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The State of the Vietnamese Rice Economy

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The state of the Vietnamese rice economy is expressed with 3 major issues as follows:

- Rice production
- Rice export
- Socio-economic efficiency

The salient points of these issues (including good and bad points) during the renovation, especially in recent years (1995-1998), are as follows:

I. Rice Production

Rice is the major crop in Viet Nam. Although arable land is little (about 4.2-4.3 million ha, by early 1999 it is 4.38 million ha, of which 4.2 million ha are fields 4.2 million ha are flat lands and 0.18 million ha are hilly lands for rice production). This land has been decreased gradually due to urbanization, industrialization and transfer into land tenure. However, the soil is quite fertile, especially in 2 main regions: the Red River Delta (579,000 ha) and the Mekong River Delta (2.1 million ha). Rainfall and sunlight are plentiful, and the temperature is suitable for rice production year round. In addition, Vietnamese farmers are very hard-working and have gained much experiences, especially during recent scientific-technological revolution. Owing to these reasons, intensive farming is increasing and paddy crops in Viet Nam are continually becoming more abundant. These crops are playing an important part in enlarging the nation's cultivated paddy area, and increasing paddy yield and production. If in 1980, Viet Nam cultivated only 5.54 million ha of paddy with an average yield of 2.09 ton/ha and an output of 11.57 million tons, then in 1998, these figures are 7.36 million ha-3.96 ton/ha-29.14 million tons, respectively. For 18 years, paddy area has increased by 32.8 %, yield has increased by 89.5%, and output has risen by 2.52 times. During the reforms in agricultural mechanisms and policies in line with Resolution No.10 (1988), and particularly after amendment of the Land Law (1993), paddy land is allocated to farmers for long-time use; farmer-households are considered as independent economic units. Consequently, the quantity, quality and economic efficiency of Vietnamese rice production has developed. Before Resolution No.10, Viet Nam always experienced shortages of food and had to import 700,000-1,000,000 tons of rice annually; hunger between/before harvest happened nearly every year, particularly in 1988, in 21 Northern provinces 9.4 million people starved. After Resolution No.10, the policy of household contracts has been implemented and land has been allocated to farmers as part of a tenure system. Labor and land have been free from bureaucratically planned and subsidized mechanisms. The problem of ownerless land and deteriorated

agricultural labor has basically been overcome. Paddy land and farmers join with each other to create new momentum for increasing crops, yield and intensive farming. It is a turning-point in rice production. Ten years after Resolution No.10 (1988-1998), the average rate of paddy output growth is 6-7% per year, higher than the population growth rate (2% per year), so food per capita has increased gradually from 300kg (in 1980) to 408kg (in 1998). With an increase of population by 1.5 million people per year, the output of rice not only meets the demand for domestic consumption but also allowed Viet Nam to become one of great export countries. The exported quantity has increased from 1.4 million tons (in 1989) to 3.8 million (in 1998). National food security is ensured, hunger between/before harvest is reduced back and may not occur again in large areas, even in years severe of severly poor harvest.

In the early years after Resolution No.10, rice production in Viet Nam had changed, but only after amendment of the Land Law (1993) did it really shift to a commodity economy. Under the new Land Law, land owners have 5 rights (converse, transfer, inherit, mortgage, rental). In order to full establish the Land Law, decree No.64 was made by the Government, stating that land was allocated to farming households on a tenure basis. In addition to this decree, there were many policies encouraging rice production. Such policies created the material premise and intellectual motive force for developing paddy commodity production, especially in the 2 main regions: the Red and the Mekong River Delta.

Concerning investment, it is recognized that State projects for irrigation, reclaimation, sea-encroachment, and land-improvement which were built over the decades are due to bring agricultural production into play. In the Mekong River Delta, many uncultivated areas have turned into the largest rice-production regions with the highest growth, such as Dong Thap Muoi, Tu Giac Long Xuyen (Long Xuyen quadrilateral) and West of Hau River because of the investment in irrigation and improvement of acid land. Only the Quan Lo Phung Hiep project, which freshens water of the Ca Mau peninsula, and dams to prevent salt water incursion in Soc Trang, has changed acid land with unstable winter crops into land with 2 or 3-steady-crops. Since 1997, in Long Xuyen Quadrilateral (which belongs to Kien Giang and An Giang provinces), there have been projects which drain flood waters to the West Sea, together with an interlacing system of ditches and canals which lead fresh water from the Tien and Hau Rivers to dissolve acid and wash alum. They have turned that region into a rice commodity growing area covering hundreds of thousands of hectares. Decision No 99/TTg (dated 09/02/1996) of the Government on agricultural development in the Mekong River Delta has been creating the material premise and intellectual motive forces that encourage sustainable agricultural development there-the most important rice growing region of the whole country.

For recent years, in the Red River Delta, highly intensive farming has been concentrated based on irrigation and biology. Increasing investment by the State and people in irrigation

projects and in land-improvement has partly contributed to rising fertility of paddy land and has created conditions for enlarging high-yielding and good-quality paddy areas.

Favorable mechanisms, new policies, technical material investment, and scientific achievements, in particular, in new paddy varieties create rapid leaps of rice yield and quality. Hybrid and thoroughbred varieties hold a higher and higher proportion in paddy cultivated area in almost all of the provinces. In the 1996-1998 period, there was a marked change in structure in accordance with increasing rice quality to meet the demand for domestic and international markets. The area of special and fragrant rice has been enlarged. Besides traditional varieties such as Tam Thom, Du Huong, Nep Cai Hoa Vang (in the North), Nang Thom Cho Dao, Mot Bui, Nang Huong (in the South), there are some fragrant, tapering-grain varieties which are imported from India and Pakistan (Basmati), Thailand (Khawdakmali), from the IRRI (IR 64, OM90-9, IR9729, etc.).

Due to the universal impact of the above-mentioned factors, for the past few years, and especially in the 1996-1998 period, rice production in Viet Nam has attained many new achievements.

The most important one is that although the weather has not very favorable, rice production is still developing at high rate. For 3 years (1996-1998), average paddy output has been 27.46 million tons, compared to 22.48 million tons (the average of 1991-1995). Paddy output has increased rapidly because of both larger area and higher yield.

Table 1 : Rice production for 2 periods : 1991-1995 and 1996-1998

Unit : area : 1000ha ; yield : t/ha; output : 1000 t

	1991	1992	1993	1994	1995	average 91-95	1996	1997	1998	average 96-98
– Area	6302.7	6475.4	6559.4	6598.6	6765.6	6500	7003.8	7099.7	7337.0	7130
– Yield	31.1	33.3	34.8	35.7	36.9	34.5	37.7	38.8	39.7	38.5
– Output	19622	21590	22836	23528	24964	22480	26397	27524	29141	27460

For the past 3 years, national paddy output has steadily risen by 1 million tons per year in all weather conditions. The main reason is that area has been enlarged due to reclamation and increasing crop site in the Mekong River Delta, concentrated on Dong Thap Muoi, Long Xuyen Quadrilateral, West of Hau River. By the end of the 1991-1995 5-year-plan, the total paddy area was 6.7 million ha. In 1998, the third year of the 1996-2000 5-year-plan, it reached 7.3 million ha, an increase of nearly 500,000 ha. In the Mekong River Delta, the rice-growing area was 3.19 million ha in 1995, 3.4 million ha in 1996 and 3.8 million ha in 1998, of which the winter/spring paddy area increased by 100,000 ha, and the summer/autumn by 200,000 ha. Besides the potential of land and crops, increasing price and expanding the export markets, which are very good for farmers, were also effected by the sudden change of the 1998 summer/autumn paddy area in this region. In some provinces, the third paddy crop (autumn/winter) had not been previously developed, but in 1998 the price of rice is high, so this crop gained

importance, typically in Can Tho, Soc Trang, Kien Giang, Dong Thap, Bac Lieu, whereas some provinces increased by 30%, and in some cases by 50% higher than past crops. The fact that in the Mekong River Delta, the potential for paddy sown in the summer/autumn is high and could become reality when the paddy price is profitably favorable for producers.

With respect to the winter/spring crop: for 3 years in the Mekong River Delta, cultivated area has enlarged by 300,000 ha, on the average of 100,000 ha per year. However, the rate decreases gradually: 1996: 11.2%; 1997: 8.8% and 1998: 5.6%. Three provinces that have the highest rate are Soc Trang: 36%, 13% and 72%; Kien Giang: 34.8%, 7.8% and 3.2%; Long An: 16.4%, 13.4 % and 5.3%, respectively. The main reason is that large State irrigation projects have been brought into play in 3 sub-regions: Ca Mau peninsula (Bac Lieu province), Long Xuyen Quadrilateral (Kien Giang province) and Dong Thap Muoi (Long An province). To differ from the summer/autumn crop, extra new area increases of winter/spring crops are slowing down (except in Soc Trang) because amount of land which can be transferred from a one-crop field into a 2-crop field is decreasing. The fact is that in Soc Trang, the Quan Lo Phung Hiep freshening project worked at maximum capacity in 1998, so from 1999 we cannot expand winter/spring area at the same high rate as in the past 3 years. The increase could be about 50,000 ha per year in the 1999-2000 period and after 2000, it would be lower.

In the Mekong River Delta, while the area of winter/spring and summer/autumn crops of stable, high-yielding varieties is expanding, the area of one-crop, low-yielding and unstable variety crops is decreasing significantly. These figures were as follows: in 1995: 757,000 ha; 1996: 671,000 ha; 1997: 719,000 ha; 1998: 700,000 ha. This is caused by changing crop structure in line with increasing land productivity and economic efficiency. This started some years ago when irrigation projects were developed and brought into play. For 3 years, on the basis of those projects completed and upgraded, a new trend toward rapidly changing crop patterns is marked. Until 1998, some provinces had partially or totally one-paddy-crop area into 2 and 3-crop areas. This was evident in Dong Thap, Can Tho, Vinh Long, Tien Giang, and An Giang. Hence, in next few years the potential of crop conversion still remains, but it is not as significant as before.

While in the Mekong River Delta, the winter/spring and summer/autumn paddy areas are enlarging; in other regions, it is stable or decreasins little. For 3 years, the total paddy area was 1,040,000 ha in the Red River Delta, 800,000 ha in the Northern Midlands and Mountains, 680,000 ha in the Northern Central Coast, more than 500,000 ha in the Southern Central Coast, 360,000 ha in the South East. The structure of crop-based paddy area is also changing, mainly for winter/spring and winter crops. This depends on the weather. In 1998, there was a prolonged drought so paddy area in these regions is lower than before, especially in the Northern Central Coast, Southern Central Coast and Central Highland.

In the same period, paddy intensive farming was advanced, particularly in the Mekong and the Red River Delta - 2 major commodity paddy areas. As a result, the average paddy

yield per crop and per year is much higher than before: in the 1996-1998 period, it was 3.85 ton/ha/crop, increased by 0.4 ton/ha compared to the average of the 1991-1995 period. There has been a sudden change in winter/spring crop: 3.95 tons in 1995, 4.61 tons in 1996, 4.71 tons in 1997 and 4.63 tons in 1998 (despite the serious drought). Though the weather in winter and summer/autumn crop area had a negative impact on intensive farming (high flood in 1996, pest infestation in 1997 and serious drought during growing period in 1998) yields are still increasing, of course at low rates.

Although the weather has not been favorable, the average paddy yield still has been high and is increasing gradually: 1996 increased by 0.08 tons compared to 1995, 1997 by 0.11 tons compared to 1996 and in 1998 by 0.03 tons per ha compared to 1997. In comparison with Southeast Asian countries, Viet Nam not only increased yield gnickly but also gained a very high yield. For the past 3 years, average paddy yield per crop was 3.02 ton/ha in the Philippines, and about 2.1 ton/ha in Thailand. The yield of Indonesia was higher (4.4 ton/ha), but had not increased compared to prerious years (in 1992 it was 4.48 ton/ha).

Table 2 : Paddy production and yield in some Asean countries

in the 1991-1998 period

	Unit	1991	1992	1993	1994	1995	1996	1997	1998
Paddy production	mil.ton								
Viet Nam	"	19.6	21.5	22.8	23.5	24.9	26.4	27.6	29.1
Thailand	"	19.8	20.2	19.1	21.1	21.1	21.8	22.0	21.5
Indonesia	"	44.6	48.2	48.1	46.6	49.7	51.1	49.1	46.4
Philippines	"	9.6	9.1	9.5	10.5	10.0	10.5	10.6	10.5
Paddy yield	ton/ha								
Viet Nam	"	31.1	3.33	3.48	3.56	3.68	3.77	3.90	3.97
Thailand	"	2.05	1.96	2.13	2.35	2.34	2.36	2.30	2.25
Indonesia	"	4.35	4.49	4.38	4.42	4.40	4.41	4.45	4.30
Philippines	"	2.82	2.81	2.76	2.88	2.81	2.85	2.62	2.87

Application of biotechnological advances into large-scale rice production is a direct reason for increased paddy yield over the past few years. Up to now, more than 88% of cultivated areas have grown high-yielding varieties, particularly Chinese hybrid one. From the mountains to the deltas, from the North to the South, the tendency of expanding hybrid rice area has been creating sameness of paddy yield, which is very different from before. The quantity of fertilizer used increases quickly. So far nearly 200kg of nitrogen is used per cultivated ha. The exchange rate between paddy and nitrogen (urea) is 1.3-1 (compared to 2-1 before) which encourages farmers to use more fertilizer to raise productivity.

Arable land for rice is limited. The Mekong River Delta is the only region can reclaim and increase crop land. In the 7 other regions, there was no noticeable expansion. Therefore, the

only way to raise paddy output is to increase productivity. We can look at the Red River Delta case. For many years, total paddy cultivated area is about 1,040,000 ha, while the average yield per crop continually increased: 4.44 ton/ha in 1995, 4.7 ton/ha in 1996, 4.86 ton/ha in 1997 and 4.9 ton/ha in 1998. There are four provinces (Thai Binh, Nam Dinh, Hai Duong and Hung Yen) reaching more than 5 ton/ha/crop. Hence, raising yield is the decisive factor for increasing paddy output in the North (in general) and in the Red River Delta (in particular). In the Mekong River Delta, paddy output is raised mainly by enlarging area, but in the Red River Delta, on the contrary, output is raised by increasing During the 1995-1998 period, in the Mekong River Delta, the average yield has been around 4 ton/ha/crop, meanwhile the average increase in area has been 150,000 ha per year. As a result, production has increased more than 600,000 tons. In the Red River Delta, area size has been stable, average yield has increased by 0.16 ton/ha and output by 160,000 tons per year. In other regions, output has increased by 250,000 tons per year because of the application of high-yielding varieties. In the Northern Mountains and Midlands, yield was 3.56 ton/ha in 1995, 3.69 ton/ha in 1996, 3.9 ton/ha in 1997, and 3.95 ton/ha in 1998; average output rose over 130,000 tons per year, which played an important part in solving the food problem in this region, overcoming hunger between/before harvest in mountainous, border and ethnic minority areas.

Besides the above-mentioned advances, some special rice areas for export were established in the Mekong River Delta (An Giang, Dong Thap, Vinh Long, Long An, Soc Trang, Can Tho, Tien Giang provinces). These provinces have planned high-intensive and good-quality rice areas for export. Each has from 100,000 to 200,000 ha of special rice. There are many varieties but they have the same characteristic: tapering grains and fragrant varieties which meet market requirements. In An Giang province, a joint-venture for rice production for export has been emerged which is based on the Japanese market and Japanese technology. In the Red River Delta, many provinces rehabilitate special and high-quality paddy areas mainly for the domestic market (such as Tam Thom, Du Huong, Nep Cai Hoa Vang, and high-quality new ones). Areas using Japanese technology are being introduced into Hai Duong and Hung Yen provinces.

However, there are many difficulties and challenges in the Vietnamese rice economy.

First, rice land is limited while the population grows rapidly. Hence, paddy land per capita is small (561 m²) and is decreasing gradually. Not much land can be reclaimed for rice production. According to the General Cadastral Office, by the year 1998, there were 358,000 ha of land available for reclamation for paddy production throughout the country. By the year 2000, there will be 149,000 ha of agricultural land (mainly paddy land) to be converted to land for special use, inhabitants and urban land. The lack of paddy land is serious in the Red River Delta, and the Northern and Southern Central Coast. In these regions, average paddy land per capita is about 400 m², in many communes it is only 300 m². It is very difficult to plan rice production in line with the commodity economy. Rather, production is merely

maintained taking a self-sufficiency approach with low socio-economic efficiency. In the Mekong River Delta, paddy land per capita had been declining from 1500 m² in 1986 to 1230 m² in 1988, and has continued to decrease, especially in Tien Giang, Vinh Long, Can Tho, Ben Tre provinces. Due to little arable land, in many places, paddy land is used for three crops, and it has to be turned over continually; monoculture-rice production occurs. Over the long run this will reduce land fertility and productivity. In 1998, third crop areas of the Mekong River Delta increased approximately 230,000 ha, of which some areas grew a fourth crop (an additional crop). This fact needs consideration.

Second, intensively rice production in Viet Nam is at a high level compared to other countries in the region. It will be difficult to raise paddy yield in forthcoming years. In 1998, the average yield was 3.97 ton/ha, and growth rate fell from 3% to 2%. the average yield per year is over 10 ton/ha in the Red River Delta, over 8 ton/ha in the Mekong River Delta, and over 12 ton/ha in some provinces such as Thai Binh, Nam Dinh. Particularly, in some districts of An Giang and Can Tho provinces, intensive fertilization, irrigation, use of new varieties, and plan protection reached advanced international levels. Owing to intensive production, paddy yield is reaching the ceiling level. In the meantime, the rotation of paddy land also related to the possibilities of weather, season and varieties in ecological regions. Therefore, we still can raise productivity by intensive production, but not as highly as before. In Thai Binh, An Giang, Can Tho, Nam Dinh provinces, paddy yield fluctuates around the past highest average (6 tons for the winter/spring and 5 tons for the winter crop). This figure is approximately equal to the yields of high-intensive-level countries such as China and Korea (6.2 ton/ha). In the Mekong and Red River Deltas, some main paddy-producing districts used 300kg of urea per ha, irrigation is good, and 100% of high-yielding new varieties are used. The more districts and communes like that, the more difficult investment to increase paddy yield is. In these areas, saturation of organic matter has emerged. Even when more fertilizer is used, the yield does not increase, and in fact it may decrease. However, the scale of organic saturated area is so large at the present (March 1999).

Third, rice quality is low and does not meet the demand in the domestic market nor in the export market. This is a big challenge for Vietnamese rice production during this process of opening and integration.

For the past few years, the achievements of the change toward a rice variety structure in order to raise quality have been limited in some regions such as the Red and the Mekong River Delta. In other regions, people do not pay attention to rice quality. They generally consider the yield for raising quantity in order to meet the demand for food self-sufficiency. Quoted specifically, the proportion of Chinese hybrid varieties (such as Tap Giao, Khang Dan, Q5) and other high-yielding varieties is large and is increasing, but quality of these crops is low. As a result, a large amount of rice is stagnant, and its price is very low, even under producer cost. Some provinces have export quota's but have no export rice because of the crop's low qualitys which does not meet demand. They have to import rice from other

provinces to re-export.

Even in the Mekong River Delta, paddy quality is higher than before but is not stable. In Tien Giang province, farmers engaged in special, high-quality rice are worried about price and market. The provincial cultivated area of the 97-98 winter/spring crop was 600,000 ha of special and high-quality rice, mainly Zasmine 85 and VD20 varieties. They are fragrant, use little fertilizer and are high-yielding (4.5-5 tons per ha per season), but are not easy to sell. The Provincial Food Company, who signed buying contracts with farmers, later refused to buy the rice. This put farmers in an awkward dilemma, so they had to reduce their production. In Go Cong freshened communes (Go Cong Tay district), the 96-97 winter/spring crop grew 100 ha, but grew only 50 ha in the 97-98 crop. In the Mekong River Delta, special and high-quality rice does not attract farmers for it needs meticulous care, but cannot be exported and the price is not higher than other kinds.

From the above-said facts, in the Mekong River Delta, sustainable planning for areas producing high-quality rice for export has not been achieved. This is caused by issues relating to market, organization of production, and rice exportation.

Fourth, the rice market and pricse are not stable

Rice production is increasing rapidly while the consumption market has not expanded correspondingly. For many years, the supply has been higher than the demand. Typically, in 96-97 winter/spring commodity paddys left millions of tons of rice unpurchased in the Mekong River Delta. As a result, the paddy price fell to approximately equal to (even lower than) the producer cost, which abolished the motive force of farmers engaged in rice production. The 1996 the food price index only rose by 0.2% compared to 1995, the 1997 figure rose by 0.4% compared to 1996, of which the non-food price indexes rose by 3.2% and 4.4% respectively. The price ratio between agricultural and industrial products is changing, and it puts farmers at a disadvantage. This situation forces the government to carry out a series of economic-financial solutions such as giving money to State enterprises to buy stagnant paddies, reducing the rice export tax, and increasing national paddy stores.

The reasons are several, of which the most important ones are a subjective: production organization and management, projecting and planning. Spontaneous production has been popular for the past 2 years. Due to a lack of domestic and international market information, producers think only about short-term profit, and do not pay attention to long-term prospects. Meanwhile, the Government and local authorities could not organize and guide farmers on how to produce rice that meets market requirements. Purchasing, processing, preserving and distributing systems are controlled by individuals. It is common that farmers are compelled to sell at a low price. Not combining production with agro-products processing is a subjective problem afflicting the authorities in charge of guiding the agricultural field. Consequently, post-harvest losses are high, and the quality of products for consumption and for export is limited in comparison with the capacity. Some provinces are confused about whether to diversify crops and animals, whether to change the agricultural structure according to

commodity production. The Summer/autumn crop of the Mekong River Delta is harvested in the rainy season, but stations for drying, preserving, transporting, processing and purchasing are very weak. Needs and capacity are imbalanced, so economic efficiency is not high.

In 1998, the agro-product market and price were better, but still unstable. If the price for food was unchanged in the 1996-1997 period, it had a sudden increase in 1998 (by 23.1% compared to December 1997). The increase is good for paddy producers. However, it has risen too much, even higher than the ceiling price made by the Government; this fact had a negative impact on the national economy. Inflation and costs of production of many economic branches increase, so workers and the poor's income and their living are affected.

If paddy price is too high, it becomes difficult for Vietnamese rice to compete in the international market. A high buying price reduces the profits that export enterprises get, sometimes even resulting in a loss. This leads to a situation in which rice commodity is left but purchasing power declines, and farmers suffer most. Therefore, 1995's paddy price being higher than the ceiling price was surely not good. On the contrary, a number of concerns are implicit, especially regarding the rice export market and price.

Fifth, the tendency of returning to rice production is increasing

In cultivation, people tend to return to food crops, especially rice crops, even when the paddy price reduced and was at its lowest (in 1997). The ratio of food grains in the entire cultivated area tends to increase: in 1995: 86.4%, 1996: 86.8%, 1997: 86.1% and 1998: 87%. In food crops, paddy is increased while other cereals are decreased in terms of both area and output. The ratio of paddy area as part of the total cereals' area rises from 84.4% in 1995 to 85.2% in 1996, 85.5% in 1997 and 86% in 1998. In fact, diversification is not attained. Monoculture-rice production, on the contrary, happens popularly. In 1998, due to high prices, many provinces and farmers in the Mekong River Delta enlarged the third crop (autumn/winter crop) to 230,000 ha. They change some 2-crop areas into 3-crop areas, even into 4-crop areas (additional crop). In some provinces, local authorities do not direct farmers to expand their crops, but farmers still do because it is profitable in the short-term. Although this situation makes the paddy yield and farmers' income a little higher, it will reduce land fertility in the long term. With 3-4 crops per year, the land becomes exhausted, so land productivity is effected negatively in forthcoming crops.

For short-term profit, some provinces and farmers change fruit or industrial crop gardens into rice growing fields. This happens not only in the Mekong River Delta but also in the Southeast. In the 1998 summer/autumn season, in the Cu Chi district (Ho Chi Minh City), the paddy area rose by 294 ha. The main reason was that the paddy price was very high, so farmers planted rice instead of groundnut. In the meantime, vegetable areas declined by 171 ha, out of a total decline of 359 ha for the whole city (a fall of 10.9% compared to past crop). It is the same in other regions; single-crop system of rice prevail and crop diversification declines.

II. Rice Export

Results and advantages

Table 3 : Vietnamese rice exports for 10 years 1989-1998

	Unit	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
– Export quantity	1000 t	1420	1624	1033	1946	1722	1983	2058	3047	3682	3800
– Value	mill.$	290	304.63	234.5	417.7	361.96	424.43	530.18	868.4	891.3	1100.0
– Average price	USD	204	187.5	226.9	214.6	210.1	214	257.77	285	242	268.5
– Paddy output	mil.t	18.9	19.2	19.6	21.6	22.8	23.5	24.9	26.4	27.6	29.1

In 1989, Viet Nam officially joined the international rice market. It exported 1.42 million tons of rice and earned USD 290 million; the average price was 204 USD/ton. Although export quantity was small, the price was low, and quality did not meet the requirements of the international market, this event was very important to Viet Nam. It marked a change from self-sufficient paddy production to a commodity economy adhered with export. Since 1989, Vietnamese rice has stayed in the international market with increasing quality and quantity. In 1998, we exported 3.8 million tons, and earned USD 1.1 billion, with an average price of 268 USD/ton. In comparison with 1989, volume rose by 2.68 times, price rose 1.31 times and turn-over was up 3.79 times. For 10 years, we have supplied 22 million tons of rice to the international rice market, an average of 2.23 million tons per year. For 2 years 1997-1998, Viet Nam ranked second in the international export market, after Thailand (about 5 million tons) and before the United States (2 million tons per year).

Viet Nam has shown higher sustainability in rice exports over the last ten years than other countries in the region. According to the FAO, Pacific-Asian region, in Asia, Thailand is the largest rice exporter. In addition, 3 countries that are able to compete with Viet Nam are India, Pakistan and China. For 10 years, their exported rice quantities have not been stable. In 1995, India exported 5 million tons and ranked second (after Thailand), but in other years it was very low, mainly less than 1 million tons: 1993: 767,000 tons, 1994: 890,000 tons, 1997: less than 2 million tons. In 1995, Pakistan exported 1.8 million tons – the highest year, and about 1 million tons in other years. In 1994, China exported 1.6 million tons – the highest year, 1993: 1.5 million tons, in other years: about 1 million tons. In 1998, food output reached 490 million tons – the highest level – but less than 1 million tons was exported.

The ups and downs of Asian rice export over the past few years is caused by unstable rice production with a declining tendency. For instance, by early 1998 because of the negative impacts of El Nino, the FAO foresaw international cereal output to be only 1,895 million tons compared to 1,908 million tons in 1997, of which paddy output declined by 1%. In fact, by the end of this year, international paddy output declined by 2%, mainly in Asia. Therefore, the FAO had to give food relief to 40 countries (11 countries more than in 1997). Besides the

unfavorable weather, subjective reasons include the fact that in some countries, policies on agriculture and rural areas have not encouraged farmers to produce rice. Some countries turned from rice exporters into importers, such as the Philippines, Indonesia, etc. According to Indonesian Statistical Department, for the past 10 years, the paddy output of these countries has stayed around 48 million tons; in 1998, it was only 46.4 million tons.

Differing from countries of the region, for the past 10 years, Viet Nam has carried out comprehensive and profound reforms in its agricultural and rural economy; agriculture (in general) and rice production (in particular) have developed sustainably at a high rate. The food output growth rate has always been higher than the population growth rate, so food per capita has been rising gradually: 1990: 324.4 kg, 1991: 324.9 kg, 1992: 348.9 kg, 1993: 359 kg, 1994: 360.9 kg, 1995: 372 kg, 1996: 387 kg, 1997: 398 kg, and 1998: 408 kg. Admittedly, that tendency is rare in Asian rice production history, although the weather has not always been favorable; in some years the weather led to very severe conditions, such as droughts, pest infestation, high floods. Also based on FAO data, for the the past 10 years, international paddy output has increased about 70 million tons, of which Viet Nam has contributed 10 million tons. It actively contributes to the reduction of international food shortages. Viet Nam has fundamentally overcome hunger between/before harvest, which lasted for very long time before renovation, converting Viet Nam from an importing country to be an increasing rice exporter. In 1998, the country ranked second in the international rice market. Even when natural calamities, droughts and floods occurred repeatedly and created serious damage throughout country (such as in 1998), national food security was ensured, and rice exports increased in both quantity and quality.

A review of our rice exports for the past 10 years shows that besides the increase in quantity, varieties and quality have also made progress. In the early years of this process, the ratio of medium-quality with 25% brokens was very high at 80-90%, so competitiveness was weak and prices were low: 1989: 204 USD/ton; 1990: 187 USD/ton; 1991: 226 USD/ton; 1992: 214 USD/ton; 1993: 210 USD/ton, and 1994: 218 USD/ton. The reasons were that Viet Nam had just started to participate in the export field while the international rice market was stable, and that Vietnamese rice production was not trying to accomodate market needs. In those years, Viet Nam had exported what it had, not what the market required. For production, there were no plans for investment in the rice export area. Purchasing and processing was mainly based on individuals' existing networks in regions and in Ho Chi Minh and Can Tho cities. Major export markets were Africa, the Middle East and Eastern Europe, which did not require high-quality.

To overcome these difficulties and weaknesses, for the 1995-1998 period, our rice export was comprehensively improved. Exported rice increased in terms of both quantity and quality. For quantity, it rose from 2 million tons in 1995 to 3 million in 1996, 3.6 million in 1997 and 3.8 million in 1998. In terms of quality, the proportion of high-quality rice (i.e tapering grain,

about 5-10% brokens) was high and increased to about 70% in 1998, meanwhile the proportion of medium-quality rice (i.e round grain, over 10% brokens) was small and declining. The rice market has been expanding, and the number of customers has been increasing. The competitiveness of Vietnamese rice in the international market is also higher, and by the year 1998, Viet Nam was established firmly in such dewonding markets as the EU, North America, and Southeast Asia. With the improvement of quality and the supply and demand relationship in the international rice market, Viet Nam's export price has been rising step by step. The average export price during the 1995-1998 period was 269 USD/ton, an increase of 61 USD/ton over the 1989-1994 period. The gap between the Vietnamese and Thai rice price was reduced from 40-55 USD/ton in the 1989-1994 period to 20-25 USD/ton in the 1995-1998 period. In 1998, the Thai Baht devalued so Vietnamese rice price approached that of Thai rice according to specific kinds and points of time. In April 1998, the price of 5% broken rice was 310-315 USD/ton, and of 25% broken rice was 265-270 USD/ton; this compares to 310-320 USD/ton and 265-275 USD/ton for Thai rice, respectively. These prices were stable until November, 1998. By the end of 1998, prices offered for Thai rice were lower, and Vietnamese prices were affected, but owing to the stabilizing markets of Indonesia, the Philippines, Malaysia, and Iraq, as well as inter-governmental contracts which kept prices firm, our export rice price was fundamentally unchanged. Particularly, the Viet Nguyen rice export joint-venture in Tien Giang province and other such ventures in Can Tho, Soc Trang signed contracts with East Asian countries securing a high price: 305 USD/ton for 10% brokens. The quality and price of Vietnamese rice are now as good as those of Pakistan and India; meanwhile the quantity of Vietnamese export rice is rising rapidly and sustainably. For some time, the price of Vietnamese rice was 8-10% higher than that of Pakistan (in 1997).

Thanks to increasing quantity and prices, our rice export turn-over has risen quickly: from USD 530 million in 1995 to USD 868 million in 1996, USD 891 million in 1997 and USD 1.1 billion in 1998.

For 10 years, we have earned USD 5,420 million from our rice export, an average of USD 542 million per year. This figure, which we never thought about before is something we are very proud of. In terms of hard currency earned, rice exports rank second after crude oil; but as for nature of products, rice export is superior. First, after satisfying domestic consumption needs, surplus rice is exported, while all crude oil is exported. Second, while rice is an entirely Vietnamese product, crude oil is joint-venture product. Third, oil is a natural resource (i.e the more we export, the more exhausted our natural resources become), but rice is made from cultivation (i.e the quality and quantity export rice depend on production and intensive farming; the more we export the more motive forces for paddy production development we create. This result is caused by stimulating higher rice prices, consequently, increasing farmers' income and investment in intensive farming). Fourth, socio-economic, defense-security and environmental efficiency of rice production and export is higher than any other export goods in Viet Nam. This efficiency is not only short term but also long

term because rice demand for international food security tends to rise. Vietnamese may be able to penetrate more countries than now. By early 1998, according to an FAO forecast, the internationally commercial rice quantity would be 21.6 million tons, higher than 1995 record. In fact, it was 23.6 million, an increased of 24% compared to for 1997, and demand may be higher than supply at least the next 20 years. In 1999, Viet Nam plans to export 3.9 million tons after balancing domestic consumption.

Concerning the 4 above-mentioned points, it is obvious that rice exportation is one of our advantages. If we use it reasonably, it will exist for a long time and will allow our country to become rich. Few other products can do this. Two basic sides of the rice economy issue are production and market. The combination of them is a special and salient point during the renovation of Viet Nam.

Outstanding issues

First, Viet Nam has exported rice for 10 years and now ranked second in the international rice market, but we have not yet mastered nor made specific plans for export rice production (where, how large, structure of varieties and intensive farming). In some regions and districts, projects and plans have been made, but mainly are spontaneous or partial, even in the Mekong and the Red River Deltas.

Second, purchasing, transport, processing networks for export depend too much on individual traders. State food enterprises have not participated actively. (Up to now, the Northern and the Southern Food Corporations still use individuals to collect, transport, process and polish export rice). The situation in which farmers are compelled to follow price and quality quotas still occurs, and was especially evident in 1997.

Third, the material-technological basis for export processing and preservation are weak and not well-proportioned. In recent years, milling and polishing plants have been equipped with modern machines, but these plants are located mainly in Ho Chi Minh, Can Tho, and My Tho cities. In the meantime, regions and provinces which have many export commodities (such as An Giang, Dong Thap, Soc Trang) do not have modern processing and milling plants. Rice is exported from ports in Ho Chi Minh City, while the source of rice is in the Mekong River Delta. This makes transport and intermediate expenses higher.

Fourth, there are still some mistakes being made in rice export management. Export quotas are passed at the beginning of the year when production output figures are not exact. So, we have to adjust the plan continually, and sometimes we even have to cancel customers' contracts. The fact that quotas are passed to the provinces creates unfair competition among them. Some provinces had reported much higher paddy output than what they actually produced and they asked for more quotas. After that, they bought rice from other provinces to re-export. Some provinces do not have any paddy commodity, still ask for quotas and received

them. (For instance, in the 1999 plan, the export quantity is 3.9 million tons; at the first stage: 3,240,000 tons, of which 2.2 million tons are handed to 12 provinces in the Mekong River Delta and Ho Chi Minh City, 500,000 tons to the Southern Food Corporation, and 300,000 tons to the Northern Food Corporation).

Fifth, the distribution of rice export profit between farmers and rice processing and rice export enterprises is irrational, and the State and farmers always suffer losses.

Ⅲ. Socio-economic Efficiency

For a long time, many people have thought that the socio-economic efficiency of rice production is very low. So they have tended to change some paddy fields into fields for cultivating other crops. In the subsidizing mechanism with collective production (before the renovation), this concept might have been correct because paddy fields were ownerless, and farmers only worked for earnings according to their contributed labor to cooperatives and were split from the field. After Resolution No. 10, they have had the right of long tenure use of land and become the real owners. So land (in general) and paddy land (in particular) has been managed and used better with higher socio-economic efficiency.

According to the 1989 Survey of the General Statistical Office, in Can Tho, Nam Dinh, Binh Dinh, Yen Bai provinces, which are the 4 main rice production areas in Viet Nam, costs of rice production were 15-30% lower than the market price based on each area and each crop. Using the formula m/c+v for 3 crops in those 4 areas, the profit rate of farmers engaged in rice production is shown in the table below:

Table 4 : Profit rate of rice producers in 1989

Unit : %

	Red River Delta	Northern Mountains	Central Coast	Mekong River Delta
winter/spring crop	32	30	15	26
winter crop	21	17	–	–
summer/autumn crop	–	–	13	34

If we minus tax for paddy land use, (profit minus tax)/c+v, the profit rate of the winter/spring crop is 16-28% in the Mekong River Delta and 10-17% in other regions.

The gaps among regions, especially the Mekong River Delta and the Southern Central Coast, are mainly due to the difference in management expenses. This means that in the Mekong River Delta, farmer households are independent. Costs of production include fertilizer, insecticide, water, charge of labor for excavation earth-working, rice-planting without transplanting, and harvesting; so there was no indirect cost. On the contrary, in the Southern Central Coast

and the Red River Delta, indirect costs of agricultural cooperatives were high from 5.15 to 6.2% (mainly paying for cooperative cadres), meanwhile rice yield was low. Therefore, profit and the profit rate were lower than the Mekong River Delta.

Compared to other seasons, the winter/spring crop creates a higher profit rate than the winter and summer/autumn ones for a number of reasons: favorable weather, and few floods and droughts. For structure of varieties, new seeds with high yields are most commonly used because the weather is suitable for them and material cost is lower. Winter/spring-paddy intensive production is better, and makes a higher average yield and higher selling price.

Hence, even at the beginning of reform in the agricultural mechanism and policies in which households are considered as independently producing units, rice production gained profit although it was not high.

In recent years, independent households have been given long tenure land rights, so paddy land and farmers engaged in rice-production are closely linked with one another. Technological and scientific advances, especially biological ones, have create many short-term, high-yielding varieties; special varieties are put into production and direct and indirect costs are reduced, so that the efficiency of rice production compared to 1989 tends to increase gradually.

According to the 1996 Survey of the General Statistical Department, in 4 major paddy regions (Red River Delta, Mekong River Delta, Northern Central Coast and Southern Central Coast), the profit rate for the winter/spring crop was 73.8%; minus tax, it 63.5%; summer/autumn: 66.9%-59.2%; winter: 51.7%-42% respectively. Of the costs' structure of winter/spring production, fertilizer expenses were the highest 36.8%, labor wages (caring and harvesting): 36%, insecticide: 11%, seeds: 16.9%. The summer/autumn and winter crops production expenses are higher because they are susceptible to damage caused by the weather, especially floods and droughts, and profit is lower. Compared to other regions, the highest efficient region is the Mekong River Delta with the highest income of producer per ha.

Table 5 : Paddy productive efficiency in the 4 regions

Unit : %

	Total	of which			
		RRD	NCC	SCC	MRD
– Winter/spring crop					
1. Profit rate compared to					
a. Cost of production (no tax)	73.8	27.2	21.5	27.8	113.4
b. Cost of production (include tax)	63.5	18.5	14.3	21.5	100.9
2. Income/Production expense ratio	195.6	202.1	177.3	137.1	200.6
– Summer/autumn crop					
1. Profit rate compared to					
a. Cost of production (no tax)	66.9		14.6	26.9	85.8
b. Cost of production (include tax)	59.2		8.7	21.5	78.8
2. Income/Production expense ratio	151.5		136.9	163.9	160.8
– Winter					
1. Profit rate compared to					
a. Cost of production (no tax)	51.7	16.9	4.5	6.7	90.8
b. Cost of production (include tax)	42.0	9.8	6.5	4.8	76.3
2. Income/Production expense ratio	212.2	189.4	164.1	117.4	237.2

Note : RRD : the Red River Delta
NCC : Northern Central Coast
SCC : Southern Central Coast
MRD : the Mekong River Delta

The 1989 Survey as well as the 1996 Survey proved that the economic efficiency of rice production in Viet Nam has been always shown positive numbers (+) during the renovation in all weather conditions and fluctuations in the international market. Among the crops, the one with highest efficiency is winter/spring, followed by summer/autumn and lastly winter. Therefore, the change from unstable, low-yielding, low-efficient the winter crop into winter/spring and summer/autumn crops needs to be encouraged and invested in by the Government.

Among the regions, the Mekong River Delta has many comparative advantages such as a large area, fortified alluvial soil of the Tien and Hau Rivers, suitable land size for commodity production, farmers experienced in rice production in combination with export, etc. These factors have made rice production there the most profitable and sustainable economic sector in the economic structure of the provinces in the region. Even in 1997, a year of unfavorable weather and low prices, rice production still gained profit, although not much. In 1997, in the Long Xuyen Quadrilateral (An Giang province), production costs of the winter/spring crop was about 900 to 1,000 dong/kg, and the farmgate selling price was about 1,100-1,200 dong/kg, with a profit rate about 15-18%. Nowhere is the selling price lower than production cost. In 1998, in the Mekong River Delta, the paddy price increased 50-80% compared to 1997. The farmers engaged in rice production were very happy due to a good harvest and high price, and hence, increased income. The socio-economic efficiency of rice production, which is not only for farmers but also for the state, is evidently shown. In 1998, the Mekong River Delta corn-loft provided 15.5 million tons of paddy to the nation, 4 times higher than in 1976. It took

part in ensuring national food security, increasing reserves, and pushing back hunger in the between-crop period in the central part of the country, despite the fact that there was a very severe flood. We still exported 3.8 million tons of rice, the socio-economic situation was stable, and the negative impacts of the Asian and regional financial crisis were minimized.

Over the whole country, the Vietnamese rice economy not only produces food for nearly 80 million people and exports more than USD 1 billion, it also creates jobs for nearly 60 million rural people. It limits the migration to urban areas while the unemployment rate in the cities is high. Vietnamese rice economy has a decisive role in the poverty reduction program and in overcoming the situation of mal-nutritious children. It contributes to ensure social equality, to develop medical care, education, culture and to strengthen state security.

Agriculture (in general) and the rice economy (in particular) helps the country to overcome the big challenges caused by the 1997-1998 Asian and regional financial crisis. It has the most valuable politic-economic efficiency, which no other sector can compare to. However, there are still many existing issues we need to pay attention to:

First, efficiency is not sustainable because the rice market, output and input prices much depend on nature and on international market and price.

Second, manual labor makes up a high proportion of production expenses (36-40%), creating high production costs. Possibilities to reduce this expense are limited because freeing labor from rice production takes time. As mentioned above, the tendency toward monoculture-rice production and the hanging on to of paddy fields is still popular in many rural areas as a means of pursuing self-sufficient in spite of low efficiency.

Third, post-harvest losses are high because machines and facilities for transport, threshing, drying, storing and processing are not modern. In domestic and international markets, the quality of Vietnamese rice is low, so the selling price, profit of rice cultivators, processors and exporters is not high. This does not suit the real value of Vietnamese rice. Besides the fact that total profit per paddy ha is low, distribution is not equal. Farmers are continually suffering losses, which does not encourage them to invest to increase paddy yield and efficiency.

The state of the Vietnamese rice economy is expressed by both sides: good and bad points of production, export and socio-economic efficiency. In each stage, from production to processing, transport, and distribution (including export), these good and bad points are reflected at different levels. However, the good points and achievements are major and of profoundly important significance. Although there are still many bad points (sometimes they are serious), these are difficulties we have to solve during the changing process from self-sufficiency to commodity production combined with export. Hence, the only way to stimulate the Vietnamese rice economy to develop sustainably at a high rate while getting high efficiency is to associate production-processing-exportation with the application of scientific technological advances. To do so, the State plays a decisive role which is expressed by continuing investment in technology and science in production, processing and expanding the export market.

Forthcoming solutions are active and synchronous, from production to processing and export.

- Quickly complete a national scheme for exported-rice areas with specific plans, give priority to investment of capital, technology and science in stimulating rice production in each period in line with a national master plan for rice export.
- Build up new export-rice processing plants in paddy growing areas for export. Existing ones need to be upgraded and modernized for raising processing capacity and exported rice quality. A storage system, roads, and ports need appropriate investment. Can Tho port should be expanded to become a main rice-export port.
- In projected regions, the purchasing systems of rice for export could be based on direction by local authorities. The network of cooperatives and/or cooperative-type groups, which buy rice unitedly from all areas in conformity with the Government's regulations on floor-prices and on ways of doing business, should be established. Problems in profit distribution among the state, farmers and export enterprises need to be solved properly. from 1999, the government will abrogate the rice export tax. It is an active solution but not enough. In order to raise Vietnamese rice competitiveness, there need to be more integrated solutions. On one side, we must increase productivity and quality to reduce expenses. On the other side, we must expand and stabilize the market in line with diversification, multilateralization, ensuring confidence of clients, strengthening marketing, researching and forecasting on the market, etc. In order to ensure the feasibility of these solutions, the most important thing is to strengthen the managing role of the Government.
- A characteristic of the Vietnamese rice economy is the combination of production and export during renovation and affiliation. These are 2 sides which relate to and stimulate each other. Rice production increases both in quality and quantity and meets the demands of the domestic and export markets. Rice export is one of the components of the rice production process. It partially contributes to a stabilized market and rice prices in favors and intensify production. Therefore, a prerequisite and condition for increasing the socio-economic efficiency of the Vietnamese rice economy is the combination of production with export.

5

Structure of Rice Production in Viet Nam

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Rice plays a special role in economic and social life in Viet Nam. Because it is a main staple, the supply and the price of rice have a profound influence on people's lives and on the stability of the society. Also, because rice is a main cultivated plant, the production and the price of rice have significantly influenced the incomes of millions of agricultural households. Therefore, when the price of rice increases, so do the prices of other goods. Rice production is a field in which Viet Nam has a comparative advantage, especially in the area of export, and it should be stimulated to enrich the country. The rice producing sector also creates jobs and income for millions of people working in many other sectors such as collecting, processing, transporting and delivering. Japanese scientists estimated that rice production, in fact, has a value equaling to 2.2 times that of the rice itself. This does not take into account its value in terms of environment and culture.

Viet Nam always pays attention to the development of rice production first, for national food security, and then, for increasing income and improving the living standards of rice planters. With the great efforts of the State and people over the past several years, Viet Nam has achieved some successes, which it deserves to be proud of. However, there are some emerging problems that require appropriate policies to ensure the stable development of the country's most important production sector.

This paper contains three parts:

1. The state of rice production in Viet Nam.
2. Production costs and the income of the rice planters.
3. Solutions and the future of the rice economy in Viet Nam

I. The State of Rice Production in Viet Nam

(For details, please see tables 1 to 5)

Since the middle of the 1980s, Viet Nam had implemented renovating policies in the managerial mechanisms of the agricultural sector, but only since the beginning of the 1990s has agricultural production in Viet Nam really prospered. Especially, food production (in general) and rice production (in particular), have, the step by step, developed steadily to contribute to the elimination of hunger and the reduction of poverty, and the improvement of the Vietnamese rural areas.

Viet Nam is an agriculture-producing nation facing a South China Sea with a coast longer than 3,000 km. The country is also in the downstream area of two big rivers, namely, the Red and Mekong Rivers. Agricultural production always suffers from storms and floods, and annual damage to agricultural production caused by natural calamities is still quite serious; for example, in some specific years losses due to natural calamities equal to 800,000 tons of food. Thanks to appropriate reforming policies of the Communist Party and the State which are accorded with people's interests, the full potential of the land, laborers, and farmers' creativeness have been brought in to play fully. The State has increasingly invested in irrigation, electricity, science and technology for agriculture. Within only 9 years of the implementation of the "Doi Moi" renovation policy in 1990, average annual food production has increased 1 million tons.

Even though Viet Nam is an agriculture-producing country, in previous decades the country had to import food. In years of the 1970s, annual imported food was 1-1.5 million tons. In the 1980s, the figure was 30-35 thousand tons. However after entering the 1990s, Viet Nam became not only of self-sufficient in food production but also began participating in the rice exporting market. In recent years, the average amount of rice exported annually is 3-3.5 million tons, and the country is one of the three biggest rice-exporting countries in the world (after the United States of America and Thailand).

Table 1: Paddy output of 8 ecological areas in recent years

Unit: 1,000 tons

Area	1990	1995	1996	1997	1998	98/90 (%)
Red River Delta	3,618.0	4,623.1	4,811.8	5,076.6	5,364.9	148.28
Northeast	1,560.1	1,924.9	2,101.0	2,273.3	2,380.9	152.61
Northwest	141.9	328.9	315.9	345.6	332.3	234.18
North Central	1,642.3	2,140.8	2,035.5	2,495.5	2,316.3	141.04
South Central Coast	1,347.3	1,415.0	1,566.8	1,579.9	1,564.5	116.12
Highlands	315.1	348.7	359.6	389.2	337.9	107.24
Southeast	1,120.0	1,350.6	1,387.3	1,513.8	1,526.3	136.28
Mekong River Delta	9,480.3	12,831.7	13,818.8	13,850.0	15,318.8	161.58
TOTAL	**19,225.0**	**24,963.7**	**26,369.7**	**27,523.9**	**29,141.6**	**151.58**

After 9 years of reforms, rice production in these areas and in the whole country has increased continuously; rice production in 1998 compared with that of 1990 for the whole country increased 51.58 percent, of which the Mekong River Delta increased 61.58 percent and the Red River Delta increased 48.3 percent.

The progress of rice production in Viet Nam from 1990 to 1998 can be reflected through some indicators as follows:

Table 2: Food and paddy output from 1990 - 1998

Year	Food output (paddy equivalent) (1000 tons)	Paddy only			Food per capita (kg/person)	Paddy only per capita (kg/person)
		Output	Area	Productivity		
1990	21,488.5	19,225.2	6,027.7	31.9	324	290
1991	21,989.5	19,621.9	6,302.7	31.1	325	291
1992	24,214.6	21,590.3	6,475.4	33.3	349	311
1993	25,501.7	22,836.6	6,559.4	34.8	359	314
1994	26,198.5	23,582.3	6,598.5	35.6	361	324
1995	27,554.4	24,926.7	6,765.6	36.8	373	336
1996	29,210.4	26,396.7	7,003.8	37.7	386	349
1997	30,561.3	27,645.8	7,009.8	39.0	396	358
1998	31,853.9	29,141.7	7,362.4	39.6	401	367
98/90 (%)	148.24	151.58	122.14	124.08	123.77	126.55

The food and paddy output have steadily increased through the years from 1990 up to 1998, caused by increases in area and productivity of rice. Food and paddy output in 1998 increased 48.23 percent and 51.58 percent, respectively, compared with 1990. Food output has increased at a relatively faster rate than the population has, so the average food and paddy per capita has increased with increasing growth rates throughout these years. Rice per capita in 1998 compared with 1990 increased 26.6 percent (equivalent to an increase of 77kg per capita).

Rice production is mainly concentrated in the Red and the Mekong River Deltas. The proportions of rice planted areas and paddy outputs in these two deltas compared to totals of the whole country are as follows:

Table 3: Paddy areas and outputs of the Red and the Mekong River Deltas from 1990 - 1998

Unit: Percent.

Area	Rice planted area			Paddy output		
	1990	1995	1998	1990	1995	1998
In the whole country	100.00	100.00	100.00	100.00	100.00	100.00
The Red River Delta	17.54	15.40	14.20	18.84	18.84	18.40
The Mekong River Delta	42.80	47.16	51.10	49.31	51.46	52.60
TOTAL	60.34	62.56	65.30	68.15	70.00	71.00

Thus, the rice cultivated area and the paddy output of a whole year in the two deltas account for about 65 percent and approximately 70 percent of those of the whole country, respectively. In the Red River Delta, the rice cultivated area is decreasing because of a change in the structure of cultivated trees and the process of rural industrialization. But thanks to the experience of farmers regarding intensive farming, especially, the application of new rice seeds with high yield, rice output has been stable despite the fact that area has been decreased through the

years (the rice cultivated area and paddy output account for nearly 15 percent and 18 percent, respectively, of the total of the whole country).

Rice production in the Mekong River Delta has an advantage over other areas because of its fertile soil, large amount of alluvium, good water resources, stable weather conditions, and abundant sunlight, all of which are appropriate for the growing of wet-rice plants. Therefore, the Mekong River Delta is the only region where 3 crops of rice can be planted in a year. On the other hand, due to the cheap labor costs it induces low rice production costs; hence, the it is possible that competitiveness of rice grown in the region will rise.

However in recent years, there has been a tendency toward changing the crop pattern from the tenth-month crop with a low productivity to summer-autumn and the winter-spring crops with a higher productivity and profit.

Table 4: The rice-planted areas of the Mekong River Delta

Sown	1990	1995	1998
The area of Winter-Spring crop (1,000 ha)	752.40	1,035.70	1,349.00
The area of Summer-Autumn crop (1,000 ha)	908.60	1,397.60	1,776.00
The area of tenth-month crop (1,000 ha)	919.00	757.30	635.60
Total area sown (1,000 ha)	2,580.00	3,190.60	3,760.60
The average productivity of paddy per year (tons per ha)	3.67	4.02	4.07
The output for the whole year (1,000 tons)	9,480.30	12,831.70	15,318.60
Food per capita (kg per person)	658.20	880.70	940.00

With the active trend toward changing the crop pattern, reclaiming un-exploited land to expand the area, and utilization of new rice seeds in production of Winter-Spring and Summer-Autumn crops, the Mekong River Delta has become a concentrated region of commodity rice production with an absolute advantage over the rest of the country. This region accounts for 51.3 percent of the total rice-planted area and 52 percent of the total paddy output. The amounts of commodity paddy in the Mekong River Delta continuously increased through the years corresponding to the growth rates of paddy output.

The amounts of commodity paddy and processed paddy for exporting rice in the Mekong River Delta from 1989 to 1997 are showed as follows:

Table 5: The amount of commodity paddy in the Mekong River Delta

Year	Commodity paddy		Processed paddy for exporting rice	
	Amounts (1,000 tons)	Percentage (%) in total paddy output	Amounts	Percentage (%) in total paddy output
1989	4,337.00	49.00	2,750.00	63.41
1990	4,746.00	50.00	3,000.00	63.21
1991	5,472.00	52.90	2,033.70	37.17
1992	5,858.00	53.50	3,900.00	66.58
1993	5,979.00	54.03	3,289.00	55.16
1994	6,837.00	56.42	3,925.00	57.41
1995	7,320.00	57.05	4,105.00	56.07
1996	7,850.00	56.81	5,880.00	74.90
1997	8,010.00	57.36	6,890.00	86.02
1997/ 1989 (%)	184.69		250.55	

So, after 9 years the amount of commodity paddy increased 1.84 times; the amount of processed paddy for exporting rice increased 2.5 times in comparison with the figures for 1989 (the first year Viet Nam exported rice). Steadily increasingly exports of rice not only creates favorable conditions for the development of rice production in the Mekong River Delta, but also contributes to increasing farmers' income and improving their living conditions, especially in remote areas where farmers must constantly deal with floods.

II. Production Cost and Income of Rice Producers

(For details, please see tables 6 to 15)

Agricultural production in general (and rice production in particular) prior to the middle of the 1980s was based on self-sufficient production. The rice yield and effectiveness (profit) were very low.

Since implementing renovating policies in the agricultural sector together with the "open door" policy to the world, Vietnamese agricultural production, step by step, has transformed to commodity production. Many Vietnamese agricultural products such as rice, rubber, peanut, cashew, and tea have been exported to other countries. Thanks to expansions in terms of both kinds and volume of goods for export, the effectiveness (profit) of production has been improved rapidly, and farmers have actively invested in production.

costs and profit

According to data on profit of rice production obtained from a survey conducted on 391 farming households in some districts mainly producing rice in the Red River Delta and 1,004 farming households in the Mekong River Delta, the profit earned from one ha of rice planted is shown as follows:

A. PRODUCTION COSTS AND PROFIT FOR 1 HA OF RICE PLANTED IN THE RED RIVER DELTA IN 1996

Table6: Production costs for the Winter-Spring and the Winter crops in 1996

	Units	The Winter-Spring crop	The Winter crop	Average
Total production costs for 1 ha of rice planted	1,000 VND	7,450.5	6,283.9	7,021.9
Total production costs for 1 ton of paddy	1,000 VND	1,131.1	1,322.4	1,197.0
Yield per 1 ha of paddy planted	Tons/ha	6.587	4.752	5.817
Average selling price of 1 ton of paddy	1,000 VND	1,910.9	1,920.1	1,914.8
Total value of products of 1 ha planted rice	1,000 VND	12,886.9	9,407.5	11,430.8
Profit per 1 ha of rice planted	1,000 VND	5,436.4	3,123.6	4,408.8
Profit per 1 ton of paddy	1,000 VND	825.3	657.3	757.9

The above table shows out that the profit earned from 1 ha of rice planted in the Winter-Spring crop is 5,436.4 thousand VND equaling to 1.74 times of the one in the tenth month crop. The profit from 1 ton of paddy produced in the Winter-Spring crop is 825.3 thousand VND, equaling to 1.25 times of the profit from the tenth-month crop. The average production costs of 1 ha of rice planted is 7,021.9 thousand VND, so farmers in the Red River Delta can get a total value for their products of 11,430.7 thousand VND per ha of rice per crop.

In the case in which there are 2 crops of rice produced in a year, the total value of products per ha is VND 22,861.4 thousand. The profit made by farmers on 1 ha of rice with 2 crops per year is 8,817.6 thousand VND. Hence, the rate of profit on 1 ha with planted 2 crops of rice in a year is 38.5 percent. In other words, in the Red River Delta, if a farmer spends 1,000 VND for production costs of rice, they can earn a profit of 627.8 VND.

In the areas farmed intensively by using new seeds with high yields, costs for producing 1 ton of paddy are low but profit per ha increases, and the total value of products per ha of paddy increases, too.

Table 7: The Winter-Spring crop in 1996.

	Intensive farming (hybrid varieties of rice)	Average intensive farming (various varieties of rice: CR203, C71)	Low intensive farming (various varieties of rice: CR203, C71)	Comparison (percent)	
				Column 1/2	Column 1/3
(1)	(2)	(3)	(4)	(5)	(6)
Average yield per ha (tons of paddy per ha)	6.587	5.327	4.653	123.65	141.56
Production cost for 1 ton of paddy (1,000 VND)	1,141.9	1,295.4	1,330.6	88.15	85.12
Profit per 1 ha (1,000 VND)	2,202.0	1,623.0	1,293.0	135.67	170.30
Total value of products per 1 ha (1,000 VND)	9,724.0	8,529.0	7,484.0	114.01	129.93

Table 8: The tenth month crop in 1996

	Intensive farming (hybrid varieties of rice)	Average intensive farming (various varieties of rice: CR203, C71)	Low intensive farming (various varieties of rice: CR203, C71)	Comparison (percent)	
				Column 1/2	Column 1/3
	1	2	3	4	5
Average yield per ha (tons of paddy per ha)	5.293	4.825	4.273	109.70	123.87
Production cost for 1 ton of paddy (1,000 VND)	1,171.0	1,216.5	1,235.5	96.26	94.78
Profit per 1 ha (1,000 VND)	3,337.0	3,874.5	3,328.0	86.13	100.27

For the tenth-month crop, the weather can be problematic with severe storms and floods so that even in the areas where farming is intensive, using new seeds with high yield, production is still not as highly profitable like as the Winter-Spring crop.

Classifying into groups in terms of yield it is shown out that in the areas yielding a high productivity, the production costs for 1 ton of product are low, and the total value of products per ha increases.

Table 9: The Winter-Spring crop

Yield: Tons/ha

	Average yield of 4.56	Average yield of 6.099	Average yield of 7.229	Comparison (percent)	
				7.229/6009	7.229/4.56
Average cost for producing 1 ton of paddy (1,000 VND)	1,477.1	1,151.2	1,120.3	97.32	75.84
Total value of products per ha (1,000 VND)	9,738.2	12,637.2	13,267.8	104.99	141.47

Table 10: The Winter crop

Yield: Tons/ha

	Average yield of 4.499	Average yield of 5.499	Average yield of 6.818	Comparison (percent)	
				6.818/5.499	6.818/4.499
Average cost for producing one ton of paddy (1,000 VND)	1,328	1,305	1,293.9	99.15	97.43
Total value of products per ha (1,000 VND)	9,051	10,317.5	12,611.7	122.24	139.34

B. PRODUCTION COSTS AND PROFIT FOR 1 HA OF RICE PLANTED IN THE MEKONG RIVER DELTA IN 1996

Table 11: Production costs for the Winter-Spring and the Summer-Autumn crop in 1996

	Units	The Winter-Spring crop	The Summer-Autumn crop	Average
Total production costs for 1 ha of rice planted	1,000 VND	5,589.9	5,230.9	5,395.4
Total production costs for 1 ton of paddy	1,000 VND	913.1	1,107.1	1,005.9
Average selling price of 1 ton of paddy	1,000 VND	1,458.5	1,253.0	1,362.5
Average yield per 1 ha of rice planted	Tons/ha	6.122	4.722	5.364
Total value of products from 1 ha of rice planted	1,000 VND	8,929.1	5,916.7	7,308.6
Profit earned from 1 ha of rice planted	1,000 VND	3,339.2	685.8	1,913.0
Profit per 1 ton of paddy	1,000 VND	545.44	139.52	356.64

In recent years, some provinces in the Mekong River Delta have actively expanded areas planted rice in the Winter-Spring crop (in 1995 there were 1,035.7 thousand ha, but in 1998 the figure was 1,349.2 thousand ha). The reasons are production in the Winter-Spring crop has more advantages and yields higher productivity and profit than the Summer-Autumn crop. Productivity of the Winter-Spring crop is 6.1 tons per ha. The profit from 1 ha of rice cultivated in the Winter-Spring crop reaches to 3,339.2 thousand VND, which is 4.8 times higher in comparison to that of the Summer-Autumn crop. The profit from 1 ton of paddy produced in the Winter-Spring crop is 545.4 thousand VND, which is 3.9 times higher than the Summer-Autumn crop.

The production cost for 1 ha of rice planted is 5,395.4 thousand VND, and the farmer in the Mekong River Delta can get a total value of products amounting to 7,308.4 thousand VND per ha (for one crop). If they cultivate 2 crops of rice per year, they will get 14,616.8 thousand VND. The profit earned by the farmer in the Mekong River Delta is 3,826.0 thousand VND per year. The rate of profit per 1 ha with 2 crops in one year is 26.17 percent. To put it another way, if the farmer in the Mekong River Delta spends 1,000 VND for producing rice, they can receive a profit of 354.5 VND.

Comparing the two deltas in terms of profit, it is clear that rice production is more profitable in the Red River Delta than in the Mekong River Delta.

Table 12: Profitability of intensive farming in the two deltas

	Units	Average of 2 crops in the Red River Delta (the Winter-Spring and the Winter crop)	Average of 2 crops in the Mekong River Delta (the Winter-Spring and the Summer-Autumn crop)	Of the Red River Delta /of the Mekong River Delta (percent)
Total production costs for 1 ha	1,000 VND	7,021.90	5,395.40	130.15
Total costs for 1 ton of paddy	1,000 VND	1,197.00	1,005.90	119.00
Average yield of 1 ha	Ton/ha	5.82	5.36	108.45
Total received (total value of products) from 1 ha	1,000 VND	11,430.70	7,308.40	156.40
Profit from 1 ha	1,000 VND	4,408.80	1,913.00	230.47
Profit from 1 ton of paddy	1,000 VND	757.91	356.64	212.51

In the Red River Delta, production costs for 1 ha are 1.3 times higher than in the Mekong River Delta. However, for the former one, the total received from 1 ha is 1.56 times higher, profit from 1 ha is 2.3 times higher, and profit from 1 ton of paddy is 2.1 times higher in comparison with those of the Mekong River Delta.

Reviewing the structure of average expenses for one ha and for two crops, namely, the Winter-Spring and the Winter crop in the Red River Delta and, similarly, the Winter-Spring and the Summer-Autumn crop in the Mekong River Delta, we can see the following:

Table 13: Average production costs in 2 regions

	The Red River Delta		The Mekong River Delta	
	Value (1,000VND)	Percentage (%)	Value (1,000 VND)	Percentage (%)
TOTAL PRODUCTION COSTS	**7,021.90**	**100.00**	**5,394.50**	**100.00**
- Rice seeds	539.50	7.68	536.10	9.94
- Land working	575.50	8.20	266.40	4.94
- Fertilizer	1,574.70	22.43	1,149.60	21.31
- Insecticide	507.90	7.23	528.10	9.79
- Irrigation	350.90	5.00	347.60	6.44
- Fuels	3.40	0.05	41.40	0.77
- Transportation	173.30	2.47	196.40	3.64
- Plucking paddy off the ears	426.00	6.07	294.80	5.46
- Small tools	66.30	0.94	54.40	1.01
- Fixed capital depreciation	106.20	1.51	42.70	0.79
- Field guards	20.30	0.29	7.40	0.14
- Laborers hired	304.00	4.33	447.10	8.29
- Self working labors	1,673.50	23.83	842.10	15.61
- Agricultural tax	421.50	6.00	334.70	6.20
- Interest payments	2.50	0.04	156.00	2.89
- Contribution for funds	241.50	3.44	70.00	1.30
- Production insurance	7.80	0.11		
- Other costs	27.10	0.39	79.70	1.48

Total production costs for 1 ha of rice cultivated in the Red River Delta equal 130.15 percent of the costs in the Mekong River Delta. Ccosts such as land working, fertilizer, and self-working labors in the former are higher than in the Mekong River Delta. In the Red River Delta, average land per household is 0.24 ha, so farmers they are able to increase the investment in one unit of area to increase yield and output.

Concerning the expansion of areas cultivated with new rice seeds to replace old ones, expansion is higher in Red River Delta, in terms of percentage of the new seeds to the total, than in the Mekong River Delta and other regions.

Table 14: The structure of rice sown area by seed.

	1995			1998		
	Aveas planted	Structure divided by seeds (%)		Aveas planted	Structure divided by seed (%)	
	With Rice	New seeds	Old seeds	With Rice	New seeds	Old seeds
Red River Delta	1,942.1	90.5	9.5	1,046.7	92.2	7.8
Mekong River Delta	3,190.6	79.8	20.2	3,760.6	87.7	12.3
North East	673.2	61.5	38.5	695.2	87.4	12.6
North West	134.5	67.3	32.7	128.6	62.2	37.8
North of Middle	682.2	62	38	677.5	87.4	12.6
South of Middle Coast	422.5	51.9	48.1	424.6	77.3	22.7
Highland	143	70.0	30.0	133.0	78.9	21.1
South East	477.4	58.7	41.3	496.2	65.5	34.5
For the whole country	7,665.5	74.2	25.8	7,3623.4	85.6	14.4

In the Mekong River Delta, the average amount of agriculture land per household is 1.39 ha, which is 5.8 times higher than the level in the Red River Delta. The amount of exported paddy in this region is the largest in the whole country. If investment is increased by using varieties with a higher quality for export, profit per unit of area will be considerably higher.

Table 15: The Mekong River Delta.

	Units	The Winter-Spring crop		The Summer-Autumn crop	
		High-quality rice seeds for export	Low-quality rice seeds (504)	High-quality rice seeds for export	Low-quality rice seeds (504)
Total costs	1,000 VND	5,757.5	5,465.4	5,432.6	5,383.1
Yield	Tons/ha	5.622	6.122	4.722	5.017
Cost for producing 1 ton of paddy	1,000 VND	1,021.1	892.7	1,150.5	1,073.0
Production value	1,000 VND	8,500.5	7,548.4	6,856.3	6,301.4
Profit from 1 ha	1,000 VND	2,743.0	2,083.0	1,423.7	917.9

Total costs invested for 1 ha of high-quality rice for export in the Winter-Spring crop are 5,757.5 thousand VND, an increase of 5.44 percent in comparison with the costs for areas using low-quality seeds. In the Summer-Autumn harvest, the total costs for 1 ha of high-quality rice for export is 5,432.6 thousand VND, an increase of 0.92 percent in comparison with those of areas using low-quality seeds.

Although the productivity of high-quality rice seeds for export is lower than that of low-quality seeds, the production value per 1 ha of the former in the Winter-Spring crop increases by 12.60 percent, and in the Summer-Autumn crop increases by 8.81 percent in comparison with the latter. Profits per 1 ha of high-quality rice seeds in the Winter-Spring and in the Summer-Autumn crop increases 31.69 percent and 51.10 percent, respectively, in comparison with those of low-quality rice seeds.

Ⅲ. The Solutions for Increasing Production Effectiveness and the Future of the Rice Economy in Viet Nam

Rice production in Viet Nam in the next few years and in the future has to ensure fulfilling three main requirements as follows:

- To continuously increase output to ensure that enough food is supplied to the whole society. Because 80 percent of Viet Nam's population lives in rural areas, if food supplies are guaranteed social security in all parts of the country, an in particular rural areas, can be ensured. It also creates conditions for industrializing and modernizing rural areas as well as agriculture in accordance with the Communist Party's guidelines.
- To ensure adequate national food reserves for prevention of natural calamities and for security and national defense.
- Rice exports have to be continuously increased; this means assisting farmers in terms of establishing rice-selling markets so that farmers cultivating rice can earn reasonable profit and increase their income.

1. SOLUTIONS

1.1. Irrigation should receive further investment, especially in the Mekong River Delta, in order to exploit completely the remaining areas which are contaminated with alum and salt in the Long Xuyen quadrangle and the Ca Mau peninsula to expand rice planted areas. According to statistical data on land in 1997, the Mekong River Delta had 2,200 thousand ha on which rice and other food crops can be planted, beside that there were 163 thousand ha which were not brought into production. The total area for rice cultivation in 1998 in the whole region was 3,760.6 thousand ha. The rate of land utilization for planting rice was only 1.72 times.

1.2. If irrigation is well managed so that all land cultivated with rice can be planted with two harvests per year (the Winter-Spring and the Summer-Autumn), then total areas planted rice for the entire year in the Mekong River Delta could reach 4 to 4.5 million ha. If average productivity for a year is 4 tons per ha, the paddy output of the whole region could reach 18 million tons, in comparison to an increase of 2.5 million tons in 1998.

1.3. In the Red River Delta and other regions, although the possibilities for expansion of rice land are few, the important issue is to appropriately manage the presently available land. Provision of land for other purposes (such as building up infrastructure, public construction, industrial zones, accommodations) needs to be made under strict guidelines, and should not use rice land. In order to increase paddy output in the Red River Delta and also other regions in coming years, active application of advanced science and technologies in agriculture must take place. The first priority is to apply new rice seeds, which can with stand pests and insects and are appropriate to each region and each kind of land to improve productivity.

The Red River Delta (as well as other regions) still uses too many kinds of rice seed now. Each district is using from 15-20 kinds of rice seed in one harvest. This fact not only creates favorable conditions for pests and insects to breed, but also reduces the average yield because many kinds of rice seed have still not been tested; therefore, productivity is unstable in different harvests.

2. FUTURE PERSPECTIVE OF THE RICE ECONOMY IN VIET NAM

Within the next 5 years, activity in the Red River Delta should focus on actively applying advanced science and technologies in agriculture, especially, improving rice seeds and selecting new seeds with high yield and quality. Also, the rice seeds' structure needs to be allocated appropriately so that it is proportionate to each kind of land and each crop. It is necessary to push intensive farming practices to increase average productivity to 6 or 6.5 tons per ha (in 1998 the level reached in the Red River Delta was 5.13 tones per ha), so that paddy output can reach 6.5 million tons.

The Mekong River Delta can achieve 18 million tons of paddy per year. Therefore, the national total output could reach 33 million tons of paddy. If the amount of other kinds of food, which is equivalent to three million tons of paddy, is included, the total national food output could reach 36 million tons.

Exported rice can reach 4.5-5.0 million tons per year. Vietnamese rice exports in recent years have increased in terms of amount, but there is a quality seems to be decreasing. Rice having low quality presently accounts for 50 percent of the total exported.

Table 16:

Year	The amount of export rice (1,000 tons)	Quality of export rice (percent)		
		High quality	Average quality	Low quality
1995	2,020	54.8	22.7	22.5
1996	3,050	49.0	13.0	38.0
1997	3,680	44.0	8.0	48.0

In order to increase the amount and to improve the quality of export rice, it will soon be necessary to project areas with concentrated land for production of rice for export in the Red and Mekong River Deltas.

According to evaluations made by the National Institute for Agricultural Planning and Projection-Ministry of Agriculture and Rural Development, if in the Mekong River Delta region irrigation is scientifically well managed, the Winter-Spring and Summer-Autumn harvest can have the best conditions for cultivating high-quality rice for export. The total area of land where rice for export can be planted in Long An, Tien Giang, Ben Tre, Dong Thap, Vinh Long, Tra Vinh, An Giang, Kien Giang, Can Tho, Soc Trang, Bac Lieu and Ca Mau provinces is approximately 1 million ha.

Table 17: Different types of land for production of rice for export

	Alluvium	Mixed with low salt	Mixed with alum in the deep strata
Area (1,000 ha)	600	226.16	173.8
Percentage (percent)	60	22.62	17.38

Based on evaluations made by agricultural experts, these lands have the best conditions for production of high quality rice for export.

In these land, if rice seeds such as IR_{64}, IR_{66}, IR_{9729}, IR_{62032}, IR_{66707}, IR_{42}, OM_{997} for production of rice are used, then the quality of rice for export will be extremely high, In particular, IR_{64}, now accounts for about 80-85 percent of the total rice amount consumed in the world.

For the Red River Delta, it is also necessary to conduct research and studies to plan areas which concentrate on producing rice of high quality. By doing so, the quality of Viet Nam's exported rice may achieve competitiveness in the world market.

In general, rice production in recent years has made some successful achievements and has partly contributed to improvement of the people's living standards, stabilization of the internal economic and social situations, and step by step Viet Nam's integration into the global food market. However, up to the present, Vietnamese rice production and export has faced some new serious challenges. These challenges require appropriate and strong measures for maintaining a reasonable growth rate, to ensure national food security and farmers' interests. Besides active investment from the state, the most important factor

is still maintaining high incentives for farmers. Meanwhile, competitiveness should be improved to make use of opportunities in the international market for export and, thereby, enrichment of the country.

6

The State of Production and Living of Landless and Land-Lacking Households in the Mekong River Delta

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The Mekong River Delta has 3.986 million ha of land, of which there were 2.821 million ha of agricultural land with more than 2.151 million ha of annually cultivated land (these figures were as of 1997). In the whole region, there were 2.347 million agricultural households with over 12.33 million people (these figures were as of July 01, 1997). Average agricultural land per household and per capita are, respectively, 1.2 ha and 0.2287 ha, which are 4.3 times and 2 times higher than the figures of the Red River Delta and of the national average, respectively. This is the most important region producing commodity rice for local consumption and for export. However, in recent years some problems have emerged, among which is the fact that a notable proportion of households who are either landless or lack agricultural land have had affect their production and living standards affected. This said problem above should be identified and dealt with.

I. General Information About Landless and Land-Lacking Households in the Mekong River Delta

Since The Liberation War ended and Viet Nam was unified, the Communist Party and the State have implemented a policy of "share one's food and clothes", creating conditions so that Southern farmers could have land for plantation. However, through each period of economic development of the country, a proportion of farmers who are either landless or lack of agricultural land have appeared in different areas, especially in the Mekong River Delta. According to a survey on agriculture and rural areas conducted by The General Statistic Office in 1994, there were, throughout the country, 109,116 households, which accounted for about 1.15 percent of all agricultural households, having no agricultural land. In the Mekong River Delta, the figure was 12,250 households, accounting for 0.70 percent of all agricultural households of the region. The problem is serious in Soc Trang province where 3,668 households had no land accounting for about 2.62 percent of all agricultural households. Regarding households with very little agricultural land, in the Mekong River Delta there were 108,035 households, accounting for 6.15 percent; especially. Especially, in Ben Tre and Tien Giang provinces, there were quite a large number of such households, accounting for the highest proportion in this area in the country:26,859 households (14.37 percent) in Ben Tre province and 24,447 households (11.6 percent) in Tien Giang province (see table 1).

In recent years, the number and the proportion of households that have had no or very little agricultural land have increased quite rapidly in the Mekong River Delta. According to data the Provincial People Committees reported to the Government's working missions (June 1998), the number of landless households has increased to 135,338 in the area as a whole, accounting for 5.69 percent of all agricultural households. In which, the ratio in Tra Vinh province is 14.0 percent and 13.3 percent in Bac Lieu province. In Tien Giang and Long An provinces, this figure is lower than 1.0 percent and in the eight remaining provinces these numbers range from 5 to 8 percent. There is an increasing trend foward landless households, particularly in Dong Thap, Ca Mau, Bac Lieu, Tra Vinh and Ben Tre provinces. The number of households that have very little land in the Mekong River Delta at 1998 has increased to 208,712, which is equivalent to 9.95 percent of all households in the whole area. Such households in Ca Mau, Soc Trang and Bac Lieu provinces have increased dramatically by 4 - 7 times while the figures for two other provinces, Tien Giang and Ben Tre, have decreased. (see table 2)

Being in an area that has had the traditional practices of producing commodities, rice production in the Mekong River Delta, especially in recent years, has increased quickly and allows for export of a huge amount of rice, resulting in a large amount of foreign money earned for the country. However, in the process of producing commodity rice, quality has to be improved while production costs are reduced in order to increase the industry's competitiveness in the domestic and international markets. For those households who are lacking land, capital and insufficient knowledge and experience in production, it is quite difficult for them to compete in the markets with the other households that do have enough land. It has been shown in the Mekong River Delta in recent years that the effectiveness of rice production is, in general, positively proportionate to the average scale of land per household, and it is best to pass over a certain threshold-at least, 1.0 ha per household. Among the provinces, the general trend is that those households with very little land gradually change to become landless households. The dividing lines between households that have very little land and landless ones, and between households that formerly had land and those that are now land-lacking households are very delicate. If only one unexpectedly external or subjective condition occurs, it can easily push them from one group to another. For those households, with very little land, if they suffer from risks caused by falling commodity prices, natural calamity, sickness, or an accident, etc, they have to transfer or mortgage their agricultural land and immediately become landless. However, land concentration is not the only cause of the problem. Rather, there are a lot of other reasons, such as transferring agricultural land voluntarily to do a non-agricultural job with higher profits, and/or being originally being landless, and/or having to cede agricultural land in unavoidable situation, etc.

The trend of concentrating agricultural land into the hands of well off and rich households who are able to produce rice profitably is a positive one. It is suitable with the formula "those who have expertise in a job, must do that job". It also helps to increase productivity

of land, increase output and commercial output, and push up the quantity and quality of export rice. However, regarding the social aspect, this process induces many serious problems, in rural areas such as increase in number of landless or land-lacking households, increase in number of hired laborers, a widening of the gap between the rich and the poor and complications of land tenure relationships.

II. Producing and Life Status of Landless and Land-Lacking Households in the Mekong River Delta

To fulfill the assignment of the Prime Minister, in collaboration with the Viet Nam Farmer Association, the National Economic University (Hanoi) surveyed and examined the state and reasons for the phenomenon of households who are landless or have a shortage of land, and their production and living conditions. It was, then, necessary to submit solutions to ensure the development of the production and living standards of these households in the Mekong River Delta. The Project's Coordinating Committee had surveyed 12 pilot provinces, in which in cooperation with local authorities, each province picked 2 districts, in each district selected 2 communes, and in each commune chose 3 hamlets, resulting in a total of 144 hamlets were drawn. The interviewees in the pilot studying areas were households; the items surveyed centered on land, production, daily life, and the inmost feelings and aspirations of these households. Interviewees were hamlet, communal, district, and provincial leaders, and the contents of the interviews were items relating to managerial functions. All the data was compiled into a computer; the results of this data processing are used to analyze and evaluate in following issues:

1. The State of Production and Living of Landless Households

According to results surveyed in the 144 pilot hamlets drawn from 12 provinces of the Mekong River Delta, in 1994 there were 32,292 agricultural households, of which there 6,355 were landless. In 1998, there were 51,438 agricultural households of which the number of landless households increased to 10,129. Therefore, in the pilot survey areas of 144 hamlets, the number of landless households in 1998 increased 86.9 percent compared with 1994; and the proportion of all households in the hamlets increased from 13.79 percent (1994) up to 19.69 percent (1998).

In 1998, there are 51,438 agricultural households in 144 pilot hamlets surveyed, of which the sample of 5,741 households has been drawn. The number of landless ones in the sample is 3,079 with 15,272 people. Landless households are those whose tenure land and the areas of garden and lawn total less than 300m² or those who possess no tenure land and have to stay with others. On average, each landless household contains 4.96 persons, but in 8 provinces this number is more than 5. The number of laborers of working age per household is 2.61. Kh'me minority households account for 19.7 percent, and privileged households

account for 5.7 percent of the sample. In terms of occupation, of the total of 3,079 landless households of the sample, 12.6 percent are concurrently do hired out labor and agriculture, 6.92 percent concurrently do sideline working and agriculture, 7.34 percent are concurrently doing service work and agriculture, and 73.14 percent are purely hired out as labor; this accounts for 73.54 percent of all laborers of working age in landless households. In some provinces, the proportion of purely hired out labors is very high, such as: Kien Giang province 90.56 percent, Dong Thap province 90.64 percent, Tra Vinh province 84.02 percent, and Bac Lieu province 85.39 percent. So, the main occupation of landless households is hired out laborers, their income and living depend mainly on earning of working as laborers for hire.

The average income per year for a landless household in the Mekong River Delta is 5,144.4 thousand VND, that means for one laborer at working age per month makes 164.29 thousand VND, and per capita per month is 86.43 thousand VND. In some provinces, average income per capita per month has reached the higher level of over 100 thousand, VND, such as: in Kien Giang province: 110.8 thousand VND, in Bac Lieu province: 108.67 thousand VND, and in Tien Giang province 105.93 thousand VND. In contrast, in some other provinces these figures are rather low, such as: in Soc Trang province: 57.93 thousand VND, in Tra Vinh province 59.65 thousand VND, etc. (see table 3). Judging from the income structures of groups of landless households in terms of occupation, it has been shown that: the income of the group of households concurrently doing hired out labor and agriculture is lowest and the income of the group of households concurrently doing sideline work and agriculture is highest. The group of purely hired-out labor households is at a level which is approximately equal to the average level of the whole sample. It is only lower than the group of households concurrently doing service work and agriculture and the group of households concurrently doing sideline work and agriculture. The income of these households is varied and comes from such diverse sources as: gardening, animal husbandry, breeding fish in ponds, sideline working, and income from service and hired-out labor. For instance, in the income structure of households concurrently doing sideline work and agriculture, 5.74 percent of their income comes from agriculture, 21.39 percent from aquaculture, and 72.87 percent from sideline work and others, of which most comes from earnings hired-out labor. In the case of households concurrently doing service work and agriculture, 3.25 percent of ther income comes from agriculture, 8.86 percent from aquacultue, and 87.89 percent from small trading and others (see table 4). By another mean of classification of the sample in terms of monthly income per capita, 27.8 percent of persons of the sample had an income level of lower than 75.0 thousand VND, 29.6 percent had an income level ranging from 75.0 to 100.0 thousand VND, and 28.3 percent had an income level ranging from 100.0 to 150.0 thousand VND. It is worth noting that in this group of landless households, there is a small subgroup of households receiving a relatively high income; for example, there is a subgroup accounting for 8.8 percent of the sample's population with an income level ranging from 150.0 to 200.0 thousand VND and another subgroup accounting for 5.9 percent of the total with an income

level of higher than 200.0 thousand VND (see table 5).

Most of the landless households are poor households, whose monthly income level is lower than 100.0 thousand VND; these households account for 57.4 percent of the total. As far as expenditure, food, alcoholic beverages, and tobacco account for a large proportion of 66.38 percent, (drinking and smoking alone account for 4.77 percent), and the remaining amount is spent on clothes, accommodations, health care, education, etc. Another area in which attention should be paid is the very expenditure for education and culture (for education 1.34 percent, for culture 0.43 percent). Most of the landless households' houses, which are made from simple materials such as bamboo, thatch, etc., account for 91.07 percent, of which 1.06 percent have a thatch hut or sentry box. The provision of family furniture is very poor, for instance, 2.57 percent of households have a motorbike, 15.88 percent have a TV, and 14.58 percent have a radio-cassette player, etc.

The obliged contribution per landless household at 1997 was 74.04 thousand VND, equivalently VND 14.93 thousand per capita. The contribution is for such obligations as: 38.98 percent for land tax, 5.16 percent contributed for several kinds of fund, 42.14 percent for civil duties, 1.31 percent for health care, 8.61 percent for an education fund and 3.79 percent for others. One of the most dominant constraints of landless households is that their income earned is not equal to expenditures, so that in order to cover these expenditures, they have to borrow. Continually borrowing has led them to shoulder huge debts that they are not able to repay.

2. The State of Production and Living of Land-Lacking Households

According to the results of the survey conducted in 144 hamlets, in 1994 the number of households having agricultural land lower than 0.2 ha was 5,314. In 1998 this figure had been increased to 8,320 households, an increase of 54.87 percent. The percentage of land-lacking households rose from 13.52 percent in 1994 to 16.0 percent in 1998. Within 51,438 agricultural households surveyed, there were 1,946 households having very little land (smaller than 0.2 ha) with 9,643 people. In terms of average, this represented 4.96 persons and 2.64 laborers of working age per household. The average agricultural land for each household was 1,407 m², in which this figure was highest in Kien Giang province with more than 2,500 m², followed by An Giang province with more than 1,700 m², and Ben Tre province with 967 m²; Ca Mau province had the lowest at 671 m². The average input value per household spent for production in 1997 in the whole region was 298.82 thousand VND, equaling 8.15 percent of the figure of those households who have plenty of land. Regarding the value of fixed capital, garden capital accounts for nearly 63.0 percent, the remainder being tools, machines, buffaloes, cows, boats, etc. The input value spent for production by land-lacking households differs significantly by province. For instance, in Can Tho province this amount is 616.2 thousand VND per household, meanwhile, in Tra Vinh province, it is 74.7 thousand VND, and in Soc Trang province it is 43.47 thousand VND. While the self-supplied fund of households is still small, the number of households who borrowed from the bank and the average amount of

borrowed funds were not high. Taking an example, in 1997 only 40.7 percent of little land-holding households had borrowed from the bank, with the average amount being 2.461 million VND. In two other provinces with the highest percentage of households who had been borrowed, the figure is only more than 60 percent;specifically, those provinces are Ca Mau with 64.29 percent and Long An with 62.62 percent. Special attention should be paid to Ben Tre province, whose figure was 12.07 percent, and to Kien Giang province (25.0 percent). Regarding the average amount of borrowed funds per household, this figure was quite high in 3 provinces, namely:Ben Tre (3.848 million VND), Can Tho (3.793 million VND), and An Giang (3.653 million VND). In contrast, in Tra Vinh and Vinh Long provinces, the arevage was only equal to half of the average amount of the whole region. Borrowing from Banks accounted for 50.79 percent; from relatives and friends, 23.22 percent; from projects' funds, 9.89 percent, etc. Judging from the analysis of the data, the conclusion drawn is that the land lacking households are also poor with respect to tools, machines, and capital which are main conditions influencing their production effectiveness.

Because of a lack of agricultural land, shortage of production inputs, shortages of self-supplied and borrowed funds, lack of knowledge and experience in production, income of very little land-holding households is still low. The average income per household per year reached 5,957.87 million VND, higher than that of landless households, 15.8 percent which equalled. The average income per laborers of working age per month was 187.72 thousand VND. The income per capita per month of the very little land-holding households was 98.86 thousand VND, and particularly, for the Kh'me minority households, it was 81.91 thousand VND equaling 79.6 percent of the amount of the Kinh majority households facing the same production conditions (see table 6). Of the 12 provinces, there are four provinces whose income is higher than the average of the whole region: An Giang province (146.36 thousand VND), Tien Giang province (130.52 thousand VND), Bac Lieu province (121.65 thousand VND), and Long An province (101.27 thousand VND). The eight remaining provinces whose income is lower than the average are Ca Mau, Soc Trang and Tra Vinh province with income levels being lower than 80 thousand VND. It is worth noting that in the 3 other provinces, namely, Dong Thap, Kien Giang and Vinh Long, the income of land-lacking households is lower than of landless households. Classifying income levels in terms of occupation shows that income of the group of households concurrently doing sideline work and agriculture is highest at 104,77 thousand VND per month, which is 6 percent higher in comparison with the average level. But the income structure is as follows: earnings from sideline jobs only accounts for 9.21 percent of the total, from agriculture:24.10 percent, and from others:55.98 percent in which the main source is hired-out labor earnings. For the 3 remaining groups, income levels are all lower than the average income of the whole group, in which the income of the group of purely hired-out labors is 93.84 thousand VND equaling 94.96 percent of the average. This group, whose income from hired-out labor earnings occupies about 70 percent, accounts for 13.4 percent of total households holding very little land. (see table 7). Grouping in terms of monthly income per capita has shown that the number of households with incomes

of under 50 thousand VND accounts for 7.1 percent, lower than the income of the group of landless households by1.9 percent. At present, poor households with incomes of lower than 100 thousand VND per month account for 38.2 percent, while other households with incomes ranging from 100 to 200 thousand VND account for 43.5 percent. The notable proportion of households with income higher than 200 thousand VND is 18.3 percent. (see table 8)

Regarding living expenditures, the amount spent for food, alcoholic beverages and tobacco still accounts for about 69.93 percent of the total, (the figure for alcohol and tobacco alone accounts for 4.89 percent). In some provinces where there is of a low-income level, this proportion (for food, drinking, and smoking) is still rather high, for instance, the figure in Soc Trang province is 76.00 percent (alcohol and tobacco only:5.8 percent). Other expenditures are very small, and especially culture and education, which are still very low. Similar to the landless households, the land-lacking households are poor life in terms of both materials and spirit. Their income is not enough to meet their expenditure, the over spent amount is covered from borrowing. Debt, interest, and borne interest lead to the result that they have to cede or mortgage their land for repaying debts and for their daily life's expenses.

The average contribution per household in 1997 was 115.65 thousand VND, the equivalent to VND 23.34 thousand per capita. Of the total, 60 percent went to the land utilization tax, 27.7 percent for civil duties and the remaining for different kinds of fund. In some specific provinces, the contributing level was too high, such as:Tien Giang province 247.9 thousand VND per household (equaling 55.3 thousand VND per capita) and An Giang province: 196.2 thousand VND per household (VND 36.3 thousand per capita). In contrast, in Tra Vinh province it was only 27.3 thousand VND per household in which 84.2 percent went to the land utilization tax; in Ben Tre province: 41.8 thousand per household.

3. The State of Production and Living of Households Holding Much Land

Examining households holding much land is intended to highlight the fundamental nature, trends and reasons households are landless and land-lacking in order to evaluate them and then, to recommend views and solutions to ensure the development of production and living for each kind of household in the Mekong River Delta. To implement the above said examination, in each province 60 households having much land were chosen in a manner so that households having the largest amount of land topped the list followed in descending order until reaching the required number of households for each hamlet. According to the survey results, of the total of 716 much-land-holding households, 12.9 percent of the households had land holdings of smaller than 1 ha, 44.1 percent of households were in a scale ranging from 1 - 3 ha, and 43.0 percent of households had holdings of more than 3 ha. In some specific provinces such as Long An, Ben Tre and Vinh Long, where the average land is low, the number of households having less than 1 ha accounted for more than 30 percent

of the households in the sample. Meanwhile, in Ca Mau province, the average area was 4.5 ha per household, of which the number of households holding more than 3 ha of land accounted for about 69.5 percent. This is the newly exploited land. The average number of people per household is as many as 6.4 persons, and in Ca Mau and Dong Thap provinces these numbers were 7.17 and 6.75, respectively. The average number of laborers of work age was 3.71 labors per household, particularly in Ca Mau, Dong Thap, and Tien Giang provinces, these numbers was 4.32, 4.17, and 4.15, respectively.

The means of production of these households (inputs) was quite good. The procured value per household in 1997 was 2.27 million VND, of which 54.8 percent went to buying machines, 32.9 percent for buying transportation means, and 12.3 percent for building workshops. The figure for Can Tho province is nearly 3 times higher than the average of the whole sample, of which 51.6 percent went to buying machines, 33.8 percent for buying transportation means, and 14.6 percent for building production workshops. Regarding the available means of production in the Mekong River Delta the proportions are as follows: 8.1 percent of households have a tractor, 43.6 percent of households have a pump machine, 26.6 percent of households have a machine boat, 24.0 percent of households have a boat, etc.

The fact is that these households have plenty of funds, but their self-supplied funds have not been enough for intensive production, so they have to borrow more funds. In 1997, over the whole region, the average loan amount per household was 4.796 million VND. There are 5 provinces paying a lot of attention to providing loans for farming households. At the top of this list is An Giang province, which reached the amount of over 9.4 million VND; after that, Can Tho province: 6.9 million VND, and Tien Giang province: less than 2.0 million VND. The main source of funds is from Banks (72.1 percent) and the remaining amount comes from other sources, such as credit funds, private lenders, relatives, etc.

Because land, laborers, means of production, and funds are concentrated into this group of households having much land, those households earned a high, stable, and rapid increasing income in comparison with the average households in the same areas. The average income per this kind of household in the whole region was 23,392 thousand VND per year, 525.41 thousand VND per laborer per month, and 304.74 thousand VND per capita (see table 9). In some provinces, monthly income per capita is higher than the average, such as in Kien Giang province: 389.16 thousand VND, Vinh Long province: 387.38 thousand VND, and Tra Vinh province: 361.70 thousand VND. There are 7 provinces with lower income in comparison with the average, and 2 provinces with an income level lower than 200 thousand VND. The main income source of households having much land (agriculture, aquaculture, and forestry) accounts for 82.9 percent, the proportion of income from sources other than agriculture is 17.1 percent, of which non-agriculture activities account for only 4.9 percent. Classifying income in terms of occupation, the group of purely agricultural households accounts for 82.1 percent (of total households); their income is 306.95 thousand VND per month higher

than the average income of all households having munh land. The main income of these households comes from agriculture, aquaculture and forestry;only 3.39 percent comes from non-agricultural activities. For the group of honseholds concurrently doing sideline, service, and agricultural work, income (which is lower than the average level of which 70-77 percent) comes from agriculture, aquaculture and forestry (see table 10). Grouping the sample in terms of income per capita, the number of households holding much land with an income level lower than 200.0 thousand VND per capita accounted for 30 percent;households having an income level ranging from 200.0-300.0 thousand VND accounted for more than 20 percent; households having an income ranging from 300.0-500.0 thousand VND accounted for nearly 22 percent;and households having higher than 500.0 thousand VND accounted for nearly 16 percent.

For these households, expenditures and the structure of expenditures are much more sensible, income and expenditures are balanced, and they have savings. Over the whole sample, the amount spent for food, alcohol and tobacco took about 51.90 percent of total expenditures, and the amount for only alcohol and tobacco was 3.9 percent lower than that of the group of landless and land-lacking households. Spending for accommodation accounted for 19.4 percent, for procurement of family furniture was 3.2 percent, for education -2.7 percent and for culture-1.1 percent. Regarding living facilities, these households are better equipped, for illustration, 35.05 percent of total households have a motorbike, 82.11 percent have a TV set, 42.7 percent have a radio cassette player, 24.62 percent have a video cassette player, and 4.45 percent have a refrigerator.

The average contribution per household is quite high, reaching 1,007.7 thousand VND, which is 10-13 times higher than that of the group of landless and land-lacking households, of which 86.40 percent is land utilization tax.

In recent years, the State has issued many policies to encourage people to enrich their wealth legally. The Land Law promulgated in 1993 has confirmed that farming households have been given rights in land utilization, including 5 rights, of which two were the right for transfer and the right for hiring land. In implementing these rights, a trend toward quick concentration of land in the Mekong River Delta appeared.

According to a survey conducted by the General Statistic Office in 1994, if the number of households having 3-5 ha account for 3.63 percent and the number of households having more than 5 ha account for 0.73 percent, then based on the 1998 the survey of 716 households having much land, these figures grew to 30.32 percent and 12.65 percent, respectively. Regarding the additional increase of land holdings of households having much land, one reason was a voluntarily transfer of land for doing non-agricultural work and another was (especially for land-lacking households) the unofficial ceding and mortgaging of land. One more reason was the reclamation of un-exploited land, and the restoration of

infertile land in the Dong Thap Muoi area, Long Xuyen quadrangle, Ca Mau peninsula using own funds. According to the data surveyed on households having much land in the Mekong River Delta, of their land resources, 20.1 percent came from transferring, 3.3 percent came from mortgaging, 1.4 percent came from hiring, and 22.1 percent from other reasons. It is worth noting that for land gaind by other reasons, the percentage is rather high in some provinces, such as: Ca Mau province: 63.76 percent, Dong Thap province: 35.5 percent, and Long An province: 32.85 percent.

Ⅲ. The Reasons Leading to the Situation of Landless and Land-Lacking Households in the Mekong River Delta

An increasing number of landless and land-lacking households has appeared in the Mekong River Delta; this is a fact. The trend toward landless or land-lacking households is caused by many reasons; in some cases these reasons are related to the land concentrating process and in other cases the reasons are not related to this process. Taking some examples for the latter case: a) the past generations of a household originally lacked land, leading to its present status, b) some households split new ones, c) some households immigrated from other regions, and d) land was transferred for infrastructure buildings, joint-ventures, etc. Losing land through the process of land concentration should also be considered thoroughly: for some cases land is voluntarily transferred in order to get funds for non-agricultural jobs with higher profits. It is a process of reallocating land with a low effective utilization to a higher one. There are also many other cases in which households have had to cede their land because of various reasons such as: risk, accident, misfortune, laziness, or unplanned spending. Hence, there are a lot of different reasons, in which sometimes one reason is a consequence of other factors or the reverse. It is possible to list up 17 detailed reasons, and it is notable that from the surveyed documents, the reasons leading to the above situation of landless and land-lacking households can generally be quantified. However, it is necessary to arrange and group these reasons into main themes as follows:

1. The first group is ceding and mortgaging land. This is the consequences of a number of factors, such as lack of capital, shortage of producing knowledge and experience. All of these lead farmers to suffer loses, to be indebted to banks and private lenders, and to be in need of funds to change to other occupations with higher profits. Other reasons may be that they have suffered from illness or accident, or must undertake unplanned spending, etc. All of these reasons made them cede or mortgage their land and consequently, they become landless or short of land. For these reasons, 35.62 percent of households surveyed expressed their unanimity. In some provinces, this percentage is rather high, such as: Soc Trang province: 51.0 percent, Vinh Long province: 42.4 percent, and Can Tho province: 43.0 percent. Through interviews of 564 provincial, district and communal leaders, it was learned that 40.1 percent attributed loss of land to lack of funds, 36.0 percent attributed it to

mortgaging of land without ability to redeem, and 32.3 percent attributed it to a lack of production experience.

2. The second group of reasons is the splitting of households caused by the high population increase, especially, the phenomenon (rule) of additional births after the war, resulting in many households splitting into new ones in the Mekong River Delta in recent years. This has lead to the increasing number of landless and land-lacking households. According to the results of a survey conducted on 3,079 households, 23.81 percent of all households agreed with these reasons. This percentage is quite high such provinces as in Tien Giang province: 36.2 percent, Long An province: 35.5 percent, and Ben Tre province: 33.4 percent. Also, 34.2 percent of leaders at different levels agreed with these reasons.

3. The third group of reasons is former land owners asking for return of their land after the system of production teams and cooperatives dissolved. Over the whole region it is estimated that this reason accounts for 9.7 percent, where in some specific provinces this percentage is quite high, such as in Soc Trang province - 28.8 percent (of the total surveyed households). Land returned to former owners is *not only* land which was distributed and had been seized after the system of production teams dissolved in 1987 - 1990, *but also* land gained from the "shared one's food and clothes" movement of 1976 - after Southern Liberation, according to the Direction from Provincial People Committee No 54/QDUBT dated August 2, 1994. This situation has also occurred in such provinces as An Giang province: 17.8 percent, Can Tho province: 17.0 percent, and Dong Thap province: 11.9 percent. A survey of leaders at different levels showed that, there is 29.4 percent of opinions agreed with this reason.

4. The fourth reason is immigration from other regions. According to the surveyed data, in the whole Mekong River Delta, immigrants account for 3.9 percent of all the households surveyed. In particular, this figure for Bac Lieu province was 13.2 percent, for Ca Mau province: 5.1 percent, and for Dong Thap province: 5.9 percent. In recent years, in Ca Mau and Bac Lieu provinces, the population has been naturally increased to quite high levels. In comparison with the population in 1975, the population in these two provinces has increased two - fold. On the other side, since new land is available the phenomenon of immigration has also contributed highly to the increase of population in the two provinces. Immigrations from the north and other areas into this region are poor and lack capital. Therefore, they are presently a kind of burden for local authorities. In only the last four years, the number of agricultural households in the two provinces grown to 254,967 households (in 1997) from 168,559 households (in 1994), an increase of 86,408 households. Specifically, the number of households in Bac Lieu province increased by 34,212 households and in Ca Mau province by 52,196 households.

5. The fifth group of reasons is the return of inhabitants who migrated for land reclamation and for building new economic zones. For example, in some provinces because of a lack of land and high density, local authorities had arranged for some farming households to migrate into new economic zones such as Dong Thap Muoi, Long Xuyen quadrangle, and Ca Mau peninsula. But due to the lack of a projection and particular plans, infrastructure and conditions for production and daily life in the new areas have not been sufficiently provided. Therefore, some of farming households were forced to return to their original places and become landless or land-lacking households. A typical case is the Da Phuoc Hoi commune (Ben Tre province), of 71 households who had gone to new economic zones, 51 households returned back. During the 20 years the new economic zones in Dong Thap Muoi have been built, 42,381 households have settled, including 12,257 households that immigrated from outside. Most of them have tried to stay in the area, but there are also 6,933 households (accounting for 16.4 percent) who get by and had to return back to their original places. This has partially contributed to the increase the number of landless or land-lacking households. The reasons that made them come back are many, such as poor infrastructure (no communal health station, no schools and exchange stores, etc) and a lack of capital or funds, meaning that they could not improve land and could not engage in intensive farming; therefore, they suffered losses. In Ca Mau province, some farming households had ceded or mortgaged their land and went to coastal forests to built ponds for feeding shrimp (aquaculture). Before 1993 the practice of extensive aquaculture (shrimp feeding) turned a high profit, but in recent years, the practice has been less economically effectiveness because shrimp often died. On the other hand the State has focused on dispersing these households, and have forced them to come back to their former hamlets. As a result, they have become landless or land-lacking households.

6. The sixth group of reasons is related to the State. When the State wanted to build certain public constructions, it was needed to use particular parcels of land used by particular households. There are many cases in which it might be possible that restitution was not enough or not in time, or the householsd were not given any new land. Therefore, they became landless or land-lacking households. Throughout the region, this reason accounts for 1.4 percent of all such households (An Giang province: 4.1 percent, Soc Trang province: 2.9 percent, Tien Giang province: 1.6 percent, Ben Tre province: 1.6 percent).

In recent years, there has been an increasing trend toward urbanization and making joint ventures with foreign companies. Some land has been transferred to other purposes, such as for construction of workshops, roads for transportation, etc., and at the same time a sufficient number of jobs has not been obtained, leading to a rapid increase in the number of landless or land-lacking households in suburban areas.

From an analysis of the facts regarding land fluctuation, of the state of production and living of farming households, and of the reasons they became landless or land-lacking

households in the Mekong River Delta, some followed remarks have been drawn:

- The number of landless or land-lacking households in the Mekong River Delta has been increasing, of which landless households tend to increase at a higher rate. It is a fact and, in our point of view, an obvious trend which is suitable to the principles of development. Since being in a region where the tendency of rice production is strongly moving toward export, the households having very little land (who lack production funds, capital, and production knowledge and experiences), are not able to do business and produce profitably. They can only do so if certain conditions (enough capital, production knowledge and experience, and a reasonable amount of land), are met. In the other side, in implementing the process of industrialization and modernization, the division of labor will be obvious and strong, with a trend toward a reduced number of agricultural laborers and with an increase of non-agricultural ones. Therefore, it is necessary to speed up the process of concentration and accumulation of land by well producing households. The landless households will move to non-agricultural work or become hired-out laborers, even working for hire in the agricultural field. So, the solution for the problem of landless or land-lacking households in the Mekong River Delta, in our point of view, lies in creating jobs and income for them rather than ensuring "land for farmers".

- In general, the income of landless or land-lacking households is low, and their living is hard. The income of these two groups is approximately the same. In some areas, the income of households having very little land is lower than that of landless households because of high production costs. In the income structure of landless households, income from hired-out laborers accounts for as high as 73.93 percent, while that of land-lacking households is 13.47 percent. Income of the group of totally hired-out labor households is nearly the same with the average of the landless or of land-lacking households, and higher than that of the subgroup of hired-out labor farming households in the group of landless households. It is also higher than that of the subgroup of purely agricultural households in the group of land-lacking households. All of these say that the income from hired-out labors is also significant and it can be considered as a job with significant earning potential. The income of the Kh'me minority households is lower than that of the Kinh majority; the income of privilege households is higher;the income of single and elderly households is lower than the average of both landless or land-lacking households. The expenditures' structures of landless and land-lacking households are inappropriate, so in general, they can not balance their income and expenditures. In order to fill this gap they have to borrow. This leads them to continued debt, and consequently they have to mortgage or cede their land. The living standards in terms of both material and spirit of these landless and land-lacking householdsare still low, people's intellectual standards are still low, and the provision of health care services is still very weak. On the reverse side, for households having much land, their income is higher and they manage expenditures and income more reasonably.

The process of land concentration has made commodity output and export amounts increase. In the last three years, the Mekong River Delta has played a decisive part in increasing the rice export amount-up to 3-3.5 million tons annually-earning noticeable foreign currency for the country.

- There are many reasons that lead to a household becoming landless or land-lacking; some reasons are consequences of others. In some cases, households that have lost their land were affected by 2-3 reasons at the same time. These reasons were arranged into the 6 groups mentioned above. Among these reasons, the effects of negative reasons are still too much for farmers to bear. They push farming households to cede or mortgage their land passively. Subjective reasons (such as lack of production knowledge and experience, laziness and unplanned expenditures) are a big obstacle preventing farmers from escaping their situation. If no solutions are found soon, even with helps of local authorities, the situation can not be changed. Identification of these reasons in each locality is an important condition to ward recommendation of effective solutions that will create jobs and income for landless and land-lacking households*.

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*1. *Landless (no land) household*
2. *Very little land household*
3. *Land-lacking household*
4. *Agriculture combined occupation (or non-agriculture)*
5. *Agriculture combined service household*
6. *Agriculture household only*
7. *Work for hire only household*
8. *Real asset*

Table 1: *Numbers and percentages of households who were landless or lacked sufficient land in the provinces of the Mekong River Delta in 1994*

Provinces	Landless households		Land-lacking households	
	Number (Households)	Percentage (%)	Number (Households)	Percentage (%)
1. Long An	769	0.48	10,214	6.38
2. Tien Giang	957	0.45	24,447	11.60
3. Ben Tre	570	0.30	26,859	14.37
4. Soc Trang	3,668	2.62	3,048	2.18
5. Vinh Long	442	0.34	9,153	7.05
6. Tra Vinh	770	0.67	4,789	4.19
7. Dong Thap	168	0.10	7,131	4.35
8. Can Tho	825	0.44	11,538	6.16
9. An Giang	1,721	1.14	7,201	4.75
10. Kien Giang	1,441	0.98	1,853	1.30
11. Bac Lieu	489	0.63	1,043	1.46
12. Ca Mau	457	0.50	760	0.78
Total	**12,250**	**0.70**	**108,035**	**6.15**

Source: *Surveyed database in 1994, General Statistic Office.*

Table 2: Numbers and percentages of households who were landless or lacked sufficient agricultural land in the provinces of the Mekong River Delta in 1997

Provinces	Landless households		Land-lacking households	
	Number (Households)	Percentage (%)	Number (Households)	Percentage (%)
1. Long An	1,536	0.62	20,712	9.95
2. Tien Giang	2,393	0.88	8,778	3.24
3. Ben Tre	11,974	5.05	23,454	10.14
4. Soc Trang	9,900	6.58	20,802	13.83
5. Vinh Long	9,218	5.20	43,514	24.81
6. Tra Vinh	16,198	14.0	16,871	10.00
7. Dong Thap	15,516	7.16	12,163	5.60
8. Can Tho	16,147	5.00	22,155	10.40
9. An Giang	15,870	5.58	24,433	8.59
10. Kien Giang	9,376	6,59	3,759	2.65
11. Bac Lieu	14,086	13.33	5,611	5.30
12. Ca Mau	14,424	8.24	6,043	3.47
Total	**136,338**	**5.69**	**208,322**	**8.71**

Source: Data is compiled from the reports of the Provincial People Committees of the Mekong River Delta.

Table 3: The average income of landless households in 12 surveyed provinces in 1997

Unit: 1,000 VND

Categories	In terms of household		In terms of labor force		In terms of persons	
	Households	Income (1000 VND/ year)	Laborers	Income (1000 VND/ month)	Persons	Income (1000 VND/ month)
In general	**3,079**	**5,144.40**	**8,034**	**164.30**	**15,272**	**86.43**
1. In terms of peoples						
- Kinh majority	2.471	5,304.96	6,395	170.82	12,063	90.56
- Kh'me minority	608	4,491.60	1,639	138.85	3,209	70.92
2. In terms of Occupation						
- Concurrently Agri. & hired out laborers.	388	4,357.56	946	148.94	1,798	78.36
- Concurrently Agri. & sideline jobs.	213	5,787.48	587	175.00	1,091	94.16
- Concurrently Agri. & services	226	5,263.80	593	167.17	1,084	91.45
- Purely hired-out laborers	2,252	5,207.04	5,908	165.40	11,299	86.49
3. In terms of Subject						
- Privileged	174	5,121.84	418	177.67	813	91.35
- Disabled	28	3,307.56	51	128.20	86	72.54
- Others	2,877	5,168.04	7,565	163.79	14,373	86.21

Table 4: The income structures of landless households in 12 surveyed provinces in 1997

Unit: Percent

	Total Income	Agricultural income			Aqua-culture	Services	Others	
		Total	Crops	Livestock			Total	Of which: wage
In general	**100**	**4.35**	**1.65**	**2.70**	**7.96**	**5.04**	**82.64**	**73.38**
1. In terms of peoples								
- Kinh majority	100	4.68	1.66	3.02	8.05	5.61	81.66	71.71
- Kh'me minority	100	2.80	1.61	1.18	1.18	2.34	87.34	81.40
2. In terms of Occupation								
- Concurrently Agri. & hired out laborers.	100	6.68	3.27	3.41	9.51	2.92	80.89	69.44
- Concurrently Agri. & sideline jobs.	100	5.74	1.60	4.14	21.39	7.15	65.72	55.12
- Concurrently Agri. & services	100	3.25	0.83	2.43	8.86	28.08	59.80	46.39
- Purely hired out laborers	100	3.98	1.51	2.48	6.23	2.79	86.99	78.61
3. In terms of Subject								
- Privileged	100	6.58	1.99	4.59	9.01	3.57	80.84	65.56
- Single elderly	100	1.86	1.86	0.00	0.00	5.99	92.15	35.12
- Disabled	100	1.75	1.18	0.57	4.68	9.46	84.11	70.49
- Others	100	4.23	1.63	2.60	7.92	5.11	82.73	73.90
4. In terms of province								
- Long An	100	4.78	2.22	2.56	2.97	3.25	89.00	77.50
- Dong Thap	100	5.76	0.32	5.44	12.42	3.48	78.35	66.17
- An Giang	100	7.56	0.42	7.14	16.33	4.60	71.51	63.98
- Tien Giang	100	8.18	2.68	5.50	1.99	2.41	87.42	81.79
- Kien Giang	100	1.56	0.30	1.26	2.84	2.37	93.22	87.38
- Can Tho	100	6.40	3.55	2.86	9.28	4.64	79.68	70.70
- Ben Tre	100	2.25	1.77	0.47	9.91	15.16	72.69	59.49
- Vinh Long	100	4.25	1.26	2.98	4.02	3.29	88.44	77.35
- Tra Vinh	100	2.20	0.98	1.22	9.56	7.90	80.35	67.91
- Soc Trang	100	3.18	2.39	0.79	11.10	0.90	84.82	91.20
- Bac Lieu	100	1.33	0.68	0.65	1.75	7.64	89.28	81.20
- Ca Mau	100	5.64	3.22	2.43	18.50	2.85	73.00	63.16

Table 5: Distribution of income per capita per month of landless households in 12 surveyed provinces, 1997

Household Income levels	The number of households (household)	Percentage (%)
- Lower than 50,000 VND	244	9.0
- From 50-75,000 VND	509	18.8
- From 75-100,000 VND	800	29.6
- From 100-125,000 VND	506	18.7
- From 125-150,000 VND	260	9.6
- From 150-175,000 VND	136	5.0
- From 175-200,000 VND	102	3.8
- From 200-250,000 VND	89	3.3
- From 250-300,000 VND	24	0.9
- From 300-500,000 VND	31	1.5
- More than 500.000 VND	5	0.2

Table 6: The average income of land lacking households in 12 surveyed provinces in 1997

Income unit: 1,000 VND

Categories	In terms of households		In terms of labor force		In terms of people	
	Household	Income per year	Labor	Income per month	Capita	Income per month
Total	**1,946**	**5,957.87**	**5,147**	**187.72**	**9,773**	**98.86**
- Kinh majority	1,596	6,101.12	4,157	195.20	7,844	102.92
- Kh'me minority	350	5,304.65	990	156.28	1,889	81.91
2. In terms of occupation						
- Purely agricultural HHs.	785	5,387.29	1,931	182.51	3,653	96.47
- HHs concurrently doing sideline work and agriculture	652	6,560.02	1,819	195.95	3,402	104.77
- HHs concurrently dojng service work and agriculture	249	6,128.78	671	189.53	1,331	95.55
- HHs of purely hired-out laborers	260	6,006.90	726	179.27	1,387	93.84
3. In terms of subject						
- Privileged	130	6,231.74	315	214.32	629	107.33
- Single, elderly	6	1,701.82	0	0	9	94.50
- Disabled	22	4,413.82	40	202.3	85	95.20
- Others	1,788	5,970.57	4,792	185.65	9, 050	98.30

Table 7: The Income structure of land lacking households in 12 surveyed provinces in 1997

Unit: percent

	Income	Income from			Other	Others	
	Total	Agri.	Forest.	Aqua.	Production	Total	In which: Wages
Total	**100**	**25.42**	**2.04**	**9.47**	**7.40**	**55.68**	**92.59**
1. By peoples							
- Kinh's majority	100	26.98	1.84	10.04	7.23	53.91	91.05
- Kh'me minority	100	17.19	3.06	6.48	8.30	64.97	99.26
2. By occupation							
- Pure agriculture	100	31.47	1.79	10.65	3.01	53.08	90.80
- Concurrently sideline jobs and agriculture.	100	24.10	1.95	8.77	9.21	55.98	93.81
- Concurrently services & agri.	100	24.10	2.25	8.30	18.09	47.26	92.37
- Totally hired-out labors	100	13.92	2.72	9.30	3.92	70.14	93.72
3. By subject							
- Privileged	100	25.94	1.15	6.87	5.96	60.08	76.92
-Single. elderly	100	40.08	1.57	20.22	0.00	38.14	0.00
- Disabled	100	19.47	6.23	9.34	4.35	0.61	103.97
- Others	100	25.52	2.06	9.65	7.55	55.32	93.84
4. By province							
- Long An	100	29.40	0.73	4.65	1.13	64.09	83.56
- Dong Thap	100	36.58	1.93	19.71	2.81	38.96	87.52
- An Giang	100	20.57	2.29	22.12	8.30	46.71	92.81
- Tien Giang	100	32.70	0.38	2.87	3.75	60.29	90.72
- Kien Giang	100	23.04	3.51	3.52	7.86	62.08	99.12
- Can Tho	100	49.22	0.50	9.89	9.28	31.12	86.98
- Ben Tre	100	24.15	3.60	10.40	0.45	61.39	95.12
- Vinh Long	100	29.24	2.09	5.54	16.16	46.98	98.63
- Tra Vinh	100	10.95	2.85	6.37	7.73	72.10	96.01
- Soc Trang	100	26.37	3.39	7.79	7.08	55.37	98.79
- Bac Lieu	100	13.50	1.94	4.59	13.05	66.92	87.58
- Ca Mau	100	6.14	0.33	4.49	7.57	81.47	91.88

Table 8: Distribution of monthly income per capita (in groups) for land-lacking households in 12 surveyed provinces, 1997

Income level	The number of households (Households)	Percentage (%)
- Lower than 50,000 VND	138	7.1
- From 50-75,000 VND	245	12.6
- From 75-100,000 VND	360	18.5
- From 100-125,000 VND	321	16.5
- From 125-150,000 VND	259	13.3
- From 150-175,000 VND	162	8.3
- From 175-200,000 VND	105	5.4
- From 200-250,000 VND	216	11.1
- From 250-300,000 VND	64	3.3
- From 300-500,000 VND	76	3.9
- More than 500.000 VND		

Table 9: The average income per household, laborers, and the number of people of the group of households having much land in 12 surveyed provinces in 1997

Unit: 1,000 VND.

Categories	Number of Households	Income per		
		Household per year	Labor per month	Capita per month
Average Income	716	23,392.0	525.41	304.77
1. In terms of peoples				
- Kh'me minority	106	29,999.0	720.42	341.55
- Others	610	22,244.0	494.33	298.46
2. In terms of occupation				
- Pure agriculture	588	23,340.0	532.92	306.96
- Sideline work and Agri.	72	23,174.0	504.25	292.05
- Service work and Agri.	56	24,106.0	485.25	300.03
3. In terms of subject				
- Privileged	84	23,037.0	546.92	307.72
- Others	632	23,439.0	522.25	304.39

Table 10: The income structure of much land holding households in 12 surveyed provinces in 1997

Unit: Percent

	Total	Cultiva.	Livestock	Forest	Aqua.	Non Agr.	Others
Total	**100**	**66.62**	**7.74**	**2.23**	**6.17**	**4.92**	**12.22**
1. In terms of peoples							
- Kh'me minority	100	80.66	8.58	0.65	4.03	2.09	3.99
- Others	100	63.33	7.55	2.73	6.67	5.58	14.14
2. In terms of occupation							
- Pure agriculture	100	67.80	8.17	2.07	6.89	3.39	11.68
- Sideline doing and Agri.	100	58.69	4.08	5.44	2.27	12.73	16.78
- Service and Agriculture.	100	64.72	7.74	1.18	3.63	10.86	11.87
3. In terms of subject							
- Privileged	100	54.53	7.34	2.82	9.94	6.94	18.44
- Others	100	68.20	7.80	2.27	5.68	4.66	11.40