

Role of Sustainable Irrigation Development and Management in Hunger Eradication and Poverty Reduction in Vietnam: Some Issues and Options

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INTRODUCTION

Vietnam is an agricultural country with 80 percent of the population living in rural areas, and 80 percent of the rural working people engaged in agricultural production, especially in growing wet rice. Based on the practical experience in agricultural production in Vietnam, four essential factors are water, manure, work, and variety, in the order of importance. Importantly, water is in the first position. This is true, because water is needed for all living things, fauna and flora alike. Furthermore, water holds the highest priority in agriculture, forestry, and fishery development for a tropical country such as Vietnam.

For this reason, the Party Congress and the State have given irrigation activities the highest priority in their outlook, plans, and guidelines for agricultural development. Thus, all resources available have to be especially devoted to the investment in irrigation development throughout the country in order to continually increase the production of crops and animals in order to meet the consumption needs domestically and internationally.

IRRIGATION DEVELOPMENT IN VIETNAM IN RECENT YEARS

Achievements

Due to the above facts, the State has mobilized substantial resources to develop irrigation in Vietnam. In particular, areas such as the Northern mountainous and midland regions, Central coastal region, Central highland region, South Eastern region, and Cuu Long river delta to live up to the irrigation and drainage requirements for agricultural areas devoted to rice and short-term and long-term industrial crops. It is especially the case with rice. Thanks to such efforts, the solution to crop and seed structures has been found. Consequently, rice productivity and output have continually increased in the past years, which transformed Vietnam from a food-deficient country into a country with food security and particularly into the world's second largest rice exporter (current rice per capita is 400 kg). Many Northern

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mountainous and Midland region, the old fourth region, Central coastal region, and Central highlands, which experienced serious food shortages before the 1970s, have now balanced the import and the export of rice in their areas.

The State budget for investment in irrigation development from 1996 to 2000 was 14.1 trillion VND. As a result in 2000, the irrigated area rose to 3.3 million ha, drainage area rose to 1.4 million ha, salinity prevention rose to 700,000 ha, and water supply for industrial and domestic use rose to 5 billion m³ of water. The annual irrigated rice area is 6.870 million ha (accounting for 89.8% the total planted area annually). The area of irrigated upland and industrial crops amounted to 808,000 ha.

According to a report of the Ministry of Agriculture and Rural Development (MARD), among the national programmes on Hunger Eradication and Poverty Reduction in the period 1999–2000, there were several projects on immigration to develop new economic zones (including 534 sedentarisation projects, 12 new economic zones immigration projects, 91 free immigration stabilization arrangement projects). Total investment capital from the State budget amounted to 690.2 billion VND. Irrigation activities alone have successfully built 240 hydraulic structures, large and small, which include 123 km of inner-field channels, 24 pumping stations, 61 irrigation and drainage gates, and 3 systems of reservoirs. Additionally, these irrigation projects have successfully developed 14,670 ha in the wild for developing production, and have stabilized the local people's everyday life, helping eradicate starvation and reducing poverty in their areas. The investment in irrigation was a prioritized target in the period 1999–2000. The Ministry of Agriculture and Rural Development has spent 470.7 billion VND (257.4 billion VND in 1999 and 313.3 billion VND in 2000) on building hydraulic works that help ensure the stability of 368,000 ha of winter crop. These efforts have also helped to solve the problem of domestic water shortage of more than 1 million inhabitants, especially of more than 300,000 people in Ha Giang, Cao Bang, Lai Cai, Son La, Lai Chau. Moreover, MARD's efforts have helped build 390 small and medium-sized hydropower stations to supply 32,200 kw of electricity to the mountainous areas where the national power grid has not yet been extended.

Shortcomings

However, there still remain many problems in irrigation activities, such as failing to utilize the full capacity of existing hydraulic structures, large and medium alike and failing to maintain adequate investment in the building of channel networks stretching to the areas in dire need of water. The problem still exists of "lacking" and "too much" local water happening at the same time in the same place, especially in areas with complex geographical positions. There are high levels of investment, but efforts still fail to find a proper solution technologically, so farmers can only harvest once a year because of inundated soil or lack of water. Policies on managing and using irrigation and drainage structures still contain in themselves many problems causing low usage efficiency, waste, and improper water use, etc.

Solutions

Strong efforts have to be exerted to take full advantage of the existing hydraulic structures. Research needs to be done on small hydraulic structures in terms of combining those with small hydropower plants and/or with aquaculture. This is especially true in the Northern mountainous and midland region, old four regions, Central coastal areas, and Central highlands in order to meet the requirements of the new land exploration, together with suitable crop diversification, productivity of rice, as well as other short-term and long-term industrial crops. Last, to help eradicate starvation and reduce poverty, farm production has to be increased in terms of both quality and quantity, which enables farm workers to have higher incomes and better standard of living.

SUSTAINABLE IRRIGATION DEVELOPMENT—ITS ROLE IN HUNGER ERADICATION AND POVERTY REDUCTION

Objectives

- Making the fullest use of the existing large and medium-sized hydraulic structures in every area.
- Increasing the ratio of irrigated land areas used for crops, raising animals, aquaculture development, and for domestic use of water in each specific area.

Targeted land

Targeted areas include areas now lacking small hydraulic structures, such as those far from large and medium-sized structures, far from river networks, near the coast, or situated in low-lying areas frequently inundated with water. These areas tend to be characterized by unstable agriculture, low incomes, and poor population.

Targeted beneficiaries

Targeted beneficiaries are primarily farmers working on rice fields, raising animals and aquaculture in the above-mentioned lands. If the currently existing problems of water resources are solved, there will be substantial changes in their lives, materially and spiritually, which is a great tool in hunger eradication and poverty reduction, and also in their community integration.

Policies

- Central and local governments need to undertake research before establishing policies appropriate for the effective management and exploitation of existing hydraulic structures.
- Mobilizing resources available for irrigation development.
- Developing the spirit of self-reliance, and the participation of local people in managing, using, and building new hydraulic structures, especially small-scale ones.
- Socializing irrigation activities.

Technical solutions: Magnitude, models of development

In the years to come, in addition to increasing the efficiency of the existing hydraulic structures, special attention will need to be paid on building small hydraulic structure models managed by the local people, especially in the areas located far from larger hydraulic structures. The small hydraulic works in new economic zones are a prerequisite for further expanding rice planting areas in mountainous and midland areas in Vietnam to ensure the stability of rice output on their own lands. At the same time, it is necessary to combine the development of small hydraulic structures with small hydropower plants to meet the local people's day-to-day domestic life in the areas where the national power grid has not yet reached or where the cost of using electricity is too high. If all of these schemes are realized, then the material and spiritual life of many people in such difficult areas will be greatly improved.

Irrigation benefits

Socially and economically speaking, irrigation development, particularly small-scale irrigation, for the country's unique conditions has brought about great achievements to Vietnam's economy as a whole and to the agricultural sector in particular. It has created momentum for the whole economy and society to develop strongly, improve the issues of hunger eradication and poverty reduction, stabilize politics, and improve social security order. These will help to build Vietnam into a prosperous, equitable, and civilized society.

CONCLUSIONS

As mentioned above, we continue to emphasize the importance of developing irrigation. Irrigation development is the most important factor in the development of agriculture of our

country. It will definitely create favorable conditions for the modernization and industrialization currently taking place in Vietnam. This is also of paramount significance in helping realize the hunger eradication and poverty reduction goals, lifting Vietnam out of extreme poverty and helping it to integrate into the region and the world.