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## **Sets of Sustainable Development Indicators in Vietnam: Status and Solutions**

### **Abstract**

There are some sets of sustainable development indicators (SDI) at different regional scales in Vietnam. Actually, building and applying SDIs have faced different difficulties and this has led to reduce their values. Solutions to improve SDIs have being proposed and completed. The paper aims to review the advantages and disadvantages of SDIs in Vietnam and to propose recommendations on building and effectively applying SDIs in practice in Vietnam. Two national SDIs, one regional SDI, one local SDI and some provincial SDIs were analyzed. The common limitation of Government promulgated SDIs were found to not be feasible as they are applied in practice. The main reasons are (1) procedures used to build SDIs had not been based on specific theoretical models, (2) insufficient consideration of available data, developed timely methods of new metric calculations and (3) ineffective handing over usage of SDIs to stakeholders. Proposed solutions are building a pilot SDIs for specific regions in Vietnam based on UN guidelines from 2007 and calculating practical values of SDIs for pilot regions, subsequently recommending relevant authorities in Vietnam to change or adjust promulgated SDIs.

**Keywords:** Sustainable Development Indicators, Tracking, Monitoring, Assessing, Vietnam

## **Introduction**

Indicators, in general, play a major role in various stages of a national sustainable development strategy (NSDS): monitoring, assessment, and reporting. Moreover, taking indicators into account during the formulation stage also helps ensuring that the NSDS is concrete and measurable (UNCSD 1996, 428). The Commission on Sustainable Development (CSD) adopted three editions of Sustainable Development Indicators Guidelines and Methodologies (SDI GM) which guides countries/locals to develop their own indicator sets. In Vietnam, there are SDI sets built based on adapting the CSD indicators to national/local conditions. This paper aims to review advantages, disadvantages of SDIs in Vietnam and propose recommendations on developing and effectively applying SDIs in practice in Vietnam.

### **1. Progress of Sustainable Development Indicators Guidelines and Methodologies of the United Nation**

In 1996, CSD adopted the first edition of SDI GM. This 'blue book' guides SDI selection based on causal conceptual framework (UNCSD 1996, 428). But after the testing of these indicators in several countries the framework was abandoned as it was found to be inappropriate for economic and social indicators and it lacked focus on policy (Nathan and Reddy 2008, 47). Therefore, the blue book was revised and the second edition of SDI GM was presented in 2001. This edition used pillars/dimensions framework instead of causal framework (UNCSD 2001, 294). In 2007, the newest edition of SDI GM was published. In this edition, the division of indicators along the lines of four 'pillars' (social, economic, environmental and institutional) is no longer explicit, but it was based on domains framework. This change emphasizes the multi-dimensional nature of sustainable development and reflects the importance of integrating its pillars (UNCSD 2007, 93). This approach makes it easier for stakeholders to comprehend the issues, and aids decision making about sustainable development (Lock 2006, 6). At the same time, it does not prevent the linking of indicators or domains to dimensions of sustainable development as a pillar framework (Côté and McCollough 2007, 41).

### **2. Sets of sustainable development indicators in Vietnam**

Based on SDI GM 1996, in 1998, the first draft set of SDIs in Vietnam was promulgated by the Vietnam Environment Administration. The set included 80 indicators which relied on the causal based/linkage based framework and classified into pressure – state – response groups belonging to three pillars: (1) socio-economic (3 economic and 17 social indicators); (2) environment (7 soil, 5 inland water, 4 sea, 6 air environment indicators, and 3 solid waste, 11 biodiversity, 8 environmental incident indicators); (3) environmental management: 16 indicators. Obviously, the set was inclined to the environmental pillar (60/80 indicators) while the socio-economic one properly had not considered (20/80 indicators). Finally, the set was not promulgated officially.

In 2003, a scientist group of Vietnam Union of Science and Technology Associations proposed a SDI set grounded on the causal based/linkage based framework. The set consisted of 42 indicators belonging to 4 pillars: 5 economic, 16 social, 17 environmental and 4 response indicators. Subsequently it was reduced to 25 indicators including 4 economic, 9 social, 10 environmental and 3 responses. Although the environmental indicators had decreased, the economic ones still occupied low ratio. It means that the set had not been balanced and harmonized between the pillars. Like this, the United

Nations promulgated the second edition of SDI GM in 2001 but the set was still based on the causal framework. This made it difficult to select indicators belonging to the economic and social pillars.

Based on the second edition of SDI GM some provinces of Vietnam (Thai Nguyen, Quang Nam and Lam Dong) applied the theme based framework including 3 pillars to put the sets of SDIs in their own sustainable development strategies 2006 – 2010 in 2005 (Lam Dong 2006, 112; Quang Nam 2006, 97; Thai Nguyen 2006, 76). Although three sets were proposed by the provinces, no documents have been promulgated.

UNDP and the Ministry of Planning and Investment published the document “Designing a set of SDIs and building a database for monitoring sustainable development in Vietnam” in 2006. The set relied on the SDI GM in 2001. The document is an important result of the project “Implementation of Vietnam Agenda 21 - VIE/01/021” (UNDP and MPI 2006, 69). The set was designed at national and provincial scale. Nationally, the set was composed of 44 indicators: 12 economic, 17 social, 12 environmental – resource, and 3 institutional, while provincially, 30 indicators (7 economic, 14 social, 6 environmental – resource, and 2 institutional) were proposed (Annex 1). Software for managing an indicator database was developed to support tracking and monitoring sustainable development.

In 2012, the Vietnamese Prime Minister promulgated decision no 432/QĐ-TTg dated 12/4/2012 on the Vietnam sustainable development strategy period 2011 – 2020. Coming with the decision a set for monitoring and assessing Vietnam sustainable development period 2011 – 2020 was approved. It consisted of 3 composite, 10 economic, 10 social, and 7 environmental – resources indicators (Annex 2). This was an important step forward of designing a set of SDIs since it was the first time a set of SDIs was promulgated officially by the Government.

In the end of 2013, Vietnam Prime Minister promulgated a set of SDIs for monitoring and assessing sustainable development in provinces for the period 2013 – 2020 to make united legal bases. This has made a united and transparent information system from national to provincial scale to monitor and assess the progress of the implementation of the Vietnam sustainable development strategy (VPM 2013). The set was designed based on the indicators for monitoring, assessing national sustainable development and provincial statistic systems, and made sure it closely targets the development priorities of the Vietnam sustainable development strategy. The indicators were classified into two groups: common and local characteristic. The common indicators included 28 ones: 1 composite, 7 economic, 11 social, 9 environmental – resource, while the local characteristic ones had 15 (1 indicator for mountainous regions, 2 for plains, 2 for coastal areas, 5 for national cities, 5 for rural regions) (Annex 3). Both the government promulgated sets of SDIs did not inherit the theoretical framework of the set of SDIs proposed by the project VIE/01/021.

Y et al. (2016) carried out a full procedure for designing a set of SDIs to monitor and assess sustainable development in Tay Nguyen’s provinces. This included designing the indicator framework that was suitable for Tay Nguyen at 3 scales (77 regional, 70 provincial, 48 district indicators) (Annex 4), collecting data for each indicator, defining target values, calculating, assessing and analyzing the outputs, proposing solutions for each sections and scales and developing a software for managing data, supporting calculation of indicators, and viewing the results.

### 3. Discussion

In order to implement Vietnam sustainable development goals the Vietnam government has promulgated legal documents since 1998, and some departments and provinces also have concretized the documents. The legal system of sustainable development, enhancing national government quality of sustainable development has continued in its formulation. Coming with it sets of SDIs for monitoring, assessing sustainable development, completing both theoretically and practically.

Implementation of sustainable development in Vietnam has integrated into socio-economic and branch development plans and strategies. Specifically, global principles and goals of sustainable development have concretized properly Vietnam conditions and integrated into provincial socio-economic and branch development plans and strategies (MPI 2005; VN 2012, 82; MPI 2013). However, the set of SDIs for monitoring and assessing Vietnam sustainable development was officially promulgated in 2011 (VPPTBV 2014; Y et al. 2016, 309).

Two official sets of SDIs have faced difficulties when they applied although the guidelines were released. Both were proposed based on 3 pillars: economic, social, environmental, and added the composite indicators. They were not replied on any theoretical framework thus there was replication in these sets. More specifically, in the set of SDIs period 2011 – 2020, the “Environmental sustainable development composite indicator” is calculated based on indicators such as air quality, biodiversity, soil and water quality. Thus there is partial replication between the composite and other indicators as such air quality. Furthermore, calculation of the composite indicator is not easy and nowadays it was not used and calculated (Lam 2015, 102). This is why the target values of 2015 and 2020 were not mentioned in the set. Additionally, the target values of indicators: “Ratio of protected, biodiversity maintaining areas”; “Degraded land areas”; “Ratio of days with harmful substances in the air above standard” have not been taken into consideration. This reflects infeasibility on data for calculation, which leads to reduced practicability of the set of SDIs.

Absence of indicators related to the Vietnam sea and islands in both sets of SDIs is a very, very important shortcoming although Vietnam is one country with large sea areas and SDI GM in 2007 guided. No mention of target values in the set of SDIs at local scale period 2013 – 2020 is an area of concern. Tracking and evaluating the progress toward sustainable development are not implemented in the whole inlands and territorial waters of Vietnam. Application of the local set of SDIs in practice has faced many difficulties, too. For instance, when applied for the North West provinces, only one of the second of indicators were calculated because no data could be collected (Vuong 2016, 477). This shortcoming reflects the lack of consideration of available data in the design of the SDIs. The infeasibility of data can be for two reasons: firstly, ineffective training of staff; and secondly, metrics cannot be calculated by normal statistic methods or by Vietnam official statistic system or are calculated with high costs.

With respect to technical support, two sets of SDIs promulgated by the Vietnam Government have no tools and database to support calculation. Tracking, monitoring and assessing needs to be managed in a system including a database, software tools to calculate indicators, viewing tools to analyze sustainable development progress of nation, localities or regions. This shortcoming has also made it difficult to implement the sets in practice.

In the period 2004 – 2011, three provinces: Thai Nguyen, Quang Nam, and Lam Dong promulgated provincial sets of SDIs but with no guidelines. This made barriers to carry out for tracking, monitoring, and assessing sustainable development in the provinces.

With respect to organization, the National Sustainable Development Council was found in 2005 following decision No 1032/QĐ-TTg of Vietnam Prime Minister, dated 27/9/2005. The council consults with the Vietnam Prime Minister to direct implementation of sustainable development strategy of Vietnam, and tracks, monitors, and evaluates the implementation of sustainable development goals and targets in Vietnam following approved sustainable development strategies. The sustainable development offices have been found in some ministries, departments, and the The Business Council for sustainable development has also been established in Vietnam (VN 2012, 82). Thus, in fact strengthening of organizations needs to be continued because there are sustainable development offices only in some provinces. This is a remarkable shortcoming for the implementation of sustainable development plans for provinces in general, applying sets of SDIs in particular although training already carried but not much (VPPTBV 2013).

In the future, the very important results of the Tay Nguyen set of SDIs can make new changes although it is only a study, not a legal framework. The set was designed based on a clear theoretical framework with full consideration of data availability of indicators, and assures comprehensive, full monitoring of themes of sustainable development and local characteristics. This is the unique SDI set implementation which developed software to manage a database and support for calculations. Although it has still had some limitations such as (1) design limited to Tay Nguyen, not for all Vietnam provinces; (2) the target values of provinces have not probably convinced but this promising approach will bring advantages for tracking, monitoring, assessing the progress toward sustainable in Vietnam.

#### **4. Conclusion**

National and local sets of SDIs have gradually developed scientifically, practically, and legally. Strengthening of organizations to implement tracking, monitoring, assessing sustainable development through sets of SDIs have also developed step by step and enhanced capacity. The Vietnam government promulgated two sets of SDIs (national and local), however they have still had very important shortcomings: absence of indicators related to sea and islands, low feasibility, replication of composite indicators with some remaining ones. The reasons which lead to the shortcomings are lack of necessary theoretical framework, availability of data to calculate values of indicators, and training have not properly been taken into consideration when designing sets of SDIs. Both national and local sets of SDIs have not had technical tools (Information Technology) to support tracking, monitoring, and assessing progress toward sustainability. The Tay Nguyen set of SDIs is a new and important advance for designing sets of SDIs in Vietnam, which assures comprehensibility and adequacy of sustainable development relying on the theme based framework of the United Nations, and comes with the software for calculation of indicator values and effectively tracking, monitoring, evaluating sustainable development in the provinces. The approach can be applied for designing sets of SDIs of Vietnam's provinces to provide a scientific basis to the Vietnam government to modify the promulgated sets of SDIs.

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**Annex 1.**

Set of sustainable development indicators designed the project “Implementation of Vietnam Agenda 21 - VIE/01/021”

<b>Pillar</b>	<b>Indicator</b>
<b>Economic</b>	GDP per capita (USD; VND)
	GDP growth (%)
	The economic structure (%)
	Share of women employment in the agricultural sector (%)
	Investment share in GDP (%)
	ODA and FDI share in total investment (%)
	Gross domestic expenditure on R&D as a percent of GDP (%)
	Gross domestic expenditure on education as a percent of GDP (%)
	Balance import and export goods(USD; VND)
	Debt to GDP ratio (%)
	Annual energy consumption/GDP
	Ratio of waste recycle
	<b>Social</b>
Proportion of population living below national poverty line (%)	
GINI index	
Ratio of man salary to woman (%)	
Maternal Mortality Rate (%)	
Under-five malnutrition rate (%)	
Unemployment ratio in urban (%)	
Average life expectancy (Year)	
Proportion of population using an improved water source (%)	
Adult literacy rate (%)	
Rate of Adult secondary schooling attainment level (%)	
College student per 1,000 population (‰)	
Rate of educated labor (%)	
Proportion of population assessing modern communication technologies (%)	
Average square of house per population(m <sup>2</sup> /người)	
Ratio of criminal per 100.000 population	
Ratio of traffic accident per 100,000 population	
<b>Environmental</b>	Ratio of land area covered by forests (%)
	Portation of irrigate agriculture land (%)
	Portation of nature conservation forest (%)
	Rate of degaradation soil (%)
	Ratio of mine ores
	Ratio of industrial zone own waste treatment systems (%)
	Number of business achieved ISO 14001 (%)
	Emissions of greenhouse gases(tấn/năm)
	Ratio of urban area that pollution concentration in the air exceeds Vietnamese standards
	Number of threatened ecology systems and extinct species
	Product yield of fishery (1000 ton)
Human and economic loss due to natural disasters	

<b>Pillar</b>	<b>Indicator</b>
<b>Institutional</b>	Number of provinces built Agenda 21
	Number of offices and number of employees activity in sustainable development field
	Mobilizing financial resources for hunger eradication and poverty reduction: The ODA invest to hunger elimination and poverty reduction

## Annex 2.

National set of sustainable development indicators for monitoring and assessing Vietnam sustainable development period 2011 – 2020

Indicators	2015	2020
<b>COMPOSITE INDEX</b>		
Green GDP (VND or USD)	-	-
HDI (0-1)	Achievement of the world's average	Achievement of the world's high average
Sustainability Environment Index (0-1)	-	-
<b>ECONOMIC</b>		
ICOR	< 5,0	< 5,0
Productivity of social labour (USD/employee)	3.900-4.000	6.100-6.500
Share of total factor productivity in growth rate	30,0	35,0
Reduction of energy consumption to produce one unit of gross domestic product	2,5-3%/year	2,5-3%/year
Share of renewable energy sources in total energy use (%)	4	5
CPI (% compare to last 12 months)	Average of 5 years < 10	Average of 5 years < 5
Drawing account (billions USD)	-3,1	< -3,0
State budget deficit over GDP (%/GDP)	4,5	< 4,0
Government dept (%/GDP)	60-65	< 55,0
Foreign dept (%/GDP)	< 50,0	< 50,0
<b>SOCIAL</b>		
Proportion of population living below national poverty line (%)	Average reduction 1,5 – 2%/year	Average reduction 1,5 – 2%/year
Ratio of unemployment to population in working age (%)	< 3,00	< 3,00
Proportion of educated employee (%)	55	>70
GINI index	< 5,0	< 5,0
Sex ratio at birth (boys/100 girls)	113	115
Ratio of student per 10.000 population	300	450
Internet users per 100 population	8,5 (Big bandwidth)	20 (Big bandwidth)
Proportion of people enjoying social insurance, health insurance and unemployment insurance (%)	Social: 38 Health: 75 Unemployment: 73	Social: 51 Health: 80 Unemployment: 84,5
Number of deaths due to traffic accidents per 100,000 population	11	9
Proportion of communes achieve the standart of new rural criteria	20	50
<b>ENVIRONMENTAL</b>		
Proportion of land area covered by forests (%)	42-43	45
Proportion of protected land and maintained biodiversity land	-	-

Area of degradation land (millions ha)	-	-
Use of groundwater and surface water (m <sup>3</sup> /person/year)	-	1770
Ratio of days which pollution concentration in the air exceeds Vietnamese standards in a year (%)	-	-
Ratio of industrial zone, manufacturing area own waste treatment systems that meets Vietnamese standards (%)	60	70
The ratio of solid waste collected and treated meets Vietnamese standard (%)	85	90

### Annex 3.

Local set of sustainable development indicators for monitoring and assessing Vietnam sustainable development period 2013 – 2020

#### I. GENERAL INDICATORS

##### Indicator name

##### COMPOSITE INDEX

Human Development Index

##### ECONOMIC

The ratio of investment for development to GDP (%)

ICOR

Productivity of social labour (million VND per employee)

Ratio of budget revenue to budget expenditure (%)

Area of rice land is protected and maintained (ha)

##### Uncompulsory indicator \*

Share of total factor productivity in growth rate (%)

Reduction of energy consumption to produce one unit of gross domestic product (%)

##### SOCIAL

Proportion of poverty household (%)

Ratio of unemployment to population in working age (%)

Proportion of educated employee (%)

GINI index

Sex ratio at birth (*boys/100 girls*)

Proportion of people paying social insurance, unemployment insurance and health insurance (%)

Ratio of budget expenditures for cultural and sport activities (%)

Proportion of communes achieve the standart of new rural criteria (%)

Under-five mortality rate (%)

Number of deaths due to traffic accidents per 100,000 population

Ratio of pupils attending high school at the age (%)

##### ENVIRONMENTAL

Proportion of population using an improved sanitation facility (%)

Proportion of protected land and maintained biodiversity land (%)

Area of degradation land (ha)

Ratio of urban, industrial zone, manufacturing area own waste treatment systems that meets Vietnamese standards (%)

Proportion of land area covered by forests (%)

The ratio of solid waste collected and treated (%)

Number of disasters and extent of damage (case, millions VND)

##### Uncompulsory indicators\*

The proportion of mineral mining projects is performed environment recover (%)

Number of projects is built following Clean Development Mechanism (CDM)

#### II. REGION SPECIFIC LOCALIZATION INDICATOR

##### MIDLANDS AND MOUNTAINS AREAS

The number of cases and areas of forest are burnt and destroyed (case, ha)

##### DELTA AREAS

Ratio of annual crop area is irrigated (%)

##### Uncompulsory indicator \*

Ratio of protected wetland and biodiversity land areas (%)

<b>COASTAL AREA</b>
<b>Uncompulsory indicator *</b>
The content of some organic substances in estuarine, seawater (mg/l)
Area of mangroves is protected and biodiversity maintained (ha)
<b>CITIES UNDER THE CENTRAL GOVERNMENT</b>
Housing area per capita (m <sup>2</sup> )
Use of groundwater and surface water ( <i>m<sup>3</sup>/person/year</i> )
<b>Uncompulsory indicator *</b>
Share of investment for renovation and maintenance of historical relics and tourist sites (%)
Area of urban greenery per capita (m <sup>2</sup> /population)
Ratio of days which pollution concentration in the air exceeds Vietnamese standards in a year (%)
<b>RURAL AREAS</b>
Product value per hectare of cultivated land and aquaculture (millions VND)
Proportion of rural population using hygienic water (%)
Ratio of solid waste is collected and treated(%)
<b>Uncompulsory indicator *</b>
The amount of chemical fertilizer, pesticides on average 1 hectare of arable land (kg/ha)
The rate of solid waste in traditional crafts village is collected and treated (%)

#### Annex 4.

Set of sustainable development indicators for monitoring and assessing sustainable development in Tay Nguyen's provinces

Theme	Subtheme	Indicators
<b>1. ECONOMIC</b>		
Economic development	Macroeconomic performance	GDP per capital (VND/person)
		Green GDP <i>per capita</i> (VND/person)
		Investment share in GDP (%)
		Consumer Price Index (CPI) (% compare to last 12 months)
	Sustainable public finance	Ratio of budget revenue to total budget (%)
	Employment	Ratio of unemployment to population to population (%)
		Ratio of minority unemployment to population to minority population (%)
		Productivity of social labour ( <i>million VND per employee</i> )
	Information and communication technologies	Share of women in wage employment in the non-agricultural sector (%)
		Internet users per 10,000 population
Tourism	Tourism contribution to GDP (%)	
Quan hệ quốc tế	External financing	Rate of ODA to GDP (%)
		Rate of FDI to GDP (%)
Consumption and production patterns	Material consumption	Product values obtained from 1ha cultivating land per fertilizers weights used for the land (VND/ha/kg)
	Energy use	Number of kwh electricity use for agriculture - forestry – fishery / GDP in agriculture - forestry – fishery (kw/millions VND)
		Number of kwh electricity use for industry - construction / GDP in industry - construction (kw/millions VND)
		Number of kwh electricity use for trade – tourist – service / GDP in trade – tourist – service (kw/millions VND)
	Waste generation and management	The proportion of treated hazardous wastes meets the Vietnamese standard (%)
		The proportion of collected, treated solid wastes meets the Vietnamese standar (%)
	Transportation	Percentage of passengers transported by road / total passenger transport (%)
		Percentage of goods transported by road / total freight (%)
<b>2. SOCIAL</b>		

Poverty	Income poverty	Rate of poverty in rural (%)
		Rate of poverty in Ethnic community (%)
	Income inequality	GINI index
	Sanitation	Proportion of rural households having hygienic toilet (%)
	Drinking water	Proportion of urban population is provided clean water (%)
		Proportion of rural population is provided hygienic water (%)
	Access to energy	Proportion of rural households using electricity for daily life (%)
Living conditions	Proportion of urban households living at home is lacking in solidarity and simplicity (%)	
Governance	Corruption	Number of defendants who are officials, civil servan cadres and civil servants / 1,000 cadres and civil servants
	Crime	Number of defendants /10,000 population
Health	Mortality	Under-five mortality rate (‰)
		Under-five mortality rate in ethnic community (‰)
	Health care delivery	Proportion of hospital beds per 10,000 population
		Proportion of doctors per 10,000 population (%)
		Immunization against infectious childhood diseases (%)
		Immunization against infectious childhood diseases in ethnic community (%)
	Nutritional status	Under-five malnutrition rate (%)
		Under-five malnutrition rate in ethnic community (%)
	Health status and risks	Malaria death rate per 10,000 population (%)
		Malaria death rate per 10,000 population ethnic community (%)
Ratio of HIV infected people per 10,000 population (%)		
	Average life expectancy (năm)	
E ducation	Education level	Percentage of pupils completing primary school (%)
		Ratio of enrolment rate in primary education (%)
		Adult tertiary schooling attainment level (%)
	Literacy	Adult literacy rate (%)
Culture	Rate of villages achieve Vietnamese standard in culture (%)	
Demographics	Population	Natural population growth rate (%)

		Net-emigration rate (%)
<b>3. ENVIRONMENTAL</b>		
Natural hazards	Vulnerability to natural hazards	Percentage of population living in hazard prone areas (%)
	Disaster preparedness and response	Human loss due to natural disasters per 10,000 population (%)
		Economic loss due to natural disasters /GDP(%)
Atmosphere	Climate change	Carbon dioxide emissions in industry area
	Air quality	Sample rate of dust content in air at specific place exceeds Vietnamese standards (%)
		Sample rate of SO <sub>2</sub> content in air at specific place exceeds Vietnamese standards (%)
		Sample rate of NO <sub>2</sub> content in air at specific place exceeds Vietnamese standards (%)
		Sample rate of noise level in air at specific place exceeds Vietnamese standards (%)
Land	Land use and status	Rate of change of agricultural land (after 5 years) (%)
		Rate of change of forest land (after 5 years) (%)
		Erosion (ton/ha/year)
	Desertification	Ratio of heavy drought area (SPI) < -1,5) (%)
	Agriculture	Proportion of annual agricultural land area / suitable cultivated area (%)
		Rate of irrigated agricultural land (%)
	Forests	Proportion of natural forest area / land area to be protected (%)
		Percentage of plantation forest and perennial industrial crops / area of land suitable for development of production forest (%)
Area of forest under sustainable forest management (%)		
Freshwater	Water quantity	Proportion of total water resources used (%)
		Water use intensity by economic activity /GDP (I/VNĐ)
	Water quality	Sample rate of Faecal Coliform analysis in surface water at specific sites exceeds Vietnamese standards (%)
Biodiversity	Ecosystem	Sample rate of BOD analysis in surface water at specific sites exceeds Vietnamese standards (%)
		Proportion of conservation area / natural forest area (%)
		Rate of change of Dipterocarp forest ecosystem (%)
		Rate of change in area of evergreen broad-leaved forest ecosystem (%)
		Fragmentation of habitats

	Rate of change in numbers of taxa on the threat level of these taxa in the Red Book (%)
Species	Rate of endemic species of Central Highlands / total species in Vietnam (%)
	Proportion of exotic species entering the Central Highlands (%)