

Yunnan Provincial Environmental Protection Bureau  
27 Xiyuannan Rd, Kunming 650032, PR China  
Tel/Fax :+86-871-410963  
Email: [ftecd@public.km.yn.cn](mailto:ftecd@public.km.yn.cn)  
Website: [www.7c.gov.cn/ynepb/index.asp](http://www.7c.gov.cn/ynepb/index.asp)

Foreign Economic Cooperation Office  
Ministry of Environmental Protection  
3001 Tengda Plaza, No.168 Xizhimenwai St. Beijing, P.R.China, 100044  
Tel: (86-10) 88575140 Fax: (86-10) 88575152  
Website: [www.sepa.gov.cn](http://www.sepa.gov.cn)

United Nations Environment Programme  
Regional Resource Centre for Asia and the Pacific (UNEP/AIT RRC.AP)  
Room 304 Outreach Building, Asian Institute of Technology  
P.O. Box 4, Klong Luang, Pathumthani 12120, Thailand  
Tel: (66-2) 5242124, 5160110 Fax: (66-2) 5246233  
Email: [info@rrcap.unep.org](mailto:info@rrcap.unep.org)  
Website: [www.rrcap.unep.org](http://www.rrcap.unep.org)

**YUNNAN**

# **SUSTAINABLE DEVELOPMENT STRATEGY STUDY**



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Yunnan Provincial Environmental Protection Bureau (YEPB)  
Foreign Economic Cooperation Office/ Ministry of Environmental  
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United Nations Environment Program Regional Resource Center for  
Asia and the Pacific (UNEP/AIT RRC.AP)

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- Mr. Wang Xin, Foreign Economic Cooperation Office, Ministry of Environmental Protection of P.R. China.

**UNEP/AIT RRC. AP NSDS Project Secretariat**

Surendra Shrestha  
Subrato Sinha  
Aida Karazhanova  
Yuwaree In-na  
Liang Li  
Seon Mi Choi

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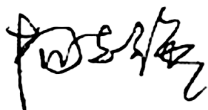
## FOREWORD

Since the United Nations Conference on Environment and Development held in Rio de Janeiro Brazil in 1992, the People's Republic of China has embraced sustainable development as a major goal of national development. China was one of the first countries in the world to have formulated its national Agenda 21 titled "China's Agenda 21 White Paper on China's Population, Environment and Development in the 21st Century". In 2002, sustainable development was defined as one of the four major goals for building a Xiao Kang society in the early 21st century, at the 16th National Congress of communist Party of China (CPC).

Yunnan Province has diverse culture and is a global biodiversity hotspot. Yunnan, as the most southwestern province, is strategically located for China's cooperation with the Greater Mekong Sub-region. Yunnan is a relatively under-developed province in the country but has made significant progress in economy, society, population, resource and environment since the implementation of reform and open policies in China in line with china's national policy on sustainable development.

However, Yunnan still faces urgent sustainable development challenges including high incidence of poverty, high rate of illiteracy, environmental degradation and uncontrolled exploitation of natural resources. Recognizing Yunnan's need for formulating and implementing a provincial sustainable development strategy, this Study on Yunnan's sustainable development strategy was undertaken by the Foreign Economic Cooperation Office of SEPA and Yunnan EPB with technical assistance from the UNEP, Government of Norway and ADB. Developed through a multi-stakeholder participatory process, this study evaluates the current status of sustainable development in the province, proposes the medium and long-term goal of sustainable development introduces a strategic framework and action plan for sustainable development and proposes measures for the implementation as well as key indicators for monitoring and evaluation.

We sincerely hope that this study would serve as practical policy guidance for Yunnan's strategic planning for sustainable development. We would like to express our gratitude for all who contributed to the development of this study and look forward to their continued commitment to achieving sustainable development at all levels.



Yang Zhiqiang  
Deputy Director  
Yunnan Provincial Environmental  
Protection Bureau (YEPB)



Surendra Shrestha  
Director  
UNEP Regional Resource Center  
of Asia and the Pacific (UNEP/AIT RRC. AP)

# 1. OVERVIEW OF SUSTAINABLE DEVELOPMENT IN YUNNAN

## 1.1 National Sustainable Development Strategies and Yunnan

In 1987 the World Commission on Environment and Development (WCED) for the first time introduced the concept of "Sustainable development (SD)" in their report *Our Common Future* as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In 1992, the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil proposed and adopted the *Agenda of 21st Century*. Each country committed to develop their own sustainable development strategies, plans and actions according to their own situation.

At the Rio+5 Summit in 1997, it was reaffirmed that the National Sustainable Development Strategy (NSDS) was an important mechanism for countries to achieving sustainable development.

In September 2000, at the United Nations Millennium Summit, world leaders agreed to establish a set of time bound and measurable goals and targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. Placed at the heart of the global agenda, they are now called the Millennium Development Goals (MDGs).

The 2002 World Summit on Sustainable Development (WSSD) adopted the Johannesburg Plan of Implementation and highlighted sustainable development with its three pillars – i.e. economic, environmental and social development. Great achievement has been made since the term of sustainable development was introduced in 1987. Today sustainable development is considered as an indispensable and mainstream element of the socio-economic development process around the world.

Since the 1992 conference, sustainable development has been accepted worldwide as a new concept of development. Chinese government responded positively and formulated *China's Agenda 21: White Paper on China's Population, Environment and Development in the 21<sup>st</sup> Century*, the first one at national level in the world, signaling the start of China's sustainable development.

On September 28 1996, CPC's *Suggestions on Compiling the Outline for Ninth Five-Year Plan of National Economy and Social Development and the Perspective in 2010* was approved in the 5<sup>th</sup> Conference of the 14<sup>th</sup> Congress of the Communist Party of China. Later, *The Outline for Ninth Five-Year Plan of National Economy and Social Development and the Perspective in 2010* was passed by the 4<sup>th</sup> conference of the 8<sup>th</sup> People's Congress. In both documents, sustainable development was explicitly heralded as a major goal of development.

In 2002, the 16<sup>th</sup> National Congress of Communist Party of China (CPC) and later the 3<sup>rd</sup> plenary meeting explicitly defined sustainable development as one of the four major goals for the construction of *xiao kang* society at early 21<sup>st</sup> century. A holistic development strategy for economy, human and society was clarified that intends to put people first and aims at comprehensive, coordinated and sustainable development. In 2003, in order to fully promote

the implementation of sustainable development strategy, to clarify its goals, principles, major fields and guarantee measures for early 21<sup>st</sup> century, to successfully achieve China's goals for national economic and social development, *Program of Action for Sustainable Development in China in the Early 21st Century* was compiled and issued. After years of relentless efforts and economic and social progresses, the concept of sustainable development has become a social consensus in China.

**Yunnan** province is located in West China and considered to be a relatively underdeveloped region.

Since the Ninth Five-Year-Plan in Yunnan province, sustainable development strategy has been implemented and the importance of the harmony between economy, society, population, resource and environment is widely recognized. The results of implementation are positive: overall economic power is strengthened; social affairs have made great progresses, once fast population growth is restrained, resource conservation is enhanced, overall ecological status is improved, environmental protection and pollution control are promoted and the ability of sustainable development is boosted.

However, the social and economic development in Yunnan province still has the “four high and four low” characteristics that need to be improved: low social development but high regional imbalance in economy; low productivity and high weight of substance and semi-substance economy; low labor quality and high percentage of illiterate & semi-illiterate; low overall living standard and high percentage of poverty-stricken population. From the perspective of sustainable development, the same “four low and four high” characteristics are also noticeable, which are: low quality of economic growth and high resource consumption; low urbanization rate and high proportion of rural population; low environmental & resource capacity and high losses caused by pollution and disasters; low level of social security and highly insufficient social development. These characteristics show that the social and economic development of Yunnan is still at the primary stage of socialism development. Therefore, sustainable development is critical for Yunnan to achieve its three strategic goals, i.e. developing Yunnan into a strong province with green economy, an ethnic province with rich culture, a great international passageway connecting China with southeast Asia and southern Asia. Only with sustainable development can Yunnan keep pace with other areas across China along the route leading to a *xiao kang* society.

Geologically Yunnan is very special, as it is on the upper reaches of Mekong River and it is a critical location in China's participation in Greater Mekong Sub-region Cooperation.

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The implementation of sustainable development and the achievement of sustainable development goals in Yunnan will improve the position and role of China in Greater Mekong Sub-region Cooperation, and will be significant for the sub-region's economic development and even for human civilization.

## **1.2 Sustainable Development Strategy Study for Yunnan: Objective and Process of the Study Preparation**

Yunnan, as one of the relatively undeveloped areas, has made remarkable achievement on social and economic development since the implementing of reform and open policies in China. Due to the conditions of special and complex landform and traditional development pattern, however, Yunnan also has many problems such as imbalanced of regional development, bulks of poverty population, high proportion of illiteracy, environment degradation, soil erosion, waste and uncontrolled exploitation of natural resource etc. These problems have restricted sustainability of social and economical development in Yunnan, and reduced the supporting capacity of ecological environment for the sustainable development. Accordingly, formulation and implementation of sustainable development strategy in Yunnan has vital significance. It is necessary for the establishment of harmony between human being and nature, as well as the social and economic sustainable development.

This study is supported by the program of Greater Mekong Subregion (GMS) Sustainable Development Strategy. It is part of the Asia-Pacific regional technical assistance project supported by the United Nations Environment Program (UNEP) and the Asian Development Bank (ADB) (No. 6198) and is implemented by the Foreign Economic Cooperation Office of SEPA and Yunnan EPB.

The goal of the current project is to develop the general scheme of Yunnan sustainable develop. Specificly it includes:

- Evaluate the status quo of sustainable development in Yunnan;
- Propose the medium and long-term goal of sustainable development in Yunnan;
- Introduce the strategy and action plan in the key fields for reaching the goal of sustainable development in Yunnan;
- Establish the key indicators to monitoring the implementation of sustainable development in Yunnan;
- Propose the supporting measures for the implementation of sustainable development in Yunnan;

This study's findings are based on the *Program of Action for Sustainable Development in China in the Early 21st Century*, Yunnan's 11<sup>th</sup> Five Year Plans and the previous works on sustainable development that have been done in Yunnan. These findings have gone through expert consultations and discussions in Kunming and Beijing in 2007-2008 (please refer to the meeting records are attached in Annex and at the web page at: <http://www.rrcap.unep.org/projects/nsds/meeting.cfm>), and have been revised and refined incorporating the experts' opinions. However, constrained by the time and resources, this report is only a project study report and the initial research outcomes need further improvement within the process. It is sincerely hoped that the research findings will help the formulation of Yunnan's sustainable development in the future. Constrained by the availability of statistics, this report sets the basic year at 2005.

## **1.3 Current Status of Sustainable Development in Yunnan Province of PR China**

### **1.3.1 Progresses of Sustainable Development Strategies in Yunnan**

In 1994, the State Council issued the *Notice on Promoting the Adoption of China's 21<sup>st</sup> Century Agenda*. In order to better adopt the Agenda, Yunnan Provincial Government



approved the establishment of Yuunan 21<sup>st</sup> Century Agenda Leading Group in 1996. An administrative office was set up to deal with routine works. According to National Planning Committee and National Science and Technology Commission's plan, the office made efforts to develop a *Yuunan 21<sup>st</sup> Century Agenda Action Plan*; however, this work was not able to complete an integrated report. In 2000, the State changed the original 21<sup>st</sup> Century Agenda Leading Group into Promoting Sustainable Development Leading Group, so did Yunnan, and a new office was accordingly set up. Early this century is a critical time for Yunnan to speed up development and shorten the distance to advanced regions. It is also the period for Yunnan to achieve the goal of a holistic *xiao kang* society and to move forward to achieve further strategic goals. The philosophy of scientific development and the strategy of sustainability are the only way to achieve sustainable economic development, to realize the holistic progress of the society, to achieve the harmony between population, resource and economy, and to achieve the goal of a holistic *xiao kang* society. In 2001, a study report for Yunnan to implement the sustainability strategy was completed. This work was assigned by the Provincial Communist Party and organized by the Provincial Planning Committee. From the same year to 2005, studies and capacity building activities were carried out for Yunnan to achieve sustainable development at the beginning of the 21st century. These works were supported by the British Department for International Development (DFID), and were organized by Yunnan Development and Reform Bureau (YDRB) in line with China's national policy on sustainable development and the order of the provincial government.

### **1.3.2 Economic Development**

Yunnan Province strives to achieve the harmonious economic and social development, to promote the reform of economic system and the shift of economic development approach, to speed up the economic growth rate, to improve the quality of economic operation, and to strengthen the potential of economic development. For agriculture, grain yield is increased, production efficiency is improved, farmers' income is increased, economic volume is also growing, and the quality and economic gain of agricultural production are both dramatically enhanced. New breakthroughs are made in the investment in fixed assets, non-public ownership economy and urbanization. In general, the economy in this province has been growing steadily and healthily and people's living standard has been improved substantially. GDP in Yunnan reached 347.289 billion RMB in 2005; provincial financial revenue reached 76.64 billion RMB; per capita disposable income was 9,266 RMB for city and town residents; per capita net income for farmers was 2,042 RMB; the rate of urbanization was increased to 29.5%.

### **1.3.3 Social Development**

Investment in Yunnan has been increasing on education, science and technology, culture and public health. At the same time, the reform of the educational system has also made a new progress. The enrolment ratio of pupils who graduated from elementary schools to enter a higher school in 2005 increased by 6% compared with that in 2001. Reform of the cultural system in the demonstrational units has gained a fresh progress. Projects were implemented to promote ethnic culture and to provide every village with TV and radio broadcast services. The development of public health system has been accelerated, and pilot projects have been initiated on new rural cooperative medical services. Social stability is paid great attention. While the social security system has been formed and improved, low income people are provided with subsistence allowances as long as they are eligible.

Yunnan Province has issued and implemented the *Decision on Strengthening Population Control and Further Reducing Reproduction Rate, Temporary Regulations on Single Child Reward for Rural Population in Yunnan Province*, and *Regulations on Population and Population Control in Yunnan Province*. An integrated mechanism has been established and refined so that the population problems are solved jointly by the communist party and the government, which take the lead responsibility of population control. As a result, the population natural growth rate has been dropping effectively. Total population in the province was contained within 44.504 million by the end of 2005, and the natural growth rate of population declined to 7.97 ‰ in the same year. The upward trend of population growth rate in the province has been largely restrained.

### **1.3.4 Ecological Recovery, Environmental Protection and Reasonable Resource Uses**

Taking the opportunity of the national policy of Grand West Development, Yunnan Province has implemented various projects featuring forestation, including Natural Forest Preservation Project, Grain for Green Project, Shelterbelt Project and Sino-Germany cooperation project, and the World Bank Loan projects. Dry fruit plantation, biomass plantation, fast-growing forest, bamboo and rattan plantation, and rare wood plantation, etc., have been established at fast speed. The ecological recovery and development in this province is showing good signs; and with the forest coverage rate increased to near 50%, this province has become one of the provinces with obviously improved ecological condition. At present, there are 198 nature reserves of different types across the province, covering 9% of the province's land area. Yunnan Province is rich in biodiversity, boasting 67.5% of the rare and endangered species nationwide, ranking the top in China.

Yunnan Province has strengthened water pollution control. With great emphasis on the improvement of Dianchi Lake, the deterioration of water quality has been generally restrained. Water quality of other lakes in the province maintains stable. For the 77 major streams, 62% of the cross-sections comply with the standards for aquatic environmental function. Environmental quality in cities has been improved greatly, helped by the construction of urban wastewater treatment facilities and waste treatment facilities. The treatment and management of atmospheric, liquid and solid wastes is regarded as the focus of pollution control and environmental protection. Small-scale enterprises with high pollution and high resource and energy consumption are either stopped, shut down, or merged or changed to other businesses. Industrial pollution sources are subjected to integrated compliance so that the province's industrial pollution is generally controlled within the regulated limit. At the same time, environmental protection industry is burgeoning, too.

Stringently following China's national land policies, 80% of the province's land is classified as basic land protection areas, on which high-productivity and stable-yield farming projects and middle to low-yield farmland improvement projects are implemented. Water conservancy measures are implemented on 35.4% of the land. These measures help to maintain the size of arable land, produce quality and agricultural yield. Meanwhile, measures of conservation and effective use of mineral resources are adopted to promote the reasonable exploitation and use of mineral resources on scale. Merging of major mines and exploration are encouraged, and deep processing is strengthened to efficiently use mineral resources and to enhance the competitiveness of mine industries.

Yunnan has unique and prestigious tourism resources. Based on the advantages, the province has adopted a series measures to promote the development of tourism industry in

line with the fast growth of tourism industry at home and abroad. Tourism industry has been growing, changing from simply receiving tourists to a more mature industry and an important pillar industry. Tourism industry has been developing and expanding steadily, gaining a higher position in the provincial economy.

### **1.3.5 Sustainable Development Implementation**

Since the Ninth-Five-Year-Plan period, Yunnan has embraced the concept of sustainable development in provincial Social and Economic Development Plans. A series of local laws and regulations have been promulgated so that the legal foundation for sustainable development is strengthened. A decision-making and implementation mechanism has been established, prescribing a leading role of the government, the coordination between different departments and differentiated responsibility. An early warning system and a monitoring, prevention and control system are established and improved for the resources, environment and disasters across the province. Governments' decision-making efficiency and emergence response ability are dramatically enhanced. The public awareness of sustainable development is raised. International cooperation and exchanges in ecological and environmental protection aspects are actively practiced.

## **1.4 Challenges to Overcome**

### **1.4.1 Irrational Economic Structure**

The economic growth in Yunnan is largely driven by investment as the structure of supply and demand is less than reasonable. The industrial structure does not match the structure of employees, in which a higher proportion of laborers are in agriculture. In the service industry, the employment rate is low. The unreasonable urban-rural structure, undeveloped county economy, imbalanced regional economic development, low urbanization rate, all combined together, are hindering the economic and social development in Yunnan. The potential of economic growth in Yunnan is still to play sufficiently. It is urgent to further increase investment, provide more employment opportunities and promote scientific and technological progresses.

### **1.4.2 Conflicts between Human, Resource and Environment**

Due to the big population and low labor quality, economic growth and a higher living standard in Yunnan have to depend mainly on the resource and environment. The pattern of extensive economic growth has not been improved. The support capacities of main natural resources such as land, water, mineral resources and forest are considerably weak due to extensive exploitation, low efficient protective measurement and insufficient comprehensive utilization and resulted resource waste. Water loss, soil erosion and rocky desertification in certain areas remain severe, resulting in many consequences such as lower land productivity, ecosystem degradation, and deteriorated water and air quality, total water quantity decreased in both rivers and lakes, and water pollution resulting in clean water shortage. Low domestic sewage treatment rate in both urban and rural areas, persistent increase in urban domestic wastes and industrial pollutants, and pollutants movement from urban to rural areas, have threatened environmental security and public health.

### **1.4.3 Imbalanced Social and Economic Development**

There are problems such as higher employment pressure, lack of investment in compulsory education, resources for public health excessively concentrated on urban areas. Over 80% percent of the province's resources for public health is poured into cities; 80% percent of the townships and farmers have no access to rural cooperative medical services; difficulties in schooling and medical care are prominent. Income distribution is irrational, social security system is incomplete, low income or unemployed population and farmers whose land is acquired are facing difficult livelihood. Public service facilities in rural areas (including facilities for transportation, utility, post services, TV and radio broadcast services) are insufficient. A mechanism for harmonious social and economic development is needed to meet the demand of the public.

### **1.4.4 Imbalance between Urban and Rural Areas and Uncoordinated Regional Development**

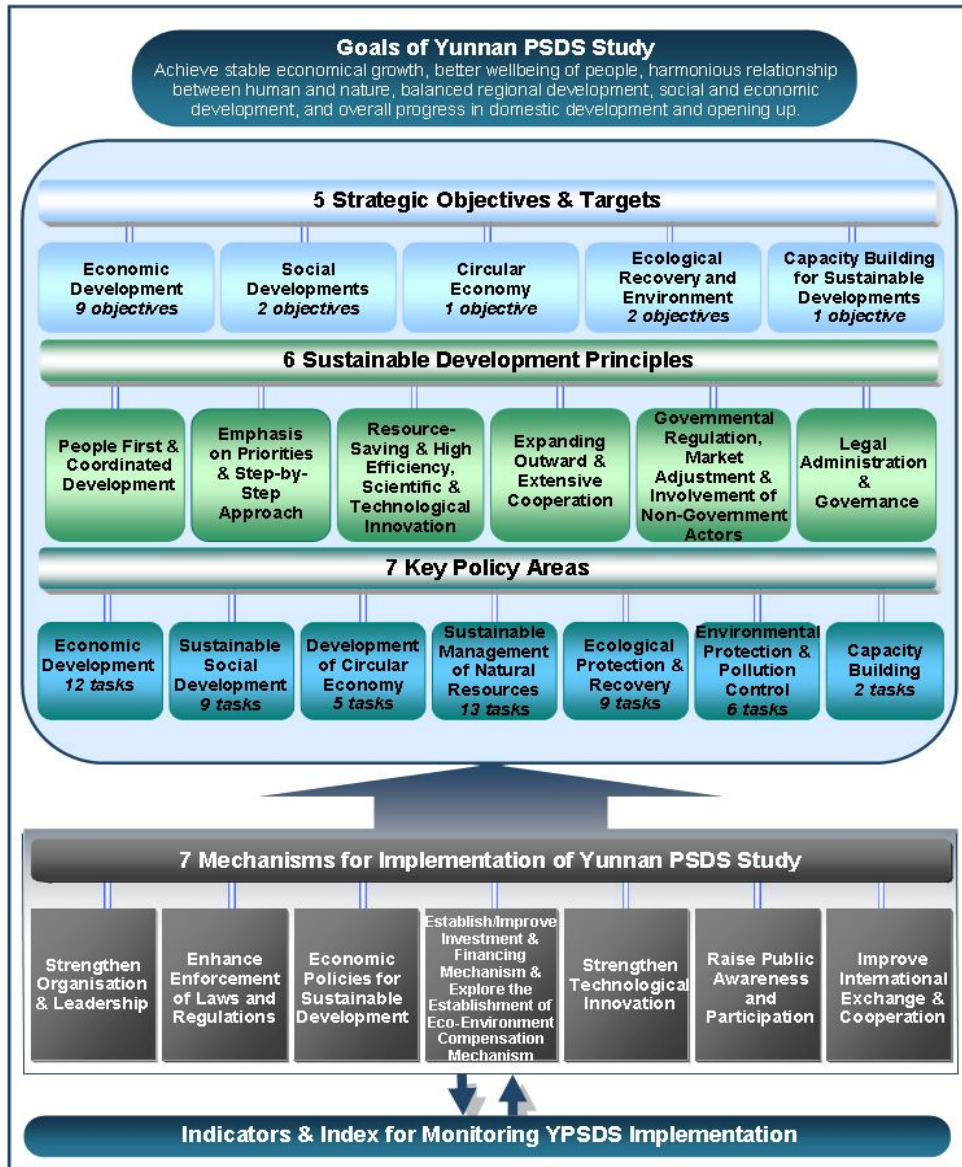
Yunnan now faces new difficulties and problems in the course of rural development. It is more difficult to further increase farmer's income and reduce poverty, and the income gap between urban and rural areas is widening. Regional development also displays imbalance. Poor population is increased while the towns and cities are experiencing economic transformation. Poverty issues still exist in many rural areas where poverty runs deep and poverty population has a high percentage.

### **1.4.5 Weak Awareness of Sustainable Development**

Some people still have some false ideas, for example, putting economic growth on top of social development, putting cities on top of rural areas, putting resource exploitation on top of ecological and environmental protection, etc. Macro-control, system, administrative management system and legal system need further improvement. The transformation of governmental functions has not finished yet to focus on economic regulation, market supervision, social management, construction of public facilities and public services. The mechanism and institutions for the implementation of sustainable development also need further improvement. Public awareness raising and education for sustainable development are not extensive enough, and the public participation mechanism needs to be strengthened.

## 2. SUSTAINABLE DEVELOPMENT STRATEGY FOR YUNNAN

This Chapter 2 presents the proposed Sustainable Development Strategy (SDS) for Yunnan Province developed in consultation process with stakeholders (see Annex 1). The Figure below summarizes the overall proposed vision for the long term development in a form of a SDS Structure, including the Goals, Objectives, Targets, Principles, existing and proposed Policies and mechanisms for implementation, described in Chapter 2, as well as existing SD indicators from the Chapter 3.



**Figure 1: Proposed Structure of the Yunnan Provincial Sustainable Development Strategy**



## 2.1 Goals for 2008- 2020 upwards

Unremitting efforts need to be made to set up a modern agriculture and a new-type industry to achieve a basic pattern of circular economy, effectively protect ecological environment, greatly improve population quality, efficiently utilize resources, and basically establish a resource-conserving society. The aim is to achieve stable economical growth, better wellbeing of people, harmonious relationship between human and nature, balanced regional development, social and economic development, and overall progress in domestic development and opening up. If those goals are achieved, Yunnan will become a new frontier, be wealthier and more beautiful, and its people can enjoy the fruits of economic development, social progress, cultural prosperity, national unity and beautiful landscapes.

## 2.2 Strategic Objectives and Targets (2010-2020)

### *Economic Development*

#### **Structural Adjustment:**

- ☞ By 2010, Per capita GDP should be increased by 120% compared with the year 2000 to reach 52.20 billion RMB, with an annual average growth rate above 8.5%, through optimizing the economic structure and improving economic returns while reducing resource consumption and protecting the environment.
- ☞ By 2020, the annual average GDP growth rate should maintain around 9%, and the GDP in 2020 should be quadrupled to reach 1320 billion RMB, so that Yunnan can keep pace with the nation along the way to build holistic xiao kang society.

#### **Poverty Elimination:**

- ☞ By 2010, 2.5 million poverty stricken population should be relieved from poverty; 5 million rural low-income population should get higher income;
- ☞ By 2020, in poverty-stricken areas, infrastructure and ecological environment should be fundamentally improved; social progresses should be made in all aspects; farmers' living standards are enhanced and their personally quality should be improved; xiao kang life should be basically achieved.

#### **Urban and Rural Development:**

- ☞ By 2010, the imbalance in regional development should be improved; income gap between urban and rural residents should be narrowed; urbanization rate should reach 35%; and economic power on county level should be further strengthened;
- ☞ By 2020, a city and town network should be formed that is rational in terms of scale, layout and size; urbanization rate should reach at least 50%; the goal of Yunnan becoming a powerful green province and a province of ethnic and cultural diversity should be achieved.

### *Social Developments*

#### **Population Quality**

- ☞ By 2010, the whole population should be restrained within 46 million; natural population growth rate should be controlled at 6.08‰; average expected life span should reach 70 years; compulsory education should be complete; gross admission rate for higher education should reach 18%; average education time for 15 and above age group should be 8 years;
- ☞ By 2020, the whole population in this province should be controlled within 47.86 million; natural population growth rate should be controlled at 2.85‰; sex ratio at birth should become equilibrium; quality of compulsory education should be improved

widely; gross admission rate for higher education should reach 30%; average education time for 15 and above age group should be 10 years. Science, education, culture and sports should be developed comprehensively; population quality should be substantially improved.

### **Social Security**

- ☞ By 2010, registered unemployment rate of urban population will be controlled within 5%. Gradually establish a social security system and a rural medical and health service system covering large areas.
- ☞ By 2020, a public infrastructure and public service system in urban and rural areas should be formed. Broadcast, television, film, culture, sports and other affairs should make further progresses, to form a good atmosphere for solidarity and mutual assistance, poverty-relief, and a peaceful and friendly, harmonious interpersonal relationship. The level of social civilization should be further improved; capacity building for establishing a harmonious society should also be strengthened.

### **Circular Economy**

- ☞ By 2010, energy consumption per 10 thousand RMB GDP should be reduced to 1.6 tone standard coal. Reuse rate for industrial wastewater should be raised by 10%, and integrated utilization rate of industrial solid waste should reach 50% or above. Recycling rate of industrial solid waste and comprehensive utilization rate of mineral resources should be notably improved. In the structure of terminal energy sources, weight of high-quality energy sources such as electric power and natural gas should be gradually increased. A social mechanism will be basically established for the whole society to spontaneously save resources.
- ☞ By 2020, energy structure should be notably improved, and energy efficiency enhanced dramatically. Resources should be efficiently exploited and rate of integrated utilization should be increased remarkably. A resource security system for sustainable utilization and a security system for important strategic resources should be further improved.

### **Ecological Recovery and Environmental Protection**

#### **Ecological Recovery**

- ☞ By 2010, plant 6.13 million mu artificial forests in normal ecological zones. Maintain the outcome of the already finished Grain for Green projects and the afforestation projects on barren mountains. Forest coverage rate should reach at least 53%. In key zones, the ecological functions and biodiversity should be recovered. Further 1.2 million hectares of eroded areas should be recovered.
- ☞ By 2020, all barren hills and mountains suitable for afforestation should be planted with woods. Forest coverage rate should reach at least 56%. Environmental quality of both urban and rural areas and key basins should be widely improved, and ecological environment for agriculture should be further improved.

#### **Environmental Protection**

- ☞ By 2010, COD reduction for major pollutants should be 5%; SO<sub>2</sub> reduction should reach 4%; domestic wastewater treatment rate in cities should reach 80%; harmless waste disposal rate should be 65%.
- ☞ By 2020, aquatic ecosystem in nine plateau lakes should be effectively protected, water pollution in six water systems should be controlled on overall, and ecological environment should be improved.

## **Capacity Building for Sustainable Developments**

- ☞ By 2010, governmental capacity for decision-making and overall coordination should be notably improved. The management system, security system, legal system and policy system should be established or improved for sustainable development;
- ☞ By 2020, the legal system and the policy system, and the inter-department adjustment and management mechanism should be established or improved for sustainable development. The information sharing mechanism for sustainable development and the assessment and monitoring mechanism for sustainable development of major economic and social activities should be fully established. Awareness and public participation in sustainable development and public supervision should be dramatically cultivated. Cooperative capacity should be built and improved for participation with other provinces and international communities in sustainable development fields to create a sound environment, in which everyone actively takes a part.

### **2.3 Sustainable Development Principles**

#### **2.3.1 People First and Coordinated Development**

Focus on sustainable economic development; change the pattern of economic growth, achieve harmony between speed and efficiency, between quantity growth and structural optimization; coordinate the relationship between economic growth, social development, population, resource and the environment; and promote harmony between man and nature.

#### **2.3.2 Emphasis on Priorities and Step-by-Step Approach**

Follow the guidelines such as balance between supply and demand, structural optimization, economy on scale and high efficiency, clearly identify key issues in economic development, have a long term vision, concentrate human, material and financial resources on key industries and key areas, achieve goals step by step.

#### **2.3.3 Resource-Saving and High Efficiency, Scientific and Technological Innovation**

Promote both development and conservation, put more emphasis on resource conservation, and give full play into roles of science and technology as the first productivity. Consider human resource as the top resource. Resource optimization, allocation, protection and exploitation should be promoted. Vigorously promote cleaner production and circular economy. Gradually build a resource-saving industrial and consumptive structure to improve resource efficiency.

### 2.3.4 Expanding Outward and Extensive Cooperation

Take geological advantages of Yunnan province; insist on using both domestic and overseas resources; starting from domestic market, actively develop both domestic and overseas markets. Strengthen international cooperation with Southeast Asian and South Asian countries in fields such as resource exploitation, material processing, import substitution, etc. Push sustainable development forward in the process of economic globalization and regional integration.

### 2.3.5 Governmental Regulation and Market Adjustment

Deepen reform to change functions of governmental agencies. Government shall play the leading roles in macro-adjustment, supervision, and in providing policy and public services. Fully use market-oriented mechanisms and mobilize enterprises, social organizations and the public to participate in sustainable development.

### 2.3.6 Legal Administration and Governance

Strengthen the formulation of regulations and policies for sustainable development, improve enforcement activities, regulate management, strictly follow the responsibilities, rights and interests of every social group so that a sound environment is built for the whole society to actively support sustainable development.

## 2.4 Key Policy Areas

Sustainable development is a complicated task. Demanded by the inner need of sustainable development, the core of sustainable development is about improving the quality of life for both current and future generations simultaneously pursuing prosperity, environmental protection and social equity. Its major components are all the aspects of social development. Optimized resource allocation, efficient resource use and conservation are the major approaches of sustainable development. The establishment of an ecologically sound and environmentally friendly environment is a major guarantee for the sustained improvement of social productivity and the continuous improvement of people's living quality. In the medium and longer term, following tasks shall be fulfilled:

### 2.4.1 Economic Development

Adjust industrial structure and change mode of economic development so that the strategic macro economic adjustment can be realized comprehensively. Finally, a sustainable economic system will be established that is low in resource consumption and minimal in environmental pollution.

➤ ***Promote agricultural adjustment and adjustment of rural economic structure***

Stabilize and increase agricultural yield, enhance the integrated capability of agriculture, and strengthen the degree of adjustment. Promote the modern characteristic agriculture by

upgrading traditional agricultural and developing characteristic production. Adjust types and production layout of produce, improve produce quality, and encourage the concentration of quality farming in certain areas. Stabilize the competition edge of fire-cured tobacco, sugar cane and gum production. Increase the production of potato, flowers, herbals and edible fungi. Develop animal farming industry, encourage pig raising, and increase scale.

➤ ***Promote industrialized agricultural production***

Develop green and safe agricultural products and by-products. Based on market mechanism and supported by science and technology, develop deep processing and integrated use industries to expand the production chains. Build intensive, standardized and large-scale agriculture production bases, led by leading enterprises. Foster some strong and competitive enterprises to form a closely-connected chain and to encourage the growth of farming, animal farming and processing industries, using advanced technologies.

➤ ***Adjust the concept of industrial development***

Change the development mode and innovate development mechanism, improve environment and quality of development. The development of key industrial chains will help Yunnan to progress along the way to new industrialization that features Yunnan's unique characteristics.

➤ ***Use high or advanced technologies to upgrade traditional industries***

Develop and use high or advanced technologies. Improve and upgrade industrial facilities and equipments and phase out backward technologies, facilities and equipments. Limit the implementation of industrial projects with low-efficiency, high-pollution and high resource consumption. Strictly follow the regulations for iron and steel, aluminum, cement, etc., sectors about the higher technological standards for entering the market. Consider Yunnan's electricity advantages and potential to lay out businesses with high energy consumption.

➤ ***Develop modern service industry***

Speed up the development pace of service industry. Improve its quality and level, with a major aim to increase employment opportunities. Focus on key sectors and key areas to upgrade traditional service industry. Fully improve the service industry.

➤ ***Eliminate poverty through development***

This task will be led by the government and will be participated by the public and the whole society. National poverty relief counties will be the major targeted places. Poverty population will be the major target groups. Poverty relief will be carried out village by village. The major aim is to improve basic living conditions, increase income. Finally, a long term poverty relief mechanism will be established.

➤ ***Concentrate resources on villages as a unit***

Village poverty elimination plans will be developed, government employees will stay in village to help. Efforts will be concentrated on improving basic living condition and supporting grain production. This village work will consist three steps: poverty relief with outside help, maintain success, and self development.

➤ ***Enhance labor training and expand labor export. Strengthen labor professional and skill training***

Combine governmental guidance with market operation. Training and labor export are the two major measures. Make full use of existing training resources to improve farmers' knowledge and skills. Farm labors will be fairly treated, properly guided and managed, and good services will be provided to them. Establish a favorable environment for farmer labors in cities in which their employment and rights can be guaranteed.



➤ ***Encourage poverty elimination by approach of industrialization***

Start from leading enterprises to support enterprises. Continue micro credit projects and help the poverty stricken people to develop farming and animal farming that have good market prospect. Based on market, continue to develop traditional competitive industries such as tobacco, sugar, tea and gum. Further develop characteristic production such as vegetable, flower and potato. Speed up the development of animal farming and forestry. Develop green or organic produce and other special agricultural products. Encourage township-owned and non public owned enterprises in agricultural product processing and construction material businesses. In this way, a long term mechanism will be set up for complete poverty elimination.

➤ ***Implement projects supporting special weak groups and special poor areas through development***

Strengthen the support given to townships and towns in old revolutionary areas, 7 areas with less than 100,000 population where minority ethnic groups live. More support will be given to ethnic groups living cross borders and ethnic groups facing the transformation from the primary stage of slave society or feudal society to socialism society. In poverty stricken areas, road access, electricity supply, broadcast and TV, and telephone services will be available. Schools, medical care stations, safe drinking water and safe shelters will also be available. Farmers will have basic farmland or forestry properties. Indicators such as per capita available grain, per capita income, nine year compulsory education rate will meet the requirements proposed by national poverty elimination plan outline. Necessities will be enough for those people and the society will become more stable and peaceful.

➤ ***Further strengthen infrastructure in poverty stricken areas***

Actively apply for national support. Province, prefectures and counties work together to finance relevant projects. Support infrastructure construction by the way of “work for food”. Continue the work of basic farmland construction and rural infrastructure such as utility and rural energy infrastructure. For poverty stricken villages and households that are too remote, scattered and require high investment for infrastructure, and for poverty stricken villages and households that have lost basic living conditions, ecological migration or relocation shall be carried out when necessary.

➤ ***Speed up urbanization***

The principles for urbanization are incremental progress, land conservation, intensive development, and reasonable layout. Continue the construction of new city of Kunming, regional cities, county towns, major towns, etc., to form a urbanization network with complete functions and prominent features. Continue to develop in places where prefecture or city government is located into middle-sized cities, helping a number of small surrounding towns to grow faster.

## **2.4.2 Sustainable Social Development**

Adhere to “people first” principle. Control total number of population. Improve overall personal quality. Improve population structure. Strengthen human resource development. Adopt the strategy of using human resource to strengthen the province. With these measures, sustainable social development will be realized. Establish and improve social security system, develop social welfare, and improve public services. Strengthen the development of socialism spirit and socialism democracy.

➤ ***Control the total number of population and improve population structure***

Continue work on family plan, implement the policy that gives reward and support to families whose two children are both girls. Implement favorable policies for rural single children,

giving them reward, allowance or fee exemption etc. Implement projects such as “Less Children Wealthier Family” projects, Family Planning Service projects, Birth Defect Prevention projects and Care for Girls projects. Strengthen family control in boarder areas and poverty stricken areas and management of migrant population. Improve aspects of social security system that are related to population and family plan. Improve the imbalanced structure of human resource. Optimize the distribution of population.

➤ ***Develop education and improve population quality***

Implement Action Plan for Improving Basic Education to promote nine year compulsory education. Comply with requirements of rural compulsory education management system that focuses on counties. Implement “one fee only” policy and for rural compulsory education “one fee exempt and one subsidy” policy. Expand the range of boarder areas enjoying the “three exempt” policy (tuition, incidental fee and book fee exempt). Increase the number of boarding schools. Speed up the reconstruction of dangerous middle and primary schools in rural areas. Improve the quality of rural schools and management. Continue the implementation of Hope projects, Spring Bud projects, Poor Students Support projects and Literacy Projects. Secure the rights of weak groups such as women, disabled, poor people and children of migrant population. Increase the scale of high schools and higher education institutions. Develop professional and skill education. Improve adult continuous education system. Encourage non-government education.

➤ ***Develop human resources and improve human resource flow mechanism***

Use human resources to make Yunnan a powerful province. Focus on the training of political leaders, business management talents and people with special skills and rural practical skills. Scientifically adjust the education mode in higher education institutions to improve education and training quality. Implement projects to improve rural vocational education and distance education. Encourage farmers to take national employment qualifications. Promote reforms in human affairs system to make it more open, fairer and encourage competition and selection. This system is conducive to talent selection and respects talents and knowledge. This atmosphere is good for the talents to gather in Yunnan.

➤ ***Improve social insurance, social relief, social welfare and charity***

The social security system will be led by the government, based on community, independent from any enterprises or institutions. This system accepts multiple financial sources, follows regulations and provides social services. Improve the minimum life guarantee system for urban citizens and basic endowment insurance system. Speed up the construction of social welfare institutions and public welfare facilities to improve the level of social welfare in cities and towns. Increase investment into the construction of social security in rural areas. Explore the establishment of a rural social security system that consists of minimum life security, pension and medical insurance. Narrow the gap between rural and urban areas in terms of social security.

➤ ***Establish and improve urban and rural medical and healthcare service systems***

Based on the existing services of health and medical care in rural areas, promote new rural cooperative medical care pilot project. Strengthen disease prevention and healthcare for women and children. Extend health knowledge and promote healthy habits and living style. Raise the citizens' health awareness and improve their ability of self care.

➤ ***Develop cultural affairs and industry***

Deepen the reform in cultural system, prosper cultural affairs and cultural industry and establish a learning society. Construct cultural infrastructure, protect selected cultural products, protect ethnic culture, and carry out capacity building for cultural development. Speed up the reform and development in news business, publishing, arts and literature,

philosophy and social science. Develop cultural industry to meet the increasing cultural need of the public. Promote popular culture that is healthy and positive. Continue to implement the Civil Physical Training projects to improve people's physical quality. Protect and document relic books and other relics of minority ethnic groups. Collect ethnic languages resources. Protect and further develop ethnic music, dance, costume and architecture. In general, protect ethnic diversity and build Yunnan into a culturally powerful province.

➤ ***Implement civil moral project***

Carry out civil activities on moral civilization. Use both moral force and legal power to govern the province. Strengthen the moral and mental quality of teenagers. Improve the legal awareness and moral awareness. Form a living style that advocates resource saving and recycling.

➤ ***Implement anti-drug and AIDS control projects***

Set up drug-free communities and families. Continue the work on AIDS control, Implement favorable national policies for AIDS patients. Restrain criminal activities such as sex work, illegal blood collection and selling to clean the society.

➤ ***Establish and improve a social management system***

Pay attention to social conflicts and social safety to stabilize the society. Establish an early warning system for the whole society and an emergent response system that is sensitive, efficient, effective and follows centralized command. This will increase the ability of guarantee social safety and emergency response. Improve social order and the relevant management works. Guarantee people's property and life safety.

### **2.4.3 Development of Circular Economy**

Combine economic development with resource conservation and environmental protection. Follow "3R" (reduce, reuse, recycle) principle to achieve high efficiency, low resource consumption and low emission. Speed up the marketing of scientific research findings. Develop circular economy which features environmentally friendly technologies, resource reuse and recycling technologies, cleaner production practices and green consumption technologies. Mobilize the whole society to conserve, reuse and recycle resources such as energy, raw materials, water, land, etc.

➤ ***Establish a resource conservation society***

Through national education, value guidance and consumption, encourage the citizens to take part in the development of circular economy so that environmentally friendly and resource-conserving style of production, consumption and living. Establish industrial system, infrastructure system, transportation system, living service system and strategic resource saving system in line with resource saving society.

➤ ***Strengthen energy saving and emission reduction***

Enforce the Renewable Energy Law, develop service industries and resource reuse and recycling industries related to circular economy. Effectively improve technologies and management of social service. Develop technologies of resource saving, water saving, land saving and develop the use of renewable sources. Develop deep processing, expand industrial chains and increase value added.

➤ ***Promote waste recycling***

Strengthen the management of sectors with high waste generation and heavy pollution, such as smelting, coal, chemical, construction materials, paper and other sectors. Increase the reuse and recycling of residual, wastewater, waste gases. Use construction wastes,

straws, animal droppings and other agricultural wastes. Promote use of biogas and other biomass energy sources. Collect, reuse and recycle wastes and worn materials. Speed up the construction of domestic wastewater treatment and reuse. Promote the reuse of treated wastewater. Increase waste reuse and recycling in construction materials, iron and steel, electricity sectors to reduce the quantity of final waste disposal.

➤ **Promote cleaner production, especially in smelting, construction materials, chemical, electricity, paper and other sectors**

Promote the concept of cleaner production to agriculture, architecture and service sectors. Major industrial sectors, eight big industrial bases and industrial parks will practice cleaner production activities. The compliance rate will reach around 40%. Construct a number of zero emission enterprises.

➤ **Promote pilot projects on circular economy**

Focus on technology, institution, policy and regulation. Start from pilot projects to foster a number of enterprises adopting circular economy. Pilot projects will be implemented on different levels. Develop and promote technologies of resource saving, substitute resource or energy, resource reuse and recycling. Speed up technological upgrading.

#### 2.4.4 Sustainable Management of Natural Resources

##### **Land Resources**

Land is the basis of livelihood and development. Strictly follow the Land Management Law and Yunnan Land Management Regulation. Adopt the national policies that land resources should be cherished and reasonably used and farmland should be protected. Change the methods of land resource exploitation to promote the intensive use and optimized allocation of land resources and to increase land efficiency and integrated benefits.

➤ **Strictly manage land uses**

Implement The State Council's Decision on Deepening Reform on Land Management. Public land uses and land uses for business will be distinguished. Land acquisition system should be promptly reformed to secure the interests of farmers whose land is acquired. Enforce the Law on Land Contract in Rural Areas. Follow the principle of legal, voluntary and compensatory to innovate a rural land transfer system. Properly develop operation on scale. Strengthen the management of land uses and further establish and improve a strict land management system catered to Yunnan's conditions. Follow the requirements of land use review and approval for construction projects. Focus on farmland protection, strict control of non-agriculture land uses, dynamic balance of total farmland volume and intensive land uses. With these measures, land resources will be managed in an integrated and balanced manner.

➤ **Implement strict basis farmland protection system**

Once identified, the identification of basic farmland will never be changed. Any organization or enterprise cannot change the status or occupy the basic farmland on their own will. Basic farmland that is occupied must have other piece of land for compensation so that the total size of basic farmland remains unchanged in the province, and its quality remains uncompromised. Implement "Arable Land Quality Improvement Project" and "Fertile Land Project". Set up standard farmland construction plan and quality standards. Establish and improve an effective long term mechanism, in which infrastructure in farmland is improved, land productivity is enhanced, ecological shelter for farmland is formed and the quality of basic farmland and other arable land is maintained.

➤ **Implement land protection and recovery projects**

Implement national projects on land recovery and management to increase the size of arable and enhance land use capacity. Implement farmland improvement projects, focusing on the improvement of middle to low productivity farmland. Continue integrated agricultural development and integrated improvement and management of mountains, waters, farmland, woods and roads. Increase productivity and fertility and incrementally increase the percentage of high productivity farmland in the total arable land. Implement projects to improve low-productivity woods and gardens to increase their productivity and operation level. Implement dynamic monitoring projects to track land uses, and gradually set up a land inventory and monitoring information system. This system will be supported by modern information technologies, equipped with complete range of functions and meet the requirement of modern land management.

**Water Resources**

Focus on the governmental role in social management and public services for water resources. Carry out catchment water management and solve the prominent water problems in catchments, regions and urban and rural development. Put emphasis on both efficient exploitation and conservation. Protect aquatic environment, optimize water resource allocation, and guarantee flood safety, water safety and aquatic environment safety.

➤ **Develop scientific water resource exploitation and protection plans**

Properly deal with the relationships between upper reaches and lower reaches, between urban and rural areas, between catchment and regions, which feature the conflict between exploitation and protection. Reasonably allocate water resources for sustainable uses, and scientifically manage flood control, water collection, water supply and discharge, etc.

➤ **Focus on solutions to problems of uneven water resource distribution and water shortage**

Adopt rural and urban sustainable water use strategy: conservation first, pollution control in source areas, protection of drinking water sources, and multiple ways of water exploitation. Establish water-conserving industry, agriculture and society. Suitably implement regional water diversion projects to relieve water shortage in Kunming, cities in Dianzhong and cities in regional centers. Strengthen flood control and management of aquatic environment. Build good water conservancy infrastructure to promote the social and economic development. Properly deal with relationship between mountainous areas and gorge areas.

➤ **Promote water conservancy infrastructure construction**

Prepare for the development of an integrated water resource exploitation plan in line with urbanization and the adjustment of industrial structure. Focus on middle-sized water conservancy projects and key projects. Actively organize the implementation of Rundian Projects<sup>1</sup>, urban water supply projects, rural water supply projects, rural drinking water safety projects, defect reservoirs refurbishing projects, follow-up supplementary facilities for major irrigation areas and water saving projects, hydropower and rural utility facility projects. Develop efficient and water-saving modern agriculture.

**Forest Resources**

Forestry is a major part of national economy featuring renewable resources. Foster forest ecological system. Implement natural forest protection, grain for green projects and shelter forest projects. Optimize vegetation mix. Reduce and improve single-species forest while increasing mixed forest to enhance biomass volume and diversify forest functions.

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<sup>1</sup> This project aims to improve 50 selected reservoirs across Yunnan to improve the capacity of water supply, irrigation, flood control and power generating.



➤ ***Carry out classified forest management***

Strictly manage public forest, flexibly manage commercial forest and promote artificial forest. Commercial forest is independently operated by the owner. The management of public forest mainly depends on governmental fund. Public forest in major ecological protection areas is under strict management, closed to foster the forest. For the establishment and management of general public forest, effective methods shall be explored, such as market-oriented instruments, mixed ownership (state owned and privately operated, state owned and privately managed and operated). Ecological benefits and economic benefits are both considered. For commercial forest, resource allocation shall be market oriented and be given necessary governmental support. Non private ownership shall be encouraged for commercial forest. Forestry market shall be fostered and regulated.

➤ ***Deepen reform in forest property system***

The direction of reform is to consider forest use rights as a property right so that ownership can be stabilized and contract rights can be improved. Operation rights will be flexible and the legal rights of the operators will be protected so that they can have proper disposal right and benefit right for forest products. According to Forest Law, the use rights of forest, wood forest land can be transferred following three principles: legal, voluntary and paid. Use right of barren mountains, barren flat land, barren sand areas and barren banks shall be flexibly managed and be given to willing people for reasonable uses. Equal policy and legal guarantee are provided to different forest operators, public or private alike.

➤ ***Continue to implement natural forest protection projects, grain for green projects and shelterbelt forest projects***

In the short term, forest preservation is the major task; for middle and long term, forest fostering is the major task. Mixed measures will be taken to effectively protect and reasonably use natural forests, including preservation, resting and fostering. Fulfill national grain for green and afforestation tasks assigned to Yunnan, maintain the forest land diverted from farmland and keep the farmers' income. A shelterbelt forest system will be built in areas beyond the natural forest protection project areas, including catchments and banks of Nanpan River, Hong River, Lancang River, Nu River, Yiluwadi River, 10 prefectures and their 60 cities and counties beyond Jinsha River catchments. It will consist of mixed forest type and different tree species and have various ecological functions in line with the areas' different ecological function zoning. This shelterbelt system will be able to reduce the frequency and intensity of natural disaster.

➤ ***Speed up economic forest bases and raw material forest bases***

Establish several large scale commercial forest bases across Yunnan in scientific layout. Establish forest product processing bases and forest product trading center.

***Mineral Resources***

Enforce Law on Mineral resources, Regulations on Mineral Resource Management in Yunnan and other related laws and regulations. Cherish, protect and reasonably exploit mineral resources. Strengthen inventory and use survey, planning and management, protection and reasonable exploitation, and mines' ecological recovery.

➤ ***Strengthen mineral resource inventory survey and assessment***

Actively implement scientific exploration projects, special mine exploration projects and metal mineral resource differentiated exploitation project, etc. Strengthen surveys of copper, lead, zinc and tin mines and other precious metal mines. Make efforts to increase the qualifying reserve of non-ferrous metals and precious metals. Set up a Risk Exploration Fund to encourage enterprises and institutions to carry out mine exploration with high risks, so that their technique and equipment advantages can be fully taken. Strengthen

cooperation with ASEAN countries.

➤ ***Implement scientific mining plans. Review and approve mine exploitation projects in accordance with the entrance conditions***

Supervise miners to exploit according to the approved exploitation plans to ensure the effective uses of mineral resources. Further enhance mine incorporation and increase level of intensive operation. Mining activities will be differentiated according to different areas, which are classified as mining encouraged area, mining limited area and mining prohibited area. Encourage the mining of resources that are rich in reserve, have good market promise, have good economic return and post minimal ecological threats. Limit the mining of resources that are oversupplied, lack reserve and have certain ecological impacts. Limit the mining of export resources to maintain the value. Prohibit the mining of mineral resources that are banned by the nation and have significant ecological impacts. Support the development of non-ferrous metal processing and phosphate chemical industry. Support the development of iron and steel industry, construction material, precious metals. Stably develop coal industry. Limit the exploitation of tin, antimony and tungsten.

➤ ***Enhance the management of mineral resource exploitation and environmental protection***

Change the approach of mineral resource management, strengthen mine property management, and regulate the trading of mine property. Carry out monitoring and prevention works to forecast and prevent the occurrence of mud and rock flow and landslide. Strictly manage ore tailings, solid waste, liquid waste and waste gases. Take integrated measures to recover the ecological environment in mining areas and soil reclaim after mining is stopped.

#### **2.4.5 Ecological Protection and Recovery**

The strategy for ecological protection and recovery is: strictly protect, sustainably develop, scientifically operate and sustain uses. Implement ecological projects to support the sustainable development in Yunnan.

➤ ***Ecological function protection projects***

Refine the Provincial Ecological Function Zoning Plan to guide exploitation of natural resources and rationalize industrial layout, to inform the compiling of major economic and social policies, and to regulate different requirements for limited or prohibited development activities. According to national plans, construct national-level key ecological function areas, implement pilot projects in Northwest Yunnan National key ecological function area and Dongchuan National key ecological function area, and initiate provincial projects of this type. Based on Yunnan's ecological function zoning, guide the zoning activities by local areas and implement protection measures. Enhance the ability of supervising ecological protection activities. Make great efforts to protect and recover the ecological systems and ecological functions in the upper reaches of Pearl River, Jinsha River, Lancang River, Nu River, in the nine lakes areas, and in key water source areas.

➤ ***Nature reserve projects. Protect fauna and flora species***

Assess the effectiveness of protecting Yunnan's major nature reserves and major species under state-level protection. Based on this assessment, add a number of new nature reserves of great protection value to increase the total area of nature reserves in Yunnan to 4 million hectares. Gradually improve the network of nature reserve. Strengthen the management of biological safety and prevent the invasion of introduced species. Protect rare and endangered flora and fauna species in the habits or relocate them for protection.

Establish habit protection areas for wild relatives of key crops, such as wild buckwheat and wild rice. Gradually carry out biotechnology safety risk assessment. Control risks posted by GM organisms.

➤ ***Ecological recovery of mining sites***

Strengthen monitoring, survey and study of ecological environment in mines. Compile ecological recovery plans, technical guidelines and optimized species mix plan. Propose ecological recovery models for different areas. Expand range of ecological recovery.

➤ ***Integrated rocky desertification control***

Compile Integrated Control Plan for Key Rocky Desertification Areas in Yunnan. Take integrated measures to control and reverse the increasing trend of rocky desertification.

➤ ***Biodiversity protection projects***

Strengthen the protection and management of biological diversity. Plan and implement a number of biological species and gene banks. Form a network of biodiversity protection to generally achieve the sustainable use and management of wild fauna and flora resources. Strengthen the supervision of safety of agricultural GMO. Prevent harmful invasion of exotic organisms.

➤ ***Rural energy projects***

In rural areas, household biogas digesters are critical. Promote biogas digester, energy (or fuel wood) saving stoves, biomass gasification and centralized gas supply facilities, small hydropower.

➤ ***Ecological agriculture project***

Immediately compile Yunnan Ecological Agricultural Development Plan. Focus on basic farmland construction and rural energy development and rural waste reuse and recycling. Establish ecological villages and ecological households; research and promote key technologies and models on ecological agriculture. Promote green production materials. Push forward standardized production. Implement Pollution-free Agro-food Action Plan. Carry out certification for green, organic and pollution-free food. Establish demonstration bases of pollution-free food with special features and brands. Continue to implement systematic projects featuring green consumption, green market and green corridor.

➤ ***Grassland management project***

Adopt a combination of engineering, biological and agricultural measures and carry out protection and construction of grassland, forage seed breeding, and monitoring and early warning of grassland ecological environment, in order to reverse grassland degradation and desertification. Control pest plants such as the invasive plant “eupatorium adenophorum”.

➤ ***Soil and water conservation projects***

Focus on four major projects: water and soil conservation in Yangtze River catchments, Pearl River catchments and Plateau Pearl Project and ecological recovery project. Taking small drainage area as a unit, comprehensively manage hills, water, fields and forests. Fully respect law of nature, rely on the self-repair capability of ecosystem, and promote vegetation restoration on large scales to achieve harmony between humans and nature. Reasonably combine biological, agricultural and engineering measures according to specific conditions of small drainage area, and scientifically collocate water resources. Fully consider ecological benefits, social benefits and economic benefits.

## 2.4.6 Environmental Protection and Pollution Control

Carry out environmental protection during the process of urbanization to create a satisfying living and investment environment. Carry out environmental protection during the process of industrialization to develop ecological industries, circular economy and environmental protection industries. Carry out environmental protection in five important sectors to promote the sustainable use of resources. Carry out environmental protection in major construction projects to strengthen the supervision of ecological and environmental protection during the construction process and minimize the adverse impacts.

### ➤ ***Control industrial pollution***

Fully comply with water pollutant discharge standards. Adopt monitoring and control measures and online monitoring for major water pollutant sources. Promote cleaner production and guide enterprises to adopt advanced processes and techniques. Decrease discharged quantity of waste and water pollution per value of industrial production. Increase industrial water reuse rate. Phase out techniques and equipments with high water consumption and heavy pollution. Promote wastewater reuse and recycling in the sectors of iron and steel, electricity, chemical, coal and other enterprises to achieve wastewater zero discharge or little discharge. Carry out waste reuse and recycling in sugar processing and other food processing industries.

### ➤ ***Strengthen the protection of water environment***

Implement water pollution projects in Dianchi Lake and eight other plateau lakes. Track the responsibilities. Achieve zero increase in industrial wastewater discharge. Implement projects identified in Yunnan's Water Pollution Control Plan for Three Gorges Areas and Its Upper Reaches, improving wastewater and domestic waste treatment ability of cities and towns, strengthening the protection of drinking water source areas and enhancing source areas' ability to conserve water. Strictly implement National Management Regulations on Pollution Control in Drinking water Source Areas.

### ➤ ***Comprehensive management of the urban environment***

Strengthen environmental protection in key cities, and accelerate construction of water supply, drainage and wastewater recycling, and treated water reuse facilities in cities. Strengthen environmental infrastructure for sanitation, transportation, gardening and others. Improve urban environmental quality. Set up National Sanitation City, National Garden City and Environmental Protection Model City. Build a livable environment. Construct centralized disposal facilities for dangerous solid waste. Refine collection methods and fee rate for operation and management charge. Improve regulations on supervision and management of dangerous wastes.

### ➤ ***Protect and improve agricultural and rural environment***

Carry out "Making Ecological Homes" project. Carry out a national environmental protection action plan for establishment of xiao kang society. Strengthen environmental monitoring and management of large-scale animal farming and aquatic farming environment and control the pollution to rural living environment. Carry out soil pollution survey and soil pollution control pilot projects. Prevent chemical pollution by refusing to use unreasonable use of chemical fertilizers, pesticide, membrane and chemical pollution caused by wastewater irrigation. Enhance the safety management of transgenic agriculture organisms to guarantee the safety of agriculture organisms and agricultural food in Yunnan province. Optimize the industrial structure and business layout of the town and township owned enterprises in connection with small town construction projects. Shut down, phase out or stop enterprises with high pollution and high consumption to prevent the relocation of these backward enterprises to rural areas. Strengthen survey and monitoring of agricultural pollution.

Promote modes of non-point agricultural pollution control to improve agro-ecosystem.

➤ **Strengthen ecological environment protection for tourism resources**

Fully implement quantitative assessment of environmental protection in tourism areas. Protect natural landscapes, cultural landscape and ecological environment. Strengthen protection and management of the world heritage site “Three Parallel Rivers” in Yunnan and national-level scenic areas. Implement “Scenic Areas development and Protection Project”. Organize the application of world heritage (natural and cultural) titles, and create famous brands of scenic areas.

➤ **Strengthen security management of radioactive sources**

Establish a dynamic security management system for radioactive sources in the province. Establish and refine the laws and regulations on the management of electromagnetic and radioactive environments.

#### 2.4.7 Capacity Building

Improve regulations and systems related to population, resource and environment. Enhance enforcement. Establish an information sharing system that is open to government, the public and academic institutes.

➤ **Adopt the Program of Action for sustainable development in China in the early 21st Century and guidelines and policies for sustainable development**

Construct local regulation and policy system for sustainable development in Yunnan. Compile and refine *Regulations on Integrated Resource Use in Yunnan Province*, *Regulations on Water Conservation in Yunnan Province*, *Regulations on Energy Conservation in Yunnan Province*, *Regulations on Environmental Protection in Cities*, and regulations on rural energy management, noise pollution control, wetland protection etc. Create a legal system that is in line with international standards in accordance with national laws and regulations and that suits the real situation in Yunnan and is operational and practical to support the sustainable development in Yunnan.

➤ **Immediately create an emergency response system to deal with public incidents**

Set up a public information database and a public service system. Using 3S technology and information technology, establish a basic information database with socioeconomic information and information about population, resource, ecological environment, and natural disasters, etc. Use the databases to provide information related to sustainable development and to provide information for strategic plans, policy development and decision making. Establish governmental information disclose system to ensure the public's right to know and to promote public participation and supervision. Establish Environment and Development Forum as a platform for the government to communicate with the society. Strengthen the monitoring of environmental disasters and environmental trend, including the dynamic changes in resources, climate, geology, hydrology, drought, flood, and earthquake. Strengthen early warning and emergency response. Establish a disaster forecast and early warning system covering the whole province, and gradually establish an environmental disaster emergency response and control system, consisting of emergency response, organizing, goods scheduling and treatment and disposal. Strengthen forest fire prevention. Strengthen the establishment of biological disaster forecast and prevention system to provide early warning and forecast. Strengthen quarantine and integrated management. Effectively prevent the invasion of harmful exotic organisms to protect biodiversity. Implement *General Emergency Response Plan for Emergent Public Incidents*.



## **3 IMPLEMENTATION AND MONITORING OF SUSTAINABLE DEVELOPMENT IN YUNNAN**

### **3.1. Mechanisms for Implementation of YPSDS**

#### **3.1.1 Strengthen Organization and Leadership**

Communist party committees and governments at all levels should embrace the philosophy of sustainable development in the process of socioeconomic development; should adopt the concept of energy conservation; should improve the capability of scientific, democratic and legal governance. Connect economic growth indicators with the indicators of human, resource, environment and social development to fundamentally change the mode of economic growth. Change the past mode that economic growth mainly based on extensive production and inefficient resource utilization to the mode featuring intensive production and development of circular economy mainly based on sci-tech progresses. Discard the conventional economic development mode of “pollute before treat; destroy before restore”. Obtain social, economic and ecological benefits; and consider both short-term benefits with long-term development. Governments at various levels should compile sustainable development plans suitable for the local conditions, take effective measures to effectively achieve the goals and objectives of sustainable development.

#### **3.1.2 Enhance Enforcement of Laws and Regulations**

Strengthen law enforcement for sustainable development. Improve the environment for administrative and law enforcement, regulate supervision behavior, strengthen the building of a law enforcement team, and establish a holistic and multi-level supervision system. Pay special attention to the implementation of the review system for ecological environment. Strengthen the supervision of law enforcement for ecological and environmental protection, the supervision of administrative punishment and administrative reconsideration. Continue the efforts on institutional reform and standardization process to promote market entrance system for pollution-free agricultural products and industrial products resulted from cleaner production. Further improve the existing environmental management systems such as the leadership responsibility system for environmental protection, environmental impact assessment, “three meantimes”, sewage discharge permission, total quantity control of main pollutants, within-a-time-limit rectification of polluting enterprises, etc. Gradually establish the natural resource ownership management system, compensated use system and right of use (property right) flow system, and accelerate the research and establishment of the comprehensive management system for migrant population. Timely develop and revise standards, technical guidelines and operating rules related to natural resource protection and exploitation, monitoring of ecological and environmental quality, cleaner production technologies, green products, technology and service import and export, commodity inspection, etc. Strictly execute environmental impact assessment for construction projects involved in resource and environment, and establish applicable annual implementation schemes, management methods for implementing construction projects as well as detailed technological guidelines.

### **3.1.3 Economic Policies for Sustainable Development**

Adopt resource and environment taxation policies. Follow the principle of “developers to protect, destroyers to restore, users pay, polluters pay, and those who treat should get benefits.” Based on market and price rules, study and set up relevant policies and systems for comprehensive resource utilization, developing ecological and environmental protection industries, promoting enterprises and the society to pay more attention to resource saving and eco-environmental protection. Under the guideline of “cost compensated, rational profit, high quality with good price, fairly bearing”, use price as an incentive. Improve water price discrimination policy, land profit distribution and adjustment policy and mineral resource price management. Implement deposit-refund system in order to collect additional charge to products with potential pollution and encourage resource recycle.

### **3.1.4 Establish and Improve Investment and Financing Mechanism and Explore the Establishment of Eco-environment Compensation Mechanism**

Set up a multiple-channel financing mechanism that is guided by the government and consists of bank loan and social fund raising and other financing channel. Clearly define and ascertain the liability of each relevant entity for investment in ecological recovery and environmental protection activities to considerably increase the input. Actively apply for national investment in ecological recovery and environmental protection and favorable policies. Apply for more foreign government loan projects, World Bank loan projects and other bilateral and multilateral aid projects. Current global situation is that environmental protection is paid great attention and grant fund and technological assistance are easier to obtain. This opportunity shall be taken to introduce more foreign fund for sustainable development in Yunnan.

Explore various financing forms, such as franchise, BOT, TOT, etc., to raise funds from the society. Encourage and guide private enterprises to actively invest and operate projects of sustainable development. Create positive conditions for the establishment of the Provincial Sustainable Development Fund. Use Capital Fund for financing eco-environmental protection projects. Make full use of the multiple financing mechanism (such as bank credit loans, bonds, investment funds, etc.) to attract funds. By means of financial investment (such as interest discount, capital fund input and subsidy for investment), the finance departments should increase the financing ability of sustainable development projects. Financing sectors should follow the principles of sustainable development to adopt differentiated policies (such as priority loan, low interest loan, discount loan, loan prohibition, etc.), supporting enterprises to carry out cleaner production and save resources. Practice green credit loans. Promote agent construction for construction projects with public benefits to efficiently use the funds for sustainable development.

Ask the nation to allow the collection of local water resource compensation tax from hydropower plants for the purpose of water and environmental protection. Make efforts to list Yunnan as one of the key regions accepting national ecological compensation for the ecological benefits of forests. Public forests will be compensated in the form of national transfer payment, and the compensation will mainly support ecological recovery in upper reaches and source areas, pollution control projects, environmental protection industries and product development, migrant relocation, etc. Based on the requirement of ecological compensation, adjust the fiscal expenditure structure at each level, gradually increase the amount of special funds for eco-environmental protection, form the cohesive function of the financial forces in province, prefecture (city) and county, promoting the establishment of

ecological compensation mechanism.

Encourage all walks of life to participate in ecological compensation and environmental protection with the following methods: special financial subsidy, financial support for ecological projects, negotiated compensation between relevant interest bodies, agreed compensation between property right trade party and benefited party for property use, water right trade and pollution discharge right trade, as well as ecological compensation to positively guide each circle in society to participate in environmental protection and ecological construction.

### **3.1.5 Strengthen Technological Innovation**

Extensively introduce, develop and spread technologies for waste reuse and recycling, industrialization of environmental protection, clean energy and new energy sources, construction and operation of ecological and environmental protection infrastructure, and circular economy. Study and spread technologies for production of pollution-free agricultural products, ecological agriculture with high quality and low consumption. Research and promote high-yield and multifunctional charcoal forest and fast-growing and high-yield artificial forest, etc. Promptly upgrade technologies for rural biomass utilization, develop biogas uses using organic wastes from cropping and animal farming and food processing. Accelerate the development of hydropower, extend the development and utilization of solar energy and wind energy. Research key technologies for eco-environmental restoration. Explore effective means and modes for ecological recovery in mines, land restoration, lake and watershed improvement, protection of ecologically fragile areas, etc. Study and spread resource saving and recycling technologies. Give priority support to technological development and renovation projects for material, energy and water saving. Accelerate the extension and application of advanced and mature technologies to reduce resource consumption. Enhance technological innovation for environmental protection and concentrate on the research of major pollution prevention technologies.

### **3.1.6 Raise Public Awareness and Participation**

Governments at each level should consider their own actual condition and spare no time to make guidelines, regulations and measures to raise public awareness and promote public participation. Provide necessary human resource, material, technological and financial support to form a close cooperative partnership between the government and the public. Guide and advocate the public to participate in sustainable development. Enhance awareness raising and education. Improve the scientific and cultural knowledge of the public. Increase their awareness of the resource, environmental and ecological situation and trend. Extend the public's rights to know and ensure their participation in environmental protection. Attract and encourage non-governmental organizations to actively participate in sustainable development and social practices. Greatly support and encourage communities to carry out green community demonstration and improve community service system to ensure the residents' active participation. Guide rural residents to choose green life style and green production to promote the construction of ecological villages. Strengthen governmental decision making institutions. Establish an expert consultation system and a review process for decision making. Encourage and support the development of civil consultancy organizations.

### 3.1.7 Improve International Exchanges and Cooperation

International cooperation follows the principles of “complementary advantages, equality, mutual trust and win-win cooperation”. Promote international cooperation and exchanges by means of bilateral and multilateral cooperation, government and non-governmental cooperation and international conferences, involvement in important international sustainable development projects, and introduction of international experiences, technologies and management. Taking the advantages of Yunnan’s unique natural resources, attract foreign research institutes to establish research institute, either exclusively owned or jointly owned. Encourage cooperative partnership with foreign research institutes to drive the sustainable development in wider ranges. Apply for foreign financial aid and favorable loans from multiple sources. Enhance the introduction of foreign investment to promote ecological and environmental protection in Yunnan. Promote sci-tech progress by opening up the market of science and technology, driving technological and trade cooperation on the basis of technological cooperation, cultivating self innovation capability, developing practicable technologies and advanced equipments suitable for eco-environmental protection in Yunnan province and training talented professionals. Strengthen Yunnan’s “go outside” strategy by adopting environmental labeling (green product, energy saving, etc.) and ISO14000 certification to promote the environmental profile of industrial and agricultural products in Yunnan. In addition, enhance market reform by utilizing purchasing power of public sector, and encourage the production and sale of innovative and sustainable products. During the purchasing by government and enterprise, green products with environment friendly logo should be invited tenders and purchased under priority.

## 3.2. Indicators and Index for Monitoring YPSDS Implementation

The indicator system for monitoring sustainable development is a major task when implementing YSDS. It is also a major measure for promoting sustainable development. The purpose of the indicators and the index is to scientifically inform the decision making by governments at all levels and to provide a monitoring instrument, helping to promote the sustainable development in economy, social aspects, population, environment, resource and other fields in Yunnan province.

The need for sustainable development indicators (SDIs) has been emphasized in Chapter 40 of Agenda 21, Information for Decision Making, pointing to the importance of balancing economic measures of success with indicators related to social and environmental sustainability. The sustainable development indicators (SDI) for Yunnan were designed to evaluate the sustainability or the sustainable development performance of the province, while providing an early warning in time to prevent unsustainable social, environmental, and economic development. The 1992 Earth Summit supplied helpful SDIs in past while the UNCSO offers 132 indicators and methodology. Determining Yunnan’s SDIs was not an easy task, as complex interdependencies were present and sorting out several representative indicators was difficult. Currently, Yunnan’s SDIs are selected based upon the UNCSO framework, National Sustainable Development Indicators (NSDI) by China, and they serve as useful feedback mechanisms. At present, Yunnan has 17 SDIs, which are essentially the diagnosis of the province level of sustainable development using objective indicators. Yunnan’s SDIs were selected and developed through defined criteria, such as object, international comparison, availability of statistics data, as well as province characteristics and situations. They are also result from the comprehensive comparison and study of the UNCSO and EU guidelines for sustainable development indicators as well as the OECD indicator system, and the incorporation of opinions collected through

consultations from relevant departments and public discussions. This indicator system will be fully used to assess Yunnan's sustainability after a pilot application of indicators in 2008. These indicators will be modified continuously according to international trends and changes in domestic conditions.

### 3.2.1 Principles for Yunnan's Sustainable Development Indicators

#### ◆ ***Being both scientific and comparable***

When designing the index for assessing sustainable development, the scientific definition of sustainable development is considered to reasonably give it a qualitative and quantitative description. Index design also considers its comparability with other indices, either domestic or overseas, for comparison and extension.

#### ◆ ***Being both systematic and pertinent***

The index is a complicated system, consisting of different levels and different elements. It has indicators for human society per se; it also has indicators for various elements related to human society, such as economy, society, population, resource and environment. The index is designed to reveal the major conflicts and problems existing in the sustainable development process in Yunnan (the main factors); it is also designed to be systematic, avoiding the problem of being too complicated to assess.

#### ◆ ***Considering both spatial and time factors***

Sustainable development is a dynamic concept, depicting the harmony between economy, society, resource and environment in a certain time period and in a certain area. Therefore, the index design has fully considered both spatial and time factors, to reveal the imbalanced economic and social development in Yunnan and the regional diversity and complexity.

#### ◆ ***Consisting both descriptive and evaluative indicators***

Descriptive indicators assess the development status of economy, society, population, resource and environment. Evaluative indicators are those that assess the interaction and relationship between these elements. With these two sets of indicators, the trend and speed of development are revealed over time; the layout and structure of development are indicated over space. Quantitative measures show the scale.

#### ◆ ***Being both limited and operational***

Sustainable development is influenced by a combination of many factors. The index is an integrated and holistic system, but it cannot contain all the factors. Therefore, the index is designed to include the major influencing factors as a general profile of the most basic features of sustainable development. The index shall contain a minimum number of indicators, information and data shall be easy to collect, and the methods shall be easy to learn.

#### ◆ ***Being both dynamic and static***

Development is dynamic and evolving; sustainable development is both dynamic and static. Its assessment index shall also contain both dynamic and static indicators.

### 3.2.2 Composition of Yunnan's Sustainable Development Indicators (SDI)

Yunnan's sustainable development indicators are a set of indicators at different levels reveal

the status of sustainable development. The SDI does not simply use indicators for one of the five elements, i.e., economy, society, population, resource or environment. Yunnan's SDI is designed (Table 1), using the degree of coordination to depict and assess the overall status of sustainable development and to reveal the trend of the coordination between the above mentioned five elements in a simple but clear way.

**Table 1** Sustainable Development Indicators of Yunnan Province

Sectors	Indicators	As of 2005
Economy	1. GDP (10,000 yuan)	34728900
	2. Respective weights of first, secondary and tertiary industry in GDP	19:41:40
	3. Percentage of education, culture and scientific fund in total financial expenditure	25%
Population	1. Natural population growth rate	7.97‰
	2. Net enrolment ratio of school-age children at primary school	96.3%
	3. Average expected life span	68.92 yr
Society	1. Under-five mortality rate	21.5‰
	2. Percentage of drinking water in compliance with quality standards	70.6%
	3. Percentage of poverty stricken population	16.58%
	4. Farmers' average income per capita	2042 yuan
Environ- ment	1. Percentages of land areas for various land uses	—
	2. Available water resource per capita	4992M <sup>3</sup>
	3. Forest coverage rate	49.9%
	4. Percentage of population influenced by natural disasters	59.38%
	5. Percentage of cities and towns in compliance with level two or above air quality standard	66.6%
	6. Rate of water bodies in compliance	62%
	7. Rate of harmless waste disposal	41.9%



## THE WAY FORWARD

Under the safeguard of economic, scientific, legislative, and administrative measures, and with the effective methods of departmental coordination, integration of policy and projects, expanding of the financing channel, dependence on science and technology education support, and perfecting of laws and regulations system, Yunnan sustainable development strategy can be implemented successfully and reaches its goal finally. Additionally, Yunnan is also making the best of a variety of cooperation mechanism to enforce its collaboration with the Greater Mekong Sub-region in wider fields and at higher levels. This cooperation will definitely promote the economic development in the sub-region and creates the conditions to increase the employment, eliminate poverty, and raise domestic living standard. Furthermore, the cooperation will continuously improve the ecological environment, realize the superiority complementation, the mutual benefit, and communal development, and eventually reach the goal of sustainable development in both Yunnan and the Greater Mekong Sub-region.

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## ANNEX

### List of Work Shop Participants #1

Inception Workshop for Development of  
Yunnan Provincial Sustainable Development Strategy (PSDS)  
5 March 2007, Horizon Hotel, Kunming, PR China



No.	Name	Organization
1	Ms. Song Xiaozhi	State Environmental Protection Administration
2	Mr. Wang Xin	State Environmental Protection Administration
3	Mr. Tian Shan	State Environmental Protection Administration
4	Mr. Yang Zhiqiang	Yunnan Environmental Protection Bureau
5	Mr. Zhou Bo	Yunnan Environmental Protection Bureau
6	Mr. Meng Guangzhi	Yunnan Environmental Protection Bureau
7	Ms. Xu Yunhua	Yunnan Environmental Protection Bureau
8	Mr. Yuan Xiwu	Yunnan Environmental Protection Bureau
9	Mr. Shi Ganlin	Yunnan Environmental Protection Bureau
10	Mr. Yang Pinan	Yunnan Environmental Protection Bureau
11	Mr. Huang Yaoguang	Yunnan Environmental Protection Bureau
12	Mr. Zhu Xiang	Yunnan Environmental Information Center
13	Ms. Zhang Haipin	World Bank Yunnan Environment Project Office
14	Mr. Yan Pengbo	World Bank Yunnan Environment Project Office
15	Ms. Zhang Pu	Yunnan Environment Programme Manage Center for Foreign Fund
16	Ms. Liu Xiaomei	Yunnan Environment Programme Manage Center for Foreign Fund
17	Ms. Wang Ying	Yunnan Development and Reform Commission (YDRC)
18	Mr. Wen Yachan	Yunnan Development and Reform Commission (YDRC)
19	Mr. Yang Peisheng	The Policy Research Office of Yunnan People's Government (YPG)
20	Mr. Zhao Xiaodong	Yunnan Forestry Department
21	Mr. Jiang Zhutan	Yunnan Forestry Department
22	Mr. LÜ Cunshu	Yunnan Transportation Department
23	Ms. Hua Xiaopin	Yunnan Foreign Affair Office of YPG
24	Mr. Cui Xiaonan	Yunnan Tourism Department
25	Mr. Gu Shixiang	Yunnan Water Conservancy Department
26	Ms. Pang Minyuan	Yunnan Institute of Environmental Sciences
27	Mr. Li Qinsheng	Yunnan Land Resource Department
28	Mr. Yang Jianlin	Yunnan Construction Department
29	Dr. Subrato Sinha (Mr)	UNEP ROAP

30	Dr. Yuwaree In-na (Ms)	UNEP ROAP
31	Dr. Aida Karazhanova (Ms)	UNEP Regional Resource Centre for Asia and the Pacific
32	Ms. Liang Li	UNEP Regional Resource Centre for Asia and the Pacific
33	Mr. Zmarak Shalizi	World Bank Institute
34	Dr. Linda Likar (Ms)	World Bank Institute
35	Dr. Adriana. Bianchi (Ms)	World Bank Institute
36	Mr. Robert Clement-Jones	World Bank Institute
37	Dr. Wang Hua (Mr)	World Bank Institute

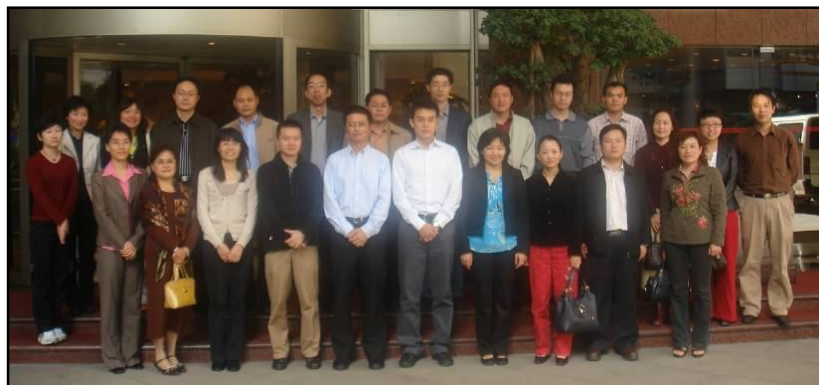
**List of Participants #2**  
 1<sup>st</sup> Consultation Workshop for Development of  
 Yunnan Provincial Sustainable Development Strategy (PSDS)  
 24-25 July 2007, Horizon Hotel, Kunming, PR China

#.	Name	Organization
1	Mr. Ma Jun	Intl. and Regional Cooperation Dept., Yunnan Foreign Affair Office
2	Ms. Feng Rong	Yunnan Transportation Department
3	Mr. Hu Gang	Foreign Funding Projects Mgmt. Centre, Yunnan Poverty Alleviation Office
4	Ms. Li Jianghong	Planning and Development Division, Yunnan Tourism Department
5	Mr. Qi Yongjiang	Planning Division, Yunnan Tourism Bureau
6	Mr. Yang Jiannong	Policy Research Office, Yunnan Provincial Government
7	Mr. Pan Xueli	Yunnan Water Resource Department
8	Ms. Yue Ying	Yunnan Agricultural Environment Protection Monitoring Station
9	Ms. Wang Ying	Yunnan Reform and Development Commission
10	Mr. Zhu Xiang	Yunnan Environmental Information Centre
11	Ms. Xiong Wenlan	Beijing Normal University
12	Mr. Wang Dongfeng	Planning Division, Yunnan Land Resource Department
13	Mr. Wu Jun	Yunnan Land Resource Department
14	Mr. Tian Peichun	Foreign Affair Office, Yunnan Forest Department
15	Mr. Xu Zhijiang	Yunnan Forest Department
16	Mr. Liu Wen	Yunnan Construction Department
17	Mr. Chen Xiaohu	Landscape Division, Yunnan Construction Department
18	Mr. Yang Jianlin	Urban Development Division, Yunnan Construction Department
19	Mr. Shi Ganlin	Planning and Finance Division, Yunnan Environment Protection Bureau
20	Mr. Zhou Bo	International Cooperation Department, Yunnan Environment Protection Bureau
21	Ms. Zhang Haiping	Environmental Project Office for Foreign Funding, Yunnan Environment Protection Bureau
22	Ms. Xu Yunhua	International Cooperation Department, Yunnan Environmental Protection Bureau
23	Mr. Meng Guangzhi	International Cooperation Department, Yunnan Environmental Protection Bureau

24	Ms. Liu Xiaomei	Environmental Project Office for Foreign Funding, Yunnan Environment Protection Bureau
25	Ms. Zhang Xuan	Environmental Project Office for Foreign Funding, Yunnan Environment Protection Bureau
26	Ms. Yang Liqiong	Environmental Project Office for Foreign Funding, Yunnan Environment Protection Bureau
27	Ms. Aida Karazhanova	UNEP Regional Resource Centre for Asia and the Pacific
28	Ms. Liang Li	UNEP Regional Resource Centre for Asia and the Pacific
29	Ms. Jiao Xi	UNEP Regional Resource Centre for Asia and the Pacific



**List of Participants #3**  
 2nd Consultation Workshop for Development of  
 Yunnan Provincial Sustainable Development Strategy (PSDS)  
 18 September 2007; Horizon Hotel, Kunming, PR China



No.	Name	Organisation
1	Mr. Tian Shan	State Environmental Protection Administration
2	Mr. Ma Jun	Intl. and Regional Cooperation Dept., Yunnan Foreign Affair Office
3	Ms. Zhen Jie	Intl. and Regional Cooperation Dept., Yunnan Foreign Affair Office
4	Ms. Tu Mingming	Yunnan Transportation Bureau
5	Mr. Qi Yongjiang	Planning Division, Yunnan Tourism Bureau
6	Mr. Chen Xin	Policy Research Office, Yunnan Provincial Government
7	Mr. Yang Jiannong	Policy Research Office, Yunnan Provincial Government
8	Ms. Ouyang Chunmei	Yunnan Water Resource Department
9	Mr. Gu Shixiang	Yunnan Water Resource Department
10	Ms. Yue Ying	Yunnan Agricultural Environment Protection Monitoring Station
11	Ms. Wang Ying	Yunnan Reform and Development Commission
12	Mr. Zhu Xiang	Yunnan Environmental Information Centre
13	Ms. Yu Yanhong	Yunnan Institute of Environmental Sciences
14	Mr. He Lei	Beijing Normal University
15	Mr. Ren Jian	Planning Division, Yunnan Land Resource Department
16	Mr. Li Hongwei	Forest Survey and Investigation Institute of Yunnan
17	Mr. Tian Peichun	Yunnan Forest Department
18	Mr. Shi Ganlin	Planning and Finance Division, Yunnan Environmental Protection Bureau

19	Ms. Aida Karazhanova	Regional Resource Centre for Asia and the Pacific, UNEP
20	Ms. Liang Li	Regional Resource Centre for Asia and the Pacific, UNEP
21	Mr. Zhou Bo	International Cooperation Department, Yunnan Environmental Protection Bureau
22	Ms. Zhang Haiping	Environmental Project Office for Foreign Funding, Yunnan Environmental Protection Bureau
23	Ms. Xu Yunhua	International Cooperation Department, Yunnan Environmental Protection Bureau
24	Mr. Meng Guangzhi	International Cooperation Department, Yunnan Environmental Protection Bureau
25	Ms. Liu Xiaomei	Environmental Project Office for Foreign Funding, Yunnan Environmental Protection Bureau
26	Ms. Zhang Xuan	Environmental Project Office for Foreign Funding, Yunnan Environmental Protection Bureau
27	Ms. Yang Liqiong	Environmental Project Office for Foreign Funding, Yunnan Environmental Protection Bureau

**List of Participants #4**  
 Expert Review Meeting on Yunnan PSDS  
 14 December 2007, Xiyuan Hotel, Beijing, PR China



No.	Name	Organization
1	Mr. Sun Xinzhang	Agenda 21 Office Ministry of Science and Technology
2	Mr. Tin Aung Moe	UNEP Regional Resource Centre for Asia and the Pacific
3	Dr. Aida Karazhanova (Ms.)	UNEP Regional Resource Centre for Asia and the Pacific
4	Ms. Liang Li	UNEP Regional Resource Centre for Asia and the Pacific
5	Dr. Wu Yuping (Ms.)	Policy Resource Center on Environment and Economy of SEPA
6	Mr. Wang Xin	FECO/SEPA
7	Mr. Zhou Bo	YEPB
8	Mr. Zhu Xiang	Yunnan Environmental Information Centre
10	Mr. Xiong Ruiyang	GEPB
11	Mr. Tian Shan	FECO/SEPA
12	Ms. Wang Aihua	FECO/SEPA
13	Ms. Cai Lei	FECO/SEPA
14	Mr. Li Shaocai	Beijing Normal University
15	Ms. Sun Qun	Beijing Normal University
16	Mr. He Lei	Beijing Normal University
17	Ms. Gao Fang	Beijing Normal University
18	Ms. Han Ping	Beijing Normal University