

# A Report for Monitoring and Assessment of **the Socio-economic Impacts of China's Key Forestry Programs 2004**

2004



China National Forestry Economics and Development  
Research Center (FEDRC)

Department of Development, Planning and Funds Man-  
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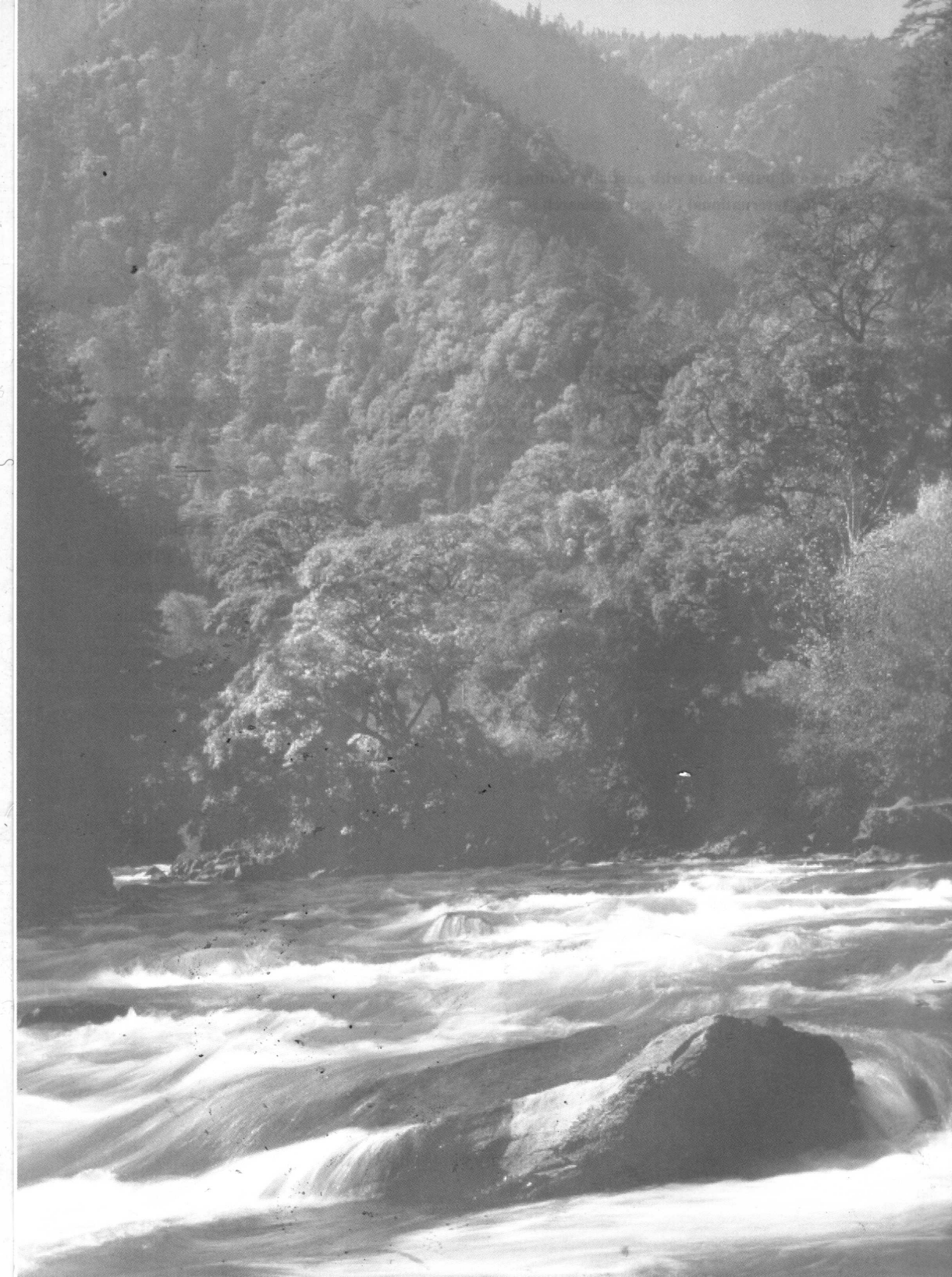
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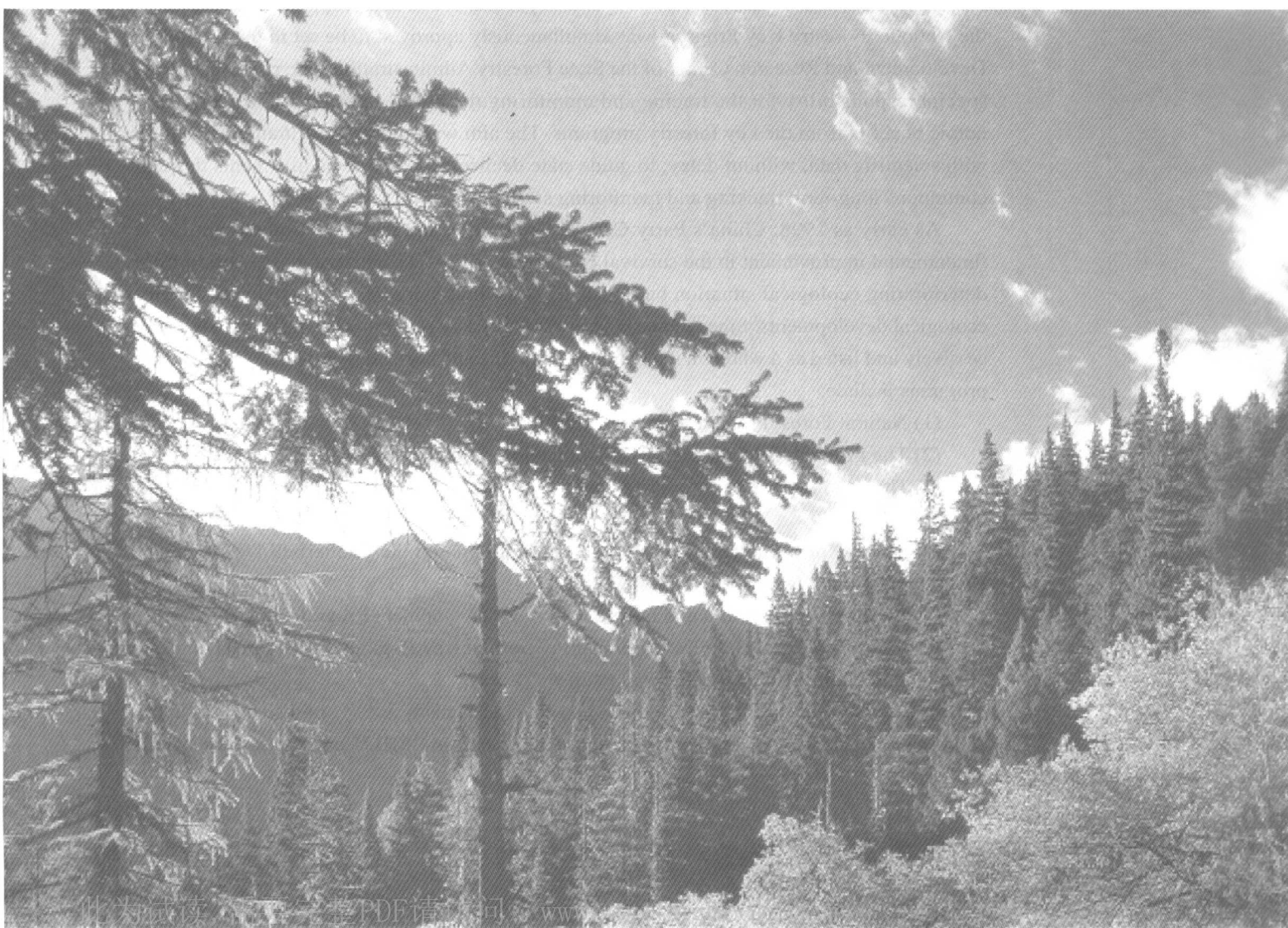
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## General Report



# A REPORT FOR MONITORING AND ASSESSMENT OF THE SOCIO-ECONOMIC IMPACTS OF CHINA'S KEY FORESTRY PROGRAMS

Monitoring work to analyze the social and economic impact of a key forestry program package at national research level was decided to carry on at the end of 2001 by the State Forestry Administration. The Center for Assessing and Reporting Social and economic Benefits under the National Forestry Key Program was simultaneously approved to be set in the Economic Development and Research Center of the State Forestry Administration. The new center took special responsibility for the tracing and monitoring the policy execution and social-economic benefits from the key forestry programs. The aim was to obtain accurate information with scientific data, without delay, to guide state decisions and policy adjustments through continuous long-term tracking and monitoring system.

As early as 1998, China's Party Central Committee and the State Council aiming at fundamental improvement in the survival conditions of Chinese nation and prevention from deteriorating ecological situation had made a series of strategic plans for the new century ecological developments. Since then, six major forestry key programs had been initiated successively and listed as a whole in the national economic and social development plan. The six programs include:

- (1) Natural Forest Protection Program (NFPP);
- (2) The Program for Conversion of Cropland into Forests (PCCF);
- (3) The Sandification Control Program for the areas in the Vicinity of Beijing and Tianjin (SCPBT);
- (4) Three-North Shelterbelt Development Program and the Shelterbelt Development Program along the Yangtse River Basin ;
- (5) Wildlife Conservation and Nature Reserves Development Program, and
- (6) Forest Industrial Base Development Program in Key Regions with a Focus on Fast-growing and High-yielding Timber Plantations.

Those six principal forestry programs had covered as many as 97% of the counties in the country with a schematized total investment of 552.5 billion RMB Yuan. The earliest started

programs, such as those of NFPP and PCCF are approaching mid-term stage of their practice. As a result, the social and economic benefits from the program investment, the policy implemented, the development of their follow-up production, as well as the problems encountered have become the focusing attention of both domestic and international societies. The decision-making departments at different levels have made a new step to curb difficulties and cope with them. Some concerned experts, however, had put forward the point that the situation have grown from backward to poor conditions among families as a result of the ecological construction of the western parts, and therefore proposed that monitoring and evaluating system should be established in the NFPP and PCCF. The proposal won high attention of the leaders of the State Council instructing departments concerned to make careful serious investigation and make research.

From February 2003, with full cooperation between the Social and economic Impacts Monitoring and Reporting Center of China's Key Forestry Programs and the Development Planning and Capital Administrating Department of the State Forestry Administration, speedy survey to investigate social and economic impacts was carried on in 100 counties covering the area of the three programs NFPP, PCCF and SCPBT on the grounds of reliability, gradual promotion and accuracy, and objectivity. In the process of designing the monitoring index, opinions and suggestions were widely collected from the experts and workers of the National Bureau of Statistics, the Ministry of Agriculture, Rural Development Institute of Chinese Academy of Social Sciences, Center for Chinese Agricultural Policy of Chinese Academy of Sciences, Renmin University of China and Beijing Forestry University as well as some departments and the office of Program Administration in the State Forestry Administration. The monitoring work was greatly supported and coordinated by the forestry departments in the investigated provinces, so that effective achievements were obtained in the fast survey. Based on that, the monitored places were expanded in 2004 to 200 counties in which industry of forestry was stressed, and among which 22 provinces or autonomous regions, municipalities directly under the Central Government, and 4 forestry conglomerates were involved. In the monitoring index system, monitoring was also revised and improved.

The main monitoring and assessing contents contained:

- (1) The performance of the programs, i.e.
  - a. discontinuance of felling natural forests and adjusted reduction of timber production,
  - b. administration and protection of forest resources,
  - c. returning the grain land into forestry use,
  - d. afforestation on barren mountains and land liable to forest,
  - e. controlling and managing grassland, and
  - f. irrigation measures, etc.
- (2) The practice of policy, e.g.
  - a. whether the capital had reached the right places and how it was used,
  - b. whether money and grain had been paid to peasants and the forest tenure certificate issued,
  - c. whether the surplus people had been rearranged to new work, and
  - d. how the retirement insurance was socially pooled, and so on.
- (3) The social and economic development, including
  - a. the industrial construction adjustment in the program areas,



- b. the economic development levels,
  - c. the financial income changes, and
  - d. the new trends of peasants' income and employment,
  - e. the ecological emigration,
  - f. the infrastructure construction, and
  - g. the social participation, etc.
- (4) The last one is the ecological improvement, including
- a. the changes of forest resources,
  - b. the controlling and managing of soil erosion, and
  - c. the reduction of sand storm attacks, etc.

## I. ECONOMIC AND SOCIAL DEVELOPMENT IN PROGRAM MONITORING AREAS

In the areas of the three programs NFPP, PCCF and SCPBT, 200 random samples were collected for monitoring and assessing, as well as 165 sample counties and 35 sample forest industrial enterprises. The final confirmatory effective samples, however, were listed as 195 at county level (163 counties and 32 enterprises), 188 at village level and 1,200 at family level.

### ***1. The Monitored Sample Counties are Mainly Distributed in Western Poor Areas***

Among the total 163 effective sample counties, 44 are in the category of NFPP, 100 PCCF and 19 SCPBT. They belong to 22 provinces (autonomous regions and municipalities) respectively and 116 are in the west, 71.17% of the total sample counties.

**Lower Population Density.** In 2003 the total administrative territory of the 163 sample counties amounted to 690.3 thousand km<sup>2</sup>: the land of the counties of NFPP 167.8 thousand km<sup>2</sup>, that of PCCF 420.6km<sup>2</sup> and that of SCPBT 101.9km<sup>2</sup>.

While the total population in those counties was 64.156 million: 15.349 million in NFPP counties, 43.26 million in PCCF and 5.547 million in SCPBT.

So that, the average population of each county was 0.3936 million: 0.3488 in NFPP, 0.4326 million in PCCF, and 0.2929 million in SCPBT.

And the average population density per county was 92 people/km<sup>2</sup>, that is: in the NFPP county 93 people/km<sup>2</sup>, in the PCCF county 103 people/km<sup>2</sup>, and in the SCPBT county 55 people/km<sup>2</sup>.

All being lower than the national average, which is 134 people/km<sup>2</sup> (Figure 1-1).

**Fairly Serious Soil Erosion and Desertification.** By the end of 2003, the exact farmland area was 4,521.1 thousand ha, 10.7% of the total land. The average cultivation field per person was 1.57 mu (1 Chinese mu = 0.0667 ha), 2.76 mu per person along the Yellow River Basin, 0.82 mu along the Yangtse River Basin, only 29.7% of that of the Yellow River Basin.

As to the soil erosion area, the total coverage was 15.7666 million ha, which was 37.48% of the whole of the territory. While the area of desertification in 16 counties among the 100 PCCF counties reached 1,329.4 thousand ha, accounting for 12.53% of the total territory (Due to the lack

of data, insufficient or illogical data from some monitored places, some single items have been eliminated so that the remained become effective samples. So are the following statements). Among the 19 counties of SCPBT, their farming fields were 1,199.1 thousand ha, consisting of 11.77% of the complete territory with an average of 3.24 mu per person; While their land of desertification covered 2,284 thousand ha, 22.39% of their total area.

**Comparatively Backward Economic Development.** The 2003 GDP of the 163 monitored counties was calculated to be 281.758 billion RMB Yuan with the respective GDP figures of 59.324 billion in the counties of NFPP, 1,976.653 billion in the counties of PCCF and, 24.781 billion in the counties of SCPBT. The average county GDP was 1.729 billion, whereas the average of NFPP, 1.348 billion, PCCF 1.977 billion and SCPBT 1.304 billion.

The average GDP per capita was 4,392 RMB, and it was only 48.64% when compared to the

national average of the same year 9,030 RMB. As for each type of counties, 3,865 RMB the NFPP, 4,569 RMB the PCCF, and 4,467 RMB the SCPBT Figure 1-2 shows, with the percentage of 42.80%, 50.60%, and 49.47% respectively.

The revenue of those 163 counties totaled 12.821 billion RMB in 2003 and 2.843 billion from NFPP, 9.014 billion from PCCF and 0.964 billion from SCPBT. So there was an average county revenue 786.564 billion RMB, 646,136 billion RMB from NFPP, 901.4 billion RMB from PCCF and 507,368 billion RMB from SCPBT (Figure 1-3).

In the 100 PCCF counties the 2003 average net income per countryside resident came to 1,869.91 RMB, being 71.32% of the national average level 2,622 RMB. That of the Yellow River Basin and northern counties was 1,929.51 RMB while that of the Yangtse River Basin and the southern counties 1,843.75 RMB, having percentages of 73.59% and 70.32% respectively of the national level. The peasants and herdsmen in the 19 counties of SCPBT averagely earned 1,799.14 RMB for their net income, 68.62% of the national one.

**A Great Population in Poverty.** Ninety-one out of 163 monitored counties

Figure 1-1 2003 Average County Population, and Population Density of Various Program Counties

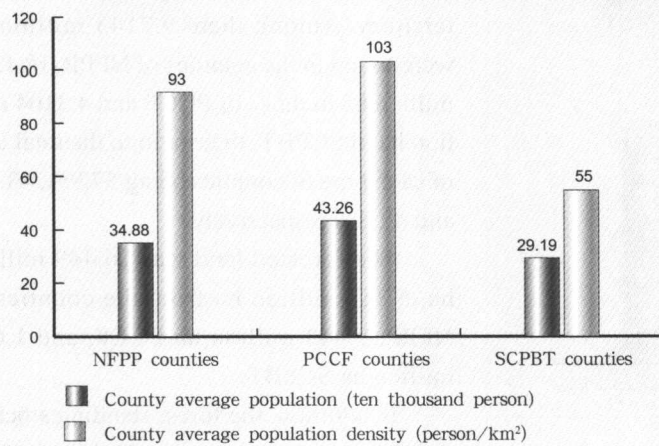


Figure 1-2 2003 GDP Per Capita of Program Counties to National Levels

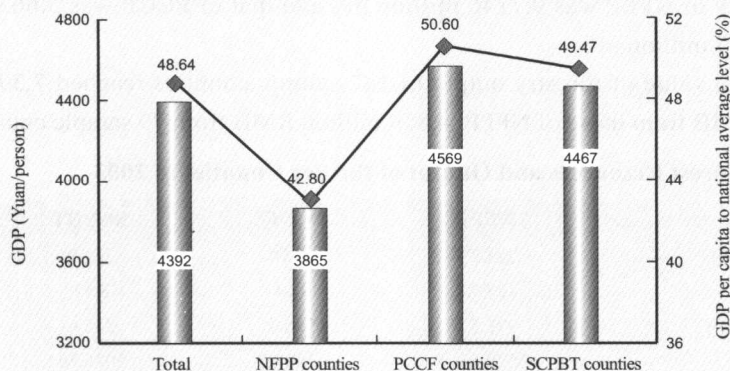


Figure 1-3 2003 Average County Revenue of Program Counties

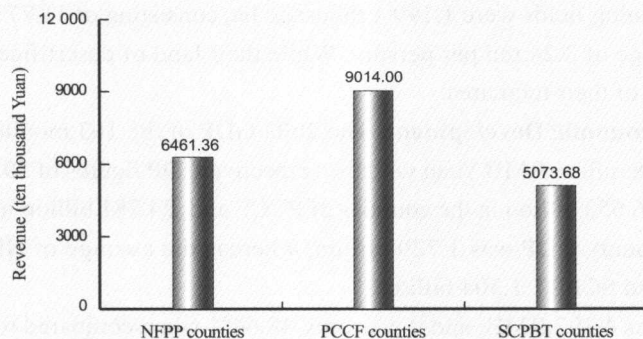
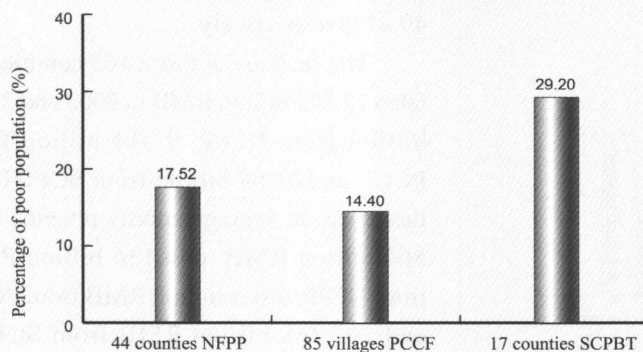


Figure 1-4 The Percentage of Poor Population in Program Counties in 2003



are classified as the aid-the-poor counties with a percentage of 55.8% of all the sample counties. The poor population in the 44 counties of NFPP in 2003 was 2,689 thousand, 17.52% of the total sample county population. While in the 85 villages of PCCF 4,567 families were poor, 14.409% of all the families. In regard to SCPBT counties, there was a poor population of 1,484.1 thousand, 29.20% of the whole within the counties (see Figure 1-4).

**Proper Bases for Forestry Development.** In the year 2003, the land for forestry use in the 163 sample counties totaled 32.1616 million ha, being 46.6% of all the territory. Among them 9.7143 million ha were found in the counties of NFPP, 18.1369 million ha in those of PCCF and 4.3104 million ha in SCPBT, their ratio to the total area of each type of counties being 57.9%, 43.1% and 42.3% respectively.

The forested land was 16.449 million ha, 5.311 million ha from the counties of NFPP, 9.443 million ha PCCF, and 1.695 million ha SCPBT.

In addition, the forest standing stock in the 160 counties came to 1,022.9204 million

m<sup>3</sup>, i.e. 427.4434 million m<sup>3</sup> in those of NFPP, 549.384 million m<sup>3</sup> in PCCF (97 samples), while 46.093 million m<sup>3</sup> in SCPBT.

For the average forest standing stock of each county, the figure was 6.3933 million m<sup>3</sup>. And the average one of each county of NFPP was 9.7146 million m<sup>3</sup>, and that of PCCF was 5.6638 million m<sup>3</sup>, and SCPBT, 2.4259 million m<sup>3</sup>.

In the same year, the total value of forestry output of 142 sample counties reached 7,391 million RMB, 1,575 million RMB from those of NFPP, 4,859 million RMB from 79 sample coun-

Table 1-1 Average Forest Resources and Output of the Per Counties in 2003

Item	NFPP	PCCF	SCPBT
Land for forestry use (ten thousand ha)	22.08	18.14	22.69
Forested land (ten thousand ha)	12.07	9.44	8.92
Forest standing stock (ten thousand m <sup>3</sup> )	971.5	566.4	242.6
TVFO (ten thousand Yuan)	3579.54	6150.63	5036.84
Ratio of TVFO: TVAFAP (%)	5.95	6.98	7.60

ties of PCCF and 957 million RMB from those of SCPBT.

Whereas the average total value of forest output (TVFO) of each county was 52.0493 million RMB, which of NFPP was 35.7954 million RMB, PCCF 61.5063 million RMB and SCPBT 50.3684 million RMB. Lastly, the ratio of the total value of forestry output to the total value of agriculture, forestry, animal husbandry and fishery (TVAFAP) was 6.80%, among which, NFPP 5.95%, PCCF 6.98% and SCPBT 7.60% (Table 1-1).

## ***2. The Monitored Sample Forestry Industrial Enterprises Possess Abundant Resources with Fairly Great Survival Pressure***

**Greater Forest Area and Storage Capacity Per Capita.** In 2003 in the 32 monitored sample Forestry industrial enterprises that were carrying on the program of NFPP (constituting 19.16% of all the enterprises in the program of NFPP) there was a total population of 1,537 thousand in their operating locations, of which 344.1 thousand were forestry workers. When the total land area 14.8512 million ha was averaged for all the population in the operating area, everyone had 9.66 ha. While the 10.1818 million ha land for forestry use was averaged for the forestry workers, each gained 29.59 ha. Within the land for forestry use, the forest area of 8.5121 million ha and each forestry worker could get 24.74 ha averagely (the national average forest area 0.13 ha per capita in 1998).

The 8.5121million ha could be further classified into 6.7815 million ha for forests for public benefits and 1.7306 million ha for commercial forests. The 7.5895 million ha of national forests could be averaged by the forestry workers with a result of 22.06 ha per capita. And the total 7.5895 million contained 1.448 million ha in the sample forestry enterprises along the Yangtse and the Yellow River Basins and 6.141 million ha in those in Northeast and Inner Mongolia.

The average forest standing stock per forestry worker came to 2,313.28 m<sup>3</sup> (the national average 9.05 m<sup>3</sup> in the year 1998) calculated from the total 796 million m<sup>3</sup> of which 772 million m<sup>3</sup> was from natural forests with an average per worker 2,243.53 m<sup>3</sup>.

**Nine Tenths Natural Forests.** Among the 32 sample forestry industrial enterprises the forest area generally covered 8.5152 million ha. While the natural forests located occupied 7.5895 million ha, being 89.16% of the entire area. The total forest standing stock was 796 million m<sup>3</sup>, of which 96.98% or 772 million m<sup>3</sup> came from natural forests. Furthermore, the natural forest standing stock was consisted of 169 million m<sup>3</sup> in the Forestry industrial enterprises in Yangtse River and the Yellow River Basins and 603 million m<sup>3</sup> from those of the Northeast and Inner Mongolia. And the stock in one hectare was 101.72 m<sup>3</sup>, which was averaged by 116.71 m<sup>3</sup> from those in the Northeast and Inner Mongolia. Finally, the forest coverage was 55.69%, and the average in those of the two river Basins was 42.45% and 60.93% in those of the Northeast and Inner Mongolia.

**Heavy Enterprise Debts and Fairly Low Employee Income.** In 2003 the wood output from 32 monitored sample forestry industrial enterprises achieved 3.0145million m<sup>3</sup>, 98.46% of the planned output. The total converted timber output was 207 thousand m<sup>3</sup> while the wood-based panel output was 165.9 thousand m<sup>3</sup>. As to the total value of output of the forestry industries, it reached 4,315 million RMB, 2,163 million RMB from the first industry, 1,259 million RMB from