

Natural Resources and Environment — The Foundation for Sustainable Development: The New Thought and Policy Suggestions for Vietnam

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Abstract: After decades of development the world had created both positive and negative changes. Beside economic, social development and prosperity, environmental degradation and social troubles also exist like hunger and poverty, armed conflicts,... Linked with those changes there are evolution of thoughts in development and development management. This paper aims to reveal changes of thought in management related to natural resources and environment (NRE) at 3 aspects: the new awareness on NRE; the new thought and approach on NRE; and policy suggestions towards sustainable development in new development context in Vietnam. NRE is the foundation for sustainable development and this can be considered as new awareness in Vietnam. Roles of NRE is now in a higher position than in the past. The new awareness is adopted and promoted by the Government of Vietnam (GoV) which considers it as leading management point of view towards sustainable development of the country in coming time. The new thought and approach on NRE are expressed in the development policy framework for new economic models towards a green, circular and sharing economy. Those new economic models are creating a great family of sustainable economic models in Vietnam. The policy suggestions are proposed towards creating and developing a favorable ecosystem for development management at 2 aspects: legal framework and policies, management instruments.

Key words: natural resources and environment, sustainable development, green economy, circular economy, sharing economy

1. Introduction

Natural resources and environment (NRE) are known at the higher position and level now than in the past, and it has changed thoughts and approaches in socio-economic development management towards sustainability all over the world. Namely, NRE is considered as the foundation in all decisions and management of development processes towards sustainability. Such changes in management of NRE caused by serious consequences when NRE were neglectedly evaluated (behind, equal or same level with economic activities). Such position is not properly

placed as the nature of NRE, as a result the world leaders called for “Save our Planet” in 1986.

In Vietnam, the Conclusion of the Politburo of the Communist Party of Vietnam (CPV) No. 56-KL/TW dated 23 August 2019 defined that “the environment is not only man’s life space but a condition, basis, prerequisite factor for sustainable socio-economic development” and it is the point of view be grasped thoroughly in NRE management and climate change response in present context of country’s development.

This paper therefore to discuss the new knowledge at 3 aspects: reasons for the new knowledge related to NRE management; the new thought, approach to NRE; and policy suggestions for NRE management towards sustainability in the coming period in Vietnam.

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2. Reasons for the New Knowledge of NRE

In a long time (some decades) scientists and practitioners have discussed about the position of the environment (including natural resources) in development and development management. Before 1972 the environment is known as a place to provide “inputs” and of receiving “wastes” from development activities, meaning it is placed in a secondary position. Knowledge on environment began revisited only with first official alarms about the world’s environment and its negative, serious consequents in 1972 when the United Nations Conference on the Human Environment took place in the Stockholm, Sweden and the Stockholm Declaration on the human environment was announced which concludes that “we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes” [1]. Unfortunately, those alarms were ignored for decades of rapid development, especially decades when countries have being realized and encouraged industrialization, modernization, urbanization and economic integration.

The alarms in the Stockholm Declaration on the Human Environment has only awakened human’s understanding the environment in economic development but they are not enough to change our awareness. Only till 1987 there was a dramatically change of knowledge on the environment pointed by the Report titled “Our Common Future” of the World Commission on Environment and Development (WCED) where the term “sustainable development” for first time was proclaimed expressing the environment is a pillar of sustainable development, equal to economic and social pillars.

Then, from 1992, the UN Summit Conference has been happened every 10 years with participation of the state’s leaders around the world to discuss issues of sustainable development and release Declarations of common actions. Sustainable development since then became the central content of all discussions at the international level showing not only the common interest of all countries on issues of sustainable development, especially issues of poverty, NRE and recently climate change, but also the increasing urgency to ensure the environmental sustainability for sustainable development in every single country as well as regional and global scale. Perhaps, degradation, decrease, even exhaustion of natural resources with negative consequences never became so serious that threatening human existence as at the present. Issues of NRE became increasingly serious that in 2007 the UN Environment Programme (UNEP) issued the Report titled “The fourth Global Environment Outlook — GEO-4” which provided convincing evidences of the Planet’s environmental situation with alarm “Save the planet: Now or never!” and called for a shifting of the environment from the periphery to the core of decision making.

Thus, during past 5 decades (from 1972 to now) world-scale declarations with commitments of countries in the world taking actions showed the change of awareness on the relationship between Man and Nature towards Man stands not outside or over Nature to conquer, exploit, compel Nature to serve Man’s demands but Man’s life depends on Nature, and so, Man has to respect, live in harmonization with the Nature. We can generalize this relationship (Man-Nature) that all Man’s decisions and actions should be in the limit of Nature (Fig.1, right) but not over like now (Fig. 1, left). This means that NRE should be foundation for sustainable development. This is also theoretical and practical foundation for development towards sustainability, green and circular economy.

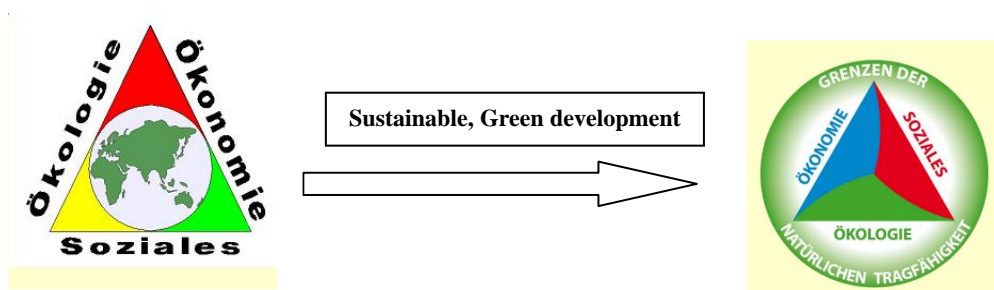


Fig. 1 Man-nature relationship in sustainable development [2].

The Ecosystem-based Approach (EbA) is a way of directly and clearly expressing the thinking that Man depends on Nature but not the other way around. EbA is a strategy proposed by the Convention on Biodiversity (CBD). Vietnam joined the Convention in 1994 and the Ministry of Natural Resources and Environment (MONRE) in 2013 issued a Technical Guidance Document “Building and implementing ecosystem-based climate change adaptation solutions in Vietnam” with the introduction of the MONRE’s Minister highlighting that the EbA has been tested in practice in many countries and “it has the ability to help Vietnam be more proactive and effectively respond to the impacts of climate change”.

Green development is also called sustainable development with content posing NRE at centre of all development decisions. Sustainable development respects the harmonizing relationship between economic, social and environmental pillars but green development considers NRE as a foundation for economic activities and to improve life quality of the society (Fig. 2).

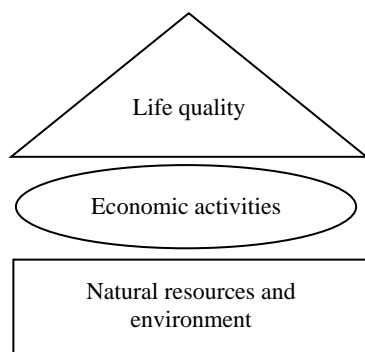


Fig. 2 NRE is a foundation.

In development process towards a green, NRE with the role of a foundation, centre of importance and to be protected and consolidated for generations to come, pose a principle be followed strictly in all development decisions that growth of productivity of natural resources should be always more als growth of GDP, where exploitation of renewable resources (h) should be always less als (at least equal) renewability of natural resources (y): $h < y$ and waste (W) should be always less als (at least equal) waste absorbability of the environment (A): $W < A$. This principle expresses also SD principle that responsibility of the present generation in guarantee of NRE’s foundation for economic development and improvement life quality for next generations.

Circularity in uses of natural resources at present is founded on the completely new development principle in comparison with those in the past, namely if long before development principle was founded on the conception that natural resources are available, plentiful, even no limit but today-principle of development is founded on the contrary conception that although natural resources are available, plentiful but limited and unique sources for all development activities on the Earth and that the Earth is considered as the spaceship, where all what needed should be used reasonably, smartly and circularly to ensure a long flight. This is also a theoretical base for definitions of the circular economy (CE), including a definition of the European Unions (EU) “the circular economy is an economy where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized” [3].

3. The New Thought and Approach to NRE

As presented above, development practices in many decades has damaged seriously natural base of continuing development of the Mankind. This forced us to revise, re-think about the current development pathway, first and foremost on the role, position of NRE in development. With alarmings, began by environmental scientists and then discussed among scientists, managers and politicians, sustainability and greening are selected as the development manner and

pathway for the present and future. This selection, consensus and commitment for development at all levels (global, regional, national and local) also expresses a new base for development management, marking a critical change of thought (and at the same time the approach). It is an abandon of the “brown” development pathway with the “brown” of thought to sustainable development pathway with the “sustainable” thought and at present, under increasing impact of climate change, to a green development with the “circular” of thought (Fig. 3).

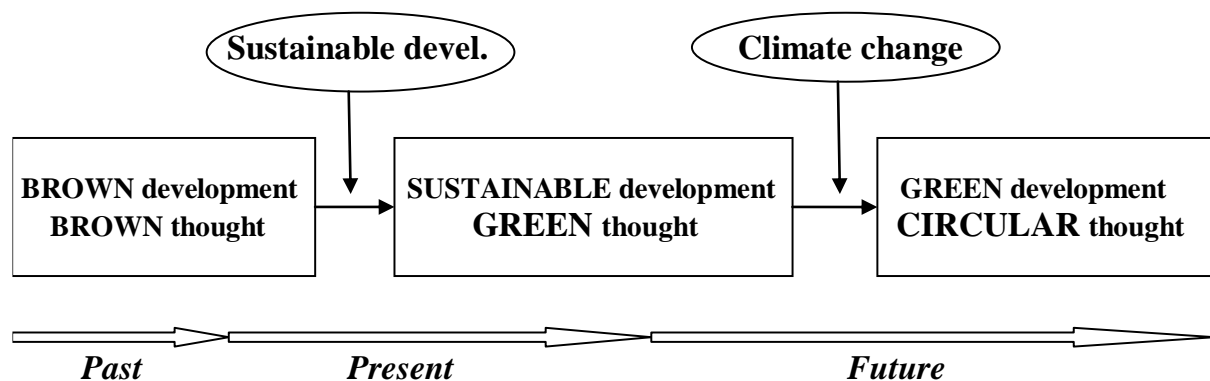


Fig. 3 Evolution trend from brown to green development.

Besides, it is useful to discuss the relationship and at the same time evolutionary movement of the development management thought from “brown” to “green”, although this movement is partly slow, even it is difficult and contradict. The main reason for that is the traditional (“brown”) economic development quickly, clearly brings socio-economic benefits and prosperity while the green development shows un-clear and convinced practical evidences, especially for business enterprises — the main forces of the development and prosperity of a nation.

The brown economy and brown development (and linked to it is the brown thought) are terms less used in scientific and managerial literature but used for contrarious comparison with term “green”. Dimitar S. Lalnazov from Kyoto University in Japan, wrote that “Characters of the brown economy is concentrated at GDP growth and average income per capital. Brown economy’s growth is based on available natural

resources and economic development is similar to exploitation and exhaustion of natural resources, leading to consequences such as heavy environment ravage; exhaustion of natural resources” [4].

Concerning the green economy (and linked to it is the green thought), there are various definitions but the following definition is cited most in Vietnam, a green economy is “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of the one that is low carbon emission, resource efficient and socially inclusive” [5].

Regarding the circular economy (and linked to it is the circular thought), there are a number of definitions, including the EU’s one, as mentioned above, that is an economy “where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized”.

Thus, the brown economy is completely in opposition to green and circular economy. Green and circular economies are unity in their nature with a difference of circular economy that to maintain resources in products for as long as possible before waste into environment achieving socio-economic and environmental goals, benefits as well as following correctly requirements that economy operates based on the spaceship's principle, as discussed above, that all what needed for it should be used reasonably, smartly and circularly to ensure long flight without any supply source outside except Earth's one.

Transition to sustainable development, green and circular economy shows transition to a new development thought and approach: Green and Circular. Green thought is one that is directed to and makes all development activities to be green and environment friendly as a basic condition. Greening is decisiveness in the green thought where what is related to development activities and management should be greened. Greening is also a requirement in direction towards sustainability and used for many activities towards sustainable development like green production, green consumption, green lifestyle, green products,... In 1999, the World Bank published a report titled "Greening Industry: New Roles for Communities, Markets and Governments" introducing a new model for pollution control in industry: greening Industry. Until now almost development activities are required

to be greened. In 2015 The Economic and Social Commission for Asia and the Pacific (ESCAP) released publication series titled "Greening of Economic Growth" introducing a term of greening economic growth and called Asia and the Pacific countries to abandon the approach "grow first, clean up later". However, in the last few years under impact of climate change, NRE degradation and little improvement in greening have created a new content: not only environment friendly but also to protect natural foundation (that is NRE) for development. Resulting from this new content of green economy's development has a new face: Circular Economy. Circular economy in its nature is green economy but they are not the same and circular economy not only takes less natural resources and less wastes into environment but it also makes value of natural resources crystallized in products and services serving human needs more and longer. Thus, in circular economy maximization of product's lifecycle is the important point and to achieve so "take less, waste less" is only one of objectives and solutions. Simply, content of circular economy can be generalized as follows: Take less (resources from the Nature) => Green Production/Goods => Green Consumption/Lifecycle maximum => Less Wastes. Fig. 3 can be added with changes linked to changes of thought on NRE as showed in Fig. 4 presenting a relationship between the brown, green and circular economies.

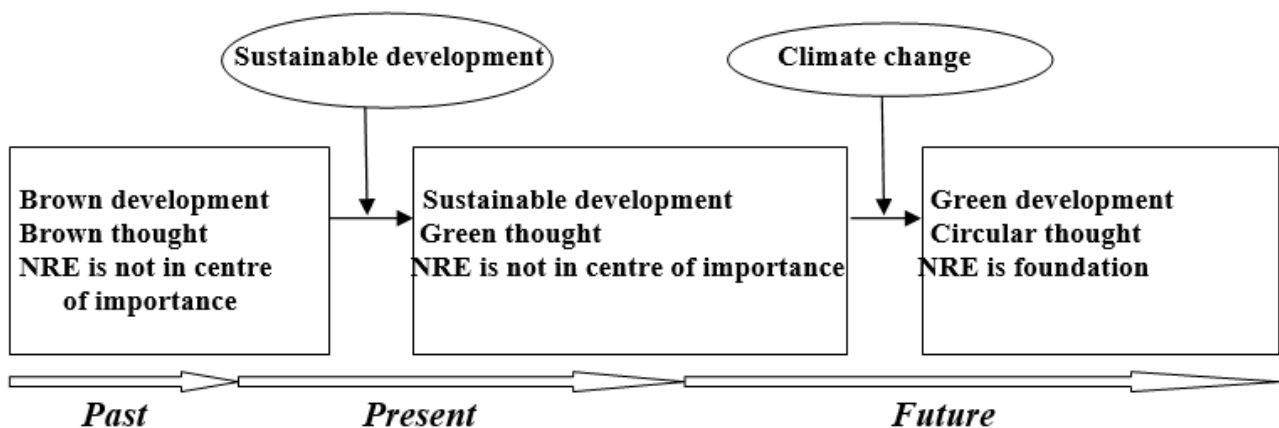


Fig. 4 Relationship between brown, green and circular economies.

For addition, in difference from traditional and green economies, in the circular economy waste is considered as a secondary resource to be re-used, recycled as much as possible and it exists not only in physical, such as scrap metal and electronics in a landfill, but also in abstract such as empty rooms or unused seats in passenger vehicles. Circular economy is directed to models where all links to reproduction cycle are combined closely and continuously.

Circular economy is also a base for formulation of other models based on the same thought of NRE as a foundation having a new name: sharing economy. Sharing economy is a new term appeared recently and linked to the digital technology revolution. It is formulated and developed by its utility that transfers resources being used not reasonably (products bought but not used, machines are being used but not at full capacity,...) to others where they can be used more reasonably and effectively. Sharing economy, examining its content, is also a kind of circular economy with difference that based on foundation of digital technology. In sharing economy model owners of assets, goods can lease to others any things that not being used, including factories, agricultural machines,... through internet-based companies like Grab/Uber taxi

or hotel booking. Today many companies develop and operate sharing economy models based on new business thoughts considering “product as a service”. The difference of this new business model is that beside the traditional business “buy and own” model companies apply also “buy and not own” model where products are used by one or many people through a lease or pay-for-use arrangement form. Box. 1 shows an example.

Vietnam begins to show its interest in development of sharing economy models as the model makes use of the industrial revolution 4.0 to promote the country economy development towards sustainability and circulated. The Government of Vietnam has issued the Decision No 999/QĐ-TTg dated 12 August 2019 approving a plan to enforce sharing economy models, where MONRE is responsible as the liaison organization for study and develop proposals of policy and solutions on effective exploitation and utilisation of natural resources and environmental protection as well as enforcement of reuse and recycle wastes related to sharing economy. Thus, sharing economy has being channeled into a big family of sustainable, green and circular economy models in Vietnam.

Table 1 A “tires as a service” business model of Michelin company [6].

Michelin, one of the world’s leading tire manufacturers, has made significant strides toward adopting the Product as a Service model to create an innovative program in which fleet customers can lease instead of purchase tires outright. Under this program, Michelin effectively sells “tires as a service”. Customers pay per miles driven. They don’t own the tires and therefore they don’t have to deal with the hassles of punctures or maintenance of any kind. By adopting a Product as a Service model, Michelin is incentivized to develop longer lasting tires. And, by getting wornout tires back, the company is motivated to make sure through design and material selection that they can be reprocessed into a valuable input for new tires or something completely different.

4. Policy Suggestions for Vietnam

International experiences show that the most important expression of thought and awareness is to create an ecosystem favorable for the development of a family of sustainable, green and circular economy models. This ecosystem includes a legal framework together with enforcement policy and instruments. Below is some policy suggestion to create and develop

such an ecosystem, from point of view that NRE is the foundation for sustainable development in Vietnam.

4.1 Legal Framework

The existing legal framework in Vietnam is formulated relatively clearly for sustainable development in general but not clearly for green and circular one. The reason is easy to understand that green and circular development in Vietnam only

becomes recently an indispensable requirement link to a new context of climate change and negative impact from mis-management of NRE. Many laws, including ones on NRE, are in process of reviewing and supplementing like the Law on environmental protection (LEP), the Law on Land,... For example, one of the reasons for correcting the previous LEP (promulgated in 2014) is, as indicated in the GOV's document No. 125/TTTr-CP dated 7 April 2020 submitted to the National Assembly, that "international integration and the industrial revolution 4.0 impact and continue to impact all aspects of society's life, creating a new trend in environmental management and sustainable development, where creating a green, circular economy becomes the leading trend in the world". The Conclusion of Politburo of the Communist Party of Vietnam No. 56-KT/TW dated 23 August 2019 considered the environment as "condition, foundation, and prerequisite factor for sustainable socio-economic development" and required to create "new policies, legal foundations for formulating and developing sustainable growth models through enforcing green, circular and less-carbon intensive economies".

The recent revised LEP (promulgated in November 2020) defined a policy "Integrating, enforcing green economy, circular economy models in formulating and implementing socio-economic development strategies, plannings, programs, projects" (LEP, 2020, Article 5). Thus, there is enormous works to do to concretize this Law's articles in form of the under-law legal document (such as Decrees, Circulars, Regulations, and so on). International studies recommended that implementation of the circular economy needs adjustment and adding of new relating concepts into existing legal documents like product design, product, service sharing,... aiming at the goal of minimum waste disposal into the environment while ensuring economic needs and benefits for investors, producers, and consumers (see also [7]). A number of countries are adjusting their legal regulations hindering the

development of a circular economy which were designed for the linear economy, including those in institutions and trade agreements as well as in financial stimulants for what that circularness and pollution, NRE degradation costs are not calculated into price costs of products and services (see also [8]).

4.2 Management Policy and Instruments

As for any management object, policies and instruments for a circular, sharing economy should be created, including changes, adjustment of the existing, and to add new ones. Circular and sharing economy models, as mentioned above, are new economic models that not only widen existing activities (like 3R, cleaner production,...) but also include new ones that appear only in modern conditions (digital technology, internet of things,...). Expression forms of circular and sharing economies, as well as their markets, are thus more diversified and copious. A pay-as-you-go model becomes more popular creating a new need part and area for the development of goods, service markets for circular and sharing economies. Thus, policies and mechanisms are needed and gone ahead to pave the way and create an ecosystem for the development of those models. This ecosystem, according to UNCTAD's recommendations, includes 3 policy instrument categories: Command and Control; Economic Instruments, and Public-Private Partnership [9].

4.2.1 Command and Control

As mentioned, LEP has been recently promulgated (on 17 November 2020) and it needs to be concretized into under-law legal documents that guiding the implementation in practice, at least until the end of 2021. For this matter, it can probably consider adjustments of higher national standards, technical regulations for landfills to protect the environment as well as to avoid negative reactions of the communities living near-by landfills that are becoming disseminated in Vietnam nowadays

Compelling regulations are also needed for the exchange of non-toxic wastes for businesses, at least regulations of informing, providing information on wastes and waste sources. It should be different from existing regulations, meaning that informing and providing information aim not only simply at information collection for management purposes in general but it is more important at proving level of extended responsibility realization of producers, including information of impacts of a product, service design; materials, energy selection for production; implementation of circular, sharing economy models;...

Based on characters of the circular, sharing economy models, legal regulations of leasing and circularising, sharing products, services are also needed including wastes. This would be a legal framework for implementing the national program to promote sharing economy models that indicated in the Prime Minister's Decision No 999/QĐ-TTg dated 12 August 2019. At present, according to the Decision No. 999/QĐ-TTg, MONRE is drafting policy regulations and concrete measures for reasonable exploitation, utilisation of natural resources, environmental protection and promotion of waste reuse and recycle in fields related to sharing economy models that should be submitted to the Government in 2021.

4.2.2 Economic Tools

In Vietnam there are economic instrument related to some contents, aspects of circular economy like taxes, fees, deposit - refund,... but adjustments and additions to the existing are needed, resulting from and correlated with new characters, requirements, contents of circular, sharing economies. Concretely, it could take into account the option of adjusting tax, fee levels of NRE in accordance with the principle of the general initial "inputs" costs (natural resources) should be always bigger also the general secondary "inputs" costs of same categories (that is reuse, recycle, sharing).

Research is also needed for the addition of new tax, fee categories to support, promote circular, sharing

economies as some countries have conducted like landfill and/or incineration taxes; different taxation levels for reused or recycled products; reduced value-added taxes for repair and reuse services; increased taxes on non-reparable products; landfill and/or incineration taxes; incentives for access over ownership,... (see also [9]).

4.2.3 Public Private Partnership (PPP)

There is a lot of matters to do to promote PPP because until now this field in Vietnam is almost fewest developed and here only to emphasize 2 matters: to create and develop recycle, circularness markets and information, a database system for circular, sharing economies where the first work is to create a "playground" and the next work is to provide initial "materials" for PPP decisions.

Regarding recycle, circular markets: participation of the private sector is the prerequisite factor, a condition for implementation of circular, sharing economy models. PPP is a Vietnam Government's policy in general including in NRE management. Some policies to mobilize the private sector's participation in the NRE field were promulgated and being implemented. However, results are very limited with many subjective and objective reasons. From point of view of circular, sharing economy PPP in the field of NRE in Vietnam has 2 points to pay attention to no private ownership of natural resources and high publicity of environmental goods, services. Those characters pre-determine that it is necessary to have enough strong stimulants for attracting actual interest and participation of private investment in providing environmental goods, services and circularly using natural resources. And this is relating also to the state's management tools as mentioned above. For example, it is difficult to have actual interest and participation of private investment if natural resources tax, environment fee are low or failure of a "playground" (that is market) for recycled, circularized, shared products, services. Circular, sharing economies have a character that is symbiosis. A symbiosis is first a need, an interest, and a long

linkage between partners to achieve together SD benefits (ecological industrial parks are real symbiosis examples of circular, sharing economies). In a circular, sharing economies symbiosis is a close linkage between partners to maintain the value of products, materials, and resources as long as possible and minimize wasting. Thus, build and developing PPP in the NRE field means also build and developing of symbiosis relationship between partners in a base of market relationship, where the State plays a role of leading, promoting, stimulating, building a “playground” for entrepreneurs and consumers to realize a symbiosis in circular, sharing use of natural resources and environmental protection.

Regarding information, database system: the system should include not only information, database on wastes but also other goods, services related to recycling, circularness. Information technology evaluation 4.0, especially the Internet of Things (IoT), BigData, BlockChain, brings big and real opportunities for the widening and developing this kind of information and database system. As discussed above, the nature of circular, sharing economies is to maintain the value of products, materials, and resources for as long as possible, and at the same time to minimize the generation of wastes. This is related to the production chains and lifecycle as well as to stakeholders (producers, distributors, consumers). Information and data on circular, sharing economies are initial “materials” for decisions to participate in recycle, circularness, sharing. First of all, it should link to needs and interests of stakeholders. Then creation and development of information and database system for circular, sharing economies is a requirement not only for the development of circular, sharing economies generally but also for the development of PPP itself in the NRE sector because those have a close linkage to NRE. This system (that is information, a database system for circular, sharing economies) in Vietnam is considered as a sub-system in the national database system for development which is being implemented

according to the above mentioned Premier Minister’s Decision No 999/QĐ-TTg dated 12 August 2019.

5. Conclusion

NRE is a foundation for sustainable development and it is also the core of the new thought on development management. The Government of Vietnam requires to realize this thought in the practice for development and development management of the country.

Green, circular and sharing economies are being received big attention in Vietnam and that is a concrete expression that the new development management thought is being gradually absorbed in development activities.

It is necessary to create a healthy ecosystem for that the new thought of development management which is quickly absorbed in practice and for developing the creative power of stakeholders. This ecosystem includes a legal framework carrying deeply green, circular, sharing character together with policy, mechanism, tools correspondingly designed and effectively implemented.

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