

Chapter 8

Strategies and Experiences in Poverty Alleviation and Sustainable Development in the HKH and the Qinghai-Tibetan Plateau Region in China

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8.1 Introduction

The natural, economic, social, and ecological causes of poverty in the Qinghai-Tibetan Plateau Region of China are analysed in this article. It also discusses the anti-poverty strategies and counter measures that have been undertaken during the past five decades in these regions. It is agreed that introducing a market economy into poor areas is the key factor in reducing the poverty of farmers and herdsmen. Rational exploitation of natural resources is an important precondition for resource and environmental protection. Cooperation between developed and developing areas within a country is the most efficient mechanism for transferring capital, technology, and talent to poor areas. Government at different levels has to facilitate the development of the market economy through construction of infrastructure, institutional innovation, and appropriate policies. Alleviating poverty does not mean distributing relief. A strategy of integrated development should be adopted to raise the level of the education, culture, hygiene, and health care, and poverty can be alleviated only by sustainably raising the quality of life of the people.

The Qinghai-Tibetan Plateau rises in the western and southwestern parts of China known as 'the roof of the world'. It is an area of ancient human activities where different cultures have intermingled. For a long period, however, the area has remained isolated and economically backward.

8.2 Factors Underlying Poverty in the Qinghai-Tibetan Plateau

Natural and economic resources of the Qinghai-Tibetan Plateau

The plateau is high in altitude, averaging over 4,500 masl. It is far away from the ocean on the eastern, western, and northern sides and is screened off by the Himalayas in the south. As it is surrounded by mountains and cut by deep valleys, the area has a unique climate, characterised by plenty of strong sunshine, low temperatures, and limited rainfall. The soil is mostly rough and loose with a high content of gravel, lacking in nitrogen, phosphorus, and other nutrients. The region suffers from serious wind erosion and desertification has become a growing problem (Wang 1995).

The Qinghai-Tibetan Plateau, is however rich in natural resources (Shi 1998). There is a hydropower potential of about 300 megawatts, which is about 50% of the national total. Terrestrial heat has been found in more than 1,000 places in the region with a total thermal flux of 2,310 million joules/second. More than 80 minerals have been found in the region. Mineral reserves, that are among the best in the country, include sylvite, magnesium, sodium, boron, asbestos, gypsum, copper, lithium, bromine, silicon, sulphur, and quartz. The region has extensive land resources, consisting of 61% steppes, 4% forests, and only 0.48% arable land. The development of tourism focused around its many colourful and unique environments has huge potential. It has won the acclaim of all who have visited the area. Many mountains rising above 8,000 metres are to be found here.

Economic resources

Although the Qinghai-Tibetan Plateau is extensive in land resources, the area suitable for people to live and to engage in production is rather small. The population has increased slowly, and the population density is the lowest in the whole country, averaging only 4.21/km², compared to the national average of 123.46/km². The population is mainly Tibetan. A survey carried out in 1990 showed that among the population 15 years of age and older, 44.43% in Tibet and 27.7% in Qinghai were illiterate or near illiterate, while the national average was 22.81%. The rural population is about 90% of the total (Liu 1993). Most of the villages are not connected by telephone. There is now a labour force of about five million. Productivity is low. The GNP per person in Tibet and Qinghai is respectively 3,292 'yuan' (RMB) and 4,550 yuan, which is lower than the national average of 5,211 yuan. Despite many difficulties, the local people are hard working and have withstood many hardships.

Because of the low levels of development in the Qinghai-Tibetan Plateau, the capacity for saving is low. In 1993, the average savings per person in Tibet and Qinghai was 89.9 yuan and 204.5 yuan respectively, while the national average was 308.7 yuan for the same period. As the capital flows into the region from the outside are limited, the main source of capital is the investments provided by the Central Government.

The region also has low levels of technical skills. Using the 1993 index of national technical skills as 100, it was 14.04 in Qinghai and 10.23 in Tibet. Industrial outputs are very low, although rapid changes are being seen in some areas. Nomadic lifestyles and tribal organisations still exist in the villages.

Different types of vicious circle

It is possible to identify four types of vicious circle operating in the area. The first is the vicious circle of poverty which is related to low incomes, low savings, and insufficient accumulation of capital, and this again leads to low productivity and low income. Low income in turn results in low purchasing power, smaller scale of investment, and low growth in the regional economy. The net consequence is that incomes remain more or less stagnant or decline over time.

The next vicious circle is related to human resources. Low levels of skill, seen in terms of technological backwardness lead to insufficient investment in science, education, culture, and hygiene. Thus, in turn this results in low productivity in the long run as the level of skills, physical fitness, and life expectancy tend to remain low.

The third vicious circle is related to the environment. In order to support livelihoods, trees are indiscriminately felled and pastures ploughed for cultivation. Over time this results in increasing loss of water and soil. Mud and rock flows and desertification increase, worsening the conditions of the environment as well as the prospects for economic growth in future.

The fourth vicious circle is related to urbanisation. As conditions in rural areas are not satisfactory, population and labour force begin to shift to urban areas. However, the process of urban development is slow, which means fewer opportunities for incoming people. This in turn creates underemployment and unemployment in urban areas and, at the same time, reduces the number of able-bodied people working in rural areas, resulting in stagnant or low levels of output in rural areas.

On the Qinghai-Tibetan Plateau, all four of these vicious circles can be seen to be operating, making it very difficult to break away from their grip. However, with the realisation that greater efforts are needed on all fronts, including a growing appreciation of the critical environmental roles of upland areas, more serious attention is being given by the central government to development of these areas.

It should also not be forgotten that beginning in the latter half of the 10th century, a feudal serfdom was enforced on the Qinghai-Tibetan Plateau. The extensive pasturing

area was divided into 'tribes'. The mass of people lost their land and livestock and individuals became serfs owned by serf owners. Taxes and levies, when put together, amounted to almost 70% of the total output value. The annual interest rates for usurious loans reached as high as 30-50%. Under this kind of ruthless exploitation, it was very difficult for the poor peasants and herdsmen to improve their livelihoods and economic conditions.

8.3 Measures against Poverty on the Qinghai-Tibetan Plateau

Democratic reform

The democratic reform carried out in Tibet in 1959 carried out land reform providing land to masses of landless and marginalised farmers for the first time. Initial gains in output brought about by the reform were not sustained because the commune system failed to generate incentives for increasing outputs. This was mainly on account of the lack of a market for competition, absence of free prices, and low levels of individual motivation. In 1979, the population living below the poverty line in the whole country totalled 250 million or 24.4% of the rural population. The figure was 30% for the Qinghai-Tibetan Plateau, with the most needy households being as high as 20.7% of the total.

In order to change this situation, the Chinese Government adopted various policies of reform as well as opening the economy to the outside world (Liu 1993). It abolished the people's commune system in the rural area and introduced the household contract system. Arable land and pastures were allotted to subsistence farmers and herdsmen's households for cultivation over longer periods of time. They could decide for themselves how to cultivate the land and also receive the income from the use of lands for the payment of fixed dues. This system greatly aroused the enthusiasm of both farmers and herdsmen for making use of the local resources and diversifying economic activities. Following various improvements in policies as well as investments from the government, a new picture is beginning to unfold in the Qinghai-Tibetan Plateau.

Policy of rehabilitation

Following the democratic reforms, a policy of low taxation was adopted for Tibet. In 1980, business and income taxes were exempted for agriculture and animal husbandry for fixed periods (Bian 1995).

Expenditure for education was increased to about 15% of the total expenditure for the region. Children of peasants and herdsmen in key secondary and primary schools were provided with free food, lodging, and clothes. More than 140 Tibetan classes were also opened in 17 provinces and municipalities where food, lodging, and clothes were made freely available. In addition, the state organised teachers from interior provinces and municipalities to go and teach in Tibet and allotted funds to build new schools and improve teaching facilities.

Free medical care was continued and speedy development of medical and hygiene services was emphasised. The average lifespan in the whole region increased from 36 years to 64 years at present over a period of four decades.

A preferential policy has been adopted to provide low interest and interest free loans for production and poverty-alleviating activities. Handicrafts have received special help for their revival and development. Measures have been taken to subsidise prices in many commodities in order to help people develop different production and livelihood activities and improve the quality of their lives.

Reorganisation of the structure of production

The nature and structure of production directly influence the manner in which resources in a certain area are used. It also determines the extent to which the ecological environment and the living standards of the people can be improved. It is therefore important to determine production activities with a sound understanding of these factors.

The comparative advantage of a certain branch of production in an area is usually judged by an analysis of its regional quotient (Zhang 1997). The higher the regional quotient, the greater the possibility for it to become a leading sector of production. Calculations show that, for the Qinghai-Tibetan Plateau, the regional quotient is higher than one for livestock breeding, ferrous and nonferrous metal smelting and forging, petroleum and natural gas exploitation, manufacture of ordinary machinery, power, steam, and hot water production and supply, and cutting down timber and bamboo. The Qinghai-Tibetan Plateau also enjoys a great advantage in tourism, but so far little resources have been exploited (Yu 1992; Zhang 1992).

Infrastructural development

Infrastructure includes communications, transport, power, and water supplies. Communication and transportation infrastructure and services are very limited in the Qinghai-Tibetan Plateau. The direction for the future development of communications and transportation in the Plateau are focused on the following.

- a) Increasing the density of the transportation network by four times the present level so that available resources can be exploited effectively
- b) Building 'three latitudinal and three longitudinal lines' in order to link the Qinghai-Tibetan Plateau with almost all the economic centres inside the country and also to provide external links with India, Burma, Bhutan, Sikkim, and Nepal (Liu 1993). In addition, civil aviation and the railways also need to be improved.

Post and telecommunications' services are also poor. The emphasis for their future development should be on high speed and greater quality so as to reduce the disadvantage of natural and geographical barriers that hinder the delivery of messages. Special emphasis should be placed on the construction of basic tele-transmission, telecommunications, and supporting networks.

Increasing investments in technological development

In 1993, the total investment in Tibet was yuan 1,600 million. Financial subsidies from the central authorities amounted to yuan 1,700 million, which does not include free allotments of materials and interest-free or low-interest loans. Aid from the central authorities is the main source of support for operation of the economy of the Qinghai-Tibetan Plateau. In future, savings from within the region should be increased by tapping all the potentials. Import of capital from other parts of the country and from abroad should be encouraged.

Low levels of technology and insufficient technical personnel are critical bottlenecks in the economic development of the Qinghai-Tibetan Plateau. The building of a technology development support system for the future faces many difficulties. While the import and use of new technology should be continued, its adaptation should be an important starting point. Conditions should be created for absorbing talent from outside the region. The quality of the scientific and technical personnel in the region should be improved. Scientific and technological development should be raised from many sources. Since scientific and technical capacity is related to the educational level of the people, it is also necessary to improve the overall skills of the population through high quality universal education. At the national level, a policy to prevent the outflow of talent from the region to the eastern part of the country should be followed.

Ecological management

As the 'third pole' of the earth, the Qinghai-Tibetan Plateau is a very unique environment. But development activities have already seriously damaged many parts of the environment. If adequate attention is not given to environmental protection, future development of the plateau could be adversely affected with serious consequences for other parts of the country (Shun 1999).

To ensure the sustained development of the Chinese nation, a 'Programme for China in the 21st Century' has been developed. It clearly points out the targets and measures for protecting the ecological environment of the Qinghai-Tibetan Plateau (Man 1995). The specific measures identified cover the following aspects.

- a) Protecting and building water-retaining forests and shelter forests for controlling soil erosion in the upper reaches of the great rivers
- b) Bringing natural calamities such as mud and rock flow, wind erosion, and desertification under control
- c) Improving pastures by maintaining a balance between carrying capacity and the number of animals
- d) Bringing industrial and urban pollution under strict control and enforcing environmental protection standards for all new industrial projects
- e) Developing more effective state and provincial-level nature reserves for protecting wild animals and plants

- f) Protecting the physical and cultural environment of the plateau for the benefit of future generations (although the primary purpose of environmental protection is the continued development of the plateau)

Poverty alleviation

Because of an adverse climate and frequent natural disasters, including low levels of education, technology, and communications services in the Qinghai Plateau, there are large numbers of people living in poverty. In 1995, there were still 478,000 needy people or 19.2% of the total population in Tibet. The government has done much to alleviate poverty since 1985. An example of what has been done is demonstrated by the case of Xigaze Prefecture.

Poverty alleviation activities by government departments alone did not work. It has now become the daily task of the prefecture Party Committee and the prefecture government. All the forces are mobilised and organised to participate in poverty alleviation activities.

The system of distributing free relief has been discontinued. This has been replaced with a system that combines repayable and free relief. By 1987, the repayable part had reached 80%, and the repayment was 75.3%.

Instead of giving relief for subsistence as was the main focus of relief work in the past, providing assistance for production activities has become the main form of relief work more recently.

Limited relief funds are concentrated on the most needy villages and households, instead of distributing these equally as in the past. The mutual-aid foundation for poverty alleviation and disaster relief established in 1988 has effectively assisted those farmers and herdsmen who were short of production and working capital. A programme for poverty alleviation through science and technology development has also been carried out. Foreign trade has also been expanded. Able persons have been helped to start activities that can assist others to overcome poverty through collective enterprises that provide employment for needy households who are able to work. Giving employment instead of relief to needy households in agriculture, water-conservation work, pasture management, and road building has helped to improve production, mitigate disasters, and reduce poverty.

8.4 New Thrusts in Poverty Alleviation

The 21st Century offers favourable conditions for developing the Qinghai-Tibetan Plateau. The 21st century is a time of rapid global integration. The opening of cooperative relations and the developments in the surrounding countries and regions provide new opportunities for the Qinghai-Tibetan Plateau. The Qinghai-Tibetan Plateau with its rich resources is one of the most attractive areas in Asia. As China's economic focus shifts gradually to the interior, resources of the Qinghai-Tibetan

Plateau will be developed on a greater scale providing many opportunities for expansion of economic activities in future.

However, the Qinghai-Tibetan Plateau will still face some serious problems. The great majority of the population is still in the villages, engaged mainly in agriculture and livestock activities. A greater part of the pastures are still under primitive nomadic modes of production. Isolated by lofty mountains, people are cut off from modern ways of production and distribution. As the natural environment is fragile and natural calamities occur frequently, the living conditions in many areas are very difficult. Industry on the plateau is still very limited, and there is a serious shortage of capital and technical personnel. Communications and transport have to be improved. Urbanisation is still at a very low level. At a time when challenges and opportunities exist side by side, opportunities should be developed by appropriate strategic measures.

One important strategic measure is the introduction of the market economy that has become an important national policy for overall development and poverty alleviation. The market economy stimulates consumption, which is the prime mover encouraging farmers and herdspeople to change their modes of production. It will encourage them to make full use of the resources, raise productivity, and produce surplus over their own consumption needs for sale in the market. This will be a decisive shift in the economy of the Qinghai-Tibetan Plateau. Once poor peasants and herdsmen embark on the path of a market economy, the inherent benefits of the market economy will gradually come into full play, promoting rational exploitation of resources, a more efficient structure of production and division of labour, adoption of new technologies, and improvement of management systems. All of these will help in the emergence of new organisations suited to the growth of the new productive forces and the market economy.

The market economy has and will increase economic disparity between the advanced and backward areas for a certain period of time. However, with appropriate policies, this can be corrected over time.

The development of the market economy in China in the past few years has indeed enlarged the differences in the level of economic development between the regional economies. This problem has arisen because there has always been a great difference in the level of economic development between different regions. As reasons move forward with spontaneous and regular development of the market economy, allocation of resources will move on the basis of comparative advantages. Policies should encourage resources to flow to backward and poor areas, and, over time, with growth in investments, disparities in economic development between areas will begin to narrow down.

The role of the state in this transition of backward and poor areas will be very crucial. The most essential consideration is to find appropriate ways for the economy to develop at a faster rate than in other areas. A more rapid speed of development will

reduce the development gaps between the different areas. The comparative advantages specific to the backward and poor areas need to be fully developed in such a manner and on such a scale that these can offset the existing disadvantages and put the backward and poor areas on a more competitive basis (Xiao 1993).

To develop the socialist market economy in the Qinghai-Tibetan Plateau the following two points should be noted.

1. With the help of the government, greater efforts should be made to improve the environmental conditions for promoting the market economy. In recent years, the state launched a large number of building and infrastructural projects to exploit the resources in the poorer central and western parts. Sixty-two per cent of the total investment for capital construction has been in the central and western regions. Investments in fixed assets for the western region have increased by 31.2%, 14.9% higher than in the eastern region. In 1998, the state allotted 100 billion yuan to increase investments in infrastructure, of which two-thirds were invested in the central and western regions. More than 13 billion yuan were invested in selected projects in the poor counties. These investments will promote the growth of the market economy on the Qinghai-Tibetan Plateau (Shi 1998).
2. It is necessary to integrate the household economy of peasant farmers and herdsmen into the market economy. Without greater participation by peasant households, the inner driving force of the market economy will be missing. The prerequisite for this is that farmers' households must fully own the means of production and use it according to their own will. This is particularly true with land and other physical assets, the most basic means of production. Farm households should be able to convert available resources into commodities and gradually move towards specialised and modern market operations. With farmers and herdsmen becoming the inner driving force for the development of the market economy, a strong basis for the sustained development of the rural economy of the Qinghai-Tibet Plateau will be established.

8.5 Conclusion

Based on the discussions so far, the important points are highlighted here.

1. It is necessary to change once and for all the subsistence nature of the economy in poor areas. The market economy should be introduced to free the areas from poverty and become the driving force for sustained development.
2. In the process of development of poor areas, the market economy will be a major driving force for people to improve their standards of living. This can narrow the economic gap between developed and underdeveloped areas. It is, therefore, necessary for the State to guide the market economy so that equity and efficiency considerations are balanced.
3. The role of the state in the fight against poverty is crucial. It can create the conditions and clear the way for development of the market economy, including

building infrastructure, institutions, and providing policies and aid. Encouraging economically viable and environmentally desirable use of the land is important.

4. Only by developing local comparative advantages of their resources will poor farmers and herdsmen be able to become involved in the market economy. For this reason, choosing the appropriate production activities should be the main goal in local efforts for alleviating poverty. When there are no resources and the land cannot feed the population, it will be necessary for people to migrate to other places with better conditions for development.
5. The exploitation of natural resources must be based on the protection of resources, ecology, and the environment.
6. To exploit resources and build the principal branches of production in poor areas, priority should be given to agriculture and livestock breeding because this can promote participation by a large number of people and be of direct benefit to farmers and herding communities.
7. Alleviating poverty does not mean distributing relief. Mechanisms should be introduced to help needy households exploit resources and develop economic activities. Funds used for poverty alleviation should be repayable; otherwise it will be unsustainable. (Giving work instead of money and granting small poverty-alleviation loans have proved to be successful experiences in other parts of the country.)
8. To overcome the difficulties of marketing, individual farmers and herders should be encouraged to set up their own service organisations for managing marketing, storage, and processing and improving productivity and quality control.
9. Equal help for all poor areas is not desirable. Each village and household should be treated differently. Help should be given to the households and people in real need.
10. Modernisation of the economy of subsistence farm households under the prevailing conditions in China do not favour mechanisation and large-scale operations. Focus should be on specialisation, development of collective activities, and adoption of modern biotechnology.
11. Resources should be exploited through a combination of long, medium, and short projects to achieve sustainable development, while at the same time solving the present problem of providing the basic needs of life.
12. Technology used by the peasants and herdsmen should be improved to maintain competitiveness in the market.
13. Comprehensive development should also focus on raising the level of education, nutrition, and health of farmers and herders. For this purpose, it is necessary to set up medical, hygiene, and health-care systems and a system of scholarships for children from poor families to go to school. Poverty cannot be alleviated without improving the quality of life of the people.
14. Women should be made knowledgeable in law, hygiene, nutrition, technology, and modern child rearing and family planning, so that they can play the role of 'holding up half of the sky' in the fight against poverty.

15. Cooperation on the basis of mutual benefit between the east and the west (between the developed and backward areas) should be encouraged.

Through alleviation of poverty, protection of the environment, and sustainable development, the Tibetan people will proudly stand up as equals with other groups of people and will live in peace and happiness.

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Chapter 9

Mountain Agriculture in the Hindu Kush-Himalayas: Trends and Sustainability

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9.1 Introduction: The Data Base and Methodology

In the Hindu Kush-Himalayas (HKH), the majority of mountain households operate a mixed crop-livestock farming system. Food crops, horticulture and cash crops, and livestock are three integral components of mountain farming households. Over the years, changes have been taking place in terms of crop land use, land resource allocation, production, and productivity of cereal crops, horticultural crops, and livestock structure and composition. Better understanding of these changes can lead to important implications for development of sustainable mountain agriculture.

Over the years, the International Centre for Integrated Mountain Development (ICIMOD) realised the need for an empirical database on mountain agriculture to identify long-term trends and their implications. According to Jodha et al. (1992), efforts to build an empirical picture of the existing conditions in mountain agriculture, the changes over time, the various policies, and aspects contributing to its long-term sustainability have only recently begun. The lack of empirical data meant that earlier efforts to assess the state of mountain agriculture were based on a handful of micro-level case studies relating to a point of time and covering a negligible part of a vast tract of the HKH region. Concerns about the lack of an empirical database were often raised during various ICIMOD forums and the Regional Consultation on Education and Research for Sustainable Mountain Agriculture recommended that ICIMOD could be a focal point for the creation of a technical database for mountain