision No. 04 / QD-TTg (2017)	Decision	Energy efficiency label	CG
	Mechanism to encourage the development of solar power projects Decision No. 11/2017 / QD-TTg (2017)	Decision	Solar power	CG
	Amending and supplementing a number of articles of Circular 16/2017 / TT-BCT dated September 12, 2017 providing for the development of projects Model and Power Purchase Agreement apply to solar power projects. Circular No. 05/2019 / TT-BCT (2019)	Circular	Solar power	MoIT
	Stipulating the development of wind power projects and Standardized Power Purchase Agreement for wind power projects. Circular No. 02/2019 / TT-BCT (2019)	Circular by Ministry of Finance?	Wind power	MoIT
	Guiding the protection and development of aquatic resources Circular No. 19/2018 / TT-BNNPTNT (2019)	Circular by Ministry of Finance?	Aquatic resource	MoIT
Resource Efficiency and Cleaner Production	National Target Program (NTP) on the use of energy saving and efficiency period 2006-2015 Decision 79/2006 / QD-TTg (2006)	Program	Energy saving	CG
	Strategy for cleaner production in industry to 2020 Decision No. 1419/2009 / QD-TTg (2009)	Strategy	Cleaner production	CG
	The Law on Economical and Efficient Use of Energy (2010)	Law	Energy efficiency	NA
	Strategy for using clean technologies for the period up to 2020, with a vision to 2030 Decision No. 2612/2013 / QD-TTG (2013)	Strategy	Clean technology	CG
	National Program on economical and efficient use of energy in the 2019-2030 period Decision No. 280 / QD-TTg (2019)	Program	Energy efficiency	CG
	Management of industrial parks and economic zones Decree No. 82/2018 / ND-CP (2018)	Decree	Eco-industrial parks	CG
	Organic agriculture Decree 109/2018 / ND-CP (2018)	Decree	Organic agriculture	CG
Ecolabel	Program of eco-labels Decision No. 253 / QD-BTNMT (2009)	Program	Green label	MoNRE
	Vietnam Green Label criteria for products: batteries (NXVN 15: 2017), photocopiers (NXVN 16): 2017), LED bulbs and LED modules for general lighting (NXVN 17: 2017)	Decision	Green label	MoNRE

	Decision No. 2186 / QD-BTNMT (2017)			
Sustainable Transport	Circular 64/2011 / TT-BGTVT Stipulating measures to use energy efficiently in transport activities	Circular by Ministry of Finance?	Energy efficient transport	MoIT
	National technical regulations on emission level 4 for vehicle automobile manufacturing, assembly and new importers Circular No. 33/2015 / TT-BGTVT	Circular by Ministry of Finance?	Emission level	MoIT
	Guiding some contents on the application of level 4 emission standards specified in Decision No. 49/2011 / QD-TTg (2011) and Official Letter No. 436 / TTg-CN (2017) (2018)	Decision	Emission standards	CG
	Regulating energy labelling for vehicles and equipment Circular No. 36/2016 / TT-BCT (2016)	Circular by Ministry of Finance?	Energy label for vehicles	MoIT
	Guiding the labelling of energy for motorcycles, motorbikes manufactured, assembled and imported Circular No. 59/2018 / TT-BGTVT (2018)	Circular by MOF	Energy label for vehicles	MoT
	Action plan to reduce CO2 emissions in Vietnam's civil aviation activities in the period of 2016-2020 Decision No. 42066 / QD-BGTVT (2016)	Action Plan	CO2 emission for civil aviation	MoT
Sustainable Consumption and Lifestyles	The Strategic Orientation for Sustainable Development (Agenda 21) in Vietnam Decision No. 153/2004 / QD-TTg	Strategy	Sustainable lifestyles	CG
	Green growth strategy No. 1393/QĐ-TTg (2012)	Strategy	Sustainable rural lifestyles, SC, green lifestyles	MPI
	Approving the Scheme on the implementation, application and management of traceability systems Decision No. 100 / QD-TTg (2019)	Decision	Consumer information	CG
	Merging the Circular stipulating traceability, recall and handling of unsecured agricultural and forestry food products secure Consolidated Document 01/VBHN-BNNPTNT 2018 (2018)		Consumer information	MARD
Public Procurement	List of energy-saving devices and equipment equipped and procured with agencies and units using the state budget Decision No. 68/2011 / QD-TTg (2011)	Decision	Energy saving Public procurement	MoIT
	Increasing the use of domestically produced materials and goods in bidding for development investment projects and purchasing activities procurement often using state capital Directive No. 13 / CT-TTg (2017)	Directive	Public procurement	CG
Others	Commercial law Decree No. 81/2018 / ND-CP (2018)	Decree	Trade promotion	NA
	Amending a number of articles of Circular No. 47/2014 / TT-BCT (2014) management of e-commerce websites and Circular No. 59/2015 / TT-BCT (2015) Circular 21/2018 / TT-BCT (2018)	Circular	E-commerce and mobile applications	MoIT
	Policies to encourage cooperation and cooperation in production and consumption of agricultural products Decree 98/2018 / ND-CP (2018)	Decree	Agriculture	CG
	Solutions to encourage businesses to invest in agriculture efficiently, safely and sustainably Resolution No. 53 / NQ-CP (2019)	Resolution	Agriculture	CG

Based on reviewing policy areas of SCP in current legal document mentioned above, some conclusions could be given as follows:

Priority SCP- policy areas of Vietnam:

- Renewable energy and resources use, waste collection, recycling and reuse are considered to be the highest priority and are mentioned in most of the policy documents relevant to SCP policies.
- Cleaner production, eco-labelling, sustainable consumption and lifestyles, and sustainable transportation have continued to be strengthened, especially in national strategies such as the Green Growth Strategy, Climate Change Strategy and Sustainable Development Strategy.
- Green public procurement, marketing on sustainable products and eco-design have not been strengthened sufficiently and are not yet clearly reflected in the current policies.
- *Public procurement:* Implementing green public procurement in Vietnam is currently quite limited. At present, there is only a public procurement requirement for energy-saving products complying with Decision 68/2011 / QĐ-TTg on promulgating the list of energy-saving devices and equipment purchased or procured with state budget-using agencies and the Prime Minister's Directive No. 13 / CT-TTg of April 4, 2017 on increasing the use of domestically produced materials and goods. There is a need to develop practical implementation guidelines for Green Public Procurement in Vietnam.
- *Education activities on SCP:* Vietnam has not yet developed a separate program for sustainable education, however, the results of this policy review demonstrate that education, campaign and awareness raising activities on SCP have been implemented in many related programs as an integral component.
- *Sustainable design:* At present, there are almost no policy documents regulating sustainable design, probably because this sector relates to many other areas such as the use of materials and energy.

In conclusion, ***some of the priority policy areas of Vietnam are quite similar to other countries***, for example, the renewable energy sector has been given high priority. Vietnam has been quite sensitive to international SCP trends, incorporating new SCP sectors, such as public procurement, greening supply chains or sustainable marketing in recent policy documents. The difference of SCP policy in Vietnam compared with other countries is that some SCP areas such as network information on SCP, ecotourism, sustainable lifestyle, sustainable marketing, and sustainable design are still lacking.

(1) Progress on “Integrating sustainable production and consumption into development strategies, plans, programs at all levels”

At the **national level**, SCP is incorporated into the National Action Plan on Implementation of Agenda 2030 for Sustainable Development, the Green Growth Strategy, and the Climate Change Strategy. Moreover, an “Action Plan on Green Growth of Construction Industry to 2020 and Orientation to 2030” has been issued by

the Ministry of Construction (Decision No. 419 / QD-BXD dated 11/5/2017). That action plan focuses on (i) adjusting the construction industry development planning from a sustainable development perspective; (ii) adjusting urban renovation planning and planning according to sustainable development standards; (iii) improving technical infrastructure towards sustainability in selected cities; (iv) renovating construction technology and techniques towards greening; (v) encouraging the development of the green building materials industry; and (vi) economical and efficient use of energy in construction.

The “Action Program of Natural Resources and Environment Sector to implement the National Strategy on Green Growth for the period of 2015-2020 and orientation to 2030” was issued by the Ministry of Natural Resources and Environment (Decision No. 965 / QD- MONRE on April 23, 2015). Under this Action Program, many tasks relate to SCP: (i) control, prevent and minimize the generation of pollution sources, and restore polluted areas; (ii) strengthen capacity to cope with climate change, reduce greenhouse gas emissions; (iii) encourage and support the rapid development of eco-product manufacturing and environmental services development; (iv) exploit, use effectively and sustainably use natural resources; and (v) biodiversity conservation and development of natural capital. One of the priority activities in institutional development is to promote the implementation of Green Growth Strategy set up for 2016-2020 period, in addition to research issues of green public procurement regulations for natural resources and environment sector.

At the **local government level**, based on the reporting from provincial governments, 31 out of 63 provinces and cities nationwide have integrated SCP contents into their 5-year and annual socio-economic strategies.

(2) Progress on “Develop and improve policies to encourage investment in the production and distribution of sustainable products; develop incentives to encourage sustainable products consumption; develop and improve coordinative mechanisms among stakeholders in implementation of SCP; promote public private partnership in the implementation of SCP; develop national indicator bundle of SCP to monitor and evaluate SCP implementation”

Develop and improve policies to encourage investment in the production and distribution of sustainable products: Currently, policies are mostly concentrated in the field of agriculture: Resolution No. 53 / NQ-CP of July 17, 2019, solutions to encourage businesses to invest in agriculture effectively, safely and sustainably, and Decree 98/2018 / ND-CP on policies to encourage cooperation and cooperation associating in production and consumption of agricultural products.

Develop incentives to encourage sustainable products consumption: The Ministry of Finance has just issued Circular No. 128/2016 regulating the exemption and reduction of export taxes on eco-friendly products; products from recycling and waste treatment activities prescribed in Decree No. 19/2015 / ND - CP. Accordingly, exemption of export tax for eco-friendly products named in the Export Tariff and with a certificate of Vietnam

Green Label and a 50% reduction of export tax for products from operating activities recycling and treatment of wastes named in the Export Tariffs certified by competent state agencies. In addition, green label products and recyclable goods are also prioritized for procurement and use in investment items and recurrent expenditures of the state budget (Decision 1393 / QD-TTg dated September 25, 2012). However, despite such incentives, the Green Label has been born for a long time but enterprises have been not much paid attention, mainly because of preferential policies, preferential policies on export tax support, Corporate income tax, price support or public procurement needs in Decree 19/2015 / ND-CP detailing the implementation of a number of articles of the Law on Environmental Protection 2014 is complicated and difficult to implement. Mostly, it refers to other regulations so businesses have no motivation to carry out the procedure of applying Green Label to products.

On the other hand, Vietnamese businesses are still hesitant to invest, use technology, apply appropriate management systems to invest and produce products that meet the requirements of Vietnam Green Label. Because Vietnam Green Label criteria are still limited in number. The Ministry of Natural Resources and Environment has only issued 17 sets of green label criteria, which have been developed and published by the Ministry of Natural Resources and Environment, and 112 types of products granted Green labelling.

Develop national indicator of SCP to monitor and evaluate SCP implementation: Initially mentioned in the policy documents as indicators of effective use of natural resources; rational exploitation and economical and sustainable use of mineral resources: reducing the loss of exploited coal by 2030: less than 20% in underground mines and less than 5% in open areas (according to 681 / QD-TTg of April 4) June 2019). In addition, a system of national indicators monitoring and evaluating production performance and sustainable consumption has been systematically studied by many parties (MONRE and MOIT) in a systematic manner and is being proposed for implementation. Therefore, in the coming time, it is necessary to issue a system of indicators to monitor and evaluate production performance and sustainable consumption in order to measure the results of activities.

(3) Progress on “Develop trade policies, export tax policies, tariff policies to promote sustainable export products in line with international integration roadmap, bilateral and multilateral trade agreements.”

On August 9, 2016, the Ministry of Finance issued Circular No. 128/2016 / TT-BTC stipulating the exemption and reduction of export tax for eco-friendly products; products from recycling and waste treatment activities prescribed in Decree No. 19/2015 / ND-CP of the Government detailing the implementation of a number of articles of the Law on Environmental Protection.

Decree 32/2017 / ND-CP dated 31/3/2017 of the Government on state investment credit (replacing Decree 75/2011 / ND-CP on investment credit and export credit of the Government). The decree stipulates a list of projects eligible for preferential investment loans from the state, in which (compared with the old Decree 75) has added many investment projects in the field of green investment.

(4) Progress on “Implement green procurement; develop and improve policies promoting green public procurement; issue a list of priority sustainable products for public procurement; research, pilot application and widely extent green public procurement models”

As mentioned above, the current documents on green public procurement are quite limited. After Decision 76, Directive No. 13 / CT-TTg dated April 4, 2017 of the Prime Minister was issued to promote increase the use of domestically produced materials and goods. However, the green public procurement has not really been promoted. Due to the Bidding Law and the implementation Decree of Vietnam's Bidding Law, the bidding procedures and requirements, the preferential conditions for contractors, do not yet contain public procurement regulations, including upcoming purchases, so it is difficult to propose a legal basis for Green Public Procurement based on the Bidding Law While there are many regulations in the Decree on the implementation of the Law on Environmental Protection. in Green Public Procurement and financial incentives for environmentally-friendly products. Specifically, Article 47 (Consumption Assistance for Products) provides that, based on the State Budget Law, green-label products must be given priority in the case of public procurement of such products. Article 47 also assigns responsibility to the Ministry of Finance to assume the prime responsibility for, and coordinate with the Ministry of Natural Resources and Environment in, formulating a regulation on public procurement of eco-friendly products. Implementation of such regulations is a key element for the successful implementation of Green Public Procurement in Vietnam.

It can be seen that while it is difficult to incorporate public procurement regulations for eco-friendly products into the current legal system (the Procurement Law and the Decree implementing the Bidding Law), it is proposed that a separate circular of the Ministry of Finance in accordance with the Bidding Law should be issued.

(5) Progress on “Develop and improve policy framework to promote waste recycling and reuse activities; promote solid waste integrated management in accordance with market mechanism and apply volume-based charge rate for solid waste”

Currently, required policies for development of solid waste recycling industry have basically been formulated, including the policy of sorting solid wastes to create input materials and policies to support production (subsidies for loans, tax breaks, etc.), policies to support product consumption (subsidizing and encouraging consumption of recycled products) have been mentioned in many documents, notably the Law on Environmental Protection (2005 and 2014), National Strategy on Integrated Management of Solid Waste to 2025, vision to 2050; Decree No. 59/2007 / ND-CP on Solid Waste Management, April 2009/ND-CP on Incentives and Support for Environmental Protection Activities; 19/2015/ND-CP guiding a number of articles of the Law on Environmental Protection 2014; 38/2015 / ND-CP.

A number of policies have been implemented in practice and initially supported

businesses to establish recycling facilities, which are preferential policies on production space, loan support, tax reduction. In addition, there are some shortcomings in the solid waste policy system that hinder the objectives of sustainable development as follows:

The feasibility of some policies is not effective: This is especially reflected in the orientation policies, typically the "National Strategy for Integrated Management of Solid Waste until 2025, vision to 2050". The policy formulation with very high goals, while not taking into account the possibility of implementation. These targets are only achieved when Vietnam has a good infrastructure system for recycling activities such as solid waste sorting technology, recycling plants, and a strict legal system, serving recycling activities. Moreover, the lack of accompanying financial policies also makes the feasibility of the policy not effective (that is penalty policy in the classification of solid waste, support consumption of recycled products ...)

Lack of some important policies to support comprehensive for overall production steps of recycling activities: One of the important policies is the quality control policy of recycling activities, which is a very good tool and necessary to ensure recycling activities in order to achieve the goal of sustainable development. These policies have been issued in parallel with the policies to encourage recycling activities in developed countries, however currently in Vietnam these policies have not been issued. In principle, the control of recycling activities is still applied according to conventional technologies but in reality, recycling activities have not been controlled on quality. This is one of the adverse impacts on the environment caused by recycling activities. In addition, policies to create a stable source of raw materials for this industry, such as policies that attach the responsibility of the manufacturer, such as enforcing recycling rates for manufacturers, and packing - product recall policies and policies to encourage people to recycle (sorting solid waste, returning used products and consuming recycled products) have not been developed in detail.

The system of documents guiding the implementation of framework policies has not been adequately and timely developed: According to Vietnam's policy practice, a policy is provided for in many legal documents. Documents promulgated by the National Assembly and the Government, such as laws and decrees, are general and limited, and later concretized by ministries, branches and localities by circulars. Many studies show that the delay in promulgation of guiding documents of ministries, branches and localities is the main reason leading to limited result in the implementation of incentives for solid waste recycling activities.

There are no specific policies for specific recycling materials, given the fact that the production of organic fertilizer from food waste, agricultural by-products in Vietnam is not yet profitable, unable to compete on selling prices with other fertilizers. It would pose a challenging way forward to produce organic fertilizer if zero incentives nor assistance will be provided for. Therefore, it is proposed to continue to promulgate the following policies in order to promote and complete the policies on recycling and reuse of waste;

- Comprehensive support policies for the organization of production of recycling activities: policies to control the quality of recycling activities, policies to create a stable source of raw materials for this industry' e.g.manufacturers' responsibility policies,enforcing the recycling rate for the manufacturer, the product packaging policy, and the policy of encouraging people to recycle (sorting solid waste, returning used products/ packaging and consumption recycled products).
- Develop legal document to support framework policy: Issue circulars guiding the implementation of symbiotic technology industrial zones converted into eco-industrial parks.
- Develop specific policies for specific recycling materials: Develop supporting policies for production of organic fertilizer from food waste, agricultural by-product.

1.2.2. Progress on Task 2: “Promote production and economic restructure toward sustainability”

(1) Progress on “Exploit and utilize natural resources sustainably; enhance renewable resources and energy, and clean energy development”

(a) Scientific research

The state-level science and technology program on "Application Research and Development of Energy Technology" implemented from 2011 to 2020 has conducted research on 27 topics and 3 production projects. Half of these are topics and projects on renewable energy and energy saving. Some of these research's results have been applied in practice.

Many research projects in industries and localities have been ordered in the direction of innovation, creation and application of green technology. For example, research works on plant varieties and animal breeds have selected and developed seedlings with high productivity, but resistant to diseases and adapted to changing the ecological environment; e.g.the research of building materials, architectural designs, construction solutions in accordance with the "green architecture" standards, etc.

(b) Development Models

Ecotourism, which has been developed by localities in recent years, has shown to be effective in promoting the natural landscape resources, creating jobs and increasing income for a part of the local population. Some ecotourism projects have enriched the natural landscape, restored and preserved ancient architectural works, especially traditional cultural works such as temples, shrines.. However, many places for tourism purposes, but economic tourism projects and local communities themselves have harmed those valuable resources. Cases such as tourism development lacking conservation of landscape and precious and rare biodiversity source in Son Tra peninsula (Da Nang), intention to open cable car to Son Dong cave (Quang Binh) have been surplus.. In addition, many projects hide under the name of ecotourism to encroach the area of natural reserves and historical sites, but have not been strictly handled. This reflects weak awareness, debilitated roles and responsibilities of management agencies

for sustainable development. To overcome this situation, it is imperative to conduct the development of more sustainable tourism forms.

Ecological industrial park model: An eco-industrial park is a community of enterprises producing and providing services located at the same place; in which member businesses seek to improve economic, environmental and social efficiency through collaboration on the management of environmental and resource issues, developing an industrial symbiosis system through exchanging energy and raw materials among companies.

In the period from 2015 to June 2019, the Ministry of Planning and Investment is working with UNIDO to implement the project "Implementing an eco-industrial park initiative towards a sustainable industrial park model in Vietnam". The project is supported by the Global Environment Facility, the Swiss Federal Economic Bureau. The project is piloting in Khanh Phu industrial park (Ninh Binh province), Hoa Khanh industrial park (Da Nang) and Tra Noc 1.2 industrial park (Can Tho).

At the end of November 2016, the Ministry of Planning and Investment (MPI) submitted to the Government a draft decree regulating industrial parks, export-processing zones and economic zones, emphasizing that the model of eco-industrial parks will be prioritized.. On May 22, 2018, the Government issued Decree 82 / ND-CP with regulations on eco-industrial parks, industrial symbiosis models and priorities for enterprises in eco-industrial parks. In the near future, with more than 300 established industrial parks, of which more than 220 industrial parks are in operation, the task of converting industrial parks towards ecological orientation will be a huge challenge for both state management and business circles. But if the improvement and transformation is even a small part of that, the overall benefits will be very great not only for the country, but also for the economic benefits of businesses.

(c) Implementation in local level

Many solutions to promote the use of depleted resources with renewable resources to promote the local economy in a sustainable manner have been implemented. Some groups of solutions are as follows:

- To attract investment in solar projects, wind power projects, biomass power projects, hydropower projects (Dak Lak, Hai Phong and Binh Dinh);
- Reusing ash, slag, gypsum of thermal power plants chemical and fertilizer plants as raw materials for construction materials production in the construction industry. Supporting the owner of the ash and gypsum emission source with an approach to treatment technology, bringing appropriate and effective solutions in the solid waste treatment process of the enterprise;
- To utilize the wastes of the IZ, the EIP project implemented by MPI and UNIDO conducted the research on co-processing of alternative fuels and materials at the cement plants from the IZ wastes. The advantages of utilizing waste from industrial parks is that the industrial waste which has been heated at high temperatures of 2000°C can partially replace cement production materials, resulting in no secondary pollution, creating high processing capacity and benefits for the cement company

due to lower fossil fuel consumption. This is also a better solution than landfill and incineration.

(d) Recommendations

It can be seen that many solutions, including scientific research, developing sustainable development models and implementing these activities at local levels will provide initial results to promote the replacement of non-sustainable resources which may be exhausted by business-as-usual practices; In the current context, when many national policies are implemented with the same goals such as the Green Growth Strategy, it is necessary to further promote the above activities as follows:

- Promote research results to commercialization and common use to bring implementation results to reality at central and local levels. Especially, it is necessary to promote research and development (R&D) work not only in state agencies but also in enterprises, increasing the proportion of enterprises conducting R&D, and increasing the connection with research activities of public research institutions with businesses.
- Promote sustainable eco-tourism models with the participation of all stakeholders, benefits to local communities, especially ethnic minorities. Improve policies and mechanisms including policies on forest environment pricing, revenue use policies, policies on joint venture capital contribution and cooperation in ecotourism business activities and a set of evaluation criteria, training to improve capacity, strengthen the development of specific products, promote advertising and marketing activities.
- Promote the development of eco-industrial parks by converting existing industrial parks into eco-industrial parks which enhance the industrial symbiosis by reusing waste and wastewater after treatment, and promote effective implementation of co-processing the replacement materials in cement plants.

(2) Progress on “Continuing to implement cleaner production, economical and efficient use of energy; researching and applying clean technologies and environmentally-friendly technologies; renew technologies and eliminate outdated technology roadmap that promotes fossil fuel’s consumption and creating environmental pollution; develop human resources to meet the requirements of implementing sustainable production activities”

Specific objective: The rate of industrial production establishments applying cleaner production and energy-saving solutions will reach 50%.

(a) Cleaner production activities

Manufacturing operations are performed in the central and local focus on staff training to raise awareness, disseminate knowledge and evaluate the effectiveness of resources in the machine, the main results are summarized in Table 2:

Table 2: Implementation on Cleaner Production

	Awareness raising and capacity to apply cleaner production	The media	Technical support on cleaner production application at factories	Complete the network of organizations supporting cleaner production in industry
Central level at the Ministry of Industry and Trade	Training for managers at central level (2 courses); In-depth training for CP consultants and DoIT officials: 1-2 classes per year for provincial staff and consultants	125 Television and radio reportage on VTV, TNVN, 404 Articles, newsletters on cleaner production on paper and online newspapers, 4-6 news bulletins on Cleaner Production "GREEN TECHNOLOGY" every year. A CP site has been developed, operated and maintained. Website address: sxsh.vn	Developed, issued and disseminated over 20 technical guidelines on cleaner production for different industries Carry out a quick assessment for 411 businesses Perform detailed assessment for 102 businesses Building demonstration models: 02	Steering Committee "Strategy of Cleaner Production in industry to 2020"; + Deputy Minister of Industry and Trade is the Chairman; The maid's office is located at Department of Science and Technology (until 2017) / Department of Energy Efficiency and Sustainability (from 2018) + Center for Clean Environment and Production (ATMT Department) and Consulting companies (EPRO, VNCPC ...);
Central level: At the Ministry of Planning and Investment (Ecological Industrial Park Project)	Train local officials and factories in industrial zones: 240 turns of people Intensive training on cleaner production: 80 experts	Has built and operated a website about eco-industrial zones: khuongghiepsinhthai.vn	Develop 45 case studies on cleaner production Carry out quick assessment for 120 enterprises in industrial zones Perform detailed assessment for 73 enterprises and maintenance assessment for 53 enterprises in industrial zones	
Local level	Cleaner production workshops and seminars: 337 workshops and training courses for over 25,000 people. Send staff to participate in intensive training courses on cleaner production	134 television reports on local television stations; 256 articles and newsletters on cleaner production; 150,000 leaflets, panels, propaganda posters on cleaner production.	Support quick assessment: 335 enterprises. Support for cleaner production application, models: 88 enterprises	47 Centers (Energy Conservation, KC) across the country have activities to support cleaner production. Network of 355 experts on cleaner production in Departments of Industry and Trade of 63 provinces and cities

(b) Economical and efficient use of energy

National target program on economical and efficient use of energy in the period of 2012 - 2015 (VNEEP 2) was approved by the Prime Minister in Decision No. 1427 / QD-TTg of October 2, 2012. The target of saving from 5-8% of the total energy consumption of the whole country in the period of 2012-2015 compared to the forecast of energy demand under the National Electricity Development Plan for the period of 2011-2020 with a vision to the year 2030 has been approved by the Prime Minister. Evaluation results show that the actual savings achieved is 5.65 %, equivalent to 11.2 million tons of oil equivalent (TOE). Following the Program's success, MoIT has developed and submitted a revised plan approved by the Prime Minister on the “National Program on economical and efficient use of energy in the 2019-2030 period” in Decision No. 280 / QD. -TTg dated 13 March 2019.

Program objectives set out for achievement by 2025 are (i) achieving energy savings of 5.0 to 7.0% of the total national energy consumption from 2019 to 2025; (ii) reducing power loss to below 6.5%; (iii) reducing the average energy consumption for industries/sub-sectors compared to 2015-2018, specifically: (a) for steel industry: from 3.00 to 10.00% depending on type of product and production technology; (b) for chemical industry: at least 7.00%; (c) for plastic manufacturing: from 18.00 to 22.46%; (d) for cement industry: at least 7.50%; (e) for textile industry: at least 5.00%; (f) for the liquor, beer and beverage industry: from 3.00 to 6.88% depending on the type of product and production scale; (g) for paper industry: from 8.00 to 15.80% depending on the type of product and production scale; and (iv) 70% of industrial parks and 50% of industrial clusters will be provided with access to, and economically and efficiently use, energy.

To accomplish these objectives the program set out the following main tasks:

- Review, develop and perfect mechanisms and policies on economical and efficient use of energy
- Providing technical assistance, promoting investment projects on economical and efficient use of energy for activities of manufacturing, renovating and transforming the market of vehicles, equipment, machinery and production lines. Export, which focuses on priority activities such as: Performing energy audits and applying advanced energy management systems for energy users; Improving technological processes of fuel conversion and energy saving, efficiency, environment friendliness, climate change mitigation; Application of new technologies with high energy efficiency.
- Building a Vietnam energy data center, databases, application of information technology on energy and economical and efficient use of energy
- Strengthening capacity on economical and efficient use of energy
- Check, monitor and evaluate the results of implementation of economical and efficient use of energy
- Communication to raise public awareness
- Strengthening international cooperation and cooperation on economical and efficient use of energy

- Establish a Fund to promote economical and efficient use of energy
- Economical and efficient use of energy for each industry

(c) Activities at provinces

Many localities have implemented activities to promote economical and efficient use of energy. For example, Hanoi has effectively implemented economical and efficient use of energy in the city according to Decision No. 656 / QD-UBND dated December 3, 2018 of the City People's Committee, striving to achieve energy savings in 2019 from 2-3% of energy consumption compared to demand forecasts and the energy elasticity coefficient / GDP in 2020 will reach 0.95%. Some specific programs are as follows:

- Disseminate information to raise awareness about economical and efficient use of energy using the mass media;
- Developing and disseminating high-performance and energy-saving equipment; gradually eliminating low-performance equipment;
- Promoting energy conservation in industrial activities and greening power distribution sources: Dissemination of energy demand forecasting methods and tools and savings assessment for enterprises in the textile and garment industry group in the local level in Hanoi city; improve the efficiency of energy use for industrial production establishments; disseminate energy demand forecasting methods and tools and evaluate energy savings for buildings; and
- Economical and efficient use of energy in the field of transportation: investing in transport infrastructure, developing various forms of public passenger transportation to ensure convenience and quality; reduce fuel consumption and environmental pollution; using biofuels (x E5); improve fuel efficiency and set fuel consumption norms for CNG buses in the city.

(d) Recommendations to the achievement of target

According to survey data from the Ministry of Industry and Trade to implement the objectives of the Cleaner Production Strategy with 63 Departments of Industry and Trade and 9012 industrial enterprises: In 2010 there were 11% of enterprises and in 2015, 32% of enterprises reported applying cleaner production. According to a recent survey of MOIT from 36 Departments of Industry and Trade, only 11 Departments of Industry and Trade have surveyed the number of enterprises applying cleaner production solutions with the proportion of enterprises applying the solution on Cleaner production ranging from 15% to 40%. Therefore, it is very difficult to achieve the desired result (50%) in the short period, which will require more drastic measures such as strengthening the detailed Cleaner Production assessment of businesses and increasing communication program on the benefits of cleaner production practices for businesses.

(3) Progress on “Research and application of clean technologies, environmentally-friendly technologies; renew technologies and eliminate them according to the outdated technology roadmap, consume a lot of fuel and cause environmental pollution; develop human resources to meet the requirements of implementing sustainable production activities”

Specific objective: The percentage of enterprises applying clean technology and sustainable technology in intensive energy consumption and environmental pollution sectors reach 60-70%.

(a) The main result

In general, the research and application of clean and environmentally-friendly technologies; technological innovation and elimination according to the roadmap of outdated technologies, high fuel consumption, and environmental pollution have been implemented in many cities and provinces in Vietnam. Some results are as follows:

- The structure of industries in localities has shifted towards rationality and modernity; industries in the field of high technology and high technology applications such as electronics, electrical appliances, and machinery and equipment production, rubber and plastic chemicals (paint for ships, plastic pipes, pharmaceuticals and medical equipment, automobile tires, etc.) has been developing strongly and gaining a high proportion in total production.
- Industrial production including new industries has been more and more developed in industrial zones with the provision of infrastructure like utility, water and effluent treatment to contribute protecting environment

(b) Recommendations to the achievement of target

The above target likely coincides with the target of the “Strategy of using clean technology in the period to 2020, with a vision to 2030” issued by Decision No. 2612 / QĐ-TTg approving with the goal of "using clean and environmentally-friendly technologies, increasing the efficiency of energy, resources and low emissions in industry to promote green growth, mitigate climate change and improve community life". One of the main contents of this Strategy is “by 2020, 100% of new investment projects in energy-intensive industries which may potentially cause serious environmental pollution (such as weaving and dyeing, production of fertilizers and pesticides, steel refining, mining and processing of minerals, thermal energy, paper production, cement production, and sugarcane production) must meet standards and technical regulations on clean technology. Accordingly, **“60-70% of production establishments operating in the above-mentioned industries shall complete the formulation and implementation of the technological innovation roadmap towards using clean technologies”**.”

After 4 years of promulgating the Strategy, although there has been no formal evaluation or summary of the implementation process, it can be seen that the results have not been achieved. The most striking point is that the ambitious goal of applying clean technology to industries that can cause serious pollution has not yet been realized. Cases of serious pollution caused by unclean technology such as Formosa in Ha Tinh, Vinh Tan 2 Thermal Power Plant in Binh Thuan, Mei Sheng Textiles Vietnam in Ba Ria - Vung Tau, Hao Duong Tanning in Ho Chi Minh City, Sonadezi Long Thanh in Dong Nai, Hyundai Vinashin in Khanh Hoa, Pangrim Neotex Dyeing and Miwon Vietnam Monosodium glutamate in Phu Tho, Chu Lai Soda Extract in Quang Nam,

sugar companies in Hoa Binh, Son La, Phu Yen, Tra Vinh, Ca Mau etc. were discovered and punished. But there are many other cases of using "dirty" technology that pollute the whole country without being named. This proves that enterprises are not fully aware of, and have not strictly implemented, the Government's Clean Technology Strategy. On the other hand, the agencies responsible for inspection, investment licensing, and implementation monitoring have not fulfilled their duties either.

(4) Develop and implement an eco-innovation program. The product life cycle approach shall be applied in eco-innovation activities within enterprise, industrial parks, and industrial clusters in order to improve efficient resource utilization, prevent and reduce waste.

Specific objective: Eco-innovation activities have been successfully piloted in enterprises, industrial parks and industrial clusters, gradually expanding the scope and extent of application.

(a) The main results

Ecological innovation (or eco-innovation) is an approach to production and business that identifies challenges and takes advantage of environmentally sustainable opportunities to innovate, from business strategies and models to the operational level of companies, throughout the product lifecycle chain. This is one of the trends orienting production and business establishments towards sustainable development. In the past 3 years, within the framework of the National Action Program on Production and Sustainable Development, several eco-innovation activities have been carried out, including:

- Evaluate the potential of implementation industrial innovation in the industry has been implemented in the key ministerial-level science program in 2018 of the Ministry of Industry and Trade on Sustainable Consumption and Production Program. The studies focus on assessing the current status of policies and regulations related to ecological innovation, the potential of applying ecological innovation in industry, including in-depth evaluation for 15 industries, 30 industrial products which have been proposed for the roadmap for ecological innovation.
- 06 industries have been surveyed, evaluated and developed in pilot models to apply eco-innovation application, including beverage, paper and pulp, aquatic product processing, shoe and footwear production, ceramic and porcelain. In which, the criteria for pilot enterprises selection, guidance on the application of ecological innovation and training courses on the application of ecological innovation in industry have been developed.

- (b) Recommendations to the achievement of target:** At present, the model of ecological innovation is being studied and initially piloted for a number of industries (06) to assess the potential of application in industrial parks, industrial clusters and locations. In order to promote these activities, especially in industrial zones, it is necessary to combine with other models such as eco-industrial zone models implemented by MPI and UNIDO, which will be strongly implemented in

the coming time (2020-2024). In addition, it is advisable to continue developing the pilot model of ecological innovation in the studied fields

(5) Develop sustainable products production to key sustainable products; enhance environmental industry development.

Specific objective: the contribution of green industries, environmental industries, and waste recycling in GDP to increase to 42-45%.

(a) Developing environmentally-friendly products and services

In the key ministerial-level science and technology program on production and sustainable development in 2017 and 2018, the Ministry of Industry and Trade carried out a number of studies to develop the following friendly products and services:

- Develop a list of eco-friendly products with the goal of building environment-friendly products that are prioritized to be developed by 2025 (build selection criteria, identify market needs, current status of production and supply capacity). The project is expected to end in 2018. To contribute to the development of environmentally-friendly products
- Assess the status and propose programs of priority activities to improve competitiveness for Vietnamese businesses to meet the conditions of export products in an environmentally-friendly manner to improve enterprises' capacity, help enterprises to identify groups of products which have potential export to EU and US markets, identify technical barriers and propose programs to improve competitiveness for Vietnamese enterprises to meet the requirements.
- Research and develop regulations on certification of products from recycling activities in the industry and trade sector in order to complete the legal policy on the development of recycling industry, remove difficulties and problems for businesses on procedures for preferential treatment for products in accordance with the law. It is expected to develop a set of criteria and a process of evaluating product certification from waste recycling activities and apply to 02 product groups.
- Research and propose solutions to promote low-carbon labelling activities for industrial products of Vietnam in order to complete the legal basis to encourage businesses to participate in the low-carbon labelling program, develop a set of criteria for low carbon labelling industrial products and draft a low carbon label evaluation process for products and plan to apply the test for 2 industrial products. . Research and develop methods and applications to implement the calculation of carbon emissions in garment and footwear enterprises

Ministry of Agriculture and Rural Development:

- Strengthen supporting mechanisms and policies in production of eco-friendly products in the direction of a complete system of documents to reform administrative procedures to create conditions for enterprises to participate in production. Produce and trade agricultural products and foodstuffs safely and harmoniously with the world, contributing to overcome the cross-resistance situation of unclear responsibilities in assigning food safety management to enhance the law enforcement effect.

- The Ministry of Agriculture and Rural Development has submitted to the Government and the National Assembly for approval 04 laws on Forestry, Fisheries, Horticulture and Livestock; submit to the Government for promulgation 04 Decrees on Quality Management, Food safety and policies to encourage the development of cooperation in production and consumption of agricultural products 02 Decisions of the Prime Minister, promulgating 23 Circulars on Quality Control of Agricultural Materials and Food Safety.

(b) Promote the application of clean and environment-friendly technologies:

In order to promote the application of clean and environment-friendly technologies, in the past 3 years, the National Action Program on production and sustainable development has implemented the tasks of developing clean technology development orientations. Environmentally-friendly technology for textile - dyeing, paper and pulp industries, steel industry. These tasks focus on assessing the current state of manufacturing technology, trends in technology development, and orientation of clean, environmentally-friendly technologies for the three industries mentioned above.

For energy-efficient vehicles and equipment, on May 18, 2018, the Prime Minister signed Decision 24/2018 / QD-TTg promulgating the List and roadmap of energy-consuming devices and devices. The amount to be removed and low-efficiency generating sets are not newly built. This decision stipulates that equipment imported into Vietnam must meet minimum energy efficiency, including 11 home appliances, 4 office and commercial products, 3 industrial equipment products, coal and gas generating sets when newly built need to meet the efficiency regulations.

(c) Recommendations to the achievement of target and propose next activities

At present, there is no specific data on the contribution of green industries, environment industry, waste recycling in GDP, so it is impossible to assess the level of achievement of the goals. However, it can be seen that scientific research and policy making activities to develop the production of environmentally-friendly products and services are also the premise for the implementation of these activities at all levels and branches. Therefore, in the future, it is necessary to continue promoting the application of research results and dissemination of policies adopted in practice.

Some next activities should be strengthen as follows:

- Study and promulgate incentive mechanisms and policies to motivate enterprises to participate in industries producing environmentally-friendly products.
- Continue to carry out testing on low carbon labelling products and propose a process for evaluating low-carbon labelling for products.
- Issue a certification process for product certification from waste recycling and continue to expand test for groups of products from recycling.

1.2.3 Progress on Task 3: Greening distribution system and develop supply chain of sustainable products

(1) Application of cleaner production, economical and efficient use of energy in the distribution of products and services; phase out persistent bags use supermarkets, trade centers and traditional markets; enhance use of sustainable bags

Specific objective: Reduce waste generation in distribution activities: 50% of the enterprises in distribution sector is trained and implement cleaner production and energy saving solutions; Reduce 65% unfriendly environmental bags in the supermarkets and shopping malls (in comparison with the year 2010)

(a) The main results

Scientific research activities: In the Ministry of Industry and Trade's key scientific program on sustainable production and consumption in the 2017-2018 period of the Ministry of Industry and Trade, the following studies were carried out:

- Research, apply and disseminate solutions to improve the efficiency of energy resource use in supermarkets and trade centers in order to promote the application of solutions to build up potential and effective current status reports. resource results for supermarkets and trade centers; 02 pilot models applying solutions to improve energy resource efficiency (01 supermarket and 01 commercial center); 02 manuals to guide the application of solutions to improve the efficient use of energy resources at supermarkets and trade centers, organize training for relevant officials on applying to improve the efficiency of using natural resources quality for supermarkets and shopping malls.
- Studying and assessing the status of production and distribution and the buying behaviour of E10 bio-petrol and diesel fuel in Vietnam to propose solutions to promote the development of E10 biofuel and biodiesel fuel in Vietnam.

Activities to promote the reduction of the use of undegradable packages at supermarkets, trade centers and traditional markets; promote the use of non-biodegradable packaging with environmentally-friendly packages made from the central to local levels:

- At the central level, the Ministry of Industry and Trade is the leading agency that has organized many conferences and propaganda workshops on environmental protection in production, business, conferences connecting the supply and demand of environmentally-friendly products into retail systems to point out the harmful effects of persistent plastic bags and the benefits of substitutes.
- At localities According to the reports sent from the provinces and cities on the results of the implementation of the 2016-2018 period of the National Action Program on Production and Sustainable Development to 2020, with a vision to 2030, there are some provinces and cities above. The whole country has carried out propaganda activities to raise awareness of implementing solutions to greening the distribution system. Most activities have the Department of Industry and Trade as a focal point. Accordingly, local Departments of Industry and Trade coordinate with other departments and agencies to guide and propagate to supermarkets, trade centers and people's markets to limit the use of indestructible packaging to minimize generation of waste in distribution activities; promote the use of

non-biodegradable packaging with eco-friendly packaging: propagandize to raise awareness of the business community about the harmful effects of persistent plastic waste on the environment and encourage Use environmentally-friendly alternatives for each household. Through specialized inspections, the company introduced the introduction of environmentally-friendly bag packaging products to local plastic manufacturers and traders. Some provinces and cities have implemented pilot programs to reduce the use of plastic bags at some supermarkets and confectionery shops to switch to using environmentally-friendly bags. For example, Hai Phong city has implemented a program of reducing and mobilizing retail organizations and individuals to reduce the number of plastic bags to switch from using regular plastic bags to environmentally-friendly shopping bags. The results show that the quantity decreased from 450kg / year to 18,000 kg / year per business unit.

(b) Recommendations to achievement of target

There are no statistics as well as specific reports on the percentage of enterprises in the distribution sector that are aware, guided to implement and apply solutions for cleaner production and energy efficiency. The amount and reduction of non-biodegradable packaging at supermarkets, trade centers and traditional markets cannot be assessed. However, with the initial results as mentioned above, it is possible to continue promoting this work in the next stage, especially the mobilization of people and businesses to reduce the use of non-biodegradable packaging and promote alternative use with environmentally-friendly packaging.

(2) Research, pilot apply and expand distribution models of sustainable products; develop sustainable standards system and certification body for sustainable distribution models

Specific Objective: Apply green distribution certifications to distributors; successful develop and gradually expanse sustainable supply chain to key products in the economy;

(a) Main results

Scientific research activities: In the Ministry of Industry and Trade's key scientific program on sustainable production and consumption in the 2017-2018 period of the Ministry of Industry and Trade, the following studies were carried out:

- Study and propose a draft document regulating the assessment and certification of green retail distribution system, including the criteria, criteria, processes, procedures for evaluation and certification of the system. green retail system. At the same time, the model of state management and implementation of the green retail system is also proposed from the central level
- Research, evaluate the current situation and propose solutions to develop a sustainable supply chain for the beverage industry in Vietnam.
- Research and develop regulations on product certification from waste recycling activities in the industry and trade sector.
- Research and propose policies to support the development of sustainable supply chain development for Vietnam's industry (focusing on 02 dairy and plastic

industries): developing a set of criteria and methods price and policy framework for sustainable chain development

- Developing a manual on environmental management in goods distribution establishments ”to overview the environmental issues in the operation of the distribution system and state management organizations on environmental protection ; environmental management and protection in the stage of preparing construction investment for the distribution system; environmental management and protection in the stage of building construction for the distribution system; environmental management and protection in operation phase of distribution system

Develop and disseminate replicable sustainable supply chains:

Currently, expand distribution models of sustainable products is mainly concentrated in the agriculture sector. The supply chain of safe agricultural, forestry and fishery product is certified according to Decision No. 3075 / QD-BNN-QLCL July 20, 2016 by Ministry of Agriculture and Rural Development. In order to implement the national strategy for NAP on SCP, the Ministry of Agriculture and Rural Development has directed and urged localities to replicate the model of a safe agricultural, forestry and fishery supply chain in nationwide, ensuring an increase for the number of chains, the number of safe products controlled by the chain, the number of retail locations of products. According to a report of the Ministry of Agriculture and Rural Development, up to now, there have been 63/63 provinces and cities under have developed the supply chain model with 1249 chains, 1450 products, and 3.181 sale locations with controlled products in series. Products on the market are stamped with information about the applied standard (VietGAP, HACCC, food safety requirements) and original information.

However, the replication of a sustainable supply chain for safe products still faces difficulties such as:

- The criteria for safety products has not been issued leading to lack of synchronization in localities
- The production cost has been being increased when safe products have to certify
- As price of products are high so consumption of these products faces difficulties. It is not easy for consumers to recognize which is safe products and it makes consumers unsure to buy safe products.
- Costly in chain certification

(b) Recommendations to achievement of objectives and propose next activities

With a lot of research has been being carried out on evaluation, criteria development, certification of green retail distribution system, sustainable supply chain for Vietnam's beverage industry, sustainable supply chain for the Vietnamese industry, expands of supply chains on agriculture, forestry and fishery food in 63 provinces and cities across the country, the target may be achieved. With such a foundation, it is possible to promote and further expand the models of environmentally-friendly production and distribution in the future. There is also a need to further promote the following activities to ensure the implementation and replication of sustainable supply chains:

- Promote research and recommendations Issue guidelines including criteria and validation procedures for green retail distribution systems, sustainable supply chains for the beverage industry and sustainable supply chains for the industry (focusing on 2 industries of milk and plastic).
- Strengthen support for the expansion of safe agro-forestry and food supply chains: control, research, and promulgate criteria for safe agro-forestry and fishery products to create comprehensive management At the local level, research and develop supportive policies for businesses implementing safe supply chains, increasing the identity of safe products, creating reliability for consumers, and strengthening communication with producers and consumers about the benefits of safe products, research solutions to increase connectivity among actors in the supply chain.

(3) Promote sustainable links between raw material suppliers - manufacturers - distributors - consumers in the production, distribution and use of environmentally-friendly products and services;

Currently, sustainable links have been established between raw material suppliers - manufacturers - distributors - consumers in the production, distribution and use of safe agricultural products by many businesses. has invested in cooperative agriculture, farmers organize safe food and agricultural supply chains on a large scale: Vingruop, Dabaca, Hung Nhon Company ... Vietnam Cooperative Union has also organizing supermarket system linking with more than 100 agricultural cooperatives to form chains in safe food supply. Initial results show that: it has created cohesion in production and business activities of actors in the chain; a number of farming / husbandry / aquaculture establishments are VietGap certified; Slaughter / processing facilities are certified to meet food safety requirements according to Circular No. 14/2011 / TT-BNNPTNT and apply HACCP quality management system; (iv) Disseminate and raise awareness about sustainable production and consumption for those participating in the distribution system and supply chain of products.

1.2.4 Progress on “Improving market access and promoting export of key products of Vietnam towards sustainability

Objective: To raise the proportion of environmental-friendly products and services in key export products of Vietnamese; Exporting enterprises are provided with information, guidance and support in application of importer’s standards in management, environment and sustainable;

(1) Assessing the market potential and the ability of Vietnamese exporting enterprises to provide environmental-friendly products; research for export opportunities and participating in global value chains for Vietnam’s key products labelled with Vietnam green, energy-saving and other

(a) eco-labels

The Ministry of Industry and Trade is presiding over the implementation of the National Trade Promotion Program. The main objective of the National Trade Promotion Program is to enhance trade promotion activities, develop exports, domestic markets,

trade in mountainous areas, borders and islands. Within the framework of this program, Vietnam has promoted the export of eco-friendly products such as biodegradable plastics, products from renewable materials (bamboo, wood, paper) & agricultural and fishery products⁽¹⁾. However, availability of eco-friendly products in Vietnam is still limited, estimated at just 5% of Vietnam products eligible for eco labelling⁽²⁾. In the national environmental protection strategy up to 2020 and vision to 2030, Vietnam strives to have eco-labels in accordance with ISO 14024 standard for 100% of exported products and 50% of domestic consumer goods by 2030. A number of related activities are also widely deployed in localities e.g. building websites to provide information for global integration and creating e-commerce platform to facilitate businesses in products introduction and promotion.

In order to promote the export of eco-friendly products, the Ministry of Finance issued Circular No. 128/2016 / TT-BTC of August 9, 2016, stipulating the exemption and reduction of export tax on; environmentally-friendly products; products derived from recycling and waste treatment activities are specified in Decree No. 19/2015 / ND-CP. The Circular stipulates the exemption of export tax for environmental-friendly products described in the Export Tariff and with a certificate of Vietnam Green Label in accordance with guidance of the Ministry of Natural Resources and Environment and a 50% reduction of Export tax for products derived from recycling and waste treatment activities named in the Export Tariff Table certified by competent state agencies under the guidance of the Ministry of Natural Resources and Environment.

In this regard, in 2017, the Import Export Department - Ministry of Industry and Trade was tasked to study for and developing and elaborating international trade policies for supporting the development of environmentally-friendly products. in line with Vietnam's roadmap for global integration⁽¹⁰⁾. The study conducted surveys to find support demands for international trade policies for the environmentally-friendly products of Vietnam's export enterprise (148 enterprises), as well as to propose a content of import and export policies to promote the development of environmentally-friendly products in Vietnam.

(b) Assessment

There is *no comprehensive study on the market potential* and the ability to supply environmentally-friendly products of Vietnam exporters.

(2) Enhance the competitiveness of key export products, improve market access and ability to meet standards in environmental and sustainable development of Vietnam's key products

(a) Detailed Activities

Export Competitiveness Enhancement Program for Vietnamese SMEs aims to improve exports competitiveness of Vietnamese Small and Medium Enterprises (SMEs). Thereby, promoting export turnover and developing the main export sectors of Vietnam through the Trade Promotion System throughout the country. In addition, this Program also aims to have other outcomes such as strengthening and capacity building of local trade promotion centers and other trade promotion organizations to effectively support SMEs; Establishing Vietnam National Export Council; Strengthening the capacity of Vietnam Trade Promotion Department, the focal point of Vietnam Government on trade promotion activities at national scale⁽¹¹⁾.

Decision No. 1137 / QD-TTg dated 08/03/2017 approved Project of "Improving Vietnam's export capacity by VN 2020 and vision to 2030" with the goal in 2020,

improving the quality and added value of in-demand export products, the added value of key agricultural and aquaculture export products increased by an average of 20% per year compared to the present and gradually increase the proportion of agricultural and fishery exports to developed economies and striving to achieve an annual export growth of 8% in 2016 – 2020. The decision also provides a list of products for competitiveness improvement. The products are in priority for competitiveness improvement include agricultural and aquaculture products, of which in-demand export products are: rice, coffee, rubber, aquatic products, pepper ... Processing industry sector currently has in-demand export products: Textile; Footwear; wooden; phones and accessories; computers, electronic products and components; Goods will be in-demand for export are: Textile materials, footwear; plastics and plastic products; fertilizer; chemicals.

The main solution to achieve project objective is to restructure production and export modes in which, for agricultural products, shift from scattered small production to large-scale concentrated production, quality management through the chain i.e. from farming to transportation, processing, storage and consumption; For industrial products, the transition from processing only to production with high value-added in goods chain is required.

Regarding the export transformation, changing from export through intermediary to direct export; transfer from export under FOB terms to export under CIF terms.

In order to successfully implement the set objectives, the Project recommends main set of solutions e.g.: Restructure production through changing production and export modes; Restructuring export products towards increasing the proportion of high value-added products; Improving the quality of exported products; Developing supporting industries for industries having in-demand export products; Strengthening the role of FDI enterprises in improving the competitiveness of Vietnam's exports products; To consolidate and expand markets for export goods; Strengthening development of national brands, brands of export products and enterprises; Improve national competitiveness, create favorable conditions and reduce costs for businesses; Enhance capacity of export production enterprises, especially small and medium-sized enterprises; Improve capacity of industry associations, goods associations.

(b) Assessment

Due to the implementation period of this project is not long, there are currently no specific data to evaluate the criteria set out in the Decision. Currently, the General Statistics Office of Export provides data for 2017 only. It shows that the export value in 2017 increased by about 4% compared to 2016.

(3) Providing technical assistance to enterprises in developing and applying for certification of international standards, and standards required by importers in environment and sustainable development, building sustainable development enterprises models

(a) Detailed activities

- Developing and disseminating a Handbook on implementation of Vietnam's

environmental commitments in accordance with WTO, TPP, FTAs rules; Disseminate the latest Incoterms knowledge to businesses to avoid risks for businesses involved in import and export.

- As regards to agriculture, local governments provide policies to support farmers in cultivation process in line with advanced agricultural programs such as VietGap, System of Rice Intensification (SRI) and building sustainable production models for some agricultural products and for export. To date, 29 provinces have applied SRI with a total cultivation area of over 395,000 ha. Additionally organic agriculture is now on the rise as Vietnam has potential in organic agriculture development with total areas available for organic farming in 2014 estimated about 63 000 ha⁽¹⁸⁾. Export of organic agriculture products has increased in quantity and in number of products.
- Local governments actively develop chains which linkage production and consumption of agricultural and safe food products.
- Vietnam Business Council for the Sustainable Development (VBCSD) has been established in the Vietnam Chamber of Commerce and Industry (VCCI). This council has launched Corporate Sustainable Index (CSI), which starts deploying from large corporate and engages the participation of SMEs. Every year on Vietnamese business day (October 13), this Council in cooperation with other ministries such as the Ministry of Labor, Invalids and Social Affairs and the Vietnam General Confederation of Labor to publish a list of sustainable enterprises under CSI. In addition, VBCSD has also established a Center for Circular Economy (CE) to initially introduce the concept of CE to businesses in Vietnam.

(b) Assessment

- There is no baseline data for environmental-friendly products and services in key export products. Based on MONRE data, there is no green labels for key export products in 112 products certified with Vietnam green labels. The criteria for environmental-friendly export products of Vietnam's is mainly to comply with technical requirements set by importers.
- There is no comprehensive study on market potentials and ability to supply environmental-friendly products from Vietnam exporters.

1.2.5. Progress on Task 5 “Changing consumption behaviour toward sustainability and boost sustainable lifestyles”

Objectives: Consumers and the community are provided with sufficient information on environmentally-friendly products, sustainable production and consumption activities;

Communication is important activity in SCP National Action Program to build an environment-friendly living lifestyle that promote sustainable production and consumption in communities, businesses and social organizations. From 2016 to now, ministries, departments and local governments have actively implemented communication activities as follows:

(a) Activities at the Central Level

- Along with communication campaigns deployed in programs of Strategy for Cleaner Production in Industry there were about 125 television reportages, 404 news published in newspapers, online news and 4-6 bulletins with topic "GREEN

TECHNOLOGY" issued annually.

- Cleaner Production and Sustainable Consumption Production Offices also issued banners and leaflets through which local Departments of Industry and Trade can use them to carry out communication activities in their localities. In addition, every year, the Office organizes a series of seminars assign officials and experts to introduce cleaner production, sustainable consumption, and environmental protection.
- The Ministry of Industry and Trade actively implements the Program of “Vietnamese use Vietnamese goods”. In the past 10 years, the campaign carried out by the Industry and Trade sector has brought positive results, contributing to the socio-economic development: The ratio of Vietnamese goods in domestic supermarkets is maintained at a high level of 90% -95%; The proportion of Vietnamese goods in foreign supermarkets accounts for 60% -90%; For traditional retail channels, the proportion of Vietnamese goods in markets and convenience stores accounts for 60% at minimum.
- Vietnam has issued and implemented a number of regulations on criteria and procedures for certification of green labels. Green labels and green procurement are interconnected. Green label or eco-label is one of the measures to adjust enterprise's goals for the environmentally-friendly products and the consumers behaviors.

(b) Green public procurement

Objectives: to increase the proportion of environmentally-friendly products and services in the Government's spending patterns; improving legal framework and guidance in the implementation of green public procurement (GPP);

Green public procurement implementation can bring many benefits of which the most highlighted one is to create motivation for innovation and development of new environmentally-friendly products. Green public procurement contributes to shift to more sustainable consumption and production chains; at the same time, save on procurement costs and support the implementation of international environmental and sustainable development agreements. Public procurement accounts for an average of 20% of Vietnam annual budget (equivalent to app. 21-22 billion USD / year), but green public procurement is said to be in the initial stage i.e. in stage of “Urge to apply”. It has happened as a result of policy gaps from GPP. Specifically, in Bidding Law 2013 there was no criteria or regulations on green procurement except the technical requirements for construction package or purchase of goods need to be complied with environmental standards. Public procurement is the largest consumer in market of green products, but at present procurement and use of green products have not been prioritized. Although it is regulated that the state authorities when purchasing public goods have to give priorities to environmentally-friendly products, but the enforcement so far have not yet been effective. Therefore, it is necessary to provide appropriate policies and mechanisms so that state agencies are at the forefront of green procurement to involve private sector to participate. However, the research results on green procurement of Vietnam conducted by Vietnam National Environment Administration and KEITI (2017) show that⁽¹²⁾, the efforts of relevant agencies to implement sustainable public procurement in Vietnam is well noted. The project also aims to have a draft report which recommends amendment of the legal framework for green public procurement; Draft guideline for green public procurement in Vietnam; Draft Roadmap for Green Public Procurement.

(c) Green label

The Vietnam Green Label Program has been implemented nationwide since March 2009, aiming to continuously improve and maintain the quality of the living environment through reducing energy, material consumption and waste generated by the production, business, consumption processes and services. Vietnam green label is a certification to confirm that the products met requirement set by MONRE. Vietnam's green label attached to products are better products of the same type in respect to energy saving and cause less negative impact to environment. With the aims to enhance suitability in use of natural resource and environment protection through the best practices in production and consumption of environmentally-friendly products, the certification mechanism of green products is considered as an incentive to encourage businesses to reduce emissions at the source, and this mechanism will also help raise consumer awareness when choosing to buy products. Accordingly, the integration of development and promotion of the Green Label Program has an important role in raising awareness of businesses in environmental protection, minimizing the use and discharge of prohibited chemicals, including POPs, unintentional POPs (U-POP) and mercury (Hg).

To promote green label development, On December 23, 2013, MONRE issued Decision No. 2604/QĐ-BTNMT on establishing an Advisory Council for Vietnam Green Label Program. So far, 17 sets of Green Label Criteria have been developed and published by MONRE and 112 types of products have been certified with Viet Nam Green Labels⁽¹⁾. Therefore, it can be seen that the results of research on green procurement in Vietnam conducted by Vietnam Environment Administration and KEITI (Korea) have set the goal to reach 300 products certified with Vietnam Green Labels in period of 2020-2030 is relatively feasible;

However, so far, there is no green label has been certified and no green label criteria available for distribution and supply chains. In this regard, MPI, in coordination with UNDP, has conducted in-depth research on green supply chains in Vietnam, which provided the current status of green supply chains in Vietnam, assessing the positive impact factors as well as the barriers that help improve the greening supply chains for three selected chains: cafe, textiles and cement⁽¹³⁾.

(d) Energy Label

The Government issued Decision No. 51/2011/QĐ-TTg dated 12/12/2011 providing for the list of equipment and vehicles subject to energy labelling, applying minimum energy efficiency level and the roadmap for implementation and after that a number of equipment and vehicles was added in Decision 04/2017/QĐ-TTg dated 09/03/2017. Up to now, there have been 4 groups of equipment subject to compulsory energy labelling, including home appliances, office and commercial equipment, industrial equipment and transportation vehicles. The energy labelling program of the Ministry of Industry and Trade has been successfully implemented in recent years, helping to gradually transform the market of energy consumption equipment and devices from low to high energy efficiency. By the end of 2015, the Ministry of Industry and Trade has certified energy labels for over 8,000 product categories, affecting tens of millions of energy-consuming and energy-saving devices. Specifically, in the period of 2011-2015, the saving rate is 5.65%, equivalent to the total energy saving of 11.2

million TOE, an increase of 2.25% compared to the period of 2006-2010.

At local level, provinces and cities have taken and different approaches to propagate and motivate businesses and people to change consumption behaviours, towards sustainable lifestyles and at the same time, help consumers to access to environmentally-friendly products and services. In addition, the priority is given to provision of sufficient and accurate information on products and services to consumers. Some typical activities in provinces and cities are as follows:

- Green consumption campaign: Has been in operation for 10 years (2009-2019) with many activities to promote, propagate and engage consumers, manufacturers and distribution chains towards sustainable consumption and production e.g. " Say no to plastic waste, use of alternative products that can be reusable and environment-friendly". The campaign has gained strong response from communities and thereby, promote advocacy to help people in recognizing the environmental friendly products as well as manufacturers and business enterprises for green products; support communities to enjoy consumers 'rights - the priority to use green businesses' products, which is good for the environment and the health of the community.
- Green buildings: Green buildings is considered a good solution to reduce energy and water consumption, reduce energy content and to bring benefits to the people and the investment cost is not much increased (about 5 %) and also reduce operational costs. However, according to Vietnam Green Council, there are less than 100 certified green building in Vietnam⁽¹⁶⁾ mainly due to low consumers' awareness.
- Use only biodegradable plastic packaging in supermarkets and commercial centers such as Vinmart, Lotte, BigC, Aeon Mall, L'Space etc.
- Design packaging, packaging for agricultural products as well as create markets for a number of consumer products manufactured from renewable materials; Printing stamps on traceability of product origins, reducing the use of non-biodegradable packaging at supermarkets and trade centers: this activity is being replicated in supermarkets and trade centers of big cities e.g. Ho Chi Minh City set the goal by 2020, all supermarkets and trade centers must say no to plastic waste;
- Provinces enhance development modes for supply chain and traceability of products origins, especially for agricultural products and foodstuffs, transparent information with products origin stamps by using QR codes has gained its popularity.
- Integrating the contents of training on SCP in vocational training courses at colleges and vocational schools as well as in subjects at high schools.

(e) Assessment

- Green products, environmentally-friendly products, sustainable living lifestyles is a public interest in Vietnam. However, Vietnam does not have enough producers to meet the increasing demand for eco-friendly products such as enterprises producing biodegradable plastic products and green buildings.
- Awareness and resources for development of green supply chains is limited. This has been addressed in enterprises engaging in export, as described above, as a results of meeting stringent requirement set by importers.

- It is necessary to revise the legal framework on green public procurement and develop a guideline based on outcomes achieved by project between MONRE and KEITI on GPP.

1.2.6. Progress on Task 6 “Implementation of waste reduction, reuse and recycling

(1) Organize communication activities, awareness raising about waste recycling and reuse for communities and businesses. Guide and provide technical support for conducting reducing, recycling and reusing of solid wastes generated by households, production, trade and services activities.

(a) Detailed Activities

Number of activities in communication, awareness raising, technical training about reduce, reuse and recycling has been delivered to communities and businesses e.g. information on the mass media, educate the community, organize training for businesses and integrate knowledge of reduction, reuse and recycling into general education programs. Some detailed activities are:

- Cleaner Production and Energy Efficiency Programs: Ministry of Industry and Trade has built, promulgated, and disseminated 20 technical guidelines on CP for different industries; organizing 212 seminars and training courses; 45 in-depth training and building of 3 databases for cleaner production in industry; Support rapid audits to identify opportunities to apply CP and EE for 419 enterprises; detailed audits for 102 enterprises; Build two demonstration models to apply cleaner production. The program so far has built 134 reportages and issued 135 000 leaflets on cleaner production and energy saving.
- Q&A manual on environmental protection in Industry and Trade sector.
- Conduct EIA and recommends solutions for pollution control in craft villages in Vietnam.
- Building a Handbook for environmental management in metallurgy, leather and footwear, and goods distribution business.
- Annually, making 04 newsletters on environmental protection; 04 newsletter on cleaner production.
- Several ministries such as Ministry of Industry and Trade regularly organize competitions “Environmental Protection in the Industry and Trade Sector” to promote the application of 3Rs.

(b) Assessment

- Technical support is mainly given to manufacturers, not to services and trade business (supply chain).
- It is necessary to promote 3R awareness raising in rural areas where there are many environmental issues (waste from craft village, packaging from pesticide and fertilizers) and also have potential to develop 3R effectively (biomass generated from crop and animal husbandry)

(2) Develop and replicate 3R pilots in communities and enterprises

(a) Detailed Activities

3R development has been increased in manufacturing business and communities, as follows:

- Ecological industrial parks (EIP) and industry symbiosis: have been successfully deployed in some industrial parks such as industrial parks in Ninh Binh, Da Nang and Can Tho with participation of total of 72 enterprises. Especially, Hoa Khanh IP (Da Nang) is a successful pilot of converting an existing IP to an EIP and implementing industrial symbiosis solutions. This success has contributed to scaling up to 326 existing IPs (as of 2017) in Vietnam. Currently, this model has been applied in Ho Chi Minh City Hi-Tech Park and Sonadezi Long Thanh Industrial Zone (Dong Nai). In addition, the International Finance Corporation (IFC) has cooperated with the Ministry of Planning and Investment to research and develop a Technical Guideline Report on eco-industrial parks in order to provide the criteria and necessary steps to transform Vietnam existing industrial zones to EIP. This technical report also works out ecological opportunities and solutions for industrial zones in Vietnam. The symbiosis opportunities in waste exchange, circulating and recycling is an effective solution for the environment protection but also creates new business opportunities. Starting in June 2018, IFC, together with the VNCPC, started to develop the *National Guidelines on Building Eco-Industrial Zones*.
- Eco-innovation: is an effective solution to contribute to waste reduction, reuse and recycling, especially for SMEs. Through a number of projects such as the ASEM project on eco-innovation for SMEs, the project of the Center for Supporting Eco-Innovation for SMEs, eco-innovation has gained its popularity. MOIT has research to evaluate the implementation potential of eco-innovation in the industry which includes: review current policies and regulations related to eco-innovation, the potential for application of eco-innovation in industry; it focuses on evaluating and conducting in depth analysis for 15 industries; Roadmap for eco-innovation implementation for 30 industrial products. In addition to assessing the potential for applying eco-innovation in industries, 06 industries have been surveyed, evaluated and built into a model of eco-innovation application which are: beverage industry, pulp and paper, aquaculture processing, footwear and footwear manufacturing, industrial porcelain and ceramics. In addition, criteria for selection of pilot enterprises have been developed, guidelines for application of eco-innovation, and training courses on application of eco-innovation in industry.
- The program "For an ocean without plastics" was successfully implemented in Da Nang from 4/2018 to 4/2019 and has the prospect of replicating to the Central provinces. "The program has implemented more than 160 training and communication programs for key people at district, ward, household, youth, student and fishermen in Son Tra and Thanh Khe districts (Da Nang City).
- Earth Day Compostable (EDC) campaign to reduce the use of plastic bags and replace plastic bags with biodegradable bags made from corn starch takes place on a nationwide scale. Participating in this campaign are dozens of retailers, businesses, urban communities and organizations e.g. supermarket chains Lotte, Big C, AEON Mall, Intimex, L's place, Unik Mart, Seika, Teekiu, V + Hoa. Binh and Nam An; Saint Honore restaurant chain, Fargreen sustainable green farming community; Clean & Green NGO, MCD; Ecopark and Ciputra urban areas.

- **Biogas digesters:** This is one of the solutions for sustainable management of animal and households waste in rural areas. It has numerous benefits such as generate energy for lighting, heating, and electricity generator; residues after fermentation are used as to fertilize that reduce the use of chemical fertilizers. In addition, during fermentation under anaerobic conditions, bacteria that cause disease in humans were removed ⁽¹⁴⁾. The national strategy on clean water supply and sanitation aims to have, by 2020 about 45% of farms use biogas digesters for its waste management. Particularly, the Biogas program for livestock industry in Vietnam, funded by the Dutch Government, has built 15,678 biogas digesters up to 2011 ⁽¹⁵⁾.

(b) Assessment

The model of eco-industrial parks, eco-innovation and plastic waste programs are good models that need to be further developed and replicated. Especially the biogas digesters in rural areas is effective measures to recycle biomass waste into clean energy and need to be replicated

(3) Integrated solid waste management in accordance with market mechanism

(a) Detailed Activities

Over the past time, the management and treatment of solid waste has received a lot of attention from all stakeholders. On 07 May 2018, the Government approved the adjustment of the National Strategy on integrated solid waste management by 2025, with a vision to 2050 in which the integrated solid waste management includes 3R is a principle approach in solid waste management. Besides the strategy also stipulated the socialization of waste management activities.

According to the Ministry of Natural Resources and Environment, the amount of waste collected includes domestic waste, industrial waste and medical waste in big cities like Hanoi and Ho Chi Minh City of which only 10% is reused and recycled, while about 50-70% of the waste can be recycled and create new energy sources ⁽⁷⁾. Waste can be used as a resource by promoting reuse and recycling, contributing to resource efficient use and reducing negative environmental impacts. Currently the number of garbage treatment companies in Vietnam is too small, leading to the waste of "waste resources". With more than 90 million people, each year the volume of waste increases by 10%, meaning hundreds of thousands of tons of waste are wasted. Currently, most of the waste (except hazardous waste) is collected and treated by landfilling which is very wasteful and caused adverse impacts to environment. If the amount of waste is recycled and reused, Vietnam would save a significant quantity of resources and it has been proven through the development EIP and symbiosis industry. Some examples are: pulp and paper mills generated large volumes of non-hazardous industrial combustible waste. If it would be used for co-generation in the boilers for energy recovery, the amount of industrial solid waste generated can be sufficiently supplied more than 50% of the fuel needs in boilers ⁽⁸⁾; Slags can be used to produce building materials, pressed into high density concrete used for land reclamation in sea, dykes for river and sea or embankments for sweet water reserves during dry season in the Mekong Delta ⁽⁹⁾.

Some specific activities include following:

- Currently, there are 57/63 province /cities have approved plan for solid waste

management.

- The project “Strengthening the integrated waste management of urban solid waste (2014-2018) supported by the Japan Cooperation Agency (JICA) in collaboration with the Department of Technical Infrastructure from - Ministry of Construction to implement with the pilot. in 2 areas: Hà Nội and Thừa Thiên Huế. The overall long-term goal of the project is to establish a nationwide integrated solid waste management system in accordance with the National Strategy for Integrated Solid Waste Management⁽¹⁷⁾. Currently, JICA is also considering to support Danang to implement the 3R project.

(b) Assessment

- In fact, integrated management methods including solutions to reduce, reuse, recycle and recover energy from waste will be effective solutions for solid waste management in context of sustainable development.
- Based on lessons learned from JICA-funded 3R Project in Hanoi (2007-2009), 3R should have the right approach to be successfully applied and replicated.

(4) Weight-based charges for generated solid waste

(a) Detailed Activities

The Government promulgated Decision No.174/2007-ND-CP regulating prices charged for solid waste (40000 VND/t) and hazardous waste (not to exceed 4 000000 VND/t). But practically, for domestic solid waste, only environmental sanitation fee is applied and this fee only covers 4% of waste management cost (in Ho Chi Minh City). As for hazardous waste, due to a limited number of facilities available for treatment of hazardous waste, the treatment cost is elevated which lead to many establishments evade responsibility for handling hazardous waste generated.

(b) Assessment

Weight-based charges for solid waste generated is recommended to apply for industrial waste on the basis of total cost for integrated waste management. As for domestic waste charging by weight generated might be not feasible, instead charges should impose per person/household based on total cost for waste recycling and treatment. It is necessary to gradually reduce and eventually eliminate the subsidy for solid waste disposal, in accordance with principle “polluters need to pay”.

1.3 Lessons learned from these implementation results for the proposed NAP SCP (2020-2030)

(1) Advantage

- The national action program on SCP was established in the context of many national target programs and national strategies towards sustainable development such as the national program on energy saving and energy efficiency, Strategy for application of cleaner production in industry sector, National strategy on environmental protection, National target program in response to climate change, national program on green growth etc. The activities in national action program on

SCP are integrated or implemented simultaneously in other national programs and strategies. Therefore, the SCP programs can enhance positive outcomes and lessons learned from these programs, contributing to the implementation of sustainable development goals.

- SCP is an interesting and new program lead to be advantageous in communication and community education.

(2) Difficulties and challenges

- Currently, the National Action Plan on Cleaner Production has just entered the third year of implementation. The specific goals of the Program have not been fully enumerated, making it difficult to assess the effectiveness of the Program. There is an insufficiency in monitoring and evaluation system, especially for policy and regulations.
- Funding for the National Action Program on SCP is limited, there is no specific budget line for the Program. The ministries, branches and localities have to mobilize and seek funding sources for the implementation of the Program. Therefore, the implementation results of the Program are limited, under research stage and not yet implemented.
- The SCP trend is changing, especially the regulations of Vietnam's main export markets are getting stricter. Consumers' requirements for products and services are constantly increasing, requiring companies and production business and service providers to not only raise awareness and responsibility in safety and environment, but has extended responsibility for products and services by following LCA approaches.
- Lack of research on products and services based on LCA and CE approaches to work out appropriate policies to address shortcomings during implementation of SCP activities.
- The proposed targets should be based on research/field surveys to be feasible

(3) Recommendation

- There is a need to push implementation of green procurement by proposing a separate circular of the Ministry of Finance in accordance with the Bidding Law should be issued.
- There is a need to promote and complete the policies on recycling and reuse of waste by issuing support policies to recycling activities (policies to control the quality of recycling activities, policies to create a stable source of raw materials for this industry, such as policies attach the responsibility of the manufacturer such as enforcing the recycling rate for the manufacturer, the product packaging policy and the policy of encouraging people to recycle); issuing circulars guiding the implementation of symbiotic technology industrial zones converted into eco-industrial park; Develop specific policies for specific recycling materials.
- There is a need to develop sustainable model: (i) Promote sustainable eco-tourism models with the participation of all stakeholders, benefits of local communities, especially ethnic minorities. Improve policies and mechanisms including policies on forest environment pricing, revenue use policies, policies on joint venture capital contribution and cooperation in ecotourism business activities and a set of evaluation criteria, training to improve capacity, strengthen the development of

specific products, promote advertising and marketing activities (ii) Promote the development of eco-industrial parks by converting existing industrial parks into eco-industrial parks which enhance the industrial symbiosis by reusing waste and wastewater after treatment, and promote effective implementation of co-processing the replacement materials in cement plants.

- There is a need to push the implementation of eco-innovation: continue to set the criteria for eco-innovation for the 30 selected products under Ministry of Industry and Trade's eco-innovation program and cooperate to implement the eco-innovation in EIP model.
- There is a need to push developing green labels: Study and promulgate incentive mechanisms and policies to motivate enterprises to participate in industries producing environmentally-friendly products.
- There is a need to promote green supply chains: Issue guidelines including criteria and validation procedures for green retail distribution systems, sustainable supply chains for the beverage industry and sustainable supply chains for the industry (focusing on 2 industries of milk and plastic); Strengthen support for the expansion of safe agro-forestry and food supply chains.
- There is a need to have comprehensive study on market potentials and ability to supply environmental-friendly products from Vietnam exporters.
- Encourage export business apply for green labels certification for key export products.
- Encourage supply chain to apply for green label and work out green label criteria for distribution and supply chains.
- It is necessary to revise the legal framework on green public procurement and develop a guideline for GPP.
- The SCP program should create a Champions in the key programs/activities to have a fast diffusion.

2. International trends and experience in SCP

Sustainable consumption and production (SCP) has emerged as a practical and systemic approach to sustainability issues in the global context. It started in the 1970s as an end-of-pipe solution to address the effects of industrialization on the environment and society, culminating in the first UN Conference on the Human Environment in 1972 (Akenji, Bengtsson and Schroeder, 2017)¹. Gradually SCP evolved towards a cleaner production approach to policy making in the 1980s to increase the efficiency of natural resources use and waste minimization and to reduce pollution impacts in the manufacturing sector. Towards the 1990s, SCP shifted towards a more systemic approach involving eco-efficiency through the life-cycle approach to analyze the impacts of products and services through the involvement of all stakeholders and in all stages of production and consumption. Moreover, the modern concept of SCP considers integration of the environment and development to address the dual challenges of environmental crises caused by modern civilization and to improve the living and wellbeing of those in low-income countries. SCP also enriches and broadens the discussion on national development trajectories to open the conversations about different options in different countries (Akenji, Bengtsson and Schroeder, 2017)². Thus, the framing, needs, priority areas and means to achieve SCP or sustainable development differ from one country to another.

The Asia-Pacific region has emphasized sustainable consumption and production through programs such as the 10-Year Framework for SCP³, the Asia-Pacific Roundtable on SCP⁴, and the Asia-Pacific Roadmap for SCP (2017-2018)⁵, amongst others⁶. The European Union has had an SCP Action Plan since 2008⁷ and a Roadmap Towards a Resource Efficient Europe since 2011⁸. These platforms provide comprehensive information on SCP actions regionally and internationally.

2.1. China

Circular economy is the key concept introduced by China to enhance SCP. The development of circular economy in China is progressed by four stages (Li and Lin, 2016)⁹. Before 1992, the focus was on the comprehensive utilization of resources of waste gas and water and solid waste. In the second stage 1991 – 2002, the approach focused on cleaner production and shifted towards the sources of prevention. In the

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https://pdfs.semanticscholar.org/8808/add3eefcf58b2b0537381e7bc241554e4c3cc.pdf?_ga=2.209616980.71683634.1567074979-1366112423.1567074979

³ <https://www.unenvironment.org/explore-topics/resource-efficiency/what-we-do/one-planet-network/10yfp-10-year-framework-programmes>

⁴ <http://www.aprscp.net>

⁵ <https://www.unenvironment.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/asia-pacific-roadmap>

⁶ <https://www.oneplanetnetwork.org/>

⁷ https://ec.europa.eu/environment/eussd/escp_en.htm

⁸ https://ec.europa.eu/environment/resource_efficiency/about/roadmap/index_en.htm

⁹ http://www.eria.org/RPR_FY2014_No.44_Chapter_7.pdf

third stage 2002 – 2008 which marks the pilot stage of circular economy in selected cities and provinces. From 2009 until today, the pilot projects have been scaled up and developed more rapidly. China introduced Circular Economy Promotion Law in 2009 and followed by State Council Communication Regarding the Circular Economy Development Strategy and Action Plan in 2013. The action plan focused on three sectoral policies on industrial, agricultural and service sectors. The key targets are to increase major resource which are three energy resources, nine mineral resources, and wood and industrial grain output rate by 15% and to expand the circular economy industry's total output into 1.8 trillion yuan as indicated in the Twelfth Five Year Plan (2011 – 2015) (State Council, 2013)¹⁰. Other than production instrument, China also introduced “Zero Waste City” pilot program in 2019 to create an urban development model that minimize the waste in the whole lifecycle led by Ministry of Ecology and Environment. In the next two years, it will develop the indicators and a comprehensive management mechanism and standards for the pilot projects.

The experience from China on circular economy was implemented as mandatory measures through law enforcement in which detailed regulations and indicators are determined. It combined both the top-down approaches and also the knowledge gained from domestic talents and international experiences (Zhu et al, 2018¹¹). In application, it applied in broad scope on utilizing circular economy as the key concept for transformation of the economy and society beyond resource management to be incorporated into socioeconomic development strategy (McDowall et al, 2017)¹². Moreover, it identifies industry specific target and action areas in the action plan. It utilizes the concentration of production base such as in Eco-parks were utilized as the instrument to create industry symbiosis and to utilize the concentration of production to ease inter-companies and industries cooperation and resource efficiency. Lastly, it effectively uses pilot projects in local government level to test new approaches to identify best practices before scaling up from cities to individual companies as well as in other parts of the country.

2.2. Germany

Germany's main SCP framework emphasize on resource efficiency on the production side. It introduced the Closed Cycle Management Act in 1996 to improve the resource efficiency through waste prevention and management. The broader framework is National Action Plan for Sustainability that with measures for textile, recycling paper and car fleet with targets by 2020. German Resource Efficiency Program II – Program for the Sustainable Use and Conservation of Natural Resources (Progress) promotes sustainable use of natural resources. The key target indicators include to double raw material productivity by 2020 relative to 1994 and increase the recycling rate of municipal solid waste to over 65% from 2020, increase the collection of rate of waste electrical and electronic waste to 65% from 2019 and 50% increase in the quantity of separately collected organic waste and high-quality recycling and recovering by 2020 relative to 2010. For area specific instrument to promote sustainable procurement,

¹⁰ http://www.gov.cn/zwgk/2013-02/05/content_2327562.htm

¹¹ <https://onlinelibrary.wiley.com/doi/epdf/10.1111/jiec.12754>

¹² <https://onlinelibrary.wiley.com/doi/pdf/10.1111/jiec.12597>

Competence Centre for Sustainable Procurement works on the criteria from environment, economic and social aspects in public procurement. To enhance the innovation of the industries, especially SMEs, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and Association of German Engineers (VDI) established VDI Centre for Resource Efficiency (VDIZRE) to support SMEs in enhancing resource efficiency, through knowledge transfer. In international level, Germany and UK developed a network with partner countries to create industrial symbiosis through the resource and service sharing to enhance eco-innovation. For plastic strategies, under extended producer responsibility (EPR), plastic producers directly and indirectly collect, treat or disposing the waste. Refund scheme is also applied for glass and metal beverage packaging and plastic PET bottles.

Improving resource efficiency has been the key objective in Germany's SCP practice. The program design has systematically applied resource efficiency into the lifecycle approach from resource extraction to production, consumption and after-use stages. Specific programs in supporting SMEs on resource efficiency is important when SMEs normally lacks the resources and capacity to adopt resource efficiency in the production process. Germany also utilize industrial symbiosis to increase its resource, service and products circulation not only domestically but also with partnership countries to enhance eco-innovation. For promoting public procurement, criteria setting and incorporating of broader criteria beyond environmental, but also social and economic criteria are the key efforts.

2.3. Japan

Japan has been a frontrunner in relation to SCP as being a resource scarce nation with a strong manufacturing capacity careful stewardship of materials has been an overarching economic necessity¹³. The key concept for SCP in Japan is based on the "Sound Material-Cycle Society" to reduce the consumption of natural resources and minimize environmental load to the extent possible (Aoki-Suzuki, Kato and Miyazawa, 2019)¹⁴. Japan has its Fundamental Plan for Establishing a Sound Material-Cycle Society since 2003 based on the Basic Act for Establishing a South Material-Cycle Society. In June 2018, Japan adopted its 4th Fundamental Plan. There are relevant legal frameworks such as Act on the Promotion of Effective Utilization of Resources to promote Extended Producer Responsibility. Japan also introduced Act on Promoting Green Procurement in 2001 to require government agencies to purchase environmentally-friendly products and encourage eco-labelling for customers to recognize such products (Ministry of the Environment, 2001)¹⁵. For specific emerging issues such as food waste and plastics, Japan has Act for Promotion of Recycling and Related Activities for Treatment of Cycling Food Resources since 2001 (Ministry of the Environment, 2007)¹⁶ and Resource Circulating Strategy for Plastics in 2019 (Ministry of the Environment, 2018)¹⁷. In the 4th Fundamental Plan for Establishing a

¹³ <https://sustainabledevelopment.un.org/content/documents/16445JapanVNR2017.pdf>

¹⁴ <https://iges.or.jp/en/pub/our-actions-resource-efficient-future>

¹⁵ https://www.env.go.jp/policy/hozen/green/attach/gpp%20pamphlet_eng.pdf

¹⁶ https://www.env.go.jp/recycle/food/01_about/law_gaiyo.pdf

¹⁷ https://www.env.go.jp/recycle/recycle/circul/keikaku/pam4_E.pdf

Sound Material-Cycle Society, there are four indicators to achieve in 2025 compared to 2000 level, which are approximately double resource productivity, achieve cyclical rate (inflow) of 18% and cyclical use rate (outflow) of 47%, and cut 77% final disposable landfill amount¹⁸.

The Fundamental Plan links with the challenges and new opportunities of Japan today, such as increasing global uncertainty, progress in international cooperation, regional decline in Japan, society 5.0, economic stagnation in Japan and declining population with an aging population and decreasing birth rate. Also, the Fundamental Plan also considers recent issues in Japan, the of the nuclear plant accident, frequent natural disasters, changes in people's views from material towards spiritual wealth and shortage of human resources for waste treatment and recycling. The Fundamental Plan aims to not only address from resource aspects, but also to address broader issues in the society at the same time. In target settings, the collection of baseline data to set realistic targets and to systematically monitor the progress is crucial to achieve the goals under each program. Moreover, due to the broad of actions needed throughout the supply chain, which sometimes involves different ministries and agencies, actions through inter-ministries and multi-stakeholder cooperation with local governments and business sector is the key to holistically address resource efficiency.

2.4. Republic of Korea

The Third Basic Plan for Sustainable Development (2016-2035) is Korea's attempt to mainstream the SDGs¹⁹. Other key documents relevant to SCP are Second Five Year Plan for Green Growth, Fourth Master Plan for New Renewable Energy, Second Master Plan for Energy, First Master Plan for Resource Circulation, and the Fifth Comprehensive Midterm Plan for Environmental Protection. SCP legal framework in the Republic of Korea (Korea) consists of two acts, Environmental Technology and Industry Support Act and the Act on Promotion of Purchase of Green Products. The Environmental Technology and Industry Support Act provides the legal ground for the provision of support for the research and development of environmental technologies and the environmental industry. The Act on Promotion of Purchase of Green Products was legislated by the Ministry of Environment in 2005 to stimulate the demand on products. IT also serves as the basis for the implementation of green public procurement, voluntary agreement on green business procurement and green store certification. The SCP policy frameworks are on green growth, new renewable energy, resource circulation, environmental protection, recycling technology program, resource efficiency program, and energy recovery program. Green Growth has been a key concept in Korea's SCP promotion. The National Strategy for Green Growth (2009-2050) emphasizes development of green economy. The first five-year plan (2009-2013) was expected to create 1.6-1.8 million jobs, have global green technology product market share from 2% in 2009 to 10% in 2020, green goods exported to grow from 10% in 2009 to 22% in 2020, SME green partnership with large enterprise grow from 685 in 2009 to 2,900 in 2020, green industrial complex to expand from five to

¹⁸ https://www.env.go.jp/en/recycle/smcs/4th-f_Plan.pdf

¹⁹ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=67&menu=3170>

twenty in 2020, type of goods with carbon footprint labelling grow from 50 in 2009 to 1,000 in 2020.

Sustainable consumption and production has been implemented in Korea with special focus on the creation of new markets for green products and services. The investments in environmental R&D and eco-innovation of products have been driven to respond to the product-based environmental regulations and standards led by industrialized countries. In many cases, EU-led environmental directives such as the Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) serve as key environmental standards for Korean enterprises to follow in order to enter the European market. The adoption of sustainable production practices is considered as a strategy for enterprises to increase their competitiveness in the international market. In addition, the emergence of green-conscious consumers is another influential factor on the change of consumption and production patterns by the promotion of green public procurement, voluntary business green procurement, eco-labelling and the provision of reliable and credible information on eco-products (KEITI, 2014)²⁰.

2.5. Malaysia

The key SCP strategy is listed in the National SCP Blueprint 2016 – 2030²¹, The Pathways for Sustainable Consumption and Production in Malaysia. The blueprint is developed after the baseline study Sustainable Consumption and Production in Malaysia (EPU 2013), in which identified the gaps and key instruments to promote SCP in Malaysia. The blueprint connects the 10 dots through SCP on green public procurement, household actions, business practice, circular waste system, energy wise building, low carbon mobility, sustainable food, sustainable tourism, communication and education, and coordinating and monitoring for implementation. There are some target indicators to increase green public procurement up to 20% in 2020, 50% in 2025, and 100% in 2030 in selected groups of products, phase out landfill by 2030. In addition, other efforts include integrated SCP into the national education curriculum, increase the recycling rate to 22% by 2020 from 17.5 in 2016. Malaysian Carbon Reduction and Environmental Sustainability Tool used to quantify emissions reduction and sustainable impacts of the environment²².

SCP in Malaysia is positioned when its country is moving toward to become a high-income country during the Eleventh Plan with increased consumption and production. It aligns with existing national policies of the Eleventh Plan and international progresses on SCP to utilize SCP as the instrument to achieve green growth of the economy. It aims to facilitate different stakeholders include the households and business, industries such as tourism to understand the benefits of adopting SCP and to mobilize actions. It identified ten prioritized working area and utilize SCP as a practical framework to connect the dots together.

²⁰ https://www.oneplanetnetwork.org/sites/default/files/policy_handbook_for_sustainable_consumption_and_production_of_korea.pdf

²¹ https://www.oneplanetnetwork.org/sites/default/files/malaysia_the_national_scp_blueprint_2016_-_2030.pdf

²² <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=375&menu=3170>

2.6. Sweden

Providing good living environment and sustainable consumption by science based ambitious targets has been Sweden's core component of SCP. In the Strategic Environmental Goals, it listed the specific goals to achieve by 2020 which includes to reduce ecological footprint through tackling climate and air pollution, land and water conservation, protect sensitive habitat, and sustainably manage natural resources. In 2017, it introduced a new climate policy framework that for the country to become carbon neutral by 2045 and to be a negative emitter by the mid-century. It adopted the Action Plan for a Toxic-free Everyday Environment 2011 – 2020 to reduce the exposure of hazardous substance of everyday environment with focus on children. In 2016, it introduced National Procurement Strategy which includes public procurement. It addresses central government, municipalities, county councils and government owned companies. In 2017, it introduced Strategy on Sustainable Consumption to promote greater environmental, social and economic sustainability in consumption which focused on food, transport and housing on people's daily living. The Strategy emphasized on increasing knowledge on eco-smart consumption and environmental education, encouraging sustainable way of consuming through sharing economy and eco-labelling, streamlining resource use by circular economy and extending product life and waste management, improving information on companies' efforts, and phasing put harmful chemicals in daily living. Other specific measures include the establishment of Forum on Eco-Smart Consumption for networking and knowledge sharing, increase text on some hazardous chemicals, reduce VAT for selected products such as shoes and clothes when recycle and repair.

Sweden's SCP policies focus on science based ambitious goals to improve the living environmental and foster sustainable consumption. The improved knowledge by consumers on products lifecycles could incentivize more provision of such products on the market. There are also some innovation incentives, such as tax reduction for repair, using behavioral economics and nudging based techniques, and good consumer statistics. In the promoting efficient resource use, plastics, food and textile industries are selected with leading initiatives. Lastly, the active involvement and responsibilities of companies are emphasized through their sustainability report rule to facilitate their roles in SCP.

2.7. Other ASEAN Countries

Cambodia has issued important sub-decrees on municipal solid waste management, social environmental fund, management of electrical and electronic waste, plastic bag management, and management of sewage system and water treatment²³.

Indonesia's approach to SDG12 is measured by two main indicators (i) the number of "Proper" (a business environmental performance index) businesses that achieve a minimum blue (i.e. middle) ranking; and (ii) the number of companies that apply ISO

²³ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=1644&menu=3170>

14001 certification. For 2002-2016, companies contributing positively to the environment grew from 60% in 2002 to 85% in 2016. The number of certified ISO 14001 companies increased from 1,028 in 2010 to 2,197 in 2017²⁴.

The **Philippines** is formulating a National Action Plan for Sustainable Consumption and Production to assess how a circular economy can be adopted in the national context²⁵. The Advanced Sustainable Consumption and Production Project (2015-2018) aimed to reduce GHG emissions through (i) promotion of SCP; (ii) identification and development of SCP mitigation actions; (iii) provision of incentives for “green” products; (iv) transition to a low-carbon economy through green procurement and specific standards. The Philippines has also implemented an ecological solid waste management program through the Ecological Solid Waste Management Act, a 10-year solid waste management plan, establishment of material recovery facilities, and an environmentally-sound disposal system, implemented primarily at the local government level.

In **Thailand**, 27 agencies have formed the Taskforce for SDG12 under the Steering Committee on Natural Resources and Environment for the Implementation of Sustainable Development Goals²⁶. The Taskforce prepared the Sustainable Consumption and Production Roadmap 2017-2036, building on an earlier SCP Roadmap prepared under SWITCH Asia. Some key initiatives include in education, public transportation, evaluation and accreditation for environmentally-friendly goods, Green Industry Policy, Smart Cities-Clean Energy project, green public procurement, National Master Plan on Waste Management (2016 – 2021), and Corporate Governance Code integrating sustainability into the business sector.

Singapore is similar in many ways to Japan as a small island nation with limited natural resources and land area and a vibrant manufacturing and export-oriented economy²⁷. Singapore intends to become a zero-waste nation, in the same way as it has closed the loop in recycling water. This zero-waste philosophy is built into the Sustainable Singapore Blueprint. The goal is to increase the national recycling rate to 70% by 2030. Some specific initiatives includes a mandatory e-waste management framework by 2021 based on extended producer responsibility, business report on packaging plan reduction by 2021, waste-to-energy plants for municipal waste, donation of unsold food and food waste treatment facilities, separate collection of recyclable and general waste in public housing, 3R awareness programme, and Singapore Packaging Agreement for packaging reduction in the supply chain.

²⁴ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=479&menu=3170>

²⁵ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=73&menu=3170>

²⁶ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=428&menu=3170>

²⁷ https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf

2.8. Examples of Program from Other Countries

Australia²⁸ (1) The Australian Circular Fashion Conference, which focused on responsible fashion practices. (2) The Australian Water Partnership, Alliance for Water Stewardship, and Better Cotton Initiative are collaborating on improving water stewardship throughout the supply chain, so consumers know where their clothes come from and how they are made. (3) Australia’s Environment Ministers, together with the Australian Packaging Covenant Organization, agreed to make 100% of packaging reusable, recyclable, or compostable by 2025. (4) A waste to energy plant in Victoria converts 33,000 tons of food waste into energy powering a neighboring sewerage treatment plant, with the surplus going into the grid. (5) The National Television and Computer Recycling scheme is targeting 80% of e-waste by 2026-2027. (6) The National Food Waste Strategy is aiming to halve the \$20 billion/year food waste by 2030, through circular economy approaches and heightened consumer awareness (e.g. through the Love Food, Hate Waste campaign). (7) Financial incentives supported establishment of an oil recycling industry that recycled 286 million	United Kingdom²⁹ (1) The 25-year Environment Plan and a new Resources and Waste Management Strategy (2018) are designed to “maximize the value of resources used, minimize the amount of waste created, cut emissions, and help create a cleaner, greener, healthier planet”. (2) A landfill tax escalator has resulted in a 50-60% reduction in waste going to landfill. Under the Landfill Directive, the UK will reduce landfilling of biodegradable municipal waste to 35% of the 1995 level by 2020. (3) The UK Plastics Pact has brought together sources of over 80% of plastic packaging on the UK market targeting by 2025 (i) eliminating unnecessary single use packaging; (ii) 100% of plastic packaging to be reusable, recyclable, or compostable; (iii) 70% of plastic packaging to be effectively recycled or composted; and (iv) 30% average recycled content in all plastic packaging. (4) A Food Waste Reduction Roadmap has been introduced to achieve SDG12.3. (5) The Greening Government Commitments have achieved a 39% reduction in emissions, diverted 87% of waste from landfills, halved paper consumption, and reduced the number of domestic	New Zealand New Zealand’s declared ambition is to “lead the world in environmental guardianship” and to transition to a circular economy³⁰. To this end, some of the key SCP initiatives underway include: (1) The New Zealand Plastic Packaging Declaration, in which business is committed to 100% reusable, recyclable or compostable packaging by 2025. (2) New Zealand has banned certain products containing microbeads and single-use plastic shopping bags, while developing a longer-term Plastics Action Plan. (3) New Zealand’s Sustainable Business Council has 91 member organizations representing 29% of the private sector GDP. (4) The tourism sector has launched the New Zealand Tourism Sustainability Commitment which aims at having all tourism businesses committed to sustainability by 2025. (5) Auckland’s Waste Management and Minimization Plan (2018) envisages New Zealand’s largest city to have zero waste by 2040.
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²⁸ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=1591&menu=3170>

²⁹ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=1185&menu=3170>

³⁰ <https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=1445&menu=3170>

liters of oil in 2016-2017. (8) On the international stage, Australia is the largest donor to the Extractive Industries Transparency Initiative and the Extractives Global Programmatic Support trust fund in the World Bank.	flights by 28%. (6) The Sustainable Clothing Action Plan is a voluntary, industry-led initiative aiming to minimize the environmental impacts of the clothing industry. (7) The UK Plan for Shipment of Waste more strictly controls waste destined for disposal, generally prohibiting both export and import.	
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2.9. The Framing of SCP for Vietnam from International Trends

Since adoption of SCP in 1970s, the application has evolved from end-of-pipe solution to life-cycle approach to the whole supply chain. Moreover, the application of SCP become more holistically to address particular socioeconomic issues that countries are facing. For China, circular economy has become the key instrument for socioeconomic transition to gradually evolve based on the capacities the industries have developed over the years. Eco-industrial parks played important role to concentrate the production to facilitate industry symbiosis in implementation stage. Resource efficiency is the key focus for Germany to constantly improve efficiency through life-cycle approach in the program design. To enhance SMEs' capacity in resource efficiency, Germany provided targeted support for SMEs. Japan considers achieving of Sound Material-Cycle Society as the goal in SCP, it systematically developed and monitors indicators to measure the progress over the years. Moreover, it incorporates challenges and emerging opportunities of Japanese society to address broader social issues. Green growth has been the focus for Korea to increase its global competitiveness of its industry with specific economic goals. Market share, green goods export, and job creation are the major objectives for Korea. For Malaysia, the main goal is to become high-income country during the Eleventh Plan. SCP becomes the instrument to connect dots of actions by different stakeholders to achieve green growth. Swedish experience shows that good living environment for people and sustainable consumption are the major objective backed by its ambitious target to be carbon neutral by 2045. Specific measures emphasize consumer knowledge improvement and innovative solution.

The economic progress in Vietnam has also generated environmental and social challenges. The volume of CO₂ emissions has doubled from 4 million tons in 1980 to 80 million tons in 2005 (World Bank in Shahbaz, Haouas and Hoang, 2019). In a densely populated country, Vietnam is already facing challenges due to the lack of arable land and environmental degradation from rapid economic growth will keep adding pressure to the natural environment (Clausen, Vu and Pedrono, 2011). Extensive logging and slash and burn agricultural practices cause deforestation and soil degradation, water pollution threatens marine life, groundwater contamination limits potable water supplies, and air pollution damaging health, especially in rapidly-urbanising and-industrialising cities such as Hanoi and Ho Chi Minh, provide evidence the environment is degrading rapidly (CIA, n.d.). Moreover, Vietnam is identified as among the 5 to 10 most climate-vulnerable countries in the world (Bruun, 2012) particularly because of the socioeconomic damages that would occur (McElwee et al., 2010) from natural disasters. Moreover, land degradation due to industrial development is making coastal zones more vulnerable to flooding (Davis, 2016). SMEs still have limited capacity to comply with environmental laws and regulations in Vietnam. For instance, among the 615 industrial clusters, only 5% of the SMEs have concentrated wastewater treatment systems (ASEAN CSR Network, 2017). For social challenges, most of the population has benefited from the economic prosperity and yet some ethnic minority groups still have slower progress and a larger poverty rate compared to the national average (World Bank, 2018). The improved technological capacity of SMEs would be vital for the improvement of environmental and social

issues, but also an opportunity for Vietnam to upgrade its industries to enhance its competitiveness in the global economy.

Based on the high political backing of SCP in Vietnam, the major tasks are on implementation. The vulnerability to climate change of Vietnam shows the shift towards SCP is an important task towards long term sustainability. The concept of circular economy as a practical instrument would be useful help Vietnam's socioeconomic transition in SCP implementation process. As an emerging economy, Vietnam should strengthen R&D capacity of enterprises to facilitate eco-innovation for global competitiveness and incorporate SCP into both import and export trade measures. Moreover, as urbanization is expanding in Vietnam, more focus on sustainable consumption targeting urban residents is vital during the rapid consumption pattern transition. Thus, SCP could be adopted in Vietnam's socioeconomic transition needs to holistically address emerging opportunities and challenges through the involvement of all actors in the society.

3. Rationale for a National Action Program on SCP for the period 2020–2030

3.1. The need to continue to build on the NAP on SCP (2016-2020)

Based on the high political backing of SCP in Vietnam, the major tasks are on implementation. The vulnerability to climate change of Vietnam shows the shift towards SCP is an important task towards long term sustainability. The concept of circular economy as a practical instrument would be useful help Vietnam's socioeconomic transition in SCP implementation process. As an emerging economy, Vietnam should strengthen R&D capacity of enterprises to facilitate eco-innovation for global competitiveness and incorporate SCP into both import and export trade measures. Moreover, as urbanization is expanding in Vietnam, more focus on sustainable consumption targeting urban residents is vital during the rapid consumption pattern transition. Thus, SCP could be adopted in Vietnam's socioeconomic transition needs to holistically address emerging opportunities and challenges through the involvement of all actors in the society.

3.2. Political backing

Resolution No. 24-NQ / TW dated October 25, 2007 of the 11th Central Committee of the Central Committee on proactively responding to climate change, strengthening natural resource management and environmental protection;

Resolution No. 23-NQ / TW dated March 22, 2018 of Politburo XII on the orientation of developing national industrial development policies to 2030, with a vision to 2045.

3.3. Legal basis

Law on Environmental Protection No. 55/2014 / QH13 approved by the XIII National Assembly of the Socialist Republic of Vietnam, June 7, 2014, in which Article 44

stipulates: Agencies, organizations, households and individuals have the responsibility to participate in producing and consuming environmentally-friendly products and services. The heads of agencies and units using the state budget shall have to prioritize the use of environmentally-friendly products and services certified by eco-labels according to law provisions.

Decision No. 432 / QD-TTg dated April 12, 2012 of the Prime Minister approving Vietnam Sustainable Development Strategy for the period of 2011-2020. In which, determining the priority orientation to implement sustainable development. Sustainable production and sustainable consumption are as follows: Promote widespread application of cleaner production to improve the efficiency of using natural resources, raw materials, energy, and water, while reducing emissions and limiting the level of pollution and protection, environmental quality, human health, ensuring sustainable development. Building a civilized, harmonious and friendly consumer culture. Gradually implement eco-labelling and green shopping. Marketing development. Ecological product field and community initiative on SCP. Applying policies to regulate unreasonable consumer behavior.

Decision No. 1393 / QD-CP dated September 25, 2012 of the Prime Minister approving the national strategy on green growth, which states the following objectives of SCP: Restructuring and completing economic institutions towards greening existing industries and encouraging the development of economic sectors to effectively use energy and resources with high added value. Research and apply more and more advanced technology to more effectively use natural resources, reduce the intensity of greenhouse gas emissions, contribute to effective response to climate change. Improving people's lives, building environmentally-friendly lifestyles through creating jobs from industries, agriculture, green services, investing in natural capital, developing green infrastructure.

To accomplish these goals, the Strategy also identified three main tasks, including two on SCP:

Decision No. 622 / QD-TTg dated May 10, 2017 of the Prime Minister promulgating the National Action Plan to implement the 2030 Agenda for sustainable development. In this Decision, Objective 12 on Ensuring SCP models is defined as one of the important objectives to be achieved by 2030.

Decision No. 76 / QD-TTg dated January 11, 2016 of the Prime Minister approving the National Action Program on SCP by 2020, with a vision to 2030.

Decision No. 681 / QD-TTg of June 4, 2019 of the Prime Minister on promulgating the Roadmap for implementing Vietnam's sustainable development objectives by 2030.

Official Letter No. 430 / VPCP-TH dated February 20, 2019 of the Government Office on the working program for 2019, in which the MOIT is assigned to preside over and submit to the Prime Minister for approval of the NAP on SCP between 2020 and 2030 in the fourth quarter of 2019.

3.4. Perspectives and National Context

The National Action Plan on Sustainable Consumption and Production (2020 – 2030) aims to be consistent in international trends of SCP to incorporate life-cycle approach through circular economy to adopt into the socioeconomic context of Vietnam to bring specific solutions to Vietnam's needs. It also aligns with existing legal and policy frameworks for development in Vietnam to avoid duplicate existing actions from other programs. It will address the tasks remained from the National Action Plan on Sustainable Consumption and Production towards 2020, with a vision to 2030 to guide different actors of ministries, government agencies, local government, industries, civil society and citizens in implement specific actions to enhance SCP in Vietnam.

3.5. Principles

The NAP on SCP in the period 2020 - 2030 is built on the following principles:

- (a) Activities of the National Action Program on SCP align with Vietnam's sustainable development goals in the Agenda for Sustainable Development by 2030;
- (b) The implementation of National Action Plan on SCP in the period 2020 – 2030 is divided into two phases. The first phase is from 2020 to 2025 and the second phase is from 2026 to 2030;
- (c) Incorporate circular economy as the practical concept with three aspects: sustainable production, sustainable consumption and promotion of SCP to introduce lifecycle approach of the different stages in the supply chain;
- (d) It focuses on introducing the practical instruments that would help to define terms in SCP to strengthen the existing legal and policy frameworks on SCP to bring practical directions to all actors in society;
- (e) Mobilize all members of society, in which enterprises and consumers play a central role, the government plays a role in guiding and creating a favorable environment, encouraging activities on SCP.

3.6. Vision

Transition towards sustainable consumption and production through circular economy approach to achieve sustainable living of people within ecological carrying capacity. Introduce resource and energy use efficiency through the application of eco-innovation in the entire products life cycle. Support and inspire citizen to make more sound decisions to have sustainable and good quality of living. Enhance the implementation capacity of both central and local government in SCP. Mobilize all stakeholders including international partners to cooperate and take action towards the realization of Sustainable Development Goals of Vietnam until 2030.

3.6.1 Overall objectives

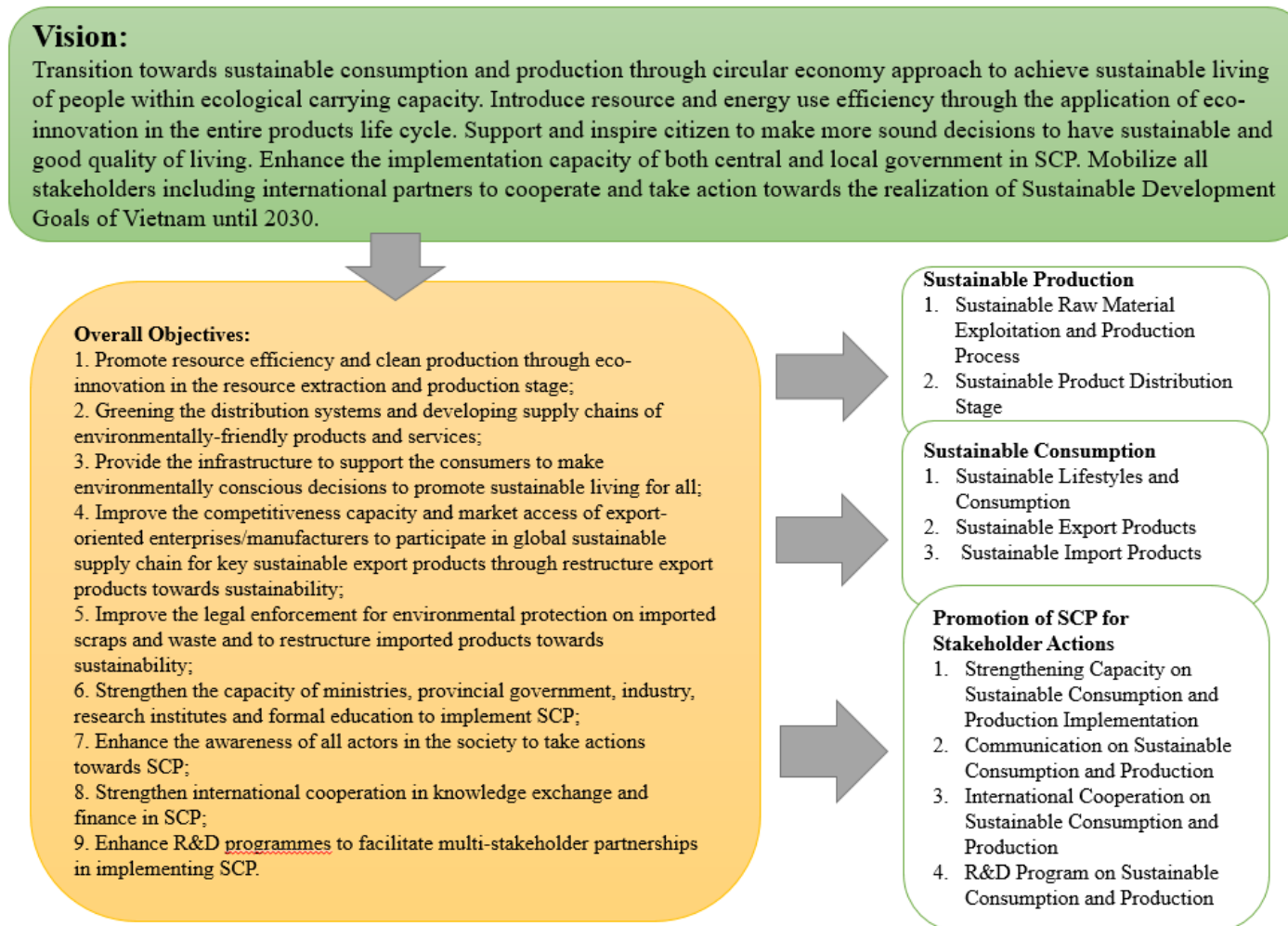
- Promote resource efficiency and clean production through eco-innovation in the resource extraction and production stage;

- Greening the distribution systems and developing supply chains of environmentally-friendly products and services;
- Provide the infrastructure to support the consumers to make environmentally-conscious decisions to promote sustainable living for all;
- Improve the competitiveness capacity and market access of export-oriented enterprises/manufacturers to participate in global sustainable supply chain for key sustainable export products through restructure export products towards sustainability;
- Improve the legal enforcement for environmental protection on imported scraps and waste and to restructure imported products towards sustainability;
- Strengthen the capacity of ministries, provincial government, industry, research institutes and formal education to implement SCP;
- Enhance the awareness of all actors in the society to take actions towards SCP;
- Strengthen international cooperation in knowledge exchange and finance in SCP;
- Enhance R&D programmes to facilitate multi-stakeholder partnerships in implementing SCP.

3.6.2. Detailed Targets and Indicators (Impact Indicators)

- (1) 30% for the number of enterprises applying cleaner production by 2025, 50% by 2030 (MoIT)
- (2) 50% urban solid waste and construction waste shall be recycled, reused, produce energy or organic fertilizer by 2025, 80% by 2030; 75% non-hazardous industrial solid waste in industrial parks shall be collected for reusing and recycling by 2025, 85% by 2030 (MoNRE)
- (3) 30% of food waste reduction in pre-consumption phase by 2025, 50% by 2030 (MARD)
- (4) 50 % share of the number of passengers using public transportations in major cities by 2025, 60% by 2030 (MoT, local government)
- (5) 30% of government organizations in central and provincial level practice green public procurement by 2025, 50% by 2030 (MPI)
- (6) 75% of export producers meet the technical standards of exporting markets by 2025, 100% by 2030 (MoIT)

Table 3: Overall Structure of NATIONAL ACTION PLAN FOR SUSTAINABLE CONSUMPTION AND PRODUCTION 2020 – 2030



3.7. Main Programs

Main Programs are built according to the phases of the product life cycle by three themes of sustainable production, sustainable consumption and promotion of SCP. Within sustainable production, there are two focused area on sustainable raw material use and production process and sustainable product distribution system. Sustainable consumption focuses on three areas of sustainable lifestyles and consumption, sustainable export products and sustainable import products. Promotion of sustainable consumption and production for stakeholder actions focuses on strengthening capacity on sustainable consumption and production implementation, communication on sustainable consumption and production, international cooperation on sustainable consumption and production and R&D program on sustainable consumption and production.

Following are the main tasks of the National Action Plan on Sustainable Consumption and Production (2020 – 2030) to be carried out during 2020 – 2030.

3.7.1. Sustainable Production

3.7.1.1. Sustainable Raw Material Use and Production Process

Resource Efficiency is a key element of sustainable development. There is a global commitment to achieving resource efficiency in order to establish sustainable consumption and production patterns. The Sustainable Development Goals (SDGs) have assigned an important position to resource efficiency. This is directly reflected in SDG Goal 12: Ensure Responsible Consumption and Production Patterns. Eight other goals (2, 6, 7, 8, 9, 11, 14 and 15) also relate to resource efficiency and circular economy. These SDGs also have approved in the Decision 622/QĐ-TTg by the Prime Minister dated 10th May 2017 on the issuance of the National Action Plan for the Implementation of the 2030 Sustainable Development Agenda. The priority actions for implementing sustainable and efficient resource use including:

3.7.1.1.1. Main tasks

- Plan and manage the processes of natural resources exploitation and utilization;
- **Promote eco-design and the overall environmental performance of products and services;**
- Promote integrated water resource management and increase efficient use of water in agriculture, irrigation, industry, services and domestic purposes;
- Promote innovative and accessible resources for energy efficiency;
- Deploy eco-innovation activities in businesses, industrial zones, and industrial clusters;
- Motivate to invest in agricultural technology, organic agriculture, and water efficiency in order to increase agricultural production;

- Adopt and implement a lifecycle management approach to all types of chemical and waste beyond merely disposing;
- Improve agricultural productivity over the life cycle of food over processing, distributing, consuming to reducing waste;
- Reduce waste generation and increase the economic value of waste resources through prevention, reduction, recycling, reuse, and recovery of energies.

3.7.1.1.2. List of concrete activities

- (a) Set the criteria for eco-innovation for the 30 selected products under Ministry of Industry and Trade's eco-innovation program (MoIT)
- (b) Develop a guideline on circular economy to distribute to selected eco-industrial parks to promote resource circulation, 3R, and industrial symbiosis applying big data through the entire lifecycle approach (MPI, MoIT, local government)
- (c) Launch a voluntary extended producer responsibility (EPR) program for large corporation for chemical, electronic and packaging industries (MoIT and Vietnam Chamber of Commerce)
- (d) Conduct training activities and development of technical guidance on resource efficiency for SMEs in pulp paper, textile and leather industry in industrial clusters and zones (enhance the knowledge from Vietnam Cleaner Production Centre (VNCPC, EPRO, and MoIT)
- (e) Launch a platform to disseminate best available technology (BAT) for improving water use efficiency in agricultural production (MARD; associations on agricultures, farmers)
- (f) Conduct a voluntary energy efficiency and cleaner production audits in steel, cement, and brewery industries (MoIT)
- (g) Launch awareness raising program on eco-system restoration to mining extraction sites in coal mining sector (MoIT)

3.7.1.2. Sustainable Product Distribution System

The rise in greenhouse emissions and pollution from production and business establishments has precipitated the need to realign their supply chain operations with a view of conserving the scarce resources. Supply chain management is an important factor and it is directly linked to productivity and competitive position. Making green the supply chain creates a great opportunity for sustainable consumption and environmental business operations issues, including:

3.7.1.2.1. Main tasks

- Enhance linkage among raw material suppliers, manufacturers, distributors, and consumers to sustainable products production and consumption;
- Establish and develop sustainable supply chains for agricultural products, reduce post-harvest loss;
- Increase the purchase of green products by distributors in the supply chain;

3.7.1.2.2. List of concrete activities

- (a) Establish and implement a guideline for the green distribution of agricultural products. (MARD, farmer association, transportation association)
- (b) Establish sustainable and green supply chains/networks for distribution of green and clean agricultural & food products, according to VietGAP Standards, and reduction of post-harvest losses (MARD, Ministry of Transport, farmer associations, Vietnam Cooperative Alliance)
- (c) Establish an information sharing website on environmentally-friendly products and services nationwide to enhance interlinkages among raw material suppliers, manufacturers, distributors, and consumers utilizing IT and database.
- (d) Launch a voluntary commitment scheme by supermarkets or shopping malls to increase the purchase of green products from producers (Retailer association, Consumer protection association)
- (e) A collection and recycle scheme for the packaging and distribution waste for food producer, carrier, warehouse, and retailers (Retailer association, Vietnam Administration of Seas and Islands)
- (f) Conduct trainings for distribution enterprises in implementing cleaner production and energy saving solutions (Ministry of Science and Technology, MoIT)

3.7.2. Sustainable Consumption

3.7.2.1 Sustainable Lifestyles and Consumption

Sustainable consumption would target more efficient use of resources, thereby effectively expanding the resource base to meet human needs, and altering consumption patterns to achieve reduced overall material and energy use. Promoting green consumption and sustainable lifestyles can indeed be related to other sustainable development actions including:

3.7.2.1.1. Main tasks

- Ensure sustainable public procurement practices;
- Provide better infrastructure and information to support consumers for making better consumption choices;
- Support consumers in taking 3Rs activities in their daily living;
- Strengthen eco-tourism in tourist destinations to reduce environmental impact of tourism;
- Discourage the consumption of non-environmentally-friendly products;
- Develop and disseminate sustainable and responsible consumption models in harmony with nature.

3.7.2.1.2. Concrete activities

- (a) Revise the public procurement regulations developed by MPI or/and MOF and set up special green criteria in the public procurement bidding law. Develop a

guideline on green public procurement to decide the criteria and set a list of prioritized green products manufactured by Vietnamese producers, to distribute the guideline to all government ministries, agencies and public owned companies and projects. (Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Ministry of Finance)

- (b) Develop an online supply chain transparency platform through consumer information association network to provide consumers with information on safety and environmental impacts (green label) of products of supply chain in making purchase decisions and prevent inaccurate claim of green products. (Ministry of Industry and Trade, consumer association, NGOs)
- (c) Launch a local government lead multi-stakeholder food waste reduction platform to invite retailers, restaurants and hotels to measure the current level of food waste in consumption phase and to set voluntary reduction target and report the progress regularly. (MoIT and local government, business)
- (d) Selected 5 major urbanized cities to develop a public transportation expansion plan and delegate a certain public area in the downtown area as “car-free day” once a month to encourage walking and cycling among residents. (Ministry of Transport and city governments of the 5 selected cities)
- (e) Set-up electronics (mobile phone and PC) and home appliances (washing machine, refrigerator, TV) repair and E-waste collection system through public-private-partnership between municipalities and manufacturers in providing information on repair and reuse to extend the lifetime of products, and for consumers to dispose used products for manufacturers to collect for recycling and remanufacturing. (Ministry of Natural Resources, municipal government and appliance manufacturers)
- (f) Promote eco-tourism through the development of eco-tourism activities and partnership with hotel associations to certify Green Lotus Label among hotels. (Ministry of Culture, Sports and Tourism, hotel association)
- (g) Impose environmental fees on non-environmentally-friendly products such as plastic bags in supermarkets and convenience stores (MoNRE and supermarket association)

3.7.2.2. Sustainable Export Products

Sustainable export products would focus on the increase of green export products in terms of access and competitiveness and to enhance resource circulation global platforms. The key tasks are following:

3.7.2.2.1. Main tasks

- Improve the market access of green products to export in the global markets;
- Enhance the eco-labelling certification for export products;
- Improve access to markets to promote the sustainable exportation of Vietnam’s key products and closely control the importation of waste materials (scrap);
- Enhance international cooperation on resource circulation and industrial symbiosis.

3.7.2.2.2. Concrete activities

- (a) Develop an online database to improve the market access for key green exporting products focusing on electronics, textile and clothing, wood products, agricultural and seafood products
- (b) Launch a supporting program for export-oriented producers to apply for eco-labelling and fairtrade certification scheme
- (c) Launch a “SCP” products section during the export-oriented trade shows in the target industries such as electronics, textile and food processing
- (d) Participate in international resource and waste circulation platform to enhance cooperation and industrial symbiosis

3.7.2.3. Sustainable Import Products

Sustainable import products target the enforcement of regulations on importing of scraps and waste and to import clean technologies from other countries.

3.7.2.3.1. Main Tasks

- Enforcement of regulations on importing scraps and waste from other countries
- Promote the sustainable import of clean technology from other countries

3.7.2.3.2. Concrete Activities

- (a) Revise the regulations and standards on importing of scraps and waste as raw material for production according to Vietnamese law and international agreement (MoNRE)
- (b) Conduct awareness raising and capacity building programs for the local authorities, trading companies and custom to strengthen the enforcement of the regulations on importing scraps and waste (MoNRE, local authorities, custom)
- (c) Develop bilateral and international agreement with countries to import clean technology (MoIT, Ministry of Science and Technology, MoNRE)

3.7.3. Promotion of Sustainable Consumption and Production for Stakeholder Actions

3.7.3.1. Strengthening Capacity on Sustainable Consumption and Production Implementation

There are many tasks remain to strengthen the capacity of different stakeholders to implement SCP in Vietnam from ministry level, province government, industries, researchers and youth.

3.7.3.1.1. Main Tasks

- Strengthen inter-ministerial and multi-stakeholder cooperation towards science based policy making and planning
- Enhance provincial level implementation to link SCP with socioeconomic issues
- Support the capacity building of industries towards eco-innovation
- Enhance SCP awareness and knowledge in formal education in all levels

- Improve data availability and knowledge base on SCP
- Exchange with other countries' experiences in higher education

3.7.3.1.2. Concrete Activities

- (a) Form an inter-ministerial and multi-stakeholder SCP Advisory Committee to advise on the legal and policy framework and implementation on SCP programs to enhance science-based multi-stakeholder policy making and planning (MoIT; Chamber of Commerce)
- (b) Request all provincial government to develop a SCP implementation plan focusing on linking SCP to their local socioeconomic and environmental challenges to incorporate one village one product program to target tourism's market, and to hold annual provincial government SCP gathering to share and scale-up good practices on SCP (provincial government)
- (c) Conduct a series of training programs for industry managers in industrial parks on the industrial symbiosis model in industrial parks, economic benefits of implementing SCP and eco-innovation, and training on certification scheme (International organizations, industrial parks, provincial government, companies in the industrial parks)
- (d) Incorporate sustainable consumption and production into formal education module to improve the multi-disciplinary knowledge development of SCP in higher education and nurture sustainable consumption practices through early ages of school children (Ministry of Education, Universities and schools)
- (e) Launch LCA methodology calculation training center in partner with universities and research institutes to transfer the knowledge to industries in implementing in production practices (International organizations, Ministry of Science and Technology, research institutes, universities, industries)
- (f) Provide international scholarships in SCP field specifically for youth to study in SCP and circular economy research in overseas universities (Ministry of Education)

3.7.3.2. Communication on Sustainable Consumption and Production

Better knowledge and awareness on SCP will ultimately lead to changes in mindset, behavior and habits. Communication, education and public awareness programmes engaging all levels of society will create a sense of shared responsibility among stakeholders. The following core actions focus on all communication, education and public awareness efforts to generate understanding and action:

3.7.3.2.1. Main Tasks

- Empower and inspire youth to create a more sustainable lifestyles;
- Ensure that citizens everywhere have relevant information on and proper awareness of sustainable development and lifestyles in harmony with nature;
- Increase awareness-raising and capacity building on SCP for the private sector in order to engage companies in the implementation of SCP policies and initiatives, paying particular attention to the needs of SMEs;

- Public dissemination of information about Vietnam Green Label, Energy-saving Label and other eco-labels and as well as products approved these labels;

3.7.3.2.1 Concrete Activities

- (a) Launch SCP communication campaign lead by MOIT
- (b) Conduct an annual competition at national, provincial and local level with international organizations to encourage young entrepreneurs to pitch their SCP ideas and assist in mobilize investment from the business sector
- (c) Launch awareness campaign on VOV about information on sustainable consumption and lifestyles and green labels in Vietnam
- (d) Restrict advertisement on products that are potentially damaging the health and waste of resources from school areas and streets
- (e) Launch the awarding “eco-innovation” scheme to SMEs that have practiced the best eco-innovation practices in selected criteria and industries with showing case their best practices
- (f) A best practice or front-runner scheme for circular economy in electronic industry, food industry and textile industry

3.7.3.3. International Cooperation on Sustainable Consumption and Production

3.7.3.3.1. Main Tasks

- Improve research capacity on SCP through international exchange
- Improve ministry’s presence on international SCP platforms to exchange knowledge and disseminate Vietnam’s experiences
- Increase SCP projects among international cooperation projects in Vietnam

3.7.3.3.2. Concrete Activities

- (a) Launch annual SCP international program to send students and young researchers overseas to have knowledge exchange with developed economies
- (b) Participate in Regional 3R Forum in Asia and the Pacific, Asia Pacific Roundtable on Sustainable Consumption and Production, and World Circular Economy Forum to exchange views with other countries and sectors on SCP practices and share Vietnam’s experiences in achieving high well-being living
- (c) Dedicate a certain share of ODA fund into SCP implementation and circular economy projects among international and local partners to receive the green technology transfer from other countries (MPI)

3.673.4. R&D Program on Sustainable Consumption and Production

3.7.3.4.1. Main Tasks

- Enhance R&D capacity on SCP utilizing emerging technologies
- Enhance cooperation with companies on R&D
- Improve SCP database and monitoring mechanism on SCP progress in Vietnam

3.7.3.4.2. Concrete Activities

- (a) Develop a R&D, and innovation on applications of IT, AI and Block-chain in

improving the performance and greening distribution systems

- (b) Design a public-private-partnership joint R&D program on SCP
- (c) Develop a R&D program focusing on eco-design for companies**
- (d) Launch a R&D programme on SCP database creation to continuously assess the evolving progress of SCP implementation regularly

3.8. Mobilize Financial Resources

- Facilitate the allocation of financial resources to support SCP implementation, technology transfer, capacity building, innovation and other mechanisms to accelerate the shift towards SCP;
- Mobilize financial resources from multiple sources which include donor countries, multilateral agencies, international financial institutions, the private sector and other voluntary contributions with the objectives of transferring and accessing to environmentally-sound technologies on favourable and according to international agreements, and of capacity-building;
- Integrate SCP programs and initiatives into existing Governmental programs and cooperation activities;
- National Sustainable Development Support Fund.

3.9 Monitoring and Evaluation

3.9.1. Indicators for monitoring and evaluation

- (1) 30% for the number of enterprises applying cleaner production by 2025, 50% by 2030 (MoIT)
- (2) 50% urban solid waste and construction waste shall be recycled, reused, produce energy or organic fertilizer by 2025, 80% by 2030; 75% non-hazardous industrial solid waste in industrial parks shall be collected for reusing and recycling by 2025, 85% by 2030 (MoNRE)
- (3) 30% of food waste reduction in pre-consumption phase by 2025, 50% by 2030 (MARD)
- (4) 50 % share of the number of passengers using public transportations in major cities by 2025, 60% by 2030 (MoT, local government)
- (5) 30% of government organizations in central and provincial level practice green public procurement by 2025, 50% by 2030 (MPI)
- (6) 75% of export producers meet the technical standards of exporting markets by 2025, 100% by 2030 (MoIT)

3.9.2. Monitoring and evaluation methodology

- Annual monitoring reports of SCP implementation from relevant stakeholders
- Follow guidelines, specific regulations on oversight, monitoring, evaluation and reporting requirements for the implementation of the sustainable development goals

3.9.3. Implementation mechanism

- The Ministry of Industry and Trade develop national indicator system of sustainable production and consumption. Support, monitor and supervise the implementation of the Plan and annually review implementation results of the Plan and report to the Prime Minister; and propose to the Prime Minister for amending

and supplementing content, task of the program where necessary.

- Based on the tasks respectively assigned, ministries, sectors, localities and other relevant institutions will prepare reports on achievement of SCP goals as provided for, in parallel with the preparation of Socio-Economic Development Plans, for submission to the Ministry of Industry and Trade for consolidation and reporting to the Prime Minister.

3.10. Organization of implementation arrangements

3.10.1 Inter-agency coordination

(a) National Steering Committee on SCP

Establishing the Steering Committee on sustainable production and consumption, (hereinafter called the Steering Committee) comprises the Deputy Minister of Industry and Trade (Standing Chairman); representatives of the Ministries of Planning and Investment, Agriculture and Rural Development, Education and Training, Finance, Natural Resources and Environment. The Steering Committee has an approved operational regulation, with an assisting office located at MoIT.

(b) Local Standing Agency

Implementing the actual tasks of the Program in the locality by the Department of Industry and Trade, with a focal point assigned to monitor the implementation of the program in the locality.

3.10.2 Responsibilities of ministries and agencies

(a) Ministry of Industry and Trade

- Establishing an Executive Board to implement the Program, headed by the Minister of Industry and Trade, composed of representatives of the government and related ministries. Operation regulations of the Executive Board and the standing office are decided by the Minister of Industry and Trade;
- Establishing an Advisory Board with members of ministries and stakeholders in various fields to advise on mechanisms and policies in the process of implementing the SCP program;
- Promoting, inspecting and supervising implementation of the Program and making annual general reports on the situation and reporting to the Prime Minister; conducting preliminary and final reviews on program results and efficiency; and proposing to the Prime Minister to amend and supplement the Program's contents and tasks as needed;
- Developing and completing criteria and a roadmap for ecological innovation for some industrial products and implementing a program to promote voluntary audits on resource efficiency and cleaner production; deploying training activities and drafting technical guidance technology on resource efficiency and cleaner production for SMEs in the paper industry and reduced-price medicine, textiles and leather in industrial clusters and industrial zones;
- Launching programs to promote the comprehensive responsibility of large manufacturers for after-sale products; supporting export-oriented manufacturers to apply green labelling and programs related to environment-friendly products in

export trade fairs with a number of products such as electronics, textiles, clothing, and food processing; and

- Developing and implementing online platform development programs and data sharing programs, including establishing a website to share information about environment-friendly services and products nationwide; building an online platform for supply chain of green label products and key export products (e.g. electronics, textiles, agricultural products).

(b) Ministry of Planning and Investment

- Conducting research to modify, supplement and promulgate standards consistent with requirements of planned eco-innovation industrial parks;
- Leading and coordinating with MoNRE and Ministry of Finance to develop green criteria for public procurement and developing green public procurement guidelines including criteria and a priority green products list;
- Presiding over and coordinating with MoNRE, MoIT, and local governments (Industrial Zone Management Boards, etc.) to implement programs on natural resource circulation, 3Rs and industrial symbiosis in industrial zones;
- Allocating the budget from ODA capital for projects on production, business, development and circulation to receive green technology transfer.

(c) Ministry of Finance

- Coordinating with MPI in balancing and allocating annual funding to implement the Program's activities in accordance with the law on state budget.

(d) Ministry of Natural Resources and Environment

- Assuming the prime responsibility, and coordinating with MoIT and concerned ministries and branches, for elaborating and implementing policies to encourage consumption of environmental- friendly products and services; formulating policies to promote the circulation, recycling and reuse of wastes; carrying out awareness raising activities about sustainable production and consumption; and implementing the action plan on reducing, recycling and reusing waste.
- Formulating building maintenance regulations and imposing environmental taxes on the products that are not environmentally-friendly; coordinating with local governments to develop public-private partnership (PPP) programs to reduce electronic waste and appliances; and promoting international research and cooperation programs on waste reuse for industrial symbiosis; and
- Promulgating regulations on importing scrap and waste as raw materials and training to raise awareness for stakeholders about the ability to enforce the regulations on waste and scrap import

(e) Ministry of Agriculture and Rural Development

- Presiding over and coordinating with relevant ministries and localities in organizing the building and development of sustainable supply chains for agricultural and food products; and
- Assuming the prime responsibility and coordinating with the concerned ministries in building the best available technology database to improve the efficient use of water in agricultural production.

(f) Ministry of Education and Training

- Presiding over and coordinating with relevant ministries and branches in integrating training content on SCP into education and training programs at all levels, including vocational and professional education programs; and
- Establishing an LCA methodology training center, in collaboration with universities and research institutes, to transfer knowledge of LCA to production facilities.

(g) Ministry of Construction

- Presiding over and coordinating with relevant ministries and localities in guiding the use of construction materials in order to save mineral resources, save energy and be environmentally-friendly in construction work; and ensuring construction waste is collected for reuse, recycling.

(h) Ministry of Information and Communication

- Directing and coordinating with agencies through radio and television stations from the central to local levels, news agencies and press agencies to propagate policies, laws, knowledge and information on SCP;
- Presiding over and coordinating with relevant ministries and localities in implementing activities to promote sustainable consumption lifestyles; and
- Presiding over the implementation and coordinating with ministries, localities and enterprises in promoting the implementation of eco-tourism programs.

(i) Ministry of Transport

- Developing and deploying solutions to promote the development and improve the market share of public passenger transport systems in urban areas; deploying application of new technologies, replacing traditional fuels with new energy sources and changing fuel use in transportation; and
- Presiding over and coordinating with relevant ministries and localities in implementing activities to promote sustainable consumer lifestyles in transport activities in big cities.

(j) Ministry of Science and Technology

- Leading and coordinating with relevant ministries and localities to carry out training activities on cleaner production and energy conservation for distribution chains as well as research and development activities for production, consumption and sustainable development;
- Working in close cooperation with MoNRE and MoIT building bilateral commitments on import of scrap; and
- Preserving the allocation of resources and implementing research and development programs and projects for environment-oriented products.

3.8.3. Local responsibilities for provincial governments

- Developing the implementation plan for the SCP program. The People's Committees of the provinces and cities directly under the Central Government are responsible for developing the programs, action plans and directing the

implementation of the SCP Action Plan; concretizing the tasks and integrating them into the local 5-year and annual socio-economic development plans in which the integration of the capacity building and production and development activities into the priority projects of the locality is considered;

- Mobilizing the allocation of local funding sources to perform the program's objectives as prescribed; and
- Reporting on annual activities; annual reporting on activities related to cleaner production to the Steering Committee on the production of equipment and supplies.

Appendix. Roadmap for Implementation of Concrete Activities

Sustainable Raw Material Use and Production Process		
	Objective	Promote resource efficiency and clean production through eco-innovation in the resource extraction and production stage;
	Outcome indicators	Number of criteria, number of guidelines, number of corporations participating in EPR, number of training activity, number of organizations joining agricultural production platform, % of companies conducted audit, number of companies to be reached in the awareness raising program
	Instrument	Regulatory instrument, educational instrument, partnering instrument, informational instrument
	main content	(a) Set the criteria for eco-innovation for the 30 selected products under Ministry of Industry and Trade's eco-innovation program (MoIT) (b) Develop a guideline on circular economy to distribute to selected eco-industrial parks to promote resource circulation, 3R, and industrial symbiosis applying big data through the entire lifecycle approach (MPI, MoIT, local government) (c) Launch a voluntary extended producer responsibility (EPR) program for large corporation for chemical, electronic and packaging industries (MoIT and Vietnam Chamber of Commerce) (d) Conduct training activities and development of technical guidance on resource efficiency for SMEs in pulp paper, textile and leather industry in industrial clusters and zones (enhance the knowledge from Vietnam Cleaner Production Centre (VNCPC, EPRO, and MoIT) (e) Launch a platform to disseminate best available technology (BAT) for improving water use efficiency in agricultural production (MARD; associations on agricultures, farmers) (f) Conduct a voluntary energy efficiency and cleaner production audits in steel, cement, and brewery industries (MoIT) (g) Launch awareness raising program on eco-system restoration to mining extraction sites in coal mining sector (MoIT)
	Leading and coordinating unit	Chair: Ministry of Industry and Trade: Contents a, c, d, f, g Ministry of Planning and Investment: b Ministry of Agriculture and Rural Development: b Collaboration: Ministry of Industry and Trade, Ministry of Natural Resources and Environment, Ministry of Science and Technology, People's Committees of provinces and centrally-affiliated cities, VCCI
	Time	2020-2025

	Capital	State budget, aid and other lawful capital sources
Sustainable Product Distribution System		
	Objective	Greening the distribution systems and developing supply chains of environmentally-friendly products and services;
	Outcome indicators	Number of guidelines, number networks, number of supermarkets and malls join the scheme, number of enterprises join the training
	Instrument	Educational instrument, partnering instrument, informational instrument
	main content	(a) Establish and implement a guideline for the green distribution of agricultural products. (MARD, farmer association, transportation association) (b) Establish sustainable and green supply chains/networks for distribution of green and clean agricultural & food products, according to VietGAP Standards, and reduction of post-harvest losses (MARD, Ministry of Transport, farmer associations, Vietnam Cooperative Alliance) (c) Establish an information sharing website on environmentally-friendly products and services nationwide to enhance interlinkages among raw material suppliers, manufacturers, distributors, and consumers utilizing IT and database. (d) Launch a voluntary commitment scheme by supermarkets or shopping malls to increase the purchase of green products from producers (Retailer association, Consumer protection association) (e) A collection and recycle scheme for the packaging and distribution waste for food producer, carrier, warehouse, and retailers (Retailer association, Vietnam Administration of Seas and Islands) (f) Conduct trainings for distribution enterprises in implementing cleaner production and energy saving solutions (Ministry of Science and Technology, MoIT)
	Leading and coordinating unit	The host institution: Ministry of Agriculture and Rural Development: a, b Ministry of Industry and Trade: c Retailing associations: d Collaboration: Ministry of Industry and Trade, Ministry of Natural Resources and Environment, Ministry of Science and Technology, Ministry of Transport, Farmers' Union
	Time	2020-2025
	Capital	State budget, aid and other lawful capital sources
Sustainable Lifestyles and Consumption		
	Objective	Demonstrate examples and provide the infrastructure to support the consumers to make environmentally-conscious decisions to promote sustainable living for all;

	Outcome indicators	Number of green criteria for GPP, number of companies join the platforms, number of residents participate in the car-free days, number of appliances recycled, number of hotels certified by Green Lotus Label
	Instrument	Regulatory instrument, educational instrument, partnering instrument, informational instrument
	main content	(a) Revise the public procurement regulations developed by MPI or/and MOF and set up special green criteria in the public procurement bidding law. Develop a guideline on green public procurement to decide the criteria and set a list of prioritized green products manufactured by Vietnamese producers, to distribute the guideline to all government ministries, agencies and public owned companies and projects. (Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Ministry of Finance) (b) Develop an online supply chain transparency platform through consumer information association network to provide consumers with information on safety and environmental impacts (green label) of products of supply chain in making purchase decisions and prevent inaccurate claim of green products. (Ministry of Industry and Trade, consumer association, NGOs) (c) Launch a local government lead multi-stakeholder food waste reduction platform to invite retailers, restaurants and hotels to measure the current level of food waste in consumption phase and to set voluntary reduction target and report the progress regularly. (MoIT and local government, business) (d) Selected 5 major urbanized cities to develop a public transportation expansion plan and delegate a certain public area in the downtown area as “car-free day” once a month to encourage walking and cycling among residents. (Ministry of Transport and city governments of the 5 selected cities) (e) Set-up electronics (mobile phone and PC) and home appliances (washing machine, refrigerator, TV) repair and E-waste collection system through public-private-partnership between municipalities and manufacturers in providing information on repair and reuse to extend the lifetime of products, and for consumers to dispose used products for manufacturers to collect for recycling and remanufacturing. (Ministry of Natural Resources, municipal government and appliance manufacturers) (f) Promote eco-tourism through the development of eco-tourism activities and partnership with hotel associations to certify Green Lotus Label among hotels. (Ministry of Culture, Sports and Tourism, hotel association) (g) Impose environmental fees on non-environmentally-friendly products such as plastic bags in supermarkets and convenience stores (MoNRE and supermarket association)
	Leading and coordinating unit	The host institution: Ministry of Planning and Investment: Content a Ministry of Industry and Trade: b, c Ministry of Natural Resources and Environment: e, g Ministry of Transport: d

		Ministry of Culture, Sports and Tourism: f Coordination: Ministry of Industry and Trade, the Ministry of Natural Resources and Environment , the People's Committees of provinces and cities directly under the Central Government through n
	Time	2020-2025
	Capital	State budget, aid and other lawful capital sources
Sustainable Export Products		
	Objective	Improve the competitiveness capacity and market access of export-oriented enterprises/manufacturers to participate in global sustainable supply chain for key sustainable export products through restructure export products towards sustainability;
	Outcome indicators	Number of products listed in the online database, number of companies join the program, number of products listed in the SCP section, number of international platforms joined
	Instrument	Informational instrument, educational instrument, partnering instrument
	main content	(a) Develop an online database to improve the market access for key green exporting products focusing on electronics, textile and clothing, wood products, agricultural and seafood products (b) Launch a supporting program for export-oriented producers to apply for eco-labelling and fairtrade certification scheme (c) Launch a “SCP” products section during the export-oriented trade shows in the target industries such as electronics, textile and food processing (d) Participate in international resource and waste circulation platform to enhance cooperation and industrial symbiosis
	Leading and coordinating unit	The host institution Ministry of Industry and Trade: a, b, c MONRE: d
	Time	2020 – 2030
	Capital	State budget
Sustainable Import Products		
	Objective	Improve the legal enforcement for environmental protection on imported scraps and waste and to restructure imported products towards sustainability;
	Outcome indicators	Number of regulations and standards revised, number of organizations joined the capacity building programs, number of countries developed agreement with
	Instrument	Regulatory instruments, informational instrument, partnering instrument
	main content	(a) Revise the regulations and standards on importing of scraps and waste as raw material for production

	according to Vietnamese law and international agreement (MoNRE) (b) Conduct awareness raising and capacity building programs for the local authorities, trading companies and custom to strengthen the enforcement of the regulations on importing scraps and waste (MoNRE, local authorities, custom) (c) Develop bilateral and international agreement with countries to import clean technology (MoIT, Ministry of Science and Technology, MoNRE)
Leading and coordinating unit	Chair: Ministry of Natural Resources and Environment: Content a, b Ministry of Industry and Trade: c Collaboration: Ministry of Industry and Trade, Ministry of Natural Resources and Environment, Ministry of Science and Technology, People's Committees of centrally-affiliated cities and provinces
Time	2020-2025
Capital	State budget, aid and other lawful capital sources
Strengthening Capacity on Sustainable Consumption and Production Implementation	
Objective	Strengthen the capacity of ministries, provincial government, industry, research institutes and formal education to implement SCP;
Outcome indicators	Number of ministries and organizations in the SCP Advisory Committee, number of provincial governments developed the plan, number of companies joined the training program, number of education modules developed, number of universities and companies joined the LCA training center, number of students received the scholarship
Instrument	Regulatory instruments, informational instrument, partnering instrument, educational instrument, economic instrument
main content	(a) Form an inter-ministerial and multi-stakeholder SCP Advisory Committee to advise on the legal and policy framework and implementation on SCP programs to enhance science-based multi-stakeholder policy making and planning (MoIT; Chamber of Commerce) (b) Request all provincial government to develop a SCP implementation plan focusing on linking SCP to their local socioeconomic and environmental challenges to incorporate one village one product program to target tourisms market, and to hold annual provincial government SCP gathering to share and scale-up good practices on SCP (provincial government) (c) Conduct a series of training programs for industry managers in industrial parks on the industrial symbiosis model in industrial parks, economic benefits of implementing SCP and eco-innovation, and training on certification scheme (International organizations, industrial parks, provincial government, companies in the industrial parks)

	(d) Incorporate sustainable consumption and production into formal education module to improve the multi-disciplinary knowledge development of SCP in higher education and nurture sustainable consumption practices through early ages of school children (Ministry of Education, Universities and schools) (e) Launch a LCA methodology calculation training center in partner with universities and research institutes to transfer the knowledge to industries in implementing in production practices (International organizations, Ministry of Science and Technology, research institutes, universities, industries) (f) Provide international scholarships in SCP field specifically for youth to study in SCP and circular economy research in overseas universities (Ministry of Education)
Leading and coordinating unit	Chair: Ministry of Industry and Trade: Content a, b Ministry of Planning and Investment: c Ministry of Education and Training: d, e, f Collaboration: Ministry of Industry and Trade, Ministry of Planning and Investment, Ministry of Education and Training, People's Committees of provinces and cities directly under the Central Government, Universities and Research Institutes
Time	2020-2025
Capital	State budget, aid and other lawful capital sources
Communication on Sustainable Consumption and Production	
Objective	Enhance the awareness of all actors in the society to take actions towards SCP;
Outcome indicators	Number of people reached in the campaign, number of young entrepreneurs participated in the competition, number of products restricted, number of SMEs awarded, number of companies participated in the scheme
Instrument	Regulatory instruments, informational instrument, partnering instrument, educational instrument, economic instrument
main content	(a) Launch SCP communication campaign lead by MOIT (b) Conduct an annual competition at national, provincial and local level with international organizations to encourage young entrepreneurs to pitch their SCP ideas and assist in mobilize investment from the business sector (c) Launch awareness campaign on VOV about information on sustainable consumption and lifestyles and green labels in Vietnam (d) Restrict advertisement on products that are potentially damaging the health and waste of resources from school areas and streets (e) Launch the awarding “eco-innovation” scheme to SMEs that have practiced the best eco-innovation practices in selected criteria and industries with showing case their best practices

		(f) A best practice or front-runner scheme for circular economy in electronic industry, food industry and textile industry
Leading and coordinating unit		Chair: Ministry of Industry and Trade: a, e Ministry of Information and Communications: c, Collaboration: Ministry of Industry and Trade, Ministry of Planning and Investment, Ministry of Education and Training , People's Committees of provinces and cities directly under the Central Government ,
Time		2020-2030
Capital		State budget, aid and other lawful capital sources
International cooperation on Sustainable Consumption and Production		
	Objective	Strengthen international cooperation in knowledge exchange and finance in SCP;
	Outcome indicators	Number of students and researchers participated, number of presentations Vietnam presented in the conferences, amount of ODA fund allocated
	Instrument	Educational instrument, partnering instrument, economic instrument
	main content	(a) Launch annual SCP international program to send students and young researchers overseas to have knowledge exchange with developed economies (b) Participate in Regional 3R Forum in Asia and the Pacific, Asia Pacific Roundtable on Sustainable Consumption and Production, and World Circular Economy Forum to exchange views with other countries and sectors on SCP practices and share Vietnam's experiences in achieving high well-being living (c) Dedicate a certain share of ODA fund into SCP implementation and circular economy projects among international and local partners to receive the green technology transfer from other countries (MPI)
Leading and coordinating unit		Chair: Ministry of Education and Training: a Ministry of Industry and Trade: b Ministry of Planning and Investment: c Collaboration: Relevant Ministries, Local Government, Geography Schools and Research Institutes
Time		2020-2030
Capital		State budget, aid and other lawful capital sources
R&D Program on Sustainable Consumption and Production		
	Objective	Enhance R&D programmes to facilitate multi-stakeholder partnerships in implementing SCP.
	Outcome indicators	Number of R&D programmes launched, number of organizations participated in the R&D programme

Instrument	Educational instrument, partnering instrument
main content	(a) Develop a R&D, and innovation on applications of IT, AI and Block-chain in improving the performance and greening distribution systems (b) Design a public-private-partnership joint R&D program on SCP (c) Develop a R&D program focusing on eco-design for companies (d) Launch a R&D programme on SCP database creation to continuously assess the evolving progress of SCP implementation regularly
Leading and coordinating unit	Chair: Ministry of Industry and Trade: a, b, c & d Collaboration: Ministry of Science and Technology, Ministry of Planning and Investment, People's Committees of provinces and cities directly under the central government
Time	2020-2030
Capital	State budget, aid and other lawful capital sources