MINISTRY OF PLANNING AND INVESTMENT

STRUCTURES IN RURAL AND AGRICULTURAL SECTORS

(Sub-component of the Project 'Restructuring the economy')

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Introduction

Over 20 years of the economic reform in Vietnam has brought about great success to the economy in term of growth, structure and using resources. However, agricultural and rural areas where habitat more than 70% of population, still has faced great challenges of being left behind and unequally benefited the outcome of the reform. Importantly, the long term growth of rural economy is not secured due to many reasons of which the internal factors and the backwardness of the economic structure are the main.

Rural economic structure improvement has received a great attention from the government of Vietnam. In early 1990s the communist party's documents pointed out that improving the rural economic structure toward more modernization and industrialization is a critical mission and also addressed this task as an important instrument for rural economic development. Such repeatedly confirmation in policy document, in one side reflects the importance of restructuring the rural economy, in the other side it means that the actual improvement of the rural economic structure has not well progressed.

Current studies show that although the share of agriculture has reduced from 24.53% in 2000 to 22.09% in 2008. The switching of rural economic structure shows a number of problem: there is an inconsistency between the structure switching of labor force and that of sectoral structure, labor working in agriculture still occupies a large share in total labor force (53% or 70% of the total rural labor force); labor productivity in agriculture is remarkably lower than in industrial and services that motivating the moving of labor out of agriculture. A problem underlying is the exhausting of good quality labor in agriculture that threatening the long term growth of agriculture and food security.

Lower productivity in rural areas is a critical reason to explain the slow movement of the structure toward more advanced structure. In general the productivity of agriculture is just 30% of that of services and industry in 2008. Due to the extraction of good labor from rural areas, such low productivity will be even worse.

It can be said that the structure of economy is the outcome rather than the objective of the development process. Therefore, the projection for switching the agricultural and rural economic structures in fact is the question of restructuring the resource uses.

Economic structure switching among regions is unclear, and there is an unhealthy competition among provinces for individual growth purpose of each province. All provinces try to invest into similar items and copying the similar economic structure pattern of the others. Interlinks from a province to the others that based on the natural and comparative advantages of each provinces seems to be ignored. Such a so-called "imitating investment" reflects the weakness of the central government in term of coordinating the economic structure switching among provinces. An obvious consequence is the inefficiency in social investment and wastes of the resources.

Investment into agriculture is continuously declining from 13.8% of total investment in 2000 into 6.4% in 2008. More important, this trend is observed even in the investment from both the state budget and foreign direct investment. Low investment to agriculture will come up with several consequences such as widening income gap between agriculture and industrial and services, natural advantages of agriculture is omitted.

Literature review

Recently, not many papers this field had been dealt with. In 2005, in scope of a ministrial project, "Switching agricultural and rural economic structure oriented toward industrialisation and modernisation" study conducted by Thai (2005) et al. gives overview of theory of switching of agricultural and rural economic structures, simultaneously describes the changing situation of these structures and also suggests some directions and solutions to switch them. However, it mainly analyses on agricultural economic structure in qualitative and traditional methods. The comprehensive relationship of this sector to other economic structures in rural area is omitted. Therefore, solutions recommended focuses only on changing economic structure in the agriculture and moreover, they are designed generally, but not detailed.

In the same year, 2005, Doanh (2005) et al. finished a national project on "Scientific foundations of switching agricultural and rural economic structure oriented toward industrialisation and modernisation". In general, it is interesting project that includes plenty of information and mentions many aspects of switching agricultural and rural economic structures. It is similar to other reports, however, related policies are not been analysed in the report; recommendations are not specific and not been considered in

integrational context. Specific missions and schedule of the Government actions could not be found in this report too.

Besides, some articles mention switching the agricultural and rural economic structure, however, they are mainly descriptive papers and for separately issues and provinces only.

The project "*Situation and measurements to stimulate the economic structure switching in agriculture and rural areas*" is under the overall framework of the master project on restructuring the economy. It is designed to address the two important issues: (1) reviewing the situation of economic structure in agriculture and rural areas; (2) propose a set of measurements to boost up the restructuring process of rural economy and agriculture in accordance with the overall restructuring the economy as a whole. Different from other papers, issues will be considered in the comprehensive relationship and in the context of international integration. Moreover, it focuses on analysing key policies related to find weaknesses and strength of these policies, then policy recommendations and solutions will be suggested based on these analyses. In the report, breakthrough policies will be pointed out corresponding to situation of Vietnam development. Especially, a schedule of the Government actions with specific missions will be designed in this project.

Section 1: Review the Government's documents and policies related to restructuring rural and agricultural economy

There are many documents and policies of the Vietnamese Party and Government involving in promoting to restructure rural and agricultural economic areas. In this paper, however, we focus on some key documents and policies only.

1. General documents related to economic restructuring in rural and agricultural areas

1.1. Documents: In the earlier of 2000s, Vietnamese Communist Party and Government had recognised the important of shifting the rural and agricultural economic structures towards to an industrialised and modernised economy. To illustrate these ideas, therefore, following key documents had been issued:

(i) Resolution No 09/2000/NQ-CP of the Government, issued on 15th Jun 2000, about some guidelines and policies on transferring economic structure and selling outputs in the agriculture.

(ii) To implement Resolution No 15/2002/NQ-TW, the Prime Minister issued Decision 68/2002/QD-TTg on 4th June 2002 about the Government's action plan to carry out Resolution No 15/2002/NQ-TW of the Central Committee IX of Communist Party, in which many projects had been proposed aiming to promote industrialisation and modernisation in the rural and agricultural areas for ten-year period of 2001-2010.

(iii) Recently, Resolution No 24/2008/NQ-CP of the Government, issued on 28th Oct 2008, about issuing Action Plan of the Government to implement Resolution No 26/2008/NQ-TW of the Communist Party XI related to the agricultural, farmer and rural areas. Similar to Decision 68/2002/QD-TTg above, in this Resolution, a lots of works and projects had been proposed to foster economic restructuring, increase in labour productivity, competitiveness and the living standard of households in rural and agricultural areas.

1.2. Strengths and Weaknesses of these documents

1.2.1. Strengths

- These documents have performed a political significance at the highest level in the Party and the Government.
- Those documents all emphasize the importance of industrialization and restructuring rural and agricultural economic structure.
- They also clearly specified the objectives of restructuring agriculture and rural economy in each specific period of time
- Specified the detailed schedules to attain the objectives, including specific mission assigned to each ministry and the cooperation between them.

1.2.2. Weaknesses

- Those documents have not yet legalized (for instance they are the agreements rather than the law) or not fully defined the obligation and enforcements coped by each organisation.
- Many missions has not implemented timely. As it is assessed in a most recent assessment for those documents (the Resolution 24/NQ-CP), by then end 2009, only 11/48 tasks, including the implementation of projects, targeted national programs and the governmental action plans that defined in Resolution 24/NQ-CP were completed; 19 projections were still under consideration and assessment; 18 projects and laws were still

under construction although the time scheduled for them has been passed (most of them must has been completed by 2009, there are only four law documents on agriculture, plant protection, animal protection, and the revision of the law on water resource has the time scheduled up to 2010). Very few projects specified in the Decision 68/2000/QĐ-TTg has been prepared and implemented in practice.

- The regulations reflected in those documents sometimes are subjective, lacking of science bases as well as the financial and human recourse considerations, therefore making them less feasible.

2. Policies for ownership

(i) Resolution No 03/2000/NQ-CP of the Government, issued on 2nd Feb 2000, about farming economy.

(ii) Multi-ministerial official letter 69/2000/TTLT/BNN-TCTK, issued in 23/6/2000, MARD, GSO provides the criteria to farming economic component.

(iii) Cooperative law 2003 and by law Decrees: 177/2004/NĐ-CP on the guidance for the law implementation; 88/2005/NĐ-CP on the priority and promotion for agricultural cooperatives development.

(iv) Enterprise Law and by-law documents.

Weaknesses

- The priorities given to each ownership kinds in rural areas, in practice, are not applicable due to the complexity of the rural situation and low motivations.
- Most farming, agricultural households as well as rural enterprises those has small scale, low investment capacity received very little support from the government for risk and crisis. Most of them have to dealt with those difficulties by themselves.

3. Policies for industrial and non-farm development:

Following the Decision 68/2000/QĐ-TTg above, some promotion policies for industrialisation, and agriculture structuring switching have been issued:

(i) Decision 132/2000/QĐ-TTg in 24/11/2000 by the Prime Minister on some promotion solution to non-farm activities development.

(ii) Decree No 134/2004/ND-CP, in 9/6/2004 on rural industrial development;

(iii)Decree No 66/2006/ND-CP, in 7/72006 about rural industrial development;

(iv) Circular 113/2006-TT-BTC, in 28/12/2006, on the guidance for using state budget for non-farm activates development in accordance with the Decree 66/2006/NĐ-CP;

(v) Decision 184/2004/QĐ-TTg of Prime Minister dated 22/10/2004, about financial mechanism to implement rural transportation development, infrastructure for aquaculture, infrastructure for improvement for industrial villages for ten-year period of 2001-2010.

Weaknesses:

- There are too many documents specified for similar issues (for example Decision 132/2000/QĐ-TTg and Decree NĐ 66/2006/NĐ-CP) making the overlap in state management among ministries (MoIT and MARD).
- Too many referring to documents those are for specifics industrial development policy. Its happens even to by-law documents such as circular (for example the Circular 113/2006/TT-BTC that gives guidance for the Decree 66/2006/NĐ-CP). Therefore, to benefit from those policy, people have to look for so many documents (sets of documents on investment, on land, on finance, tax, sciences and technology, on training etc).

4. Policies for human recourse development in rural areas

(i) Decision 48/2002/QĐ-TTg, in 11/4/2002, on the approval of the project for the development of occupational training centers during 2001-2010;

(ii) Decision 26/2003/QĐ-TTg, in 17/2/2003, approval of the national targeted program on training and education.

(iii) National targeted program on employment in 2006-2010.

(iv) Decision 30/2009/QĐ-TTg in 23/2/2009 on the supports and assistance to employee working for crisis affected enterprises

(v) Decision 1956/2009/QĐ-TTg in 27/11/2009 on the project of agricultural training to rural labor.

Weaknesses

- There is a lack of coordination and consistency between the forecast of economic restructuring , rural employment restructuring with training and education. It leads to the need of good skilled labor in agriculture. Lacking of long-term strategies for education

and training in almost all training organisations. Most of them just focus on their current capacity and current demand as well but lack of the long-term vision that that into account the development of technology and market

- Lacking of occupational orientation in school education; no coordination between school education and occupational training level that could need social and individual waste of resources.
- No effective policy to establish the links between training agents with business sectors to gradually moving agricultural labors to non-agricultural employment. This is one of reasons making the reduction in enrolment records in occupational training agents due to no promising future.
- The allocation of occupational training agents are irrelevant among geographical region. They are also operating in small scale and not meeting the training quality criteria. Lacking of those agents in rural areas, mountainous and remoted areas as well. Policy for education and training assistance to rural labor are not effectives in remoted areas where there are very little number of agents and increasing demand for training in those areas.
- Not enough attention is paid to equipments in those training agents leading to a fact that equipments for practice are lacking both in term of number and updating.
- Lack of lecturer for rural labor training, the structure of occupations trained in those agents are inappropriate leading to low quality and not meeting the demand for labor market. Lack of policy to encourage lecturer coming to work in rural and remoted areas. Salary mechanism to those lecture are not attractive enough to attract them to work there
- Less attention paid to training method that should have been relevant for rural labors and farmer.
- Lack of good mechanism and policy (for instance credit provision for occupational training centers, initially support for newly established agent etc.) for non-state owned occupational training centers are also a reasons lead to a low investment from non-state sector to occupational training activities. Financial, credit policy are not appropriate for training activities of non-state agents
- Not boosting up the privatisation of occupational training in association with the social and economic development in each localities to avoid waste of state investment.

5. Policy for investment, credit for rural and agriculture development

(i) Decision 184/2004/QĐ-TTg of Prime Minister dated 22/10/2004, about financial mechanism to implement rural transportation development, infrastructure for aquaculture, infrastructure for rural industries for ten-year period of 2001-2010.

(ii) Decision 14/2009/QĐ-TTg in 21/1/2009 on the morgaging and coleteral for credit to firms from commercial banks

(iii) Decision 497/2009/QĐ-TTg on the interest subsidy for investment on equipments, input for agriculture.

Weaknesses

- Investment policy for agriculture is said not attractive, too general but less specific support for agricultural investment. This problems leads to the limited number of enterprise and capital invested in agriculture. Agricultural enterprise – 1454 firms, just occupies 3.7% total rural firm. In term of capital, agricultural enterprise have 31.1 thousand billions VND, just occupies 6% total stock capital for rural enterprise and 0.9% of total enterprise recorded in 2007. Only 12.9% firms has stock capital over 10 bliions VND.
- The credit maximum level set for agriculture are set too low (for instance 7 million VND per ha) while too cumbersome procedures and regulations are applied, leading to few enterprise are able to get credit. For example the regulation that the equipments that firm intend to buy must be from domestic sources while in fact domestic machineries are not price competence and have satisfied quality.
- Collateral guaranty policy is set to help enterprise, household and farmer have better condition to approach credit sources, however, those policy are less effective in rural areas due to a fact that almost production agent in rural are in small scale that not satisfy for those policy application.

Currently, MPI and other ministries have been formulating a decree draft of the government including some incentive policies aiming to encourage investment of private enterprises in rural and agricultural, such as land incentives, preferential treatments for investment (state support in labour training cost, tax, marketing, transportation, R&D).

State Bank of Vietnam has been formulating a decree draft of the government about bank credit policy in rural and agricultural areas, including more preferential treatments for total value of

loans, time period of loans, interest rate of loans, procedures of getting loans…An important point in this draft decree is that interest would be not fixed but based on negotiation between banks and clients.

6. Land policy:

(i) Land law;

(ii) Resolution 15/2003/QH11, in 17-6-2003 by the national assembly on tax exemption and reduction to agricultural land use;

(iii) Decree 129/2003/NĐ-CP of the government in 3-11-2003 gives details for the Resolution 15 above.

Weaknesses

- There are many policy document related to land, however, an emerging issue that constrain the large scale production in agriculture is the regulations on land use limit and land use time stated in the article 70 of the land law. This regulations do not encourage the land accumulation and concentration for large scale production, and therefore the investment into agriculture. Particularly, the renting time that regulated by local government is normally too short (1-3 years) that disencourage investor who would like to invest on the land to build infrastructure for production. Many farmer are considering the decision on investment into agriculture.
- Land tax exemption policy are generating some social and economic issues and lead to waste of natural resources: some farmer do not have demand for land let their land uncultivated because they do not have to pay tax while some others need more land can not expand their production.

7. Infrastrucre development for agriculture and rural market development

(i) Decision 184/2004/QĐ-TTg of Prime Minister dated 22/10/2004, about financial mechanism to implement rural transportation development, infrastructure for aquaculture, infrastructure for rural industries for ten-year period of 2001-2010.

(ii) Decision 257/2003/QĐ-TTg set up the programe for providing essential constructions to extreme difficult communes and coastal and island areas;

(iv) Resolution No 09/2000/NQ-CP of the Government, issued on 15th Jun 2000, about some guidelines and policies on transferring economic structure and selling outputs in the agriculture.

(iii) Decision 80/2002/QĐ-TTg about policies aiming to encourage selling agricultural products through farming contracts.

Weaknesses

- The budget allocation mechanism in those policies are set through so many levels and agents to ensure the equality. However, such a mechanism leads to scattered investment allocation problem in the sense that there are too many investment owners to construct large infrustructure such as road, ports and to small infrustructre at the same time, making the cross-assignment, scatteredly allocation...make difficulties for management and monitoring and evaluation the resource use.
- Ineffective policy for infrastructure development leads to inconsistency in infrastructure construction for rural development. Lacking of newly constructions for post harvest is a factor constraint agricultural products to have better quality for domestic and export consumption as well.
- Quality of agricultural product is too limited, low competitiveness, not safe for consumption due to low attention of producer in using chemistry for protection.
- Policy for rural and agricultural development, in general are adhoc rather than long term vision. Poor capacity for forecast and well as predict the positive and negative impact of policy to the rural economy
- For agricultural products, the support policy are not comprehensive enough to have a long term and better programe.

Section 2: The situation of the rural and agricultural economic structure transformation

I. The process of economic structure transformation in the agriculture-forestry-fishery sector from 1990 to 2000

This period reflects the transformation in Vietnam's agriculture-forestry-fishery from the self-sufficient production into market-signaled goods production mechanism;

Many products previously in short demand have quickly become excessive in domestic consumption and ready for export;

With a rapid growth in the industry and construction, the economy witnessed a clear-cut transformation in sector structure.

Basic features of development and structure transformation process in agriculture-forestry-fishery during this period are:

1.1. The proportion of agriculture-forestry-fishery in the economy is relatively large but has been gradually decreasing over time, together with the pace of development of the whole economy.

Changes in the proportion of agriculture-forestry-fishery in the economy during this period:

Table 1: Output value and proportion of sectors in the economy (fixed at 1994's price)

Year	Agriculture-Forestry-Fishery		Industry and Construction		Services	
	VND billion	Proportion (%)	VND billion	Proportion (%)	VND billion	Proportion (%)
1990	16,252	38.74	9,513	22.67	16,190	38.59
1995	62,219	27.18	65,820	28.76	100,853	44.06
2000	108,356	24.53	162,220	36.73	171,070	38.74

Source: General Statistics Office (GSO)

Thus, the output value of agriculture-forestry-fishery increased more than 6 folds from 16.25 thousand billion to 108.36 thousand billion dong while its proportion rapidly contracted from 38.7% to 24.5%, showing a strong sector structure transformation with a rapid growth of the industry and construction, up from 22.7% to 36.7% and the service sector remaining at 38%.

Although the agriculture-forestry-fishery grew in terms of the absolute value, a sharp decrease in its proportion reflected a weaker development scale compared to the industry and construction. The exchange of positions between these two sectors can be seen clearly, thanks to the stable proportion of 38% of the service sector in 1990-2000 period, with an exception figure of 44% in 1995.

1.2. The establishment of concentrated goods production regions linked with processing industry in agricultural sector.

During this period, 15 concentrated goods production regions of large scale were established, namely: 2 regions of rice production (Mekong river delta and Red river delta); 2 regions of rubber production (South Eastern region and Central Highlands); 2 regions of coffee production (Central Highlands and North Central region); 1 region of cashew planting (South Eastern region); 2 regions of sugarcane production (Mekong river delta and South Eastern region); 1 region of pepper planting (Central Highlands); 2 regions of tea production (Northern

Mountain and Midland, Lam Dong); 1 region of fruit plants (Mekong river delta), 1 region of dairy cow raising (Lam Dong) and 1 region of aquaculture (Mekong river delta). In these regions, there were initial links between agricultural production and processing industry for domestic and international consumption. As a result, the planting area, productivity and yield of major plants have been increasingly growing.

Table 2. Planting area, productivity and yield of some major plants in agriculture

Unit: area: 1000ha; productivity: 100kg/ha; yeild: 1000 ton

Item	Rice	Maize	Sugarcane	Coffee	Rubber	Cashew	Pepper	Tea
- Year 1990								
+ Area	6,042.8	431.8	130.6	119.3	221.7	-	8.6	60.0
+ Productivity	30.6	15.5	413.3	14.9	7.1	-		32.8
+ Yield	18,481.5	671.0	5,397.6	192.0	57.9	-	9.2	145.1
- Year 1995								
+ Area	6,765.6	556.8	217.5	186.4	278.4	187.6	9.3	66.7
+ Productivity	37.9	21.3	452.6	21.8	8.4	5.5		34.1
+ Yeild	25,672.5	1,184.2	9,843.3	218.1	122.7	50.7	7.0	180.9
- Year 2000								
+ Area	7,666.3	730.2	302.3	561.9	413.8	195.6	27.9	86.9
+ Productivity	42.4	27.5	497.7	16.8	12.6	4.6	26.3	44.8
+ Yield	32,529.5	2,005.9	15,044.3	802.5	290.8	67.6	39.2	314.7

Source: General Statistics Office (GSO)

The figures show a dramatic growth of the listed agricultural products. Those with the highest growth rate are perennial industrial trees such as coffee, rubber, cashew, pepper. Remarkably, the cashew planting area, which was modest in 1994 sharply increased to 187 thousand ha in 1995. It should be recognized that the market did generate a great power pushing the development of cultivation in the decade after the Vietnam Communist Party started 'Doimoi' policy.

1.3. Development of the plants playing a key role in agricultural production structure. They are:

a. Rice: is an annual plant with long-lasting tradition of providing food mainly for local consumers. However, in the renovation of agricultural management, it has become an important commercial product of agriculture sector and made a good success. The rice cultivation area increased from about 6 million ha in 1990 to 7.66 million ha in 2000. Accordingly, the rice production was up from 18.4 million ton to 32.5 million ton, creating a continuous growth in food consumption per capita with the figure of this year exceeding that of previous year. Domestic food supply and demand have been stabilized with the average level rising from 324 kg/capita/year (1990) to 433 kg/capita/year (2000). Food security has been boosted domestically. Vietnam started exporting rice right after 'Doimoi' (1988).

b. Perennial plants: which include perennial industrial trees have grown quickly in the regions with favourable conditions in terms of land, climate and water resource. The planting

area of these trees in 2000 was 2,348 million ha, accounting for 17.7% of total cultivation area (which was approximately 9.5 million ha). The share in 1990 was 14.9%. The rapid growth of planting area of perennial trees has helped diversify the structure of cultivation in particular and agriculture in general with the directives of promoting strengths of each region. The perennial plants which are advantageous in goods production for the international market are coffee, rubber, cashew, tea and pepper. Most of tea trees are planted in the Northern Mountain and Midland. Others are grown in the South. Specifically,

- Coffee is the most major plant among Vietnam's exportable industrial trees. Vietnam so far ranks the second in the world in terms of coffee output and is the biggest exporter of Robusta coffee. On average, the coffee planting area increases by 55,000 ha annually. This is the fastest growth among industrial trees. The coffee area in 2000 was 561,9 thousand ha. It took a share of 5.3% of total cultivation area and ranked after only rice and maize area.

- Rubber is mainly planted in the fertile basaltic red soil in South East and Central Highlands which possess the most favourable land and climate conditions for rubber growing. The annual rubber output averages at 12-13 quintal/ha. 1 ha of rubber can be sold currently for USD 1000, equivalent to about VND 15 million. The rubber area, at present, makes up 4.7% of total agricultural land and 19.5% of total land for perennial trees. Rubber ranks the fourth in terms of planting area after rice, maize and coffee. Some area of bad quality soil which is currently used for rubber planting should be moved to accommodate other trees for greater efficiency.

- Cashew had earlier grown spontaneously, then was planned by the State in suitable regions scattered from Quang Nam province southwards. Cashew is mainly for exports, but its productivity remains low due to the peasants' usage of bad breeds. Cashew gardens are cared and fertilized less than rubber and coffee. In 1995, cashew planting area was 187,6 thousand ha and the cashew nut output was 50,7 thousand ton. The figures in 2000 were 195,5 thousand ha and 135 thousand ton respectively with the productivity of 8,9 quintal/ha.

- Pepper had a small planting area before 1990 with a mere annual output of 8,995 ton. The area has quickly expanded since 1990. It has increased from 9,200 ha in 1995 and reached 27,900 ha in 2000.

- Tea trees are mainly grown in Northern mountain and midland and Lam Dong provinces where enjoy a cold weather and abundant land. The area for tea planting has grown fast since 1995 from 66,700 ha to 87,700 ha in 2000.

- Fruit plants have a lot of varieties. Popular in the north are banana, longan and litchi while the south's varieties are plentiful with mango, orange, mandarin, rambutan, durian, grape, dragon, coconut… The fruit planting area has rapidly increased since 1995 from 358 thousand ha to 540,8 thousand ha in 2000. Fruit planting industry has been developing at a fairly high speed and participated in the plant structure transformation. It helps to improve the return value on a ha of cultivation land and the output value of the agricultural production as a whole.

c. Other industrial plants: are almost annual plants among which sugarcane and cotton plant are two import substitutes. Specifically,

- Sugarcane are grown in various provinces, shifting the plant structure in some provinces, for example Lam Son, Thanh Hoa and Tay Ninh. In many regions, sugarcane planting creates a lot of jobs and improves income of local farmers, contributing to hunger eradication and poverty reduction. In 1990, the country spent 130,8 thousand ha of land for sugarcane cultivation with the total output of 5,4 million ton. The figures in 2000 were 302,9 thousand ha and 15,2 million ton respectively. The sugarcane planting area had grown fast but the productivity was still low which averaged at 53-55 ton/ha. When the sugarcane price fell down below 200 thousand dong/ton, then it became less competitive than some other kinds of plants, for example cassava or pineapple. Many sugar factories made loss due to insufficient sugarcane as inputs and huge depreciation and production costs.

- Cotton trees are planted to provide materials for textile industry and considered as a part of the big program by the Government of developing trees as import substitutes (the plan of cotton development until 2010 has been approved). Peasants in Central Highlands, South Eastern and South Central coastal areas agreed to grow cotton trees when the State insured the purchase price and was committed to buying all of available cotton. The cotton area had been slowly improved. In 1990, the total area for growing cotton trees was 7,9 thousand ha. In 1995, it was 17,5 thousand ha and the figure for 2000 was 18,6 thousand ha. The average cotton productivity is at present 11 quintal/ha/crop. The current cotton output merely satisfies about 10-15% of the demand. In addition, the cotton quality remains low.

- Peanuts are rotating plants with rice and other farm produce. Peanuts are used for domestic consumption and exports. Total area for growing peanut trees in 1995 was 259,9 thousand ha and went down to 244,9 thousand ha in 2000. The annual production output ranges from 330,000 to 400,000 tons of peanut pod. Two regions with most planted peanuts are North Central Coastal region and South East.

d. Livestock raising. During this period, livestock raising focused on pigs, poultry, cattle and buffalo.

Table 3. Number of livestock in 1990-2000 period

No	Item	Unit	1990	1995	2000	Average growth rate (%) during 1990-2000
1	Buffalo	Thousand head	2.854.1	2.962.8	2.897.2	0.04
2	Cattle	Thousand head	3.116.9	4.063.6	4.127.8	3.30
	- Dairy cow	Thousand head	-	-	35.0	
3	Pig	Thousand head	12.260.5	16.306.4	20.193.7	5.56
	- Sow	Thousand head	1.572.1	2.198.3	2.788.2	
4	Poultry	Million head	107.4	142.1	196.2	5.19
5	Meat	Thousand ton	-	-	1.835.9	
	- Pork	Thousand ton	722.5	1.006.8	1.856.9	7.59

6	Number of eggs	million	1.816.9	2.665.7	3.823.2	5.68

Source: General Statistics Office (GSO)

- Herd of buffalo are raised to provide pulling power. Herd of cattle provides both meat and pulling power. Dairy cows have been developed since "Doimoi" policy in the neighbourhood of large cities such as Ho Chi Minh, Ha noi to supply milk to the cities. Dairy cow raising depends much on the breed. Specialized food and modern techniques are needed for this industry. The expansion of the dairy cow herd faced so much difficulty and low economic efficiency.

- Herd of pigs and poultry grows fast, well satisfies the domestic demand for meat. The production costs are high. Breeding and animal healthcare are less developed than other countries in the region..

In general, the livestock raising grows more slowly than the cultivation. Produce of livestock raising industry are difficult to be oriented for exports since the competitiveness is low, the price is high, 10-15% higher than that of regional countries and the food hygiene and safety are less secured. Concentrated regions for livestock raising have not yet been established. The proportion of livestock raising in agriculture is 19% in this period, much lower than many countries in the region.

e. Forestry

During this period, forestry focused on forest planting and exploitation of natural forests for timber processing industry. Vietnam's forest had gone down for long in terms of area, wood reserve and quality. The forest area of 14,3 million ha in 1943 had fallen down to 9.3 million ha in 1990. The natural and planted area has made a great improvement and on an upward trend in recent years.

Table 4. Forest area and coverage in 1990-2000 period

Unit: 1,000 ha

Forest type	1943	1990	2000
Natural forest	14.300	9.308	9.774
Planted forest	-	584	1.800
Total	14.300	9.892	11.574
Forest coverage (%)	43.0	30.0	35.2

Source: General Statistics Office (GSO)

Vietnam's forest coverage in 2000 was nearly 37%. The planted area totaled 2 million ha.

Forest wood reserve is about 751 million m^3, in which the natural forests provide for 721 million m^3 and the planted forests for 30 million m^3. Bamboo reserve approximates 8,400 billion trees. Forest regions with enormous reserve of wood and other forest products include Central Highlands, North Central, South East, Northern Mountain and Midland, South Central Coast. Facing the rapid decline of forest reserve, the State has determined to stop the exploitation of natural forests to recover the reserve and quality of natural forests nationwide.

Forest are classified into 3 types for application of separate measures of management, exploitation and development. They are: protective forest (5,611 million ha), specialized forest (1,673 million ha) and production forest (5,048 million ha).

Forest are assigned to different economic sectors for management and protection. Households are responsible for 2,7 million ha. Economic organizations are in charge of 3,9

million ha. The communal people's committees undertake 1,8 million ha. Joint ventures manage 7,964 ha and other agencies do 2,6 million ha. The remaining 1,28 million ha are being put into the management hands of management boards, enterprises, households or communities. Thus, about 90% of total forest area has been completely delivered to management units as a basis for further development of mechanism to protect and expand forests in the coming years.

f. Aquaculture

Aquaculture in this period had started to get access to market mechanism. It tried to make a full use of local potentials of regions with favourable conditions in terms of climate and freshwater for raising fish and shrimp, hence creating jobs for about 580,000 labourers. Aquaculture has helped to improve the employment situation and income of local people, especially in rural areas where there is a lack of opportunities for agriculture and non-agriculture jobs, an excess of idle time and a redundant workforce.

Table 5: Development of key aquatic products

Unit: Area: 1000ha; Output: 1000 ton

Item	1990	1995	2000
1. Culture fishery area	**295.7**	**453.58**	**641.9**
- Fish	188.6	227.2	310
- Shrimp	96.1	216.7	341.9
2. Total output	**890.59**	**1.584.40**	**2.250.50**
- Culture fishery	162.08	389.1	589.6
+ Fish	129.3	209.1	391.1
+ Shrimp	32.7	55.6	93.5
- Exploitation	728.51	1.195.29	1.660.90
+ Domestic exploitation	75.3	205	241.3
+ Sea exploitation	653.2	990.3	1.419.60

Source: General Statistics Office (GSO)

g. Exports of agriculture-forestry-fishery products

During this period, Vietnam's agriculture-forestry-fishery were export-oriented, starting with rice, then coffee, rubber, tea, cashew, pepper and aquatic products, reflecting the enormous advantages and potentials of the sector and the strong and quick penetration of Vietnam's farm produce into the world's market. Many exported agricultural products of Vietnam soon took the leading position in the international farm market. There were at that time, 6 farm produce with export value over USD 100 million per year, namely rice, coffee, rubber, pepper, cashew, fruits and vegetables. Tea had a lower export value.

Exporting agricultural products means redundancy and opening the domestic market for foreign partners to join the trading of Vietnam's farm produce.

Table 6. Exported products of agriculture-forestry-fishery in 1990-2000 period

Unit: 1000 ton

Item	1990	1995	2000	Growth rate 1990-2000 (%)

1. Paddy production output	**19225.2**	**24963.7**	**32554.0**	**4.56**
Rice export output	1478.0	2025.0	3500.0	7.48
Compared to total world's export (%)	12.0	8.6	14.5	
2. Coffee production output	**92.0**	**218.0**	**698.0**	**17.06**
Coffee export output	90.0	248.0	694.0	17.93
Compared to total world's export (%)	1.7	5.7	12.6	
3. Rubber production output	**57.9**	**124.7**	**291.9**	**14.80**
Rubber export output	75.9	138.1	280.0	14.33
Compared to total world's export (%)	1.4	2.5	4.7	
4. Tea production output (in dry)	**32.2**	**40.2**	**76.5**	**9.98**
Tea export output	16.1	18.8	44.7	13.69
Compared to total world's export (%)	1.3	1.6	3.2	
5. Cashew production output	**23.7**	**50.6**	**45.0**	**16.72**
Cashew export output	14.5	19.8	26.0	15.03
6. Peanut production output	**212.8**	**334.4**	**352.9**	**5.51**
Peanut export output	71.0	111.0	78.2	-3.20
Compared to total world's export (%)	6.3	8.0	6.5	
7. Pepper production output	**8.6**	**9.3**	**37.0**	**16.57**
Pepper export output	9.0	17.9	36.2	19.58
Compared to total world's export (%)	4.3	7.9	16.8	
8. Fresh and processed fruit and vegetables (USD m)	**-**	**56.1**	**205.0**	**-**
9. Aquatic products (USD m)	**205.0**	**550.0**	**1478.6**	**19.20**

Source: General Statistics Office (GSO)

The export value of agriculture-forestry-fishery products in 2000 were accounted for 25% of the national export turnover. The figure must have been higher if the processing industry grows fast and keeps pace with the development of the agricultural production.

II. The process of economic structure transformation in the agriculture-forestry-fishery f*rom 2000 to 2009.*

This is the period when the agriculture-forestry-fishery sector still grows quickly in the direction of promoting natural advantages and linking with export orientation;

Traditional export goods in agriculture-forestry-fishery grow more quickly, affirming their key role in the goods structure as competitive products;

Vietnam also imports some farm produce from the world that it could not produce or proves less efficient;

Under the impact of this trend, economic structure in agriculture has continuously shifted towards increasing products with high competitiveness and reducing products without competitiveness or with low competitiveness;

The proportion of agriculture-forestry-fishery sector in the economy continues its decreasing trend.

2. 1. Position of agriculture-forestry-fishery sector in the economy.

The share of agriculture-forestry-fishery sector in the economy reduced by 4% in 2000-2009 period, from over 24.5% to 20.7% in 2009. The reduction in this period is at a lower rate than that of 1990-2000 period, showing that this sector remains important to the economy. The following table illustrates the point.

Table 7: Proportion of agriculture-forestry-fishery sector in the economy

Unit: %

Year	2000	2003	2005	2006	2007	2008	2009
Entire economy	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Agriculture-forestry-fishery sector	***24.51***	***32.06***	***20.99***	***20.40***	***20.29***	***22.1***	***20.7***
1. Agriculture	19.82	17.34	15.86	15.36	15.22	16.0	15.2
2. Forestry	1.34	1.27	1.20	1.11	1.05	1.1	1.2
3. Fishery	3.37	3.93	3.93	3.93	4.02	5.0	4.3

Source: GSO. Statistical Yearbook 2009. Hanoi 2010

Pure agriculture contracted by nearly 5% (from about 20% to 15%); forestry decreased by 0.29% (form 1.34% to 1.2%); fishery increased by 0.05% (from 3.37% to 4.3%). This transformation suggests that Vietnam has big advantages at fishery and these advantages have been strongly utilized in the recent time. In addtion, pure agriculture still plays a key role in this sector.

However, total domestic production in absolute value of current price of the A-F-F industries tremendously increases. The figure is 108,356 billion dong for 2000 and tripled to 326,505 billion dong in 2008. The estimated figure for 2009 is 336,300 billion dong, up by 3% compared to 2008, reflecting a development trend of this sector, even in the global financial crisis and other unstable internatioanal economic conditions.

2.2. Growth rate of agricuture-forestry-fishery in 2000-2009 period

Table 8. Growth figures in agriculture-forestry-fishery from 2000 to 2009 (at 1994's price)

Unit: billion VND; %

Year	**2000**	**2002**	**2004**	**2006**	**2007**	**2008**	**2009**

A,F,F output in GDP	63.7	68.4	73.9	79.7	82.7	86.1	88.2
Growth rate	*4.6*	*4.2*	*4.4*	*3.7*	*3.8*	*4.1*	*3.8*

Source: Statistical Yearbook 2008, 2009

It can be seen from the above table that the agriculture-forestry-fishery output saw an annual growth rate of around 3%-4% in 9 years with the highest level of 4.6% achieved in 2000 and the lowest level of 2.9% in 2001. For the year 2009, the figure stood at 3.8%, fairly positive in the period. There are big gaps in growth of different sub-industries.

Each sub-industry has many products with different biological characteristics and commercial value (some are necessities to human being like food, but bring back low trade value; others which are not as essential are highly paid...) This leads to an unbalanced development among sub-industries.

Table 9. Growth rate in output of sub-industries in A-F-F

Unit: %

Year	**2000**	**2002**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Agri.	5.4	6.2	4.1	3.2	4.1	3.6	6.0	2.2
Forestry	4.9	1.6	1.1	1.2	1.5	3.0	2.3	3.8
Fishery	19.3	8.8	12.5	12.5	8.5	11.6	6.7	5.4

Source: Statistical Yearbook 2009; Hà Nội 2010

- Fishery takes the leading position but its growth rate is unstable, showing a less sustainable growth.

- The growth rate in agriculture is stable from year to year, fluctuating between 3,2% and 6%, with the highest level for 2008, showing a great potential in the future.

- The growth in forestry production was low and declined continuously in the past few years from 4.9% to 2.3% in 2008. This reveals that the industry has not taken advantage of tropical forests, not exploited the non-wood products like low-layer speciality trees to obtain a stronger and more stable growth. International trade tremendously affects the forestry growth, because the industry's main activity is natural forest exploitation which is difficult to promote when recent international conventions on environment strongly oppose the current deforestation.

2.3. Products with competitive advantage grow fast, leading to a natural production contraction of less competitive ones.

In the context of market oriented commodity production and economic integration in agriculture-forestry-fishery and salt industry in recent years, highly competitive products have brought into play their strengths and gained a bigger market share, forcing the less competitive ones lose its position and contract.

The following data reflects the situation.

Table 10. Expansion and reduction of some products in agriculture-forestry-fishery in 2000-2009

Product	Unit	2000	2005	2006	2007	2008	2009
Rice. - Area	1000 ha	7666.3	7329.2	7324.8	7027.4	7414.3	7440.1
Expansion/reduction rate	%	0.2	- 1.6	- 0.01	- 1.6	2.9	0.5
- Production	1000 ton	*32529.5*	*35832.9*	*35826.8*	*35942.7*	*38725.0*	*38000.9*
Expansion/reduction rate	%	*3.6*	*-0.1*	*0.0*	*0.3*	*7.7*	*0.4*
Maize. - Area	1000 ha	730.2	1052.6	1033.1	1096.1	1125.9	1086.8
Expansion/reduction rate	%	-	6.1	-1.8	0.6	0.3	-4.7
- Production	1000 ton	*2005.9*	*3787.1*	*3854.6*	*4303.2*	*4531.2*	*4000.4*
Expansion/reduction rate	%	*14.4*	*10.4*	*1.8*	*11.6*	*5.3*	*-4.3*
Cashew. - Area	1000 ha	145.8	223.7	276.8	302.8	321.0	398.1
Expansion/reduction rate	%	1.5	9.5	23.7	9.4	6.0	-2.1
- Production	1000 ton	*67.6*	*240.2*	*273.1*	*312.4*	*308.5*	*293.5*
Expansion/reduction rate	%	*89.9*	*17.3*	*13.7*	*14.4*	*-1.2*	*-4.9*
Sugar-cane. - Area	1000 ha	302.3	266.3	288.1	293.4	271.1	260.1
Expansion/reduction rate	%	- 12.2	- 6.9	8.2	1.8	- 7.6	-3.9
- Production	1000 ton	*15044.3*	*14948.7*	*16919.5*	*17396.7*	*16128.0*	*15246.4*
Expansion/reduction rate	%	*84.7*	*-4.5*	*11.8*	*4.1*	*-7.3*	*5.6*
Cotton. - Area	1000 ha	18.6	25.8	20.9	12.1	5.2	8.0
Expansion/reduction rate	%	-12.3	-7.9	-19.0	- 42.1	- 57.0	37.9
- Production	1000 ton	*18.8*	*33.5*	*28.6*	*16.1*	*8.0*	*10*
Expansion/reduction rate	%	*-15.3*	*19.6*	*-14.6*	*- 43.7*	*-50.3*	*25*
Forest exploitation	1000m3	4412.1	4435.7	4492.2	4629.0	4720.4	
Expansion/reduction rate	%	*7.8*	*1.5*	*1.3*	*3.0*	*2.0*	
Pig - Head	1000 heads	20193.8	27435.0	26855.3	26560.7	26701.6	27627.7
Expansion/reduction rate	%	6.9	4.9	-2.1	-1.1	0.5	3.5
- Pork production	1000 ton	*1418.1*	*2288.3*	*2505.0*	*2662.7*	*2771.0*	*2908.5*
	%	-	*13.7*	*9.4*	*6.2*	*4.0*	
Blackish-water Shrimp. - Area	1000 ha	324.1	528.3	612.1	633.1	629.3	
	%	-	-11.8	15.9	3.4	0.6	
Expansion/reduction rate							
- Production	1000 ton	*93.5*	*327.2*	*354.5*	*384.5*	*388.4*	
Expansion/reduction rate	%	*62.6*	*16.1*	*8.3*	*8.5*	*1.0*	

Source: Statistical Yearbook 2009, Hà Nội 2010

a. The first group includes highly competitive products, hence obtaining rapid growth last decade

In the above table, these are: rice, maize, pig and blackish-water shrimp, in which,

- Rice production has a steady increase, due to a big progress in breeding and production technology, introducing high yielding varieties

- Maize output has grown rapidly, thanks to an expansion in the cultivation area from 730.2 thousand ha in 2000 to 1.125.900 ha in 2008 (up almost 54%);

- Pork output witnessed a dramatic increase, showing the competitiveness and strengths of Vietnam's pig raising industry;

- Shrimp aquaculture had a good start with a rapid expansion in water surface area from 324 thousand ha to above 629 thousand ha and production up from 93.5 thousand tons to 388.4 thousand tons (4.1 fold).

Also included in this group are coffee, rubber, pepper, cows, poultry, catfish of all kinds and other speciality products.

b. The group with medium competitiveness includes products in forestry. There's almost no expansion in the production of this group, even a slight decrease occupies the period. Other products included in this less competitive group are in dairy-cow raising and milk processing… The domestic milk products can not be compared to imported ones in quality. Hence, the State's support is necessary for this industry to get success.

c. The group with low competitiveness includes products in sugar-cane and cotton industries.

- Sugar-cane plantation though enjoying many incentives from the State for the scheme of producing and processing 1 million tons of sugar still failed to get expected results. This industry, however is attracting a large workforce in rural areas and can exploit the less fertile soil. The stable growth of this industry has a significant role in creating jobs for farm workers in these regions. We should still promote the sugar-cane production because the prospect for an alternative plant is unclear while the market for sugar is showing positive signals in both quantity and prices.

- Cotton production industry is also declining rapidly.

Other products in this group include mulberry trees, tropical fruits and vegetables, peanuts, beans of all kinds… It is very difficult to carry out production of these industries in large scale because of their weak competitiveness.

2.4. Structure transformation within the agriculture-forestry-fishery sector

Under the impact of objective factors (including industrialization, open-door policy and integration into the world economy) and subjective factors of this sector (such as renovation and development of goods production under market mechanism, competition with farm produce of other countries), the structure of agriculture, forestry and fishery have made a significant change in the recent period from 2000 to 2009. Specifically,

a. Proportion of the pure agriculture (including cultivation and livestock raising) has reduced from nearly 80% to over 73% to give room for other industries in the sector.

b. Proportion of the forestry also went down from 4.7% to 2.7%, reflecting a weak growth potential.

c. The ishery has gradually taken over the losing share of the pure agriculture. Its proportion has improved from 16.2% to 23.5% in 2000-2009 period.

The ratio of the fishery sector increased from 15.6% in 2000 to 23.5% in 2008; the ratio of pure agriculture sector decreased from more than 80% to 73%, the ratio of forestry… More details are shown in the following table:

Table 11. Output structure transformation in agriculture, forestry and fishery sector in real terms

Unit: %

Year	2000	2002	2004	2006	2008	2009
1.Agriculture	79.1	76.1	72.2	70.0	73.8	74.7
2.Forestry	4.7	4.4	3.8	3.6	2.7	2.5
3.Fishery	16.2	19.5	24.0	26.4	23.5	**22.**8
4.Total	*100*	*100*	*100*	*100*	*100*	100

Source: Annual Statistics 2008 and our calculations

The shift of resources previously invested in pure agriculture to the fishery is an unavoidable development trend in the agriculture-forestry-fishery sector in the coming years.

2.4.1. Structure transformation within the pure agriculture

The pure agriculture includes cultivation, livestock raising and agricultural services. The ratio of cultivation and agricultural services decreased while that of livestock raising increased in the period from 2000 to 2008.

Table 12: Agricultural output structure transformation in real terms

Unit: Billion VND; %

Year	2000	2002	2004	2006	2008	2009
1.Cultivation	101,043	101,403	131,551	145,807	259,468	293,000
- Share %	78.2	76.7	75.4	73.7	71.5	71.4
2.Livestock raising	24,960.2	30,574.8	37,343.6	48,487.4	97,859.2	110,300
- Share %	19.3	21.1	21.6	24.5	27.0	26.9
3.Services	3,136.6	3,274.7	3,599.4	3,559.9	5,496.5	6,800
- Share %	2.5	2.5	2.1	1.8	1.5	1.7
4.Total	129,140.5	145,021.3	172,494.9	197,855.0	362,824.3	410,100
- Share %	100	100	100	100	100	100

Source: Statistical Yearbook 2008, Section 90, page 223

A modern agriculture is often associated with a livestock raising sector which is advanced, large-scaled and has a high proportion in the overall agricultural output. The average growth rate of 7.4% per annum of the sector is relatively high but has not corresponded with its potential, in other words resources have not been fully utilized for the sector development. Vietnam is in need to have a new strategy for livestock raising development, with such immediate solutions as ensuring the hygienic and epidemic safety, mechanizing the process of livestock killing and quickly processing the major and by-products of the industry.

- Although cultivation has decreased by more than 6%, it still makes up a considerable share; most resources are focused on this sector, hence quicker transfer of those resources from less efficient sectors into livestock raising is needed.

- Agricultural services have been undeveloped. They account for a very small and decreasing share (from 2.5% to 1.5% between 2000 and 2008). This reflects an outdated

agriculture sector and is one of the main reasons for the currently low level of labor productivity therein. Activities with high added value have not been boosted, even static in the past years. For example, the financial and banking sector has not contributed remarkably to the growth of the agriculture sector. In the rural areas, the ratio of communes in 2006[1] having newly established banks is only 12.12% while that of communes in mountainous areas is even less than 7%, the ratio of communes that have people's credit fund is 10.14% while that in mountainous areas is just 3%. The ratio of science and technology sector increased slightly from 0.53% to 0.63% (between 2000 and 2008) while the ratio of commercial and consulting business decreased from 4% in 2005 to 3.64% in 2008. Labor productivity in the service sector is low and has not experienced any big progress.

Scientific and technological services for agricultural production are still limited, which makes labor productivity in this sector much lower than in other sectors[2]. 2009 witnessed the pending problem of unsecured and unsanitary farm production and food processing methods. A series of food poisoning cases due to high ratio of remaining pesticides and the usage of unsafe pesticides or toxic chemicals in food storage and processing has been emerging. How to effectively develop agricultural service activities poses a big question for Vietnam's agriculture sector.

2.4.2. Structure transformation within the forestry.

The sector structure comprises forest planting, forest exploitation and forestry services

Table 13. Forestry output structure transformation in real terms

Unit: Billion VND; %

Year	2000	2002	2004	2006	2008	2009
1.Forest planting	1,131,5	1,165.2	1,359.7	1,490.5	2,040.5	2,182.2
- Share %	14.7	13.9	15.0	14.4	14.2	14.2
2.Exploitation	6,235.4	6,855.0	7,175.8	9,781.0	11,524.6	12,309.1
- Share %	81.3	81.5	79.9	80.8	80.2	80.2
3.Forestry services	307.0	322.1	528.6	590.9	804.7	875.9
- Share %	4.0	4.6	5.8	5.7	5.6	5.7

[1] General Statistics Office, 2007, General Survey of the rural area, agriculture and fishery in 2006

[2] According to the statistics of the GSO, in 2008, labor productivity in the agriculture and forestry sector is only equal to 37% of the average labor productivity of the whole country and even less than 4% of that in the raw materials exploitation and science-technology sector.

4.Total	7,673.9	8,411.1	9,064.1	10,331.4	14,369.8	15,367.2
- Share %	100	100	100	100	100	100

Source: Statistical Yearbook - Section 141, page 305, 2009

- Forest planting accounts for a small and unchanged ratio in the total forestry output during 2000 and 2008. This shows many difficulties faced by the sector despite a series of encouraging policies and favorable programs initiated by the State such as the program to plant trees to cover bare grounds[3], the program to plant 5 million ha of forests[4]. These difficulties become more serious because the solution must take into account the question of how to ensure a reasonable income for forest planters.

- Exploitation activities still contribute a very high ratio. In the future, the possibility for exploiting wood and other forest products will be decreasing due to poorer natural forests, which causes planted forests to be the major source. More thoughts should be devoted to exploit other forest products than wood, for example precious medicinal materials for the health sector. This is one of the solution to maintain the possibility of increasing forest's added value.

- Forestry services account for a very small ratio, reflecting their weaknesses. This is due to many reasons, first of all the distribution of resources to this sector has not been up to potential, for example investment of capital and human resources in developing breed-making farms is limited, investment and organization of industrial wood planting methods has not been paid enough attention.

2.4.3. Structure transformation within the fishery.

The structure of the fishery sector includes two sections: culture fishery and exploitation. In the past years, the sector structure has changed in the direction of increasing the ratio of culture fishery and decreasing that of exploitation activities to fully utilize the advantages of large water surface area for fish breeding and reduce the risk of natural fishery resources running out.

Table 14. Fishery output structure transformation in real terms

Unit: Billion VND; %

[3] According to Decision No 327/CT dated 15/9/1992 of the President of the Committee of Ministers

[4] According to Resolution No. 08/1997/QH10 and Decision No. 661 of the Prime Minister dated 29/7/1997 about planting 5 million ha of new forests, in such: - Period 1998-2000: Plant 700.000 ha of new forests (including 260.000 ha of protective and specialized forests), re-plant and add 350.000 ha of forests; Period 2001-2005: plant 1.3 million ha of new forest (including 350.000 ha of protective and specialized forests), re-plant and add 650.000 ha of forests); Period 2006-2010: Plant 2 million ha of new forests (including 390.000 ha of protective and specialized forests)

Year	2000	2002	2004	2006	2008	2009
1. Exploitation	14737.7	15842	19706.6	25144.0	41894.9	48450
- Share %	55.6	42.7	36.6	33.,8	37.9	38.5
2. Culture fishery	11761	21282	32271.1	49194.9	68615.5	77480
- Share %	32.8	52.3	60.2	66.2	62.1	61.5
4.Total	26498,9	37130,8	53.977,7	74.338,9	115.527,0	125930
- Share %	100	100	100	100	100	100

Source: Statistical Yearbook-Section 151, page 320

- Statistics shows that the potential to exploit aquatic products, especially sea exploitation has decreased, although the exploitation value in 2008 is 2.6 times higher than that in 2000. The fishery sector cannot grow quickly based on the exploitation activities;

- Breeding activities have grown rapidly between 2000 and 2008. This reflects considerable potential and advantages of Vietnam's culture fishery. However, the large area of water surface, especially in coastal regions has not been fully utilized.

More resources should be devoted to raising aquatic products in near-shore region. This is a potential channel to bring high economic value to the fishery and create jobs for fisherman in coastal areas. In comparison with other coastal countries in the region (Thailand or China), raising aquatic products in near-shore region still enjoys weak development with low competitiveness.

2.5. The shift of labour proportion in A- F-F.

A-F-F still plays an important role in the economy. Up to 56% of the total workforce is working in these industries and live on the income from the sector's additional value[5]. Since 2000, the labour proportion in A-F-F industries has dramatically decreased as a result of industrialization and urbanization process but still stands high with the following illustrating data.

Table 15. Labour proportion of A-F-F in social workforce

Unit: %

Year	2000	2002	2004	2006	2008	2009

[5] In rural area alone, labour proportion in A-F-F is 66.2% in 2009 (Source: investigation results of population and housing for 2009), which is still overwhelming in labour structure of rural economy.

1. Labour in Agri. & Forestry	62.5	58.7	55.4	51.8	48.9	48.2
2. Labour in fishery	2.6	3.2	3.4	3.6	3.8	3.7
3. Total labour in A-F-F	65.1	61.9	58.8	54.4	52.7	51.9

Source: Statistical Yearbook 2009, GSO 2010

The above table shows that labour proportion in A-F-F reduced by 12.4% in the period in question from 65.1% to 52.7%, averaging an annual reduction of 1,4%. The actual figures without errors in statistics, can unveil a bigger contraction. However the proportion is clearly still very high.

Also in the period, the ratio of agriculture-forestry-fishery value in GDP declined by 3.8% (see Table 4). Thus, a 1% reduction in GDP proportion of A-F-F corresponds to a 3.3% reduction in labour proportion in these industries. This should be considered as an important achievement, obtained from the recent industrialization and urbanization process. However, labour proportion in A-F-F is still very high, leading to a relatively low labour productivity, under the condition of Vietnam's small and contracting agricultural land area. As a result, the labour income in this sector is lower than most of other industries, entailing a widening gap in social incomes.

Table 16. Labour productivity in A-F-F in comparison with some other industries

Unit: million VND/person

Year	**2000**	**2004**	**2006**	**2008**	**2009**
1. Agri. & Forestry	4.0	5.6	7.2	12.2	12.4
2. Fishery	15.1	19.6	24.6	34.7	35
3. Processing	23.4	30.1	36.6	49.5	48.6
4. Hotel	20.9	29.8	45.8	78.0	83
5. Construction	22.7	23.2	30.2	40.0	40.9
6. Transportation	14.8	25.3	36.1	54.9	59.9
Total	11.7	17.2	22.5	32.9	34.7

Source: Statistical Yearbook 2009, Hà nội 2010

Labour productivity in agriculture and forestry is the lowest level, compared to other industries in the table as well as in the economy. The gap in productivity between these two industries and the national average is down from 2.9 fold in 2000 to 2.7 fold in 2008. The gap is down from 5.8 to 4.1 for the processing industry, up from 5.2 to 6.5 fold for hotel and restaurant industry, down from 5.5 to 3.3 for the construction and up from 3.7 to 4.5 for the transportation.

Labour productivity in fishery, though a bit higher than that in agriculture and forestry, still very low in comparison with other industries in the table.

In other words, low labour productivity in A-F-F is the tie that needs relaxing to achieve high growth in these industries. The only solution for relaxing the tie is to remove the workforce which proves to be unskilled and less efficient in A- F-F out of the industries and allocate the limited resources into the hands of more productive people.

In conclusion, the shift in economic structure proves to be unbalanced with the shift in the social labour force. The workforce development is getting outdated and legged far behind the modern economic structure. The adjustment of social labour structure towards decreasing proportion in A-F-F and increasing proportion in other economic sectors is one of the most important tasks in economic structure orientation in the coming years.

III. Rural economic structure transformation

3.1. The process of economic structure transformation in the country by region is very slow, even unchanged with the agriculture-forestry-fishery sector accounting for the highest ratio

Because statistics have not separated GDP share of the rural area, it is impossible to fully and precisely evaluate the rural economic structure transformation by region. In this context, if centrally-administered provinces and cities with the ratio of agriculture, forestry and fishery sector being lower than 14% of the area's GDP structure are excluded, (8 provinces and cities taken out are Hannoi, Haiphong, Quangninh, Danang, Hochiminh City, Dongnai, Binhduong and Baria Vungtau[6]), the economic structure of the remaining provinces could be assumed to be that of the rural area. With such an approach, the following observations could be made:

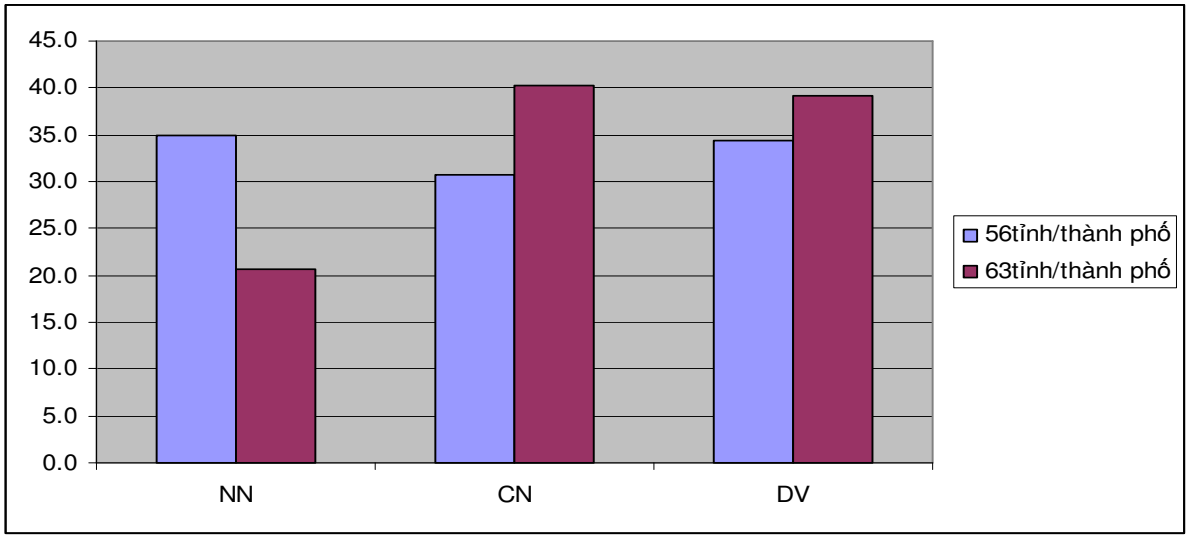
- The structure of the rural economy has not been transformed in parallel with that of the overall economy, specifically in 2009, the economic structure of the three sectors (agriculture-

[6] According to the statistics of the Rural Department – Ministry of Planning and Investment, the ratio of agriculture, forestry and fishery sector in GDP of 8 provinces and cities in 2009 is respectively Hanoi 5.50%, Quangninh 6.00%, Haiphong 9.60%, Danang 3.75%, Hochiminh City 1.30%, Binhduong 3.50% and Baria Vungta 1.52%

forestry-fishery, industry and services) in the overall economy (64 provinces/cities) is 20.7%, 40.2% and 39.1% respectively.

- Compared with the overall structure, the ratio of the rural area's agriculture-forestry-fishery sector is almost 1.7 times higher, in the meantime the industry sector is only 76.4% and the service sector 87.5%.

Figure 1: GDP structure of rural areas (56 provinces/cities) and the whole country



Source: GSO 2009 and Source: Department of Regional and Territorial Economy – MPI

3.2. The growth and economic structure transformation by 6 economic regions is not the same, however the ranking remains unchanged

According to the statistics of the Rural Department – Ministry of Investment and Planning, GDP of the above regions in 2007, 2008 and 2009 is as follows.

Table 17: GDP by economic region in real terms

Unit: Billion VND

	2007	2008	2009

	Value	*Ranking*	Value	*Ranking*	Value	*Ranking*
Total (64 provinces)	1,235,018.8		158,0325.9		1,909,913.5	
1. Red River Delta	281,656.2	*2*	352,411.5	*2*	426,771.2	*2*
2. Northern mountainous area	73,675.5	*5*	93,265.0	*5*	111,026.9	*5*
3. Central Coast	174,250.9	*4*	225,527.0	*4*	282,221.7	*4*
4. Central Highlands	43,407.4	*6*	56,446.1	*6*	70,072.0	*6*
5. South East	460,623.8	*1*	597,806.3	*1*	713,120.7	*1*
6. Mekong River Delta	201,405.0	*3*	254,870.0	*3*	306,701.0	*3*

Source: Department of Regional and Territorial Economy – MPI

The statistics show that GDP value in real terms increased considerably in all regions from 2007 to 2009, but their rankings remain unchanged. The South East area always ranks first, next comes respectively the Red River Delta, the Mekong River Delta, the Central Coast, the Northern mountainous area and finally Central Highlands.

Table 18: Economic structure by regions according to the statistics of 63 provinces/cities

	2007			**2008**			**2009**[7]			**Increase/ Decrease (percentage point)**		
	Agri	**Ind**	**Ser**	**Agri**	**Ind**	**Ser**	**Agri**	**Ind**	**Ser**	**Agri**	**Ind**	**Ser**
Northern Mountainous Area	34.9	29.5	35.5	34.8	29.4	35.9	33.6	30.3	36.1	-1.4	0.7	0.5
Red River Delta	14.0	42.2	43.8	13.9	42.7	43.4	13.0	42.8	44.2	-1.0	0.6	0.4
Central Coast	25.6	36.8	37.7	24.4	37.1	38.6	22.9	38.5	38.6	-2.7	1.8	0.9
Central Highlands	55.7	21.0	23.3	55.1	19.0	25.9	52.0	20.4	27.6	-3.6	-0.7	4.3
South East	4.7	61.8	33.6	7.0	50.9	42.1	7.0	51.7	41.4	2.3	-10.1	7.8
Mekong River	42.8	24.2	33.0	44.0	23.5	32.6	41.5	24.3	34.2	-1.3	0.1	1.2

[7] Figures in 2009 are estimated

Delta				

Source: Department of Regional and Territorial Economy, Ministry of Planning and Investment (adapted from 63 provinces and cities' reports)

- Areas with the highest proportion of agriculture-forestry-fishery in the economic structure are the Central Highlands and Mekong River Delta, which display much higher ratios than others. This also reflects advantages in terms of agricultural production of those 2 regions in comparison with others. Although the agriculture-forestry-fishery sector accounts for a big share in the region's GDP, the degree of industrialization has not been in line with the demand for the modernization of this sector. This makes the GDP share of this sector in the two regions low (20.4% and 24.3% respectively in 2009). The industrialization of the agriculture-forestry-fishery sector is essential for the quality improvement of agricultural products and the minimization of post-harvest losses, just like the mechanization process applied for crop collection in Mekong River Delta.

- The South East region shows a strong degree of industrialization with the highest ratio of industry in GDP (51.7%) while the Central Highlands has the lowest ratio (20.4%). The South East region also achieved a rapid growth of the service sector, which makes the remaining share of agriculture low. The economic growth and structure transformation of this area is quite different from other regions.

- Areas with the highest ratio of the service sector include the Red River Delta (44.2%) and the South East (41.4%), the lowest belongs to the Central Highlands (27.6%).

The service sector grows fast in the Red River Delta because this region has a small and highly-populated area. Therefore, the agriculture-forestry-fishery sector can not meet the demand for employments and income for laborers especially in the rural areas, meanwhile the industry sector is not developed enough to utilize the excess laborers in the rural areas. That makes people in the region look for various jobs in the service sector to earn their livings, leading to an increasing proportion of this sector. However, the expansion of services is just a short term alternative, not a basic and long term solution.

3.3. Rural economic growth by 6 economic regions.

With the approach that 8 provinces with the lowest ratio of agriculture- forestry-fishery sector in the economic structure are excluded, it is reported herein the GDP values and the rural economic structure of 6 above regions.

Table 19. GDP value in rural economy by 6 economic regions

Unit: Billion VND

	2007		2008		2009	
	Value	*Ranking*	Value	*Ranking*	Value	*Ranking*
Northern Mountainous Area	121,241.2	*3*	159,317.5	*3*	194,135.2	*3*
Red River Delta	55,000.5	*4*	70,877.0	*4*	86,031.0	*4*
Central Coast	159,048.9	*2*	207,294.0	*2*	260,361.7	*2*
Central Highlands	43,407.4	*5*	56,446.1	*5*	70,072.0	*5*
South East	23,330.8	*6*	31,860.3	*6*	43,479.7	*6*
Mekong River Delta	201,405.0	*1*	254,870.0	*1*	306,701.0	*1*

Source: Department of Regional and Territorial Economy – MPI

Table 19 shows that the economic structure in these 6 regions is greatly different from the figure for the whole countries with 8 provinces/cities included (table 18).

- Mekong River Delta region shows a high potential for the development of agriculture-forestry-fishery sector as well as other rural operations. Therefore, the fact that this area ranks first is reasonable.;

- The central coastal region does not have advantageous natural conditions with constant flood and drought and narrow area but ranks second after the Mekong River Delta region. This shows concerted efforts of people there in the production of agriculture, forestry and fishery;

- The Red River Delta region ranks third. This region's recent achievements do not correspond with its potential for rural economic development. It has not brought into full play the favorable conditions for winter crop and non-agricultural professions although it is endowed with many modern and traditional professional villages. The development of rural economy in the region is still spontaneous with the lack of cooperation among production entities to create large scale and high competitiveness;

- That the Northern mountainous area ranks fourth is also reasonable. The region's economic capacity and possibility for further progress is limited since the territory is divided by high and slippery mountains, causing many obstacles for development;

- However it is unsatisfactory for the Central Highlands to rank fifth because their resources should be better utilized. This is the region where ethnic minorities people account for

a high ratio of population, however, they have not been linked with modern technology to develop the economy. Moreover, the production organization is still fragmented and scattered;

- The fact that the South East region ranks sixth is reasonable with high speed of industrialization and urbanization leading to a considerable contraction in the rural activities (4 in 8 provinces and cities, namely Hochiminh City, Dongnai, Binhduong and Baria Vungtau are excluded from this region)

3.4. Development of non-agriculture jobs in rural areas, a key factor promoting the rural economic structure transformation in 2000-2009 period.

Vietnam's economy since 2000 to 2009 has the following remarkable features: (i). speed up industrialization process; (ii). increase in investment capital by national budget and ODA funding into infrastructure development to promote economic growth activities; (iii). State makes continuing efforts to consolidate and elaborate the legal system, pursues the policy encouraging economic entities in all sectors to contribute efforts and capital to non-prohibited business and production activities; (iv) Actively boost the international economic cooperation and integration, producing a high economic growth and facilitating economic structure transformation in a positive way.

In this context, the rural and agricultural sector has also witnessed a significant change in growth and economic structure transformation. The most impressive achievements include: highly competitive products in agriculture-forestry-fishery sector such as rice, coffee, rubber, cashew nut, timber and aquatic products exhibited a strong expanding trend, while less competitive agricultural products were gradually narrowing down; concentrated production area were established and consolidated; the rural economy were diversified by the development of many products from the traditional professional villages and service activities improving rural production and life.

Detailed figures and date about rural and agricultural development and economic structure transformation during the period 2000-2009 are presented as follows:

3.4.1. Industry and handicraft sectors

In the past few years, the whole country has converted nearly 300 thousand ha of agricultural land into industrial, commercial and residential land. In order to avoid the massive transformation of agricultural land for other purposes, the Government has been following

closely the situation, especially the transformation of paddy planted area into industrial, commercial and residential land.

For this reason, the establishment and development of industrial, commercial and service centers on the converted agricultural land has been so far not included in the rural production figures, but accounted for the industrial production figures in urban areas. Hence the industrial and service sectors in rural areas only comprise non-agricultural industries which are small, fragmented and spontaneous on rural regions. (not included in the overall planning for developing concentrated industrial, commercial and service zones).

With the above access, the rural industry and construction covers the non-agricultural activities operating in the rural area. In the past few years, along with the renovation in the agricultural management towards diversifying rural and agricultural economic operations, the State has encouraged the peasants to make wealth based on their internal strength with the slogan "do the job one is good at". As a result, there have been formed and developed many non-agricultural professions in almost all the countryside. However there are differences in development level among various regions. The delta regions with favorable geographical and economic conditions achieved a high growth in industry and construction. On the contrary, in the less advantageous regions, the industry and construction grows more slowly and especially, these industries are even under-developed in some remote and disadvantageous regions.

Recent studies on rural economic sectors have summed up 6 non-agricultural professions which are popular in rural areas, namely, the processing and preservation of agricultural, forest and aquatic products; the production of construction materials, wood, pottery, china, glass, textile and small-scaled engineering; the production of materials for rural wood processing; the manufacture of tools and materials for rural and agricultural production; the handicraft making; the trading of pleasure creature.

3.4.2. The processing and preservation of agricultural, forest and aquatic products

Recent positive growth in agriculture-forestry-fishery has boosted the development of the processing and reservation of the industries' products. Specifically, production value of this sector during the period 2001-2006 increased at the average rate of 15.2% per year. (the figure in the period 1996-2000 is modest at 9.4%). The processing value of aquatic products accounted for remarkable 70% of the total sectoral figure.

In 2006, the output value of the processing and preservation of agricultural, forest and aquatic products stood at 114,447.2 billion dong, contributing 32% to the total value of the

national processing industry. Its export value was 9624.2 million dong, accounting for over 40% of the entire processing industry and about 30% of the national export value.

The number of processing facilities increases from 252,129 (in 2001) to 428,439 (in 2006) (an average increase of 11.2% yearly)[8].

Among the fastest grown in processing are powder grinding, the processing of tea, coffee, rubber, cashew-nut, pepper, fruits and vegetables, wood and aquatic products;

The processing industry of agricultural, forest and aquatic products is currently still limited at the preliminary treatment and packing activities, giving low additional value. There are few enterprises investing into deep processing technology for high additional value. This can explain the low proportion of the processing industry in the internal structure of the rural industry sector. (above or below 20%).

3.4.3. The production of construction materials, wood, pottery, china, glass, textile and small-scaled engineering.

In the period of 2002-2007, the number of business facilities in small household scale is estimated at 11,607, accounting for more than 97% of the total facilities in the sector.

3.4.4. The production of materials for rural wood processing.

Major products are: paint, varnish, saw and smoother. These sectors have recently grown in line with the expansion of wood processing industry, especially with the large increase in export value of processed wood in the past 4 years.

3.4.5. Handicraft making sector: is developing well with nearly 2000 villages, accommodating more than 1000 enterprises which make, trade and export the products.

3.4.6. Construction, transportation, commerce and services

a. Construction

The rural construction has recently grown rapidly and been diversified. The main characteristic of rural construction is tiny and almost done by households. (accounting for over 86% of the total buildings in rural areas)

b. Rural transportation

Like rural construction, family households are the main service provider in rural transportation, making up 99% of the total carriers in the region.

[8] Date calculated from the investigation results of rural & agricultural production in 2001 and 2006

c. Rural commerce and services

There have been appeared in recent years many forms of commercial activities and services, which on the one hand, support the agricultural production and on the other hand, satisfy various demand of the regional people. Main services include:

- Mechanical service for agricultural production. This operation has quickly expanded in recent years with the participation of many enterprises of different economic sectors: State owned and privately owned enterprises, collectives, and household business, in which the households and agricultural collectives take the majority. Nevertheless, this service is now only provided in soil reproduction and farm product harvest;

- Service of providing materials and fertilizers for agricultural production. This operation has grown fast under market mechanism, under the State's control on prices. Main service providers are also rural households.

- Service of providing clean water in rural areas. There are 3204 communes with clean water supply facilities nationwide, accounting for 35% of the total present number of communes. Clean water in rural areas is now mainly provided by domestic and foreign invested projects. Enterprises are still outsiders of this industry.

3.4.7. Newly established industries in rural areas

This group includes diversified economic activities which take shape to meet new market demand under the industrialization and urbanization of the economy. This sector concentrates on satisfying people's need in modern life, such as food, beverage and other demand in everyday life.

One of the successful industries in this group is the planting of flowers, ornamental trees, pleasure birds and fish; stone production to meet the decoration need and spiritual luxury demand of the families. These industries have developed in line with the increased market demand in recent years, improving people's income and living standard. Main players on this market are peasant households who shifted from traditional agricultural activities into pleasure creature raising (agricultural production structure transformation)

It is very difficult to exactly evaluate the recent transformation process of rural and agricultural economic structure. Most of the studies on this issue face obstacles due to lacking official statistical data separated for rural economic sector. The statistical yearbook published officially by The General Statistics Office (GSO) to date has not separated the output value of

the industry, construction, commerce and services sectors in rural areas from the total value for the whole economy. Likewise, nor it has provided independent figures for agriculture-forestry-fishery production in urban areas. Therefore, calculation of the output value and economic structure in rural areas is not as precise as expected.

Section 3: Recommendations

I. Overall assessment of the rural and agricultural economic structure transformation in Vietnam from 1990 to 2009

1.1. Vietnam's economic structure transformation process in the rural and agricultural sector originated from the renovation policy in agricultural economic management in 1988 (when the Politburo of the Communist Party of Vietnam issued Resolution No 10 on the renovation of agricultural economic management).

This process is continuously going on in the direction of utilizing the comparative advantages in terms of natural and ecological conditions for developing agricultural products in a link with the market. Given the macroeconomic changes, this process can be divided into two stages. In the first stage, lasting from 1990 to 2000, rural and agricultural sector witnessed a transition from self-sufficient production under a concentrated and bureaucratic mechanism into goods production under a market mechanism. The second stage which begins in 2000 is when the rural and agricultural sector diversifies the product lines and actively joins the international market in accordance with the Party's and State's strategy of international economic integration. Economic structure in the rural and agricultural sector has remarkably changed with the establishment and development of various export-oriented product lines. A good progress has been made in promoting the advantageous conditions of land, climate and other resources in the rural economic sector. The process has contributed to the growth and structure transformation of the whole economy. Besides the achievements, there remain some limitations during the transformation process.

1.2. With advantageous conditions of land, climate and water resource, Vietnam is in a position to raise a wide range of plants and animals, some of which make good value and popular to foreign consumers. In addition, Vietnam's exported farm produce also helps to satisfy the food (rice) demand of many countries in the world. Thus, Vietnam's agricultural exports not only help earn foreign currency, but also contribute to the domestic and international food security.

This role is reasserted over time and is the factor strongly influencing the agricultural economic structure transformation in the past 20 years;

1.3. In addition to products of high value, Vietnam also develops many traditional farm products of low economic value, some import-substitutes which are less competitive than foreign produced ones.

Therefore, agricultural economic structure transformation takes the role of promoting products of high value and discouraging those of low value, formulating a new economic structure in the agriculture with higher added value;

1.4. Rural and agricultural economic structure transformation requires tremendous social costs, which cover the investment in planning and building infrastructure for shifted regions, the investment in breed and seed, facilities and equipments for new production… Poor farmer households and small farms and enterprises with weak financial position cannot afford the investment. As a result, the State, large enterprises, especially foreign-invested enterprises play an important role in this process.

1.5. Economic structure in the agriculture-forestry-fishery so far has not taken a clear and fixed shape despite the establishment of concentrated goods production areas. Farmers are willing to abolish their trees and animals and stop production when the prices are not sufficient to recover the costs, causing big loss for themselves and the society. This is likely to happen under current fluctuating and unstable market conditions.

The above situation exists as a failure of developing countries' agriculture in joining the international market and becoming dependent on that market. To restrict these adverse impacts, the State should work out the appropriet policy solutions to give supports to the agriculture-forestry-fishery sector in their way towards a new stable structure in order to ensure the success of the transformation.

1.6 Rural and agricultural economic structure shall continue to shift in the direction of deacreasing the share of agriculture-forestry-fishery thanks to rapid and stable development of non-agriculture jobs in rural areas, making room and opportunities to move a part of agricultural workforce to this sector. It takes more time for this process to go naturally under market forces as Vietnam did in the past than to go with interference. Thus, the State takes an important role that helps to steer, support and boost the process in accordance with the outlined planning.

With the above assessment, the report herein puts forward some ideas and orientation for futher rural and agricultural economic structure transformation until 2020 with details as follows:

II. Ideas of futher development and economic structure transformation in agriculture-forestry-fishery until 2020, include:

2.1. Structure transformation in the agriculture-forestry-fishery from now until 2020 shall focus on two strategic objectives, specifically ensuring the national food security for an estimated population of 100 million and exporting rice as an excess of domestic demand. Hence, there shall be clear, specific and suitable plan of the long-term land area used for producing rice with high productivity and good quality (about 3.5 million ha nationwide). A comprehensive infrastructure system should be constructed on this area for producing rise of good quality;

2.2. To make specific planning and to establish the concentrated goods production regions in the agriculture-forestry-fishery sector in order to produce plants and animals in large scale and of good quality, linking with processing industry. We should deeply get involved in the global value chain of separate agriculture-forestry-fishery products, including rice, coffee, rubber, cashew, pepper, tea, sea and aquatic products, wooden household appliances, which Vietnam has comparative advantage to export.

To develop a high technical agriculture with the wide application of biotech into production. To construct high-tech agricultural zones in provinces with the modernization of breed making and the scientific irrigation of paddy, perennial trees, fruits and vegetables.

2.3. To make detailed planning of three forest types: protective, specialized and production forests. To formulate suitable policies to ensure that forest planters can earn a living and improve their lives, based on planting and doing business with the benefits gained from the planted forests (such as speciality production, tourism in combination with other income generated activities), to ensure the forest and environment protection according to the law on forest.

2.4. To futher boost the development of fishery in the direction of raising fresh, blackish and salty-water aquatic species in the mainland and coastal areas by advanced techniques and modern technology to give high productivity and restrict epidemic. To make the fishery a key sector, taking the major share in agriculture-forestry-fishery structure. To encourage the domestic consumption of aquatic products to expand the internal market.

2.5. To raise the social and State investment in the infrastructure for agriculture-forestry-fishery in accordance with the structure planning of this sector and in line with other economic areas.

2.6. To develop a skilled workforce to meet the demand of economic structure transformation in agriculture-forestry-fishery through methodical training of permanent agricultural jobs and new non-agricultural jobs. To facilitate the operation of enterprises in rural areas to create non-

agriculture employments and attract laborers from agricultural workforce, boosting the rural economic structure transformation in the coming years.

III. Orientation and solutions for economic structure transformation in rural and agriculture-forestry-fishery sector in the upcoming years

3.1. Orientation and solutions for economic structure transformation in agriculture-forestry-fishery until 2020.

3.1.1. Basis for structure transformation in agriculture-forestry-fishery

- Economic structure transformation by industry in agriculture-forestry-fishery sector is to identify the development direction by increasing or decreasing the value and proportion of every industry in GDP of this sector.

- Key basis for deciding to increase or decrease the scale of each industry is its competitiveness and ability to penetrate the market under the current and future condition of economic integration. Accordingly, the State shall take measures to ensure the development of key strategic industries such as rice, protective forests… in accordance with the planning until 2020. For industries with comparative advantage, including coffee, pepper, cashew, tea, rubber, aquatic products…, the State shall follow specific policies and measures to encourage the sustainable market participation and give assistance in risk prevention under unfavourable market conditions. For industries without comparative advantage, difficult to survive under the WTO commitments on Vietnam's agriculture from now until 2020, such as sugarcane, cotton, mulberry, soya-bean, fruit and vegetables…, the Government shall take measures for contracting production to move the resources into more competitive products.

- The second most important basis is the land and water-surface in agriculture-forestry-fishery available for various industries in the sector, which should be reallocated under the planning of product groups reviewed in terms of comparative advantage and development potential.

This report uses the 2005 study results of the Ministry of Agriculture and Rural Development for the planning of agricultural and forest land and fishery water-surface until 2020 as follows:

Table 20. Orientation in national planning of agricultural and forest land until 2020

Unit: Area: 1000 ha; Structure: %

Item	2010		2020		Area changes 2010-2020
	Area	Structure	Area	Structure	
Total area	32.931,5	100,0	32.931,5	100,0	-

I. Agricultural land	10.400,0	31,6	11.000,0	33,4	600,0
Share (%)	*31,5*		*33,3*		*4,3*
1. Land for annual plants	6.020,0	18,3	6.300,0	19,1	280,0
Of which: paddy land	3.850,0	11,7	3.800,0	11,5	-50,0
(rice-shrimp land))	*200,0*	0,6	*200,0*	0,6	0
2. Garden land	370,0	1,1	190,0	0,6	-180
3. Land for perennial trees	2.940,0	8,9	3.280,0	10,0	340,0
4. Pasture	240,0	0,7	340,0	1,0	100,0
5. Land with water-surface for fishery	790,0	2,4	820,0	2,5	30,0
II. Forest land	16.000,0	48,6	16.000,0	48,6	0,0
Share (%)	*48,9*		*48,9*		*11,2*
1. Production forest	7.330,0	22,3	7.330,0	22,3	0,0
2. Protective forest	5.750,0	17,5	5.750,0	17,5	0,0
3. Specialized forest	3.020,0	9,2	3.020,0	9,2	0,0

Notes: - The figures are rounded in tens of thousand ha (2010, 2020)

- Fishery land covers the area of pond and river's water surface, excluding the area of rice and fish cultivation.

3.1.2. Orientation for the development of key products in agriculture-forestry-fishery

a. Orientation for the development of food plants

Major food plants are paddy rice and maize. To realize the planning for food plants until 2020, the following important solutions should be carried out:

- Solutions for keeping 3.8 million ha of paddy land as planned. The government should pursue effective control measures in converting paddy land for other usage purposes in order to avoid using the land planned for paddy cultivation for other purposes;

- Solutions for achieving planned paddy productivity and output. The Government shall work out the supportive program to help paddy farmers to obtain the productivity of 65 quintal/ha by 2020 (the figure now is 55,3 quintal/ha) or a total output of 45.5 million ton by modernizing the irrigation system to supply sufficient water for paddy land in two seasons. The State also plans to industrialize the sun-drying process, build large paddy grinding and milling centres in Mekong river delta provinces, expand and improve the rice storage and preservation system, raise the rice export price to equal that of the region, develop new breeds for higher productivity and quality and apply a safe and sustainable rice production process.

- Solutions for maintaining and developing 1 million ha of maize land include planning, developing infrastructure, breeds, post-harvest technology and methods to use by-products (maize trunk) for livestock raising or feedstuffs processing industries.

b.Orientation for the development of ecological forestry.

- To stabilize the forestry land area of 16 million ha for developing 3 types of forest according to the planned structure specified in Table 20 (production forest: 22.3%; specialized forest: 17.5% and protective forest: 9.2%) and to intensify the comprehensive economic measures to exploit all three types of forest.

- Key solutions for protective and specialized forests: to strictly protect 3.02 million ha of specialized forest, to protect as well as reasonably exploit 5.75 million ha of protective forest by developing livestock raising under the forest layer. Attention should be paid to maintaining protective forest trees for best keeping land and water.

- Solution for production forests, which cover 7.44 million ha in both exploitable natural forest and economic planted forest is to promote the creativeness of people in combining the agriculture and forestry activities on each area of production forest.

c. Orientation for the development of other agriculture-forestry-fishery products

Based on the classification of the sector into 3 sub-industries with different competitive advantage, the orientation for the development of each industry is identified as follows:

- Products with high competitive advantage, such as rice, coffee, rubber, cashew, tea, culture fishery, wooden household appliances… are considered as key agriculture-forestry-fishery products and a major source of exports. Basic solutions for this product group are:

+ The Government should have detailed planning of concentrated production regions;

+ To implement the program on developing infrastructure for large-scale production of goods, preferential credit policy (in terms of interest rate, lending time) to assist the producers in applying new breeds and advanced cultivation methods for higher productivity. The program also includes agricultural extension, sales promotion and gradual formulation of production insurance and risk prevention mechanism, in case of unfavourable market conditions or epidemic, natural disasters;

+ To reorganize the production in advanced farming model (5 ha or more, on average) and to form the value chain of transparent products and a closed process from the input supply, direct production, post-harvest collection, processing (from crude to refined), classification, packaging to consumption.

- For products without competitive advantage but needed for domestic consumption, such as sugarcane, milk, fruit and vegetables, maize, vegetable oil, cattle and poultry meat, fresh-water fish…, the solutions for development are:

+ To concentrate the production activities into the regions with favourable natural conditions and strong competitive capacity at the domestic market; to gradually cut down the

unsuitable production area and instruct farmers to shift to more productive plants and animals or non-agriculture sector; to promote rural service industry.

+ The Government should implement policies on: developing infrastructure in the production area, undertaking agricultural extension activities, encouraging credit institutions to follow the State's supportive credit policy, forming terminal markets to link farmers with markets in a fastest way;

+ To organize the farmers in the form of collective economic unit, like co-operatives or artels, to rationalize all the stages: input supply⇒ production ⇒ preliminary processing ⇒ classification ⇒ packaging ⇒ consumption at terminal markets;

+ To issue regulations on regional production to impose requirements on quality, food safety and hygiene, anti-monopoly, unfair competition and environmental destruction…

- Regarding products being materials for other industries, such as cotton for textile industry, soya-bean for feedstuffs processing industry, cassava and picket fence tree for microbio and bioenergy industries…, there are two cases. Those with competativeness should be futher developed according to the State's planning. For those without competitiveness and dometic production of which proves less efficient than importing, the State should definitely arrange for the farmers to shift to more competitive products, which target at the domestic market and satisfy well the people's consumption taste.

According to the above development orientations, area structure in agriculture can be outlined as follows:

Table 21. Allocation of land for developing some plants nationwide until 2020

Unit: Area: 1000 ha;Structure: %

Item	2010		2020	
	Area	Area structure	Area	Area structure
I. Annual plants	**9970.2**	***100***	**10.200**	***100***
1. Paddy	7.090.0	*71.1*	7000.0	*70.0*
2. Maize	1.140.0	*11.4*	1.500.0	*14.7*
3. Sugarcane	265.0	*2.6*	250.0	*2.4*
4. Cotton	5.2	*0.05*	0	*0*
5. Peanut	390.0	*3.9*	350.0	*3.4*
6. Soya-bean	350.0	*3.5*	300.0	*2.9*
7. Vegetable of all kinds	730.0	*7.3*	800.0	*7.8*
II. Perennial trees	**228.0**	***100***	**261.0**	***100***

1. Coffee	460,0	*20.2*	450,0	*17.2*
2. Rubber	540,0	*23.7*	700,0	*26.8*
3. Tea	120,0	*5.3*	140,0	*5.4*
4. Cashew	380,0	*16.7*	450,0	*17.2*
5. Pepper	50,0	*2.2*	50,0	*1.9*
6. Fruit	730,0	*32.0*	820,0	*31.4*

Source: The Ministry of Agriculture and Rural Development, The project of structure transformation in agriculture-forestry-fishery until 2020

According to the above figures, Vietnam's plant structure will go towards the following direction:

+ Total area of annual plants shall increase by 230 thousand ha. Specifically, paddy area will slightly contract, maize area will rise, sugarcane area will be down, cotton area will disappear, peanut and soya-bean area will diminish and vegetables will increase a bit.

+ Total area of perennial trees shall increase by 330 thousand ha. Specifically, coffee will go down in both area and proportion; rubber will move quickly in the opposite direction; tea will slightly increase in terms of area and be almost unchanged in proportion; cashew will see its area and proportion up; pepper will remain in area but contract in proportion; fruit and vegetable will have a rising area but a falling proportion.

Coffee will cut down its area in South East for planting fruit trees, maize and growing grass to feed beef cattle. Rubber will have more plants in Central Highlands. Cashew will grow mostly in South East, South Central Coast, Central Highlands. Tea will be stabilized in Midland and mountainous provinces and Lam Dong. Pepper will have no more land but try to improve its quality for exports.

Sugarcane will consolidate the current area, improve its productivity and sugar reserves that ensure the sufficient supply of materials for all sugar mills with the automatic irrigation for 50-60% of its area (10% now);

The annual plants such as maize, peanut, soya-bean, vegetables will gain the output sufficient for domestic consumption and export reduction.

- Regarding forestry.

Besides the current activities of forest protection, forest planting and forest enrichment, we should intensify the new planting activities and diversify the exploitation forms. In addition, we should develop the household wood processing industry into the key one to improve the industry's value in general and its export value, in particular.

Four regions with strong postion for wood processing are South East, Central Highlands, Red River Delta and Central Coast. These places have skilled workforce and developed infrastructure where wood furniture and other forest products should be export-oriented.

- Regarding culture fishery.

+ The fishery will make a full use of its potentials on the suitable land area and water surface in accordance with the planning approved by the Government. Three regions with the strongest conversion of agricultural land into aquaculture land in the coming years are Mekong River Delta, Red River Delta and Central Coast. As a result, the area for aquaculture in 2020 is estimated at 2,100 thousand ha, of which,

+ Fresh water surface area (including low-lying field): 900 thousand ha

+ Salt and blackish water surface area: 1.000 thousand ha

+ Sand area for aquaculture: 20 thousand ha

The fishery industry with export turnover expected to be USD 8 billion, accounting for 47% of the value of the entire agriculture-forestry-fishery will become the biggest industry in the sector in terms of export value.

The fishery industry will develop most in Mekong River Delta and Central Coastal provinces.

+ Major solutions: to make detailed planning and to develop a comprehensive and complete infrastructure and irrigation system for every concentrated raising region; to combine agriculture and fishery in irrigation operation to ensure a sustainable development of both area and source of water; to basically do the breed selection to ensure good quality and productivity; to manage the production of feedstuff for culture fishery to obtain good quality and reduce imports; to strictly control the environment and epidemic problems, to issue warnings of environmental pollution in concentrated raising regions and to study the solutions for that.

3.1.3. Orientation for the development of rural product lines by region

Our country has 7 agricultural economic regions. Some large exports production regions have been established in recent years, such as regions of rice production in Mekong River Delta and Red River Delta, region of industrial plants in South East, Central Highlands, aquaculture regions in Mekong River Delta and Red River Delta...

Orientation for the structure transformation of agriculture-forestry-fishery in the economic regions are as follows:

a. Regarding the country's largest paddy regions (Mekong River Delta and Red River Delta)

- These are the two biggest rice hubs of the nation which ensure the food security and rice export target. The planned area for paddy planting of these two regions in 2020 is about 4.5 million ha (Mekong River Delta: 3.4 million ha, Red River Delta: 1 million ha), making up a share of 62.8% of the paddy area in the whole country. These regions also have the highest rice productivity, fluctuating around 67 - 73 quintal/ha. The paddy output is about 30 million ton (of which, Mekong River Delta is 23 million and Red River Delta is 7 million), equivalent to 66% of the national output (the figure of the whole country is 45.5 million ton).

- Solutions include keeping the paddy area for 2 seasons, strictly controlling the conversion of this land for other purposes (Mekong River Delta: 3.4 million ha, Red River Delta: 1.5 million ha); organizing a comprehensive irrigation system to automatically supply water for 100% of the paddy cultivated area; sowing new paddy seeds for higher productivity and quality (Mekong River Delta should achieve 67 quintal/ha and Red River Delta should acquire 73 quintal/ha); linking production with sun-drying, grinding and milling, preservation with stores located right at the field in order to minimize the loss and increase the unit value of rice exports in Mekong River Delta and paddy in Red River Delta.

To study solutions for reducing the use of weed-killer and pesticide in paddy planting in order to ensure food security and maintain a sustainable paddy planting environment.

Combination should be made to develop pigs and poultry raising on these paddy concentrated regions by 3 measures: to improve raising method, to organize the concentrated raising model with good breed, clean feedstuff and to take preventive measure against epidemic deseases at the raising regions.

The State should have policy to compensate the specialized paddy farmers in these regions to keep them from shifting to other plants.

- Orientation for the development of non-agriculture industries in these rural regions is…

b. Regarding the large goods production regions of industrial trees (South East and Central Highlands)

South East and Central Highlands are the two biggest production regions of rubber, coffee, upmarket flower, vegetable and cattle of the country. Cashew and pepper are also major exports of the regions. Area orientation and solutions for the key plants of the regions:

- Coffee area is stable at 400 thousand ha (Central Highlands with 380 thousand ha and South East with 20 thousand ha), accounting for 90% of the total coffee area of the country.

Solutions: to improve irrigation system for intensive farming, to reduce the use of chemical fertilizer and increase the use of organic fertilizer, to harvest timely when the fruit become mature, to invest in the drying technology in a link with production.

- Rubber: The two regions have a total area of 410 thousand ha for rubber planting, accounting for more than 74% that of the whole nation. It is planned to extend by 165 thousand ha in the coming years to reach an area of 600 thousand ha in 2020, which corresponds to 85% of the nation's total area.

Solutions: to do intensive farming for a higher rubber productivity, to get access to the model of massive rubber plantation for a productivity of dried latex of 2 –2.5 ton per ha, to develop and apply high yield rubber breed and to process rubber to meet the domestic demand for civil and health rubber products. The processing percentage should be 30-40% of the total rubber output, the remaining shall be for exports.

- Cashew and pepper: The land area and the output of the two plants in these regions cover 90% of the nation's. Old cashew breed should be replaced. Intensive farming should be applied to pepper cultivation for a better export quality. Cashew area is 410 thousand ha (South East: 320 thousand ha; Central Highlands: 90 thousand ha), of which 90 thousand ha is newly cultivated.

- Upmarket flowers and vegetables: Da Lat is in a good position to plant and supply upmarket flowers and vegetable for southern provinces and foreign market. Especially, the area for planting exported flowers can be developed to 1000 - 2000 ha, dependant on the market demand and planting technique.

- Animal husbandry: South East and Central Highlands are suitable regions for raising beef cattle and dairy cows. Growing grass should be intensified to feed beef cattle during the dry season. Solutions: to produce good breed beef cattle at reasonable costs, to extend more area for growing grass, to improve pasture for raising beef cattle, supplying meat for big cities and industrial zones.

c. Regarding North and South Central Coastal areas

These regions do not have advantageous conditions for paddy cultivation. However, the sector can be developed to achieve self-sufficiency in food of the regions. These regions are also suitable for growing sugarcane, raising pig and beef cattle, breeding aquatic species, protecting and planting economic forests…

- Paddy rice: about 1,180 thousand ha of cultivation, producing an output of 7.2 – 7.5 thousand ton with a productivity of about 60 - 63 quintal per ha in 2020 (now it is 47 - 48 quintal per ha)

- Secondary crops: Peanut: 180 thousand ha, giving best quality in the country.

- Sugarcane in intensive farming: 110 thousand ha, some of which is irrigated. The productivity is 60 - 65 quintal per ha, on average, being a stable supply of materials for sugar mills in the two regions.

- Pig and cattle raising: These are two nation's biggest regions of beef cattle. The cattle herd has a scale of 4 – 4.3 million, of which 1 million is buffalo. The pig herd has 17 - 18 million head, twice as much as the current figure.

- Aquaculture will become the key industry in the regional economic structure of agriculture-forestry-fishery. Orientation is to expand step by step its scale in an environmentally sustainable development with the application of advanced technology in raising and processing.

- Forestry: The major task is to preserve the current forests and plant new trees in order to keep water, protect the environment and avoid flash flood. At the same time, we should develop wood processing industry for exports and domestic consumption, steering the regional structure transformation of agriculture and forestry.

d. Regarding the North Midland and Mountain area

This is a poor region. The long-term development target is to enrich forests, keeping water to protect ecological environment for the Red River Delta. The region's long-lasing advantage in agriculture is to plant tea, speciality fruits and to raise cattle.

- Tea occupies the largest cultivation area of 78.1 thousand ha in the region, producing a tea shoot productivity of 51 quintal per ha. It is planned to be still the leading exports in 2020, with the total planting area of 100 thousand ha. Thus, the expanded area will be 21.9 thousand ha.

Solutions: to replace the area of planting old tea with the high quality breed; to develop speciality tea in the areas at the height of over 1000m; to irrigate in some area with favourable conditions; to instruct the producers to reduce the use of pesticide for safe organic tea.

- Speciality fruit: Resources should be allocated to develop plum, longan, temperate pear, peach, orange for selling to low-land area. Fruit juice processing industry should also be developed. The area for planting fruit is planned to be 300 thousand ha. Now it is 172 thousand ha.

- Cattle breeding has the greatest potential to develop in the region. It is planned to raise the proportion of this industry to 30-35% in 2020. The cattle herd will have about 5 – 5.5 million heads, which nearly double the current figure.

Solutions: to make and select good breed of beef cattle, giving meat to regional consumers and selling breed to Red River Delta; to build and operate the feedstuff processing

mills in the North East and the middle region; to develop and deliver the grass growing model to supply additional food for cattle in the winter.

- Forestry: to protect and comprehensively exploit the area of 5.9 million ha of forest, of which, protective and specialized forests cover 3.2 million ha and the production forests cover 2.7 million ha. The Government should study and issue policies to pay the foresters for the environmental benefits they bring about to encourage them to protect and enrich forests for long.

IV. Overall assessment of the economic structure transformation in agriculture-forestry-fishery from 2010 to 2020

4.1. This period will witness the qualitative change of sectoral and regional economy in agriculture-forestry-fishery and in-depth transformation. . Efforts should be made to improve the competitiveness of potential agricuture-forestry-fishery products and restrict the disadvantageous products by moving the farmers doing this into more suitable economic sectors.

4.2. Land and other natural resources should be efficiently and sustainably used on the basis of appropriate cultivation method, renovation and protection measures. This is the orientation for long-term development, not only for the 2010-2020 period.

4.3. Economic strucuture in agricuture-forestry-fishery is projected as follows:

- Agricuture-forestry-fishery sector accounts for 10% -12% of national GDP.
- The structure within agricuture-forestry-fishery is 60 - 10 - 30%.
- The structure within the pure agricuture is: Cultivation: 50%, livestock raising: 35% and service: 15%.
- Average income per 1 ha of cultivation land: 2.,000 USD/ha
- Export value of the entire sector: 17 - 18 tỷ USD
- Population in rural area: 60% or over 60 million.

4.4. Basic solutions to obtain the above projected figures:

- Comprehensive and detailed planning (only one version of planning) of the maximum area and scale for every product in agriculture-forestry-fishery;

- Mobilizing all domestic and foreign resources into the development of infrastructure in the planned area for agricuture-forestry-fishery with a close supervision, to create foundation for developing agricuture-forestry-fishery in the direction of industrialization and modernization;

- The Government shall implement policies to support producers in terms of capital, technology and market in producing modern goods with international competitiveness.

- Expanding international cooperation in agricuture-forestry-fishery sector, and following Vietnam's commitments with WTO in a clever way (making a full use of commitments which bring benefits to agricultural producers and taking all country's advantages in farm produce trade relations with foreign partners). In this orientation, the Government, industry associations and export associations play an important role which should be promoted.

Appendix