Study on the Strategies of Sustainable Development in Chinese Ethnic Regions

JINGFU GUO
School of Economy & Management, Dalian Minzu University
Dalian 116600, China P.R.
Email: drguo@dlnu.edu.cn

WEN CHENG
School of Economy & Management, Dalian Minzu University
Dalian 116600, China P.R.

Abstract
Sustainable development (SD) is the harmonic coexistence of humans & nature, balanced development, sustainable prosperity. The nature ideology of integral harmony of the Chinese minority nations, and their ideology of equality of admiring life and the ideology of production of simple circulation are identical to the central ideology of SD. This paper presents a three-dimension model of regional sustainable development; the model includes the harmonious development of economy, society, resources and environment, it discusses culture advantages of sustainable development in Chinese ethnic regions, and the important work is to explore the SD strategies for Chinese ethnic regions and provides guidance for achieving sustainable development, such as the development of the eco-ethics of the minorities, and educating the sense of eco-citizen, perfection of the policies and regulations to protect the ecological environment of the ethnic regions, and promoting construction of industrial ecosystem as well as developing the no-carbon or low-carbon industry in Chinese ethnic regions, etc.

Keywords: Sustainable Development, Ecological Ethics, Ecological Industry, Pro-poor.

Introduction
From the middle of last century, the conflict between industrial undertakings and the world environment is more severe than before, people have begun to rethink and review traditional values and development concepts, realizing that the traditional economic development model will only aggravate the predatory exploitation of resources and seriously damage the environment. The sustainable development (SD) strategy cannot follow the traditional model with large input, high consumption and serious pollution; it must turn into small input, low consumption and light pollution, sustainable development is to be defined in the way the Brundtland report has done, i.e. as meeting our current needs without compromising the ability of future generations to meet their needs (WCED 1987). Sustainable development goals encompass protecting the earth’s life-support system and improving living conditions—for instance, by alleviating poverty and providing universal education (Rockstrom et al. 2009). Sustainable development and ecological civilization require human activity and the natural environment to be in harmony, to achieve the goals, it is necessary to establish a scientific outlook on development, coordination of nature, green consumption, and ecological sustainable development to ensure sustainable economic development in Chinese ethnic regions. Eco-civilization coordinates social-economical development with the environment.
& natural resources, establishes a new civilization based upon mutual benefit & coordination between man & nature. It's a cultural & ethical manifestation of harmonious coexistence, well-rounded development, and sustainable prosperity between human & nature.

The ethnic areas in China (five auto-autonomy regions and three provinces Yunnan, Guizhou and Qinghai with more minority populations) are the boundary’s green shield of China mainland, the treasure house of multi-ecological status with rich ecological ethics and culture. The regions have advantages of natural resources, the advantage of eco-culture and autonomy of the ethnic regions. Due to the historical, geological and social reasons, the ecological environment issue is especially remarkable, which becomes the key factor to restrain the development of the ethnic regions.

The four major ecological fragile belts of our country (severe cold, deserts, infertile yellow soil and Karst) are the main distribution in the areas of minorities. In the process of industrialization, the ecological environment of Chinese minority areas tends to deteriorate severely with series of severe ecological crises, such as the over-use and destruction of the forests and wetlands, the deterioration of woodland, the lost of water and soil, drought and water shortage, flooding, desertification, extinction of native plant and animal species etc. Certain places fall into the malignant cycle of “poverty-destruction-poverty”, which not only affects the existence and development of the people in the minority areas, but also generate environmental refugees and collision between races, affects the stability of the minority areas and the safety of the boundaries, which may also turns in to corresponding social risks.

Three Dimension Model of Regional Sustainable Development

SD is to meet the needs and aspirations of the present without compromising the ability to meet those of the future. That is to say, while we achieve the goal of economic development, natural resources such as atmosphere, fresh water, ocean, land and forest that mankind depends on for existence should be protected for descendants to develop, live and work in peace and contentment forever. In general, SD depends on economic development, social progress, and resource environment conservation. Therefore, we present a three-dimension model of regional SD (as shown in Table1).

Dimension of Economic Development

Economic development is the foundation of regional sustainable development, which continually provides the safeguard for social development, government management and the improvement of resources utilization ratio in order to improve people’s material, cultural and living standards constantly.

The basic problem of "economic SD" is how to solve the derived contradictions between development and distribution of resources with economic development and growth. We should speed up the pace of economic development and give consideration to efficiency improvement and resource conservation, so as to get people's greatest happiness by minimum inputs. People should focus on the economic models of resource-saving, environment-kindness as well as low-carbon and circulation.

Dimension of Social Progressive

Economic growth is not the ultimate goal of economic development, the improvement of people's happiness index is the ultimate pursuit of economic development. Social development aims to promote people's living quality, improve social civilization, offer enough job opportunities, safe and comfortable environment, good traffic transport capacity and health support, and make all citizens have equal opportunities to improve their quality of life. Many measures may be taken to make sure social sustainability, such as constructing pro-poor social security systems, providing a wide range of public services, and popularization of compulsory education, etc.
Dimension of Resources & Environment

Resources, here refer to natural resources, manly including land resources, water resources, forest source of human’s means of production and means of livelihood and the material foundation of social civilization development. With the constant development of human society, the lack of resources, population explosion and environment deterioration, are the three basic obstacles for economic development. The quality of the eco-environment is the important factor resources, mineral resources, wild animals and plants resources, etc. Natural resources are to evaluate sustainable development and reflect the coordination intensity of society, economy, resources and environment. Therefore, judging whether the environment system of a city can keep sustainable development, should not only evaluate the environment system but also the relations between economic development and environment bearing capacity. The natural environment, as the foundation of human survival, requires us to maintain the sustained and rapid development of economy, with the premise of ecological protection, and minimize the interference of industry to the environment.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Goals of Sustainability</th>
<th>Policies &amp; Measures</th>
</tr>
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<tbody>
<tr>
<td>Economic Sustainability</td>
<td>Rationalizing industrial structure</td>
<td>Enlarging the proportion of the tertiary industry;</td>
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<td></td>
<td>Resource-saving, Environment-kindness</td>
<td>Developing characteristics, low carbon and circular economy;</td>
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<td></td>
<td>Low-carbon, circulation of resource</td>
<td>Enhance the competitiveness of the characteristic industry in ethnic regions.</td>
</tr>
<tr>
<td>Social Sustainability</td>
<td>Poverty-reducing, Sharing opportunities, Productive employment, Social security</td>
<td>Construct pro-poor social security systems; Providing a wide range of public services;</td>
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<td></td>
<td></td>
<td>Popularization of compulsory education.</td>
</tr>
<tr>
<td>Ecological Sustainability</td>
<td>Construct ecological civilization</td>
<td>Ecological civic education, high coverage of forest and greening;</td>
</tr>
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<td></td>
<td>Good environmental quality</td>
<td>Construction of circular economy;</td>
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<td></td>
<td>Keep livable environment</td>
<td>Strict environmental inspection: the discharge of all kinds of waste with standard.</td>
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The Ethnic Minorities Culture Advantages of Sustainable Development in Chinese Ethnic Regions

The history and social development of ethnic minorities is in fact the history of the relationship between ethnic minorities and the natural environment. Ethnic minorities bound by their culture, norms, have constantly adjusted their behavior and the relationship between man and nature, protected the natural ecological environment, maintained national cohesion, and promoted harmonic sustainable development in the regions of ethnic minorities.

The Nature View of Overall Harmony

To treat nature with respect is the kind of harmonic model of handling the relationship between man and nature by ethnic minorities. It takes man & nature as an inseparable entirety, maintains that nature is the basis of human life and eternal destiny, and that human & nature must rely on each other, coexist in prosperity and develop in coordination. For example, people who are in belief of Shamanism in north China believe that humans should treat nature and all creatures with respect, live in harmony with all kinds of different organisms. This ecological idea no doubt regulates the behavior of ethnic minorities & promotes environmental protection of nature and ecological harmony.
The View of Renewable Production

Since it’s very hard to choose their ecological environment, ethnic minorities have to conduct production activities under realistic natural conditions, and their views on everyday living are evolved to adapt distinctively to the unique geographical environment. The existence of these concepts plays an important guidance role in waste reduction, green consumption, less impact on nature and wild animal protection. It also maintains local ecocological balance, coordinates the harmonic fusion between man & nature, and promotes practical natural way of living which restores nature to its original condition. For example, the nomadic way of constant migration for animal husbandry, and the nomadic way of rotation of grassland and pasture to reduce pressure on human activity, to ensure that pastures and water sources inexhaustible, not only to promote the benign cycle of grassland ecosystems, but also the protection of sustainable development of animal husbandry; Hani, Dai, Dong etc. rice-growing and other ethnic groups in south China developed the concept of forest ecosystems, which provides sufficient water and a friendly ecological environment for rice production under the forest-water-farm land model (Bai, 2007).

The View of Equality from Revering Life

Due to the limitation of productivity level, ethnic minorities usually deify nature & natural creatures. Worship for heaven & earth is the most important content of worship of nature. Tibetans’ ancient ideas believe that all species are from the same origin and lives are correlated; Uygurs view their existence as sustained by the Eternal Blue Sky, Tengri, the fertile Mother-Earth Spirit Eje, and a ruler who is regarded as the Holy Spirit of the Sky. Heaven, earth, the spirits of nature and the ancestors provide every need and protect all humans; Dai and Bulang in Xishuangbanna of Yunnan province both have the fine tradition of worship and protection of the "Dragon Mountain"; The Yi minority deify the trees around the village, while the Qiang and Bulang treat the forest as a god; The Dai believe that the elephants and the peacocks are auspicious things, people will not allow any harm to them; The Tokenism from North Shamanism regard bears, wolves, eagles etc. as their gods. All of these contribute to the protection of the ecological resources of mankind in an important way. Especially in animal protection, ethnic minorities have developed the ethical awareness of wild life conservation.

Strategies of Sustainable Development in Chinese Ethnic Regions

The basic contradiction of the eco-economic system is that of a growth-oriented economic system of unlimited demand for natural resources between ecosystems with limited stable supply of natural resources. On the one hand, the development demand of human activities on ecosystems are increasing; on the other hand, the supply of the overloaded ecosystem continues to decline, especially for the more vulnerable ethnic minorities’ ecological areas, where economic development, social progress and ecological civilization face various pressures and challenges.

Inherit and Promote Eco-ethics in Chinese Ethnic Regions

The rational factor in China's traditional eco-ethics in minorities is an intuitive and simple sentimental concept, without a comprehensive exposition on the relationship between man and nature. The integration of ecological ethics of minorities and the modern ethics is a rational choice for the reservation of ecology and the harmonious development in ethnic regions. The shared prosperity and a harmonious society of ecological civilization have to be ultimately achieved based upon the ecological ethics from minorities through the absorption of the theory of modern science to fit their specific situations. With the development of society, ethnic minorities have been unable to adapt to ecological ethics in pursuit of a modern society for the purpose of maximizing the economic benefits of large-scale material production activities. Therefore, the inheritance of traditional eco-ethics from minorities must be uplifted so that it is built on the basis of modern science.
Ecological crisis is the greatest of mankind's survival, and the crisis was mainly due to human misconduct when people's ethical culture has erred. Therefore, the ecological crisis is essentially an ethical crisis of faith and it is a cultural crisis. The history and social development of ethnic minorities is in fact the history of the relationship between ethnic minorities and the natural environment. Ethnic minorities bound by their culture, norms, have constantly adjusted their behavior and the relationship between man and nature, protected the natural ecological environment, maintained national cohesion, and promoted harmonic sustainable development in the regions of ethnic minorities. The eco-ethics of ethnic people do well on cultivating "sense of eco-citizens". The development of "sense of eco-citizens" is responsible for the "civic responsibility" in solving ecological problems in a fundamental way. Though fully understanding the rational factors in decision-making behavior of individual citizens and through legal, administrative, economic and other incentive-based measures, supplemented by a means of enforcement, combined with eco-ethics from ethnic minorities, an established code of conduct conscious citizens is the most effective, ever-lasting and prevention-over-restoration approach for ecological conservation and sustainable development.

Improve Related Policies and Regulations Related to Protect the Ecology of the Ethnic Regions

Basically the Mongolian grassland kept its primitive natural status until the middle 18th century. As early as the dynasty of Genghis Khan, the destruction of ecological environment is listed as national prohibition, e.g. The hunting of immature animals are prohibited, trees were not allowed to be cut indiscriminately. “Those, who destroy the farming-land, will be punished … the whole family will be executed if one forgot to extinguish fire and burn the grass land” was also a law at that time. The system of ecology compensation funds should be improved in the minority areas, which makes the ecological compensation vertically from the government more specific and reasonable. Especially the minority areas may fully take advantage of the “the law of autonomy of the ethnic regions” and the advantage of privilege of setting new laws of the government (especially the privilege of making changes accordingly). The national laws and regulations may be detailed, specific regulations may be added for execution to increase the operability and vigorously protect the construction of ecological civilization and the continuous development of economy and society. For example, in 2008, more than 1 million Yuan was provided through the regional & county level finance of Ali to compensate the losses of the local people by wild animals. This is another example of “pay the bill” by government since the adoption of "Tibet Autonomous Region, Provisional Measures for Property Loss & Personal Injuries by Prominent land Wildlife" in 2006 (Guo, 2010).

Promote Construction of Ecological Industries in Chinese Ethnic Regions

Ecological industry is to realize the harmony development between economy and environment by planning industrial systems according to material cycle in the natural ecological system. It has grown rapidly both in theories and practices since 1990s (Frosch, R. A.,1989). Many countries including China have applied industrial ecology to industrial practices. It is deeply recognized that developing ecological industry is an important way to realize sustainable development. An industrial symbiosis net could be formed by exchanging by-products and wastes, cascading utilization of energy and waste water, and sharing infrastructure among system units. Different processes correlate each other with material flows, energy flows, money flows and information flows. An eco-industrial system has more complicated resource utilization models and more closed interrelationship in comparison with a common industrial system. By ecological industry, we can make full use of resources, reduce wastes, use recycled materials, eliminate environmental damages, and improve the scale and quality of economic development, achieve sustainable economic development and harmony between man and the nature. Thus, industrial ecology is a new industrial development model, to be sure to achieve sustainable development we should try hard to promote construction of ecological industries in Chinese minority areas.

Based on the principles of the eco-system of coexistence, reduction (reducing), reuse (reusing) and resource regeneration (resourcing), taking material recycling and energy echelon use as its object, Eco-industry coordinates discrete enterprises and industries and integrates them into a optimized industrial ecology
chains to form integration, the Ecological industry is a dynamic systems-based framework that enables management of human activity on a sustainable basis by:

- Minimizing energy and materials usage;
- Ensuring acceptable quality of life for people;
- Minimizing the ecological impact of human activity to levels natural systems can sustain;
- Conserving and restoring ecosystem health and maintaining biodiversity;
- Maintaining the economic viability of systems for industry, trade and commerce.

Developing Low-carbon Industry in Ethnic Regions

China’s borderline stretches 22 thousand kilometers long, of which 19 thousand rests in ethnically autonomous regions. China shares borders with 14 countries and has more than 30 ethnic minority groups, which are adjacent to the same ethnic groups across the border, sharing similar language and culture. With favorable location and ethnic advantage, Chinese ethnic regions have potential of developing export-oriented economy and low-carbon or non-carbon industries based on frontier trade. By developing these industries, it can not only improve their economic strength, but also realize sustainable development.

Cultural industry of ethnic minorities has wide market prospect by providing consumers with ethnic, exotic and primitive spiritual cultural product and art service. Dynamic Yunnan is a large-scale dance drama, dynamically incorporating traditional beauty and modern flavors with a reintegration of the most original and rustic dance elements of Yunnan. A 70-percent cast of performers are the ethnic people from all villages of Yunnan province. Authentic costumes and props which are taken from real life, unsophisticated singing and primitive, enthusiastic dancing, which fuses traditional dance and modern dance, recreates fairy ethnic flavor of Yunnan from reality. It is appraised by the experts as “resurrection of ethnic dance” with significant economic and social benefit.

Promoting the Corporate Social Responsibilities

The definitions of corporate social responsibility (CSR) in different contexts, the World Business Council for Sustainable Development defines CSR as “the commitment of business to contribute to sustainable economic development, working with employees, their families and the local communities”, hence the fundamental idea of CSR is that business corporations have an obligation to work towards meeting the needs of a wider array of stakeholders. The principles of SD balance the population’s entitlement to a healthy life with a consideration of the impact of economic growth upon the environment (Shellnberger and Nordhans, 2004). Good corporate governance requires corporations to manage an organization’s wider influence on society for the benefit of the society as a whole which results in good corporate citizenship. Good corporate citizenship is closely associated with the idea of sustainability. It is also synonymous with the concept of “corporate societal responsibility.” To ensure the sustainability of the natural resource base, the recognition of all stakeholders in it and their roles in its protection and management is essential. There is need to establish well-defined and enforceable rights (including customary rights) and security of tenure and to ensure equal access to land, water and other natural and biological resources.

Mechanism of Target Poverty-alleviation by Developing the Characteristic Industry

The Trickle-down effect refers to the continuous economic growth, income from the water “trickle down” constantly, achieve the purpose of slowing down and eliminate poverty (A.O.Hirshlhan, 1958 ). Some economists believe that economic growth is a necessary condition for reducing poverty, but not sufficient, Other factors, such as the distribution system and political factors, play an important role in poverty reduction (Bourguignon, 2004), that is to say, the effect of economic poverty reduction is restricted by a series of environment and conditions, including natural conditions, cultural habits, economic environment and institutional arrangements. So there should be the guidance mechanism of government coordination,
the market mechanism of differentiated competition and the benefit distribution mechanism of Pro-poor development in China's ethnic minority areas. Some supervision departments of government should take the mechanism of “the industry following marketing + the base following the business + poor families following cooperatives”, the poor people participate in the operation and gain more interests with certain factors of production, so as to realize the accurate poverty alleviation of the characteristic industry.

**Fig1.** Mechanism of target poverty-alleviation in ethnic regions by characteristic industries.

**Conclusion**

The term SD has been used extensively by economists, policy makers and other social researchers; it has been found that there is a very close and positive relationship between environment and development. Though Chinese ethnic regions are growing at a fast rate, the growth may not necessarily lead to SD unless it is accompanied by environmental protection. The protection and conservation of the environment is one of the key factors to achieve the SD, the result shows that the bottom level, comprising of various factors like natural resource management, managing land displacement, effective water resource management, poverty alleviation, solid waste management and managing climate change can lead to SD.

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**References**


