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## **THE BALANCE OF CULTIVATED LAND IN CHINA DURING 1988-1995**

*Günther Fischer (fisher@iiasa.ac.at)*

*Yufeng Chen (chen@iiasa.ac.at and yfchen@reis.ac.cn)*

*Laixiang Sun (sun@iiasa.ac.at).*

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Approved by  
Gordon J. MacDonald ([macdon@iiasa.ac.at](mailto:macdon@iiasa.ac.at))  
Director, *IIASA*

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## Abstract

The extent and fate of cultivated land in China has been the subject of intense debate in academia and the cause for major public concerns in China and abroad.

This paper discusses statistics recently compiled by China's State Land Administration on conversions from and to cultivated land. To fit within the LUC research framework, the analysis is mainly presented in terms of eight sub-regions in China which have been defined on the basis of geographic/natural conditions, demographic and economic features, and province-level administrative subdivisions. The eight regions form the geographic building blocks in the LUC economic model. The data compilations reported here provide an improved empirical basis for modeling future land-use changes in China.

The analysis concludes that net decreases and abandonment of farmland in China during 1988-1995 amount to 2.2 million hectares, i.e., about 1.6 percent of China's cultivated land base estimated to be 131.1 million hectares at the end of 1995. Net changes in used farmland are the result of reported increases of cultivated land amounting to more than 3 million hectares and, concurrently, farmland conversions and abandonment exceeding 5.2 million hectares during the eight-year period.

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## About the Authors

Günther Fischer is the leader of the Land Use Change project, IIASA.

Yufeng Chen joined the Land Use Change project as a participant of IIASA's Young Scientists Summer Program in 1998. Dr. Chen comes from the State Key Laboratory of Resource and Environment Information System, Institute of Geography, Chinese Academy of Sciences, Beijing, China.

Laixiang Sun is a Research Scholar and economist with the Land Use Change project, IIASA.

# THE BALANCE OF CULTIVATED LAND IN CHINA DURING 1988-1995

Günther Fischer, Yufeng Chen, Laixiang Sun

## Introduction

In China, cultivated land has become a critical and scarce production factor in agriculture. Over many centuries, China has developed a large base of fertile agricultural land due to its long history of civilization. According to the historic records, the cultivated areas were near 37.1 million ha in 2 A. D., over 53.9 million ha in 1684, 55.3 million ha in 1887 and more than 97.9 million ha in 1949, respectively (Wu and Guo, 1994). In the first decade after 1949, the cultivated area has rapidly increased due to large-scale reclamation, along with the development of the national economy. Land development in the 1960s and 1970s is poorly documented and is at the root of major confusion regarding the level of cultivated land in China. Then in 1985, the total estimated extent of arable land had reached 125.2 million ha (SLA, 1994)<sup>1</sup>, accounting for about 14.3% of China's whole territory. However despite these massive efforts to reclaim and develop cultivated land, because of China's huge level and massive growth of population, the cultivated area per capita was only 0.12 ha, less than half of the world average. Also, the potential for developing additional arable land in China is fairly limited and costly. The total extent of additional land with cultivation potential is currently estimated to be less than 13.3 million ha, of which the best-rated land with high quality and suitability to cultivation accounts for only 3.1%, being near 0.41 million ha (SLA, 1994). Therefore, there is great concern to monitor and understand the tendency of changes in the cultivated land base, and to increase awareness both of the

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<sup>1</sup> This level is much higher than the estimates published by China's State Statistical Bureau (e.g., see SSB, 1996).

public and of decision-makers, to appreciate the urgency of protecting high-quality farmland in a period of social change and rapid economic development. Unlike in major other food producing countries, e.g., the United States, the best agricultural areas in China are also the most densely populated and rapidly developing regions. There is, therefore, a realistic concern that bubbling economies and unchecked development may cause unnecessary and irreversible damage to the agricultural land base.

## 1. Collection of data

### 1.1 The sources of information

On the basis of *The Law on Land Management in the People's Republic of China* and *The Law on Statistics in the People's Republic of China*, and in order to detect any changes of cultivated area accurately and timely for central government decision-making, the State Land Administration (SLA)<sup>2</sup> established reporting principles called *The Reporting System on Land Statistics*. This system stipulates that:

- (1) The county-level department for land administration is responsible for land statistics. The statistical data ought to be checked with the statistical department.
- (2) For the counties that have completed their detailed surveys of current land use, the data on change of cultivated areas must be based on village-level surveyed results. For counties that have not finished their surveys of current land use, the data will be based on county-level statistical results.
- (3) Based on surveyed and statistical data, various additional information, such as on legally built-up land, illegally occupied land, and illegal conversion of land use, should also be collected.

The data in this report are from the information on change of cultivated land in China collected by the above system and communicated by SLA of China (SLA, 1989 to 1996, see Appendix 1).

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<sup>2</sup> The State Land Administration is a bureau directly linked to the State Council, and following the current restructuring of ministries and public administration will be part of Ministry of Territorial Resources.

The data was extracted from the published materials (in Chinese) and entered into PC using Microsoft EXCEL (see Appendix 3 and Appendix 4). According to the definition of items in the database, tables of land conversion aggregated to national and regional level during 1988-1995 have been calculated (Appendix 2).

To fit within the LUC framework the analysis is mainly presented in terms of eight sub-regions of China which have been defined on the basis of geographic/natural conditions, demographic and economic features, and province-level administrative subdivisions. The eight regions form the geographic building blocks in the LUC economic model (Fischer *et al.*, 1996). For each LUC region, the model includes a land development component. Hence, a primary objective of the analysis reported here was to contribute a parameterization of the initial conditions and dynamics of land development in China. In defining the eight LUC regions we distinguish between Eastern and Western China as follows:

Eastern China includes:

- |               |   |
|---------------|---|
| 1. Northeast: | Heilongjiang, Jilin, Liaoning;                    |
| 2. North      | Beijing, Tianjin, Hebei, Shanxi, Shandong, Henan; |
| 3. East       | Shanghai, Jiangsu, Zhejiang, Anhui;               |
| 4. Central    | Jiangxi, Hubei, Hunan;                            |
| 5. South      | Fujian, Guangdong, Guangxi, Hainan;               |
| 6. Southwest  | Sichuan, Guizhou, Yunnan;                         |

Western China includes:

- |              |  |
|--------------|--|
| 7. Northwest | Xinjiang, Nei Mongol, Ningxia, Gansu, Shaanxi; |
| 8. Plateau   | Qinghai and Xizang.                            |

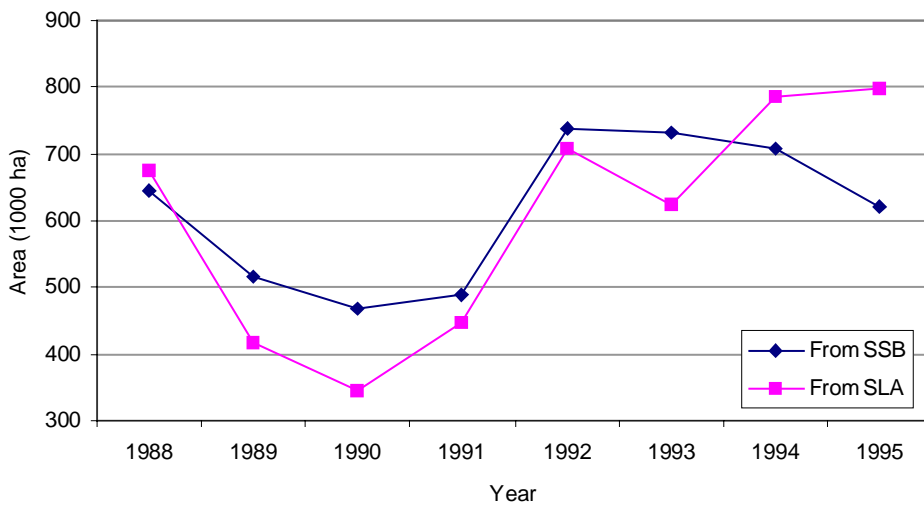
## 1.2 Comparison with land data from State Statistical Bureau of China

Land data published by the State and Provincial Statistical Bureaus (SSB) are the traditional source of land data in China. In general, SSB data are regarded as the official and most authoritative statistical estimates. Some authors, such as Li and Sun (1997), used the data from the *China Statistical Yearbook* edited by SSB to model the driving forces of cultivated land conversion in China.

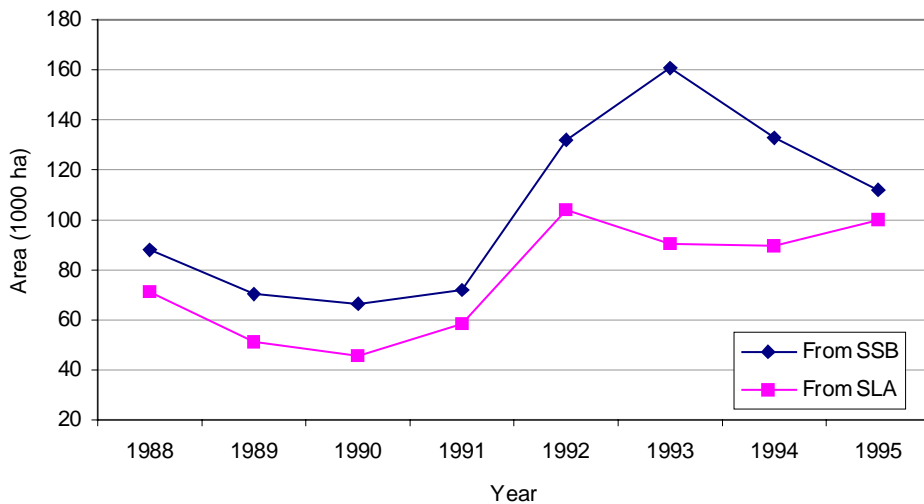
Due to different division of labor between SSB and SLA, land data communicated by SLA typically contain more detail. Also, there are obvious



differences in some major items as reported by the SSB and SLA. Nowadays, the bureaus for land administration are in charge of the current statement of land use and the monitoring and reporting of change of cultivated area. Therefore, the data compiled by the bureaus for land administration should be relied upon to understand the status and change of land use in China. A comparison of country-wide net loss of cultivated area reported respectively by SSB (SSB, 1996) and SLA (SLA, 1989 to 1996) is shown in Figure 1.



A

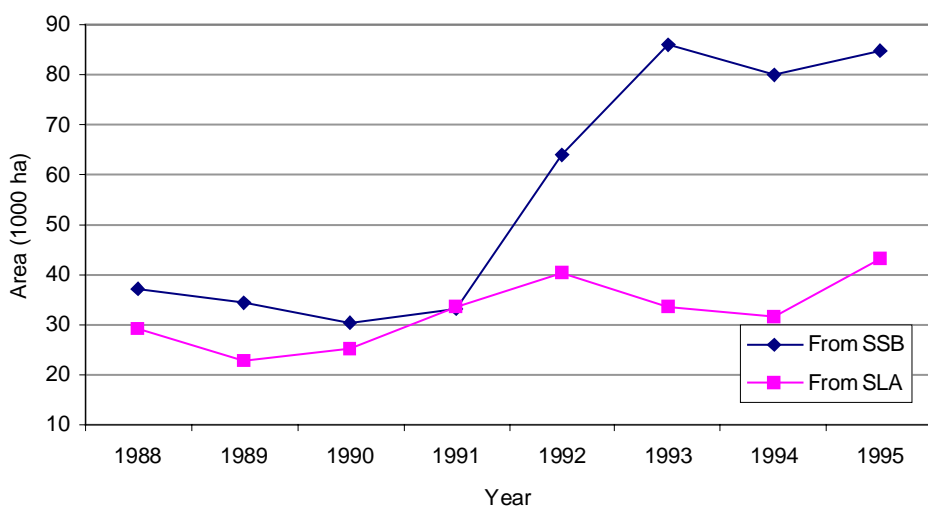


B

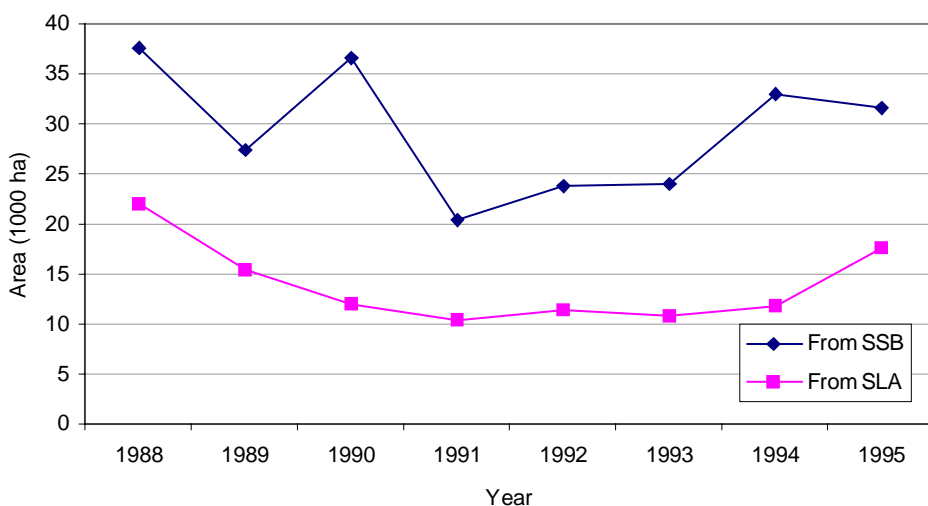
**Figure 1A. Differences between changes of cultivated land during 1988-1995 reported by SLA and SSB.**

A: decrease of cultivated area

B: cultivated area occupied due to construction of state-owned units



C



D

**Figure 1B. Differences between changes of cultivated land during 1988-1995 reported by SLA and SSB.**

C: cultivated area occupied due to construction of rural communities

D: cultivated area occupied due to peasant housing

Based on Figure 1, it can be concluded that:

- (1) There are obvious differences between statistics of SSB and SLA. Except for the *decrease of cultivated areas* in 1994 and 1995, the values compiled by SLA are somewhat lower than those of SSB.

- (2) The tendencies in all indices of net change, reported by both SSB and SLA for the years before 1992 were similar. However, regarding the trend of farmland losses after 1992 (including 1992), there are different viewpoints held by SSB and SLA regarding the magnitude and even direction of trends of estimated changes such as *decrease of cultivated area, cultivated area occupied due to capital construction, village collective construction, and peasant housing*.<sup>3</sup>
- (3) The largest decreases of cultivated land during the study period are not due to construction but have resulted from losses due to disasters and adjustment of structure within broadly defined agriculture, i.e., conversion to horticulture, forestry, improved grassland, and fish ponds.

## 2. The change of cultivated area during 1988-1995

### 2.1 Additions to the area of cultivated land

As most of the potentially suitable land has already been brought into agricultural use in China, and due to technological limitations for utilizing land, there are only four realistic alternatives to increase China's cultivated area, namely:

- Reclamation<sup>4</sup>;
- Drainage from shallow sea, lake, swamp and/or waterlogged land;
- Rehabilitation and reuse<sup>5</sup> of areas previously discarded due to disasters, mining, construction, etc.;
- Conversion of land from forestry, grassland, or horticulture<sup>6</sup> to farmland through adjustments of the agricultural structure.

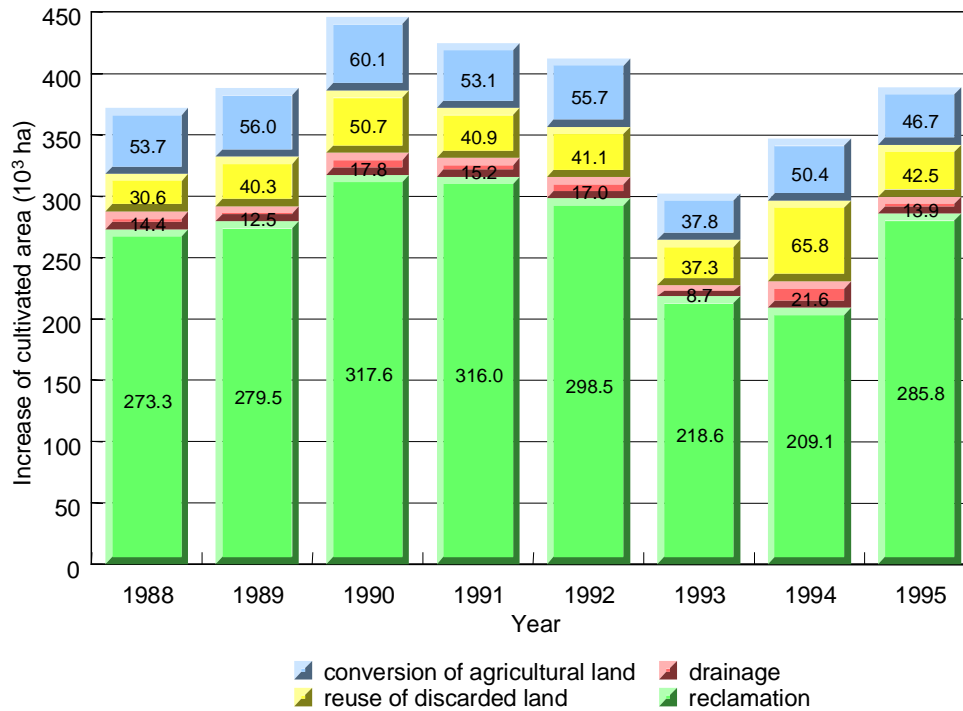
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<sup>3</sup> According to Prof. Zheng Zhenyuan of SLA (private communication), some of the decreases of cultivated land reported by SSB in 1993 may have been accepted and recorded by SLA only in 1994 and 1995. Thus, some of the discrepancies between SSB and SLA estimates of changes in cultivated land are attributable to legal procedures and lags in recording.

<sup>4</sup> *Reclamation* land refers to newly cultivated land, which has been plowed and planted with agricultural crops in the current year. It includes reused farmland that has been without cultivation or fallow for more than three years, but does not include areas idle for less than three years.

<sup>5</sup> *Reuse* of discarded land refers to newly cultivated land, which was rehabilitated from the land discarded because of natural disasters, or abandoned by various constructions such as mining, housing, etc.

<sup>6</sup> According to the Chinese classification system of land use, the term *horticulture* refers to perennial plantations, including orchards, mulberry fields, tea plantations, and tropical crop plantations.



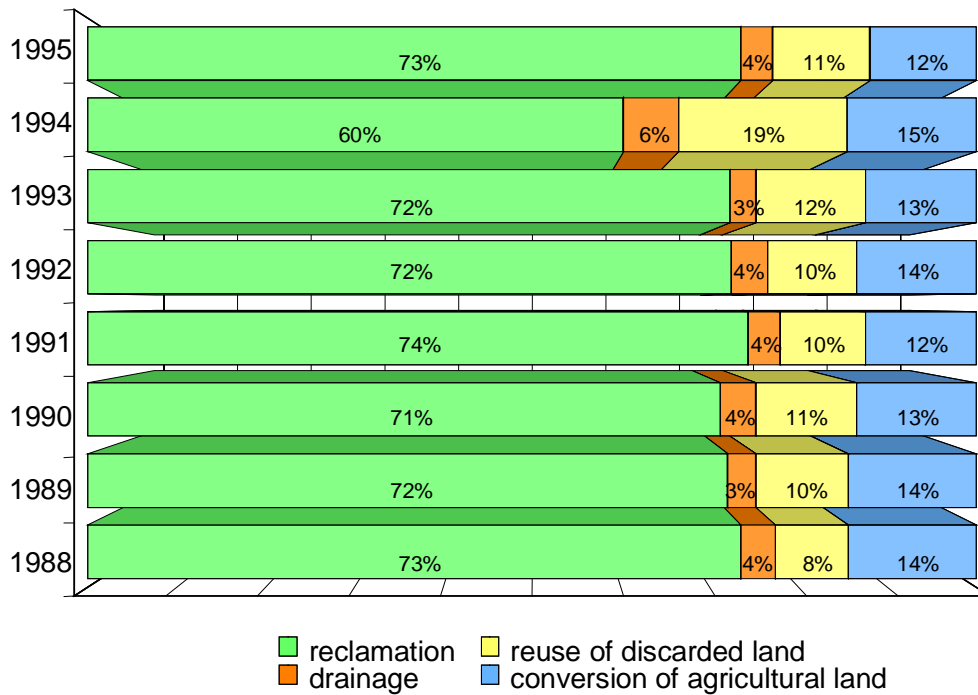
**Figure 2. Source of increase of cultivated area in China during 1988-1995.**

Figure 2 shows the origin of increases in cultivated land according to the above-mentioned categories. The following observations can be derived from the available data:

- (1) During 1988-1995, the tendency of gross additions of cultivated area resembled a sinusoidal curve.
- (2) Reclamation was by far the most important means to increase the cultivated area. As shown in Figure 3, the increase of cultivated area due to reclamation always accounted for a large share, no matter how large the absolute increase in the total cultivated land was. In all years, the proportion of reclaimed area in total additions of cultivated area was well over 70%, except for 60% in 1994.
- (3) In addition to reclamation, conversion of land-use types within the (broadly defined) agriculture sector and reuse of previously discarded cultivated land together have contributed about 25% of additions to cultivated land. Land conversion from other agricultural uses (i.e., forestry, grassland, and horticulture) each year kept a relatively stable proportion, accounting for 12-15% of the total gross increase of cultivated area. Except for 1994, when a peak

in the rehabilitation of discarded land occurred, the proportion of increases due to reuse of previously discarded land accounted for 8-12% each year (Figure 3).

- (4) The increase of cultivated area due to drainage was relatively small, some 3-6% of total increases. In fact, nowadays with a view to protecting aquatic and wetland ecosystems, China's government does not encourage increases of cultivated area by drainage.



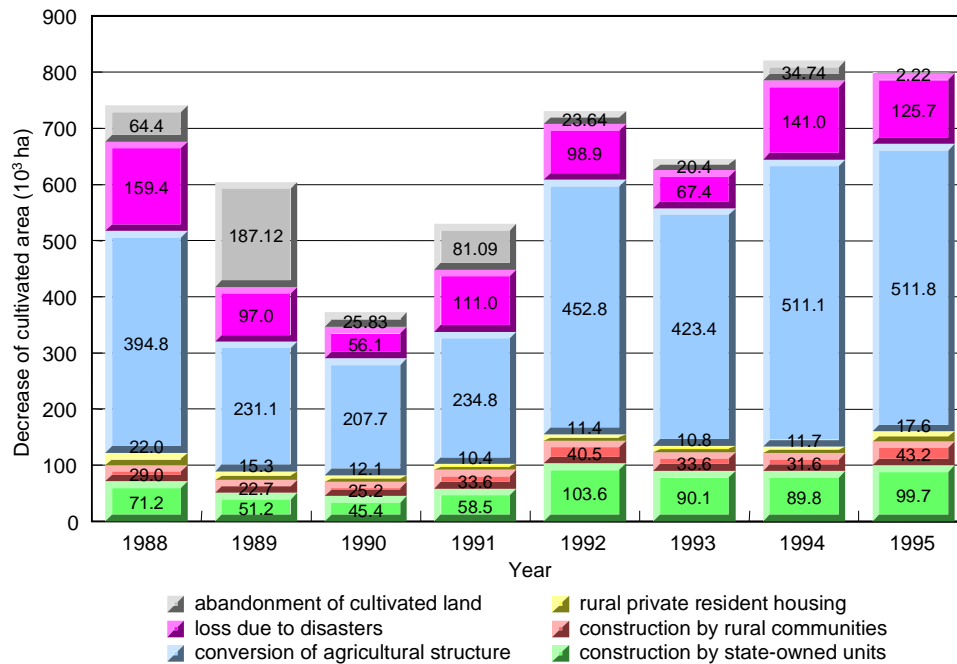
**Figure 3. Proportion of increase of cultivated area in China during 1988-1995.**

## 2.2 Decrease of cultivated area

The statistics reported by SLA are more detailed than data from SSB and distinguish six causative factors of farmland loss. The first three categories relate to construction, one category describes conversion within the broadly defined agricultural sector, one category refers to land losses due to frequently occurring natural disasters, and the last category gives an account of cultivated land abandoned for other than the above reasons:

- construction by state-owned units,
- construction by rural communities,
- peasant housing,

- conversion of farmland to other agricultural land-use types, such as horticulture, forestry, grassland, or fish ponds,
- loss due to disasters (such as flooding, mud flow, gully erosion, landslides, etc.),
- abandonment of cultivation<sup>7</sup>.

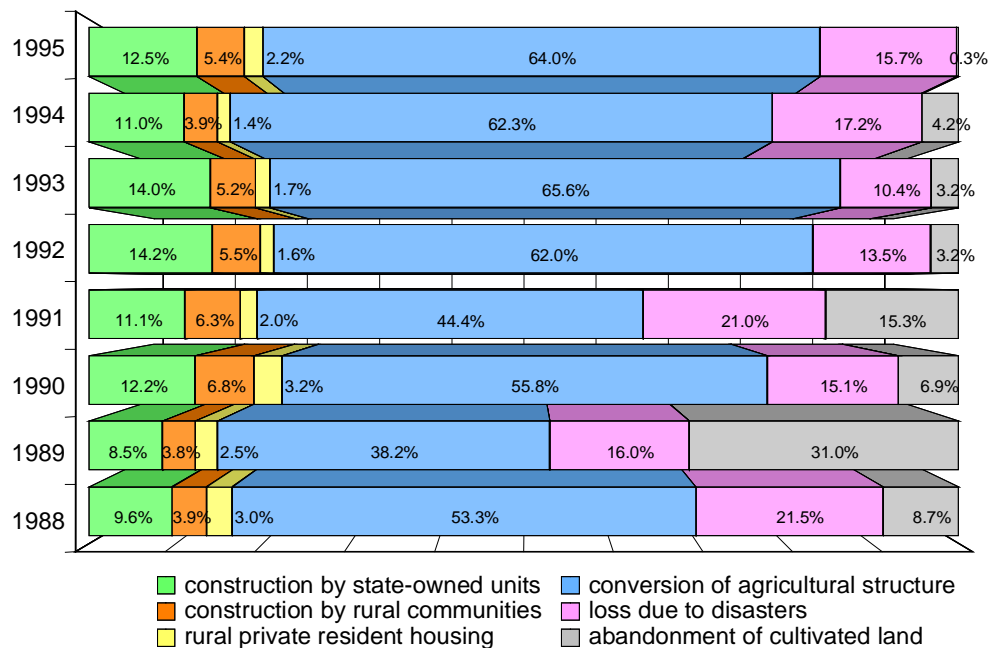


**Figure 4. Decrease of cultivated area in China during 1988-1995.**

Figure 4 and Figure 5 show, respectively, the total extent and percent distribution of decreases in *used* cultivated land according to these six categories. It is obvious that in terms of total area involved, the main cause for decreasing cultivated land was the conversion of farmland to other (broad agricultural) land-use types due to adjustment of the agricultural structure for economic reasons and environmental projects for water and soil conservation. This kind of conversion has been growing year-by-year since 1989. The data may be indicative of China's attempts to put *sustainable development*, one of the country's basic national policies, into practice. The aim is to strengthen the protection and rational use of ecosystems and the environment while emphasizing their economic benefits. However, despite of efforts to protect, the

<sup>7</sup> According to SLA, this last category is actually not included in the accounts of farmland losses since in a formal sense these areas continue to be classified as cultivated land. We have followed this logic in deriving land balances, but indicate abandonment separately in some figures of decreases of cultivated land to show the magnitude of annual changes in *used* cultivated land.

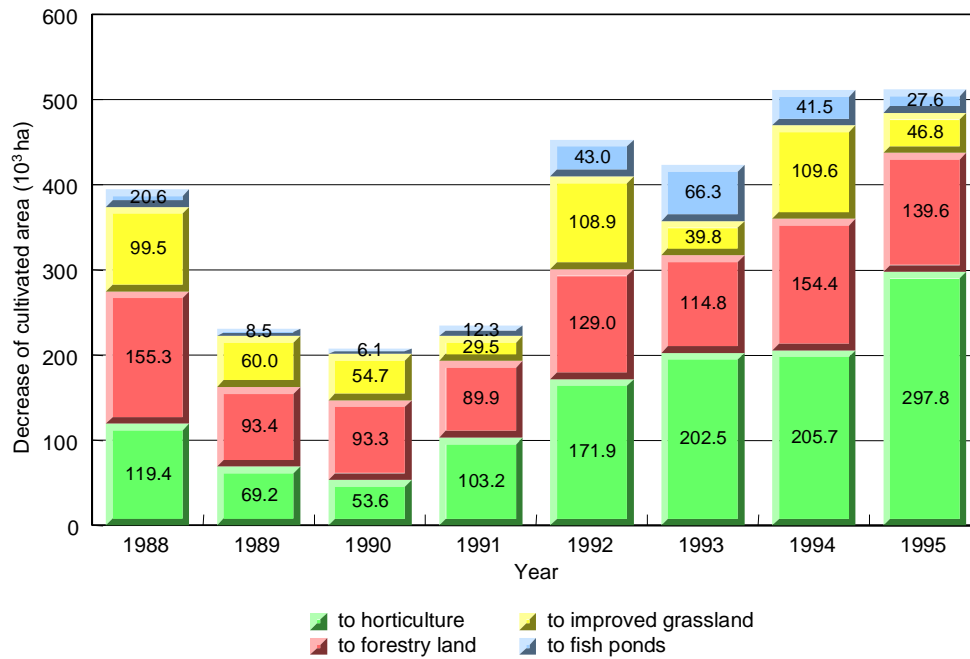
cultivated land in China has been severely threatened by natural disasters such as flooding, landslides, mud and sand drifts, sandy winds, etc. Since 1988, the proportion of farmland loss due to disasters has always exceeded 10% of the total decrease of cultivated area, and has been more than 15% in six out of the eight years reported here. In absolute terms, the cumulative loss of cultivated area between 1988-95 due to disasters is estimated to exceed 1 million ha. This total amount is about the same as the extent of cultivated land converted by construction. The proportion of loss in cultivated land due to construction (i.e., the first three categories in Figure 5) has been fairly stable since 1990 at about 20% of total decreases.



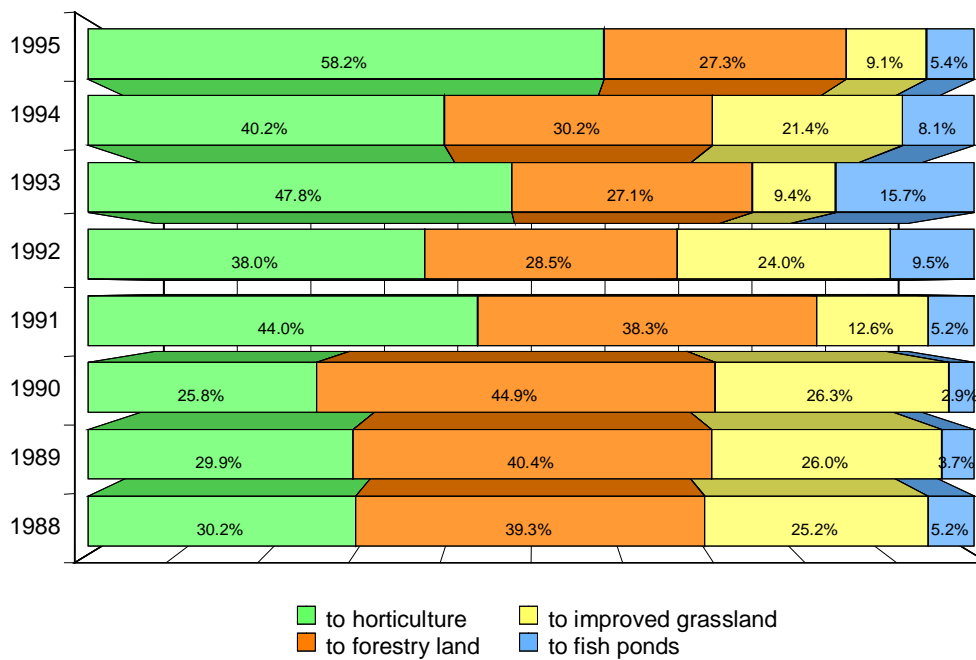
**Figure 5. Proportion of decrease of cultivated area in China during 1988-1995.**

### **2.2.1 Decrease of cultivated area due to adjustments within agriculture**

In Chinese statistics, agriculture encompasses several land-based sectors including crop cultivation, livestock husbandry, forestry, and fisheries (and sideline production). In the context of farmland losses, the denomination *adjustment of the agricultural structure* refers to transfer of land from crop cultivation to other agricultural sub-sectors.



**Figure 6. Decrease of cultivated area due to adjustment of agricultural structure in China during 1988-1995.**



**Figure 7. Proportion of decreased cultivated area due to adjustment of agricultural structure in China during 1988-1995.**

In the period from 1988 to 1995, two phases can be distinguished as regards land conversion due to adjustment of the agricultural structure. Figure 6 and Figure 7 show,



respectively, the annual amounts and destination as well as percentage distribution of diversion of cultivated land to horticulture, forestry, improved grassland, and development of fish ponds. From these data it can be derived that a shift in policy emphasis occurred in 1990/1991.

Until 1991, the total extent of land conversion in this category was rather small and decreasing year by year. Forestry, accounting for roughly 40% of the respective changes in cultivated land, received by far the largest proportion of the converted land, followed with roughly equal amounts by horticulture and grassland. It is stated that the primary objective of farmland conversion in that period was to conserve soil resources and water, i.e., strong environmental motivations. After 1991, strong incentives for adjusting the agricultural structure have also come from the increased demand for horticultural commodities, such as fruit, tea, etc. In 1995, nearly 300 thousand hectares of cultivated land were turned into horticulture, almost 60% of the total amount.

The data suggests that conversions of land due to adjustment of the agricultural structure have accelerated in recent years, with strong emphasis on horticulture and forestry. The changes in economic policies and incentives on one hand, the growing consumer incomes and the opening to foreign countries and exposure to foreign lifestyles on the other hand, have altered consumer demand and producer behavior.

The demand for horticultural products has been rising rapidly and has stimulated the investment from state-owned units, rural communities and private entrepreneurs into horticulture (Yao, 1998). The importance of economic factors and life-style related driving forces is illustrated also by the marked increase in the amount of land diverted to fish ponds (although this category is overall by far the least important). Though second in importance after 1990, the conversion of cultivated land to forestry has increased as well underlining that environmental considerations have remained important also after 1991, albeit less so in relative terms.

### ***2.2.2 Decrease of farmland due to construction of state-owned units***

Of the decrease in cultivated land attributable to construction, the area absorbed in the construction of state-owned units has been the most significant component. For construction by state-owned units, there are seven causative factors that are distinguished in the SLA statistics:

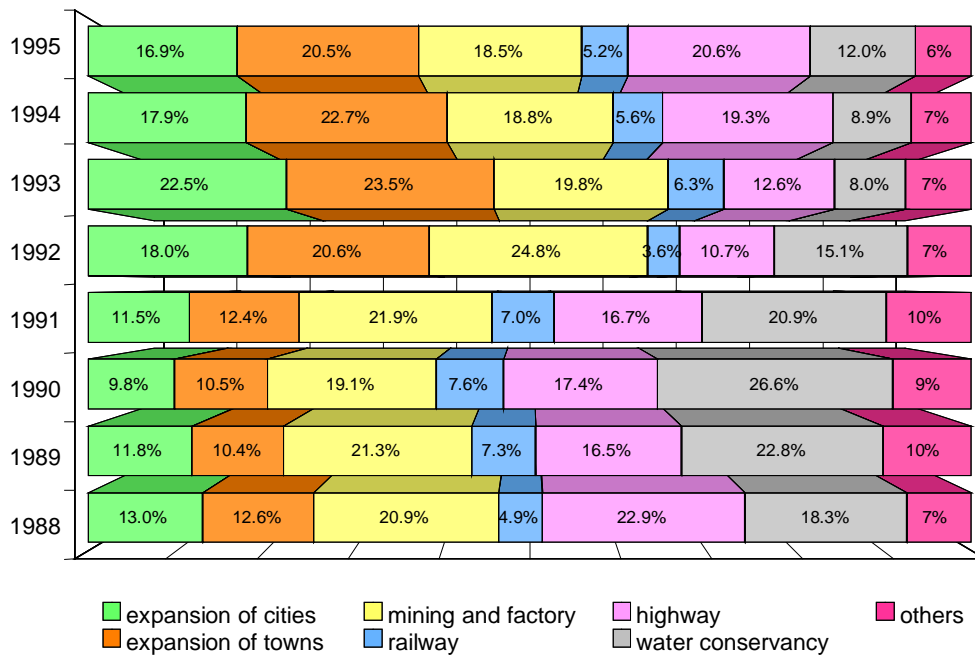
- expansion of cities,
- expansion of towns,
- construction of mining facilities and factories,
- construction of railways,
- construction of highways,
- construction of water conservancy, and
- other construction (including land for office space, buildings for education and scientific research).



**Figure 8. Decrease of cultivated area due to construction by state-owned units in China during 1988-1995.**  
*(NB: “others” means occupying cultivated land for office, education and scientific research.)*

Figure 8 and Figure 9 show, respectively, the total extents and percentage distribution of farmland losses in these categories. Again, the period 1991/1992 marks a new round of investment expansion after the 3-year retrenchment during 1988-1990. During the first half of the study period before 1992 (i.e., for the years 1988-1991), the total decrease of cultivated land due to construction by state-owned units on average amounted to a little more than half the average for the period 1992-1995. In the earlier period, construction of mining and industries as well as water conservancy projects dominated these activities. In 1992 and thereafter, the emphasis shifted to expansion of cities and towns, and the construction of road infrastructure. Farmland losses due to

construction of mining and industries increased strongly as well, though relatively less in comparison to urban expansion and infrastructure development.



**Figure 9. Proportion of decreased cultivated area due to construction by state-owned units in China during 1988-1995.**  
*(NB: "others" means occupying cultivated land for office, education and scientific research.)*

The increasing amount of farmland occupied by urban expansion reflects two trends: first, the real estate sector in China has been developing rapidly; second, higher incomes have raised the awareness and financial means to focus on a better quality of living. These trends are inevitable consequences of China's modernization and urbanization and will continue in future decades, and perhaps increasingly so, to exercise pressures on China's farmland.

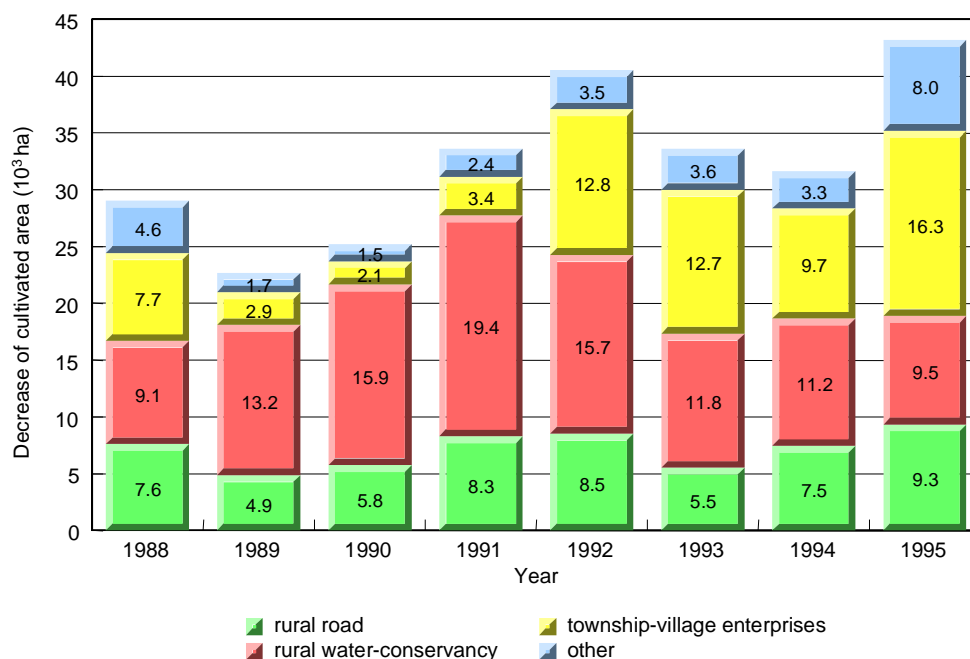
A major impulse to farmland diversion for construction of mining and industries by state-owned units can be attributed to the development of special economic zones in order to attract foreign and domestic investments. For this purpose, large areas of farmland have been built-up, especially in coastal regions.

Finally, construction of railway lines, highways and efficient road networks is taking place almost everywhere in China as a prerequisite for increased mobility, regional specialization and economic efficiency.

### 2.2.3 Decrease of farmland due to construction by rural communities

In recent years, construction by rural communities has occupied roughly 40 thousand hectares of cultivated land per year (period 1992-1995). This is somewhat less than half the extent converted through construction by state-owned units discussed previously. Figure 10 shows the total decrease of cultivated land during 1988-1995 caused by construction of rural communities. Figure 11 details the percentage distribution according to four categories:

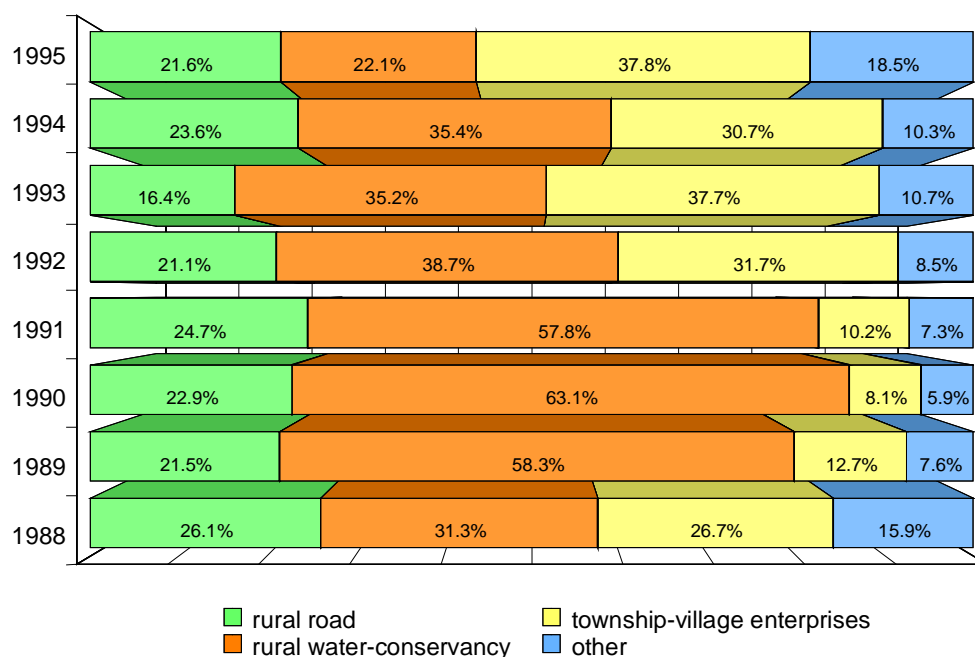
- construction of rural roads,
- construction of rural water conservancy,
- development of township-village enterprise, and
- conversion of cultivated land for other construction (including offices, education and sanitation).



**Figure 10. Decrease of cultivated area due to construction by rural communities in China during 1988-1995.**  
*(NB: "other" means occupying cultivated land for office, education and sanitation.)*

The data reveals the impulse to construction of township-village enterprises following the visit of Deng Xiaoping to the southern parts of China in 1992. The rapid economic up-swing in these areas since 1992, following a depression caused by high

inflation and political incident in the late 1980s, has resulted in a boom of township-enterprise development, as manifested by the large increase in cultivated land occupied for that purpose (see Figure 10). Also, it has been argued that more land has been delineated for township-village enterprise development than has been actually built upon, so that the land shown in this category may initially have been partly lying idle.



**Figure 11. Proportion of decreased cultivated area due to construction by rural communities in China during 1988-1995.**

(NB: “other” means occupying cultivated land for office, education and sanitation.)

Construction for water conservancy and construction of rural roads have consumed fairly stable amounts of cultivated land. However, due to the economic drivers for township-enterprise development, road building and construction of water conservancy have been relatively somewhat less important in recent years (Figure 11).

Owing to the distribution of China’s land resources and the uneven spread of climatic resources, in particular of rainfall, rural water conservancy has been one of the pillars of agricultural development in China, although its benefits become manifest sometimes only after several years of construction. High investment requirements for water conservancy projects, changes in the economic system, along with several years

of good harvests have resulted in stagnation and decrease of financial inputs into agriculture and water conservancy projects. Such trends, if they were to persist, would undoubtedly affect the mid- to long-term prospects of agricultural development in China.

### 2.3 Net change of cultivated area

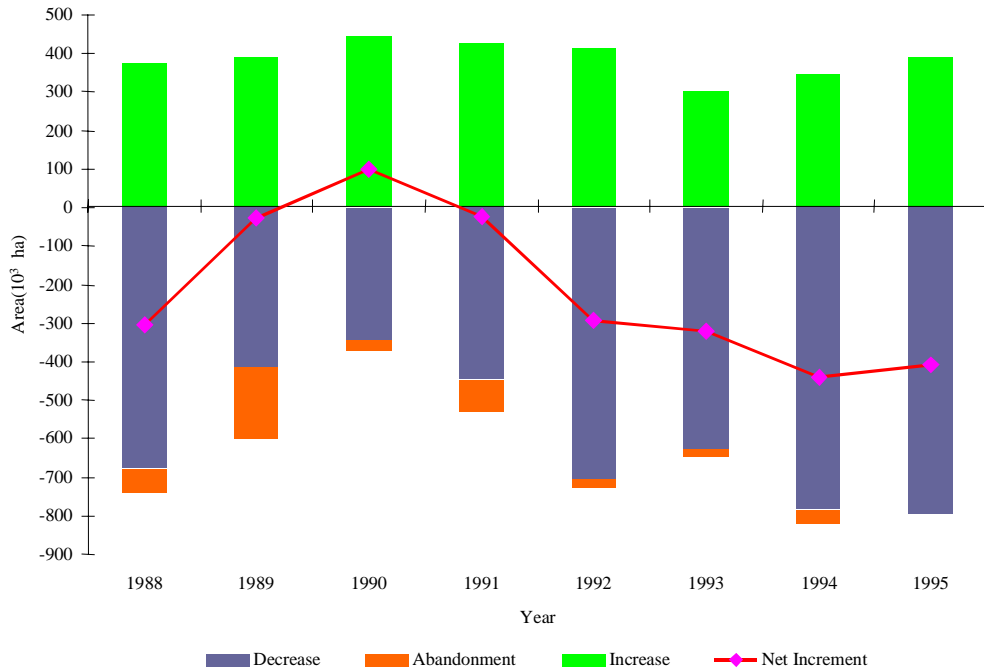
In the materials compiled by SLA, the net change of cultivated land is defined as being equal to the difference of the sum of the respective categories of *increase of cultivated land* minus the sum of categories under *decrease of cultivated land*. This definition does not include the amounts shown as *abandoned cultivated land*<sup>8</sup>. Figure 12 illustrates that during past years, decline has been the main tendency of net change of cultivated area in China amounting to 1.72 million hectares during 1988-1995. If we consider abandonment of cultivated land as part of decreases in *used* farmland, the total net reduction over the period 1988-1995 increases from 1.72 million hectares to about 2.16 million hectares, i.e., an average 270 thousand hectares per year during 1988-1995. In Figure 12, the sum of reclamation areas and conversion to cultivated land are shown in green, conversions from cultivated land are shown in blue, and their difference is indicated by a purple line-graph. In addition (but not included with the shown *net increment*), the extent of abandoned cultivated land each year is shown in orange color.

Since 1992, many important projects initiated by central and local governments have channeled investment into large-scale development projects aiming to attract investment from abroad and more developed areas to accelerate national and local economic development. In many regions, especially in coastal provinces, it became a principal task of administrators to establish special economic zones and to develop the real estate sector. As a consequence, net decreases of cultivated land have been growing year by year. A peak was reached in 1994 when the amount of cultivated land lost or abandoned within one year amounted to some 820 thousand hectares (compared to 347 thousand hectares of cultivated land gained from reclamation, drainage, conversion from other agricultural uses or rehabilitation of discarded land).

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<sup>8</sup> In the statistics abandoned farmland is kept separate from the total of decreases caused by construction, adjustment of agricultural structure, and loss due to disasters. The justification given is that according to definitions used abandoned farmland remains part of the cultivated land base.

In 1995, the SLA strengthened the monitoring and prosecution of illegal cases of land use. These measures helped to halt the increasing trend of net losses of cultivated land (SLA, 1996), at least in the short-term (see Figure 12). However, it is evident that the cultivated land base in China will continue to be under great pressure from other economic sectors requiring land to support economic growth.



**Figure 12. Change of used cultivated land in China during 1988-1995.**

Figure 13 and Figure 14 show, respectively, the contributions from each of the eight LUC economic regions to increases and decrements (including *decreases* and *abandonment*) of farmland in China during 1988-1995. Increases are dominated by expansions in the Northwest, South, Southwest, and Northeast regions. Decreases (and abandonment) are more equally spread over the eight regions, but were largest in LUC's Northwest and North region. A more detailed balance by economic region and province is given in Appendix 2.

While the aggregate national results, i.e., a net decrease of cultivated land, generally hold for most of the eight economic regions distinguished in the LUC economic model, there are also some differences among regions (and even within regions). The Plateau region, including Qinghai province and Xizang Autonomous Region, is the only LUC region with a net increase in cultivated land, although the

region's cultivated land base as well as its increase are of minor importance in the national total. Before 1992, six out of the eight regions have reported net increases in some years, the exception being LUC's Central and East economic region

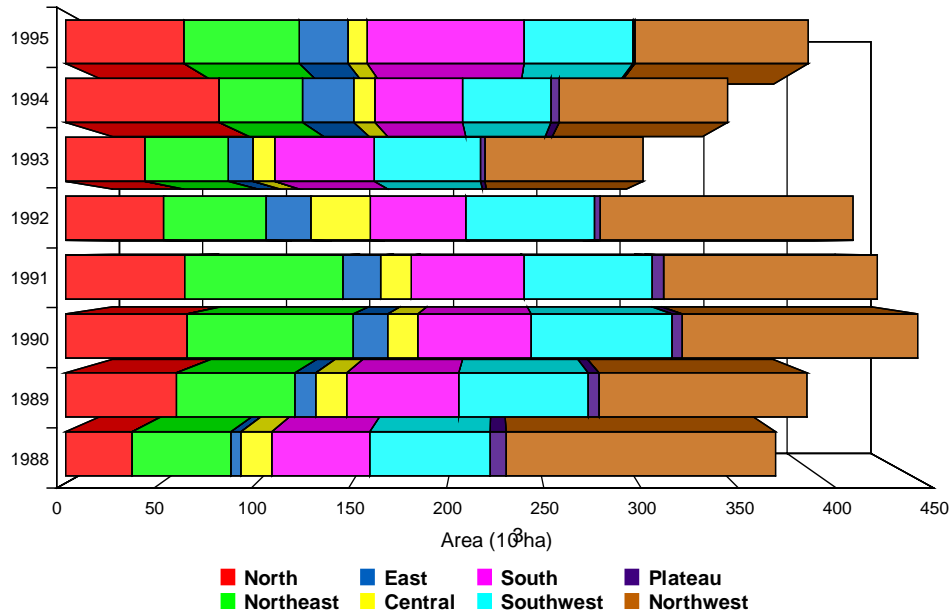


Figure 13. Regional contributions to increases of cultivated land in China during 1988-1995.

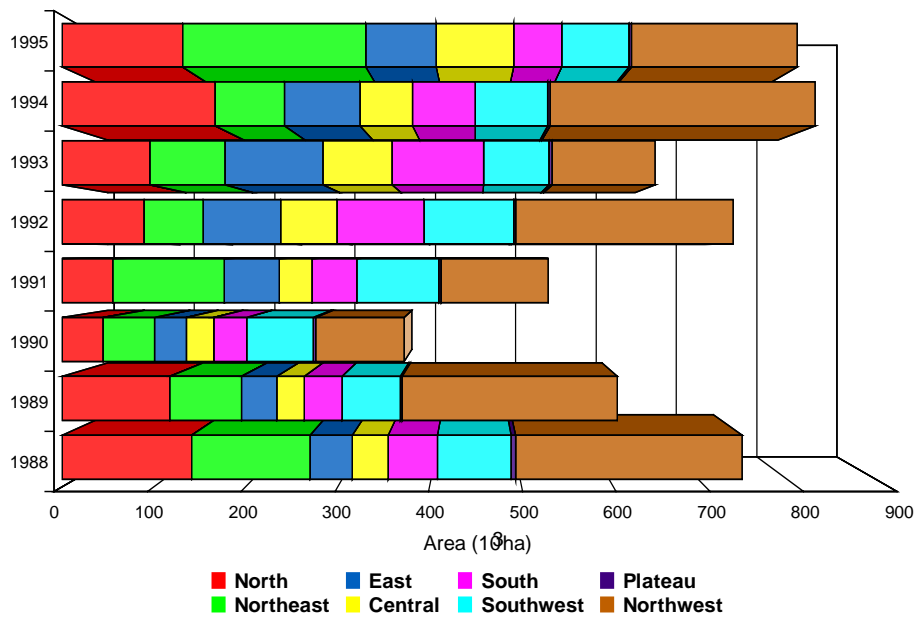
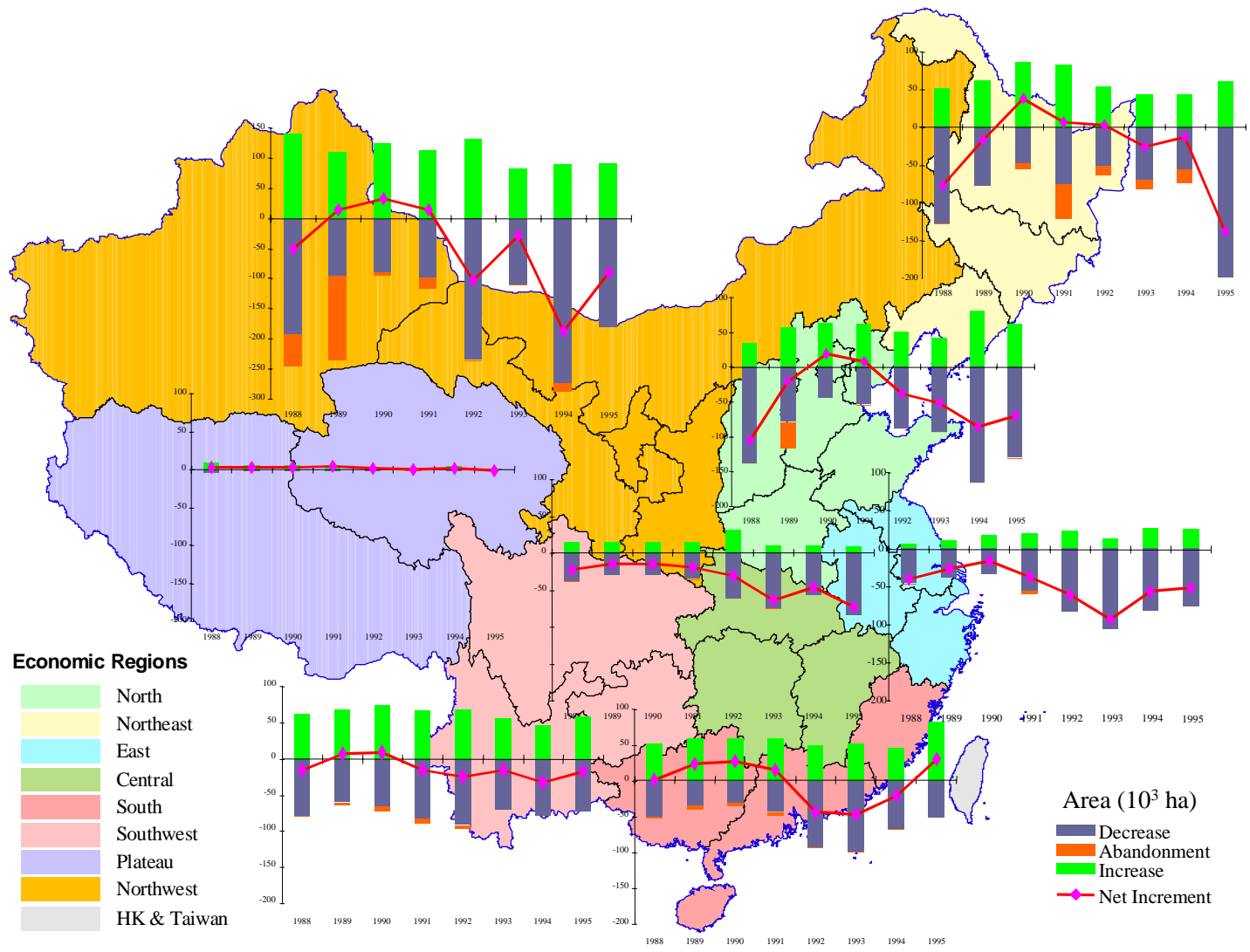


Figure 14. Regional contributions to decreases of cultivated land in China during 1988-1995 (including *Decrease and Abandonment*).

B





**Figure 15. Change of cultivated land in LUC economic regions of China during 1988-1995**

Figure 15 illustrates increases, decreases and abandonment of cultivated land in the eight LUC economic regions of China. The line-graphs show the net increases in farmland (excluding abandonment). The figure indicates that after 1992 practically all regions have had a negative balance of cultivated land, i.e., net farmland losses. The imbalance between additions and losses of farmland was especially pronounced in the East (Shanghai, Jiangsu, Zhejiang, Anhui) and Central (Jiangxi, Hubei, Hunan) region. In absolute terms, the largest flows occurred in LUC's Northwest region (Xinjiang, Nei Mongol, Ningxia, Gansu, Shaanxi) due to major conversions from crop cultivation to horticulture, forestry and improved grassland (about 300 thousand hectares each).

### 3. Summary and conclusions

The main objective of this work was to provide some empirical basis on year-by-year land conversion for modeling land-use/cover change within IIASA's LUC project (Fischer *et al.*, 1996). The project aims at setting up a complete account of land conversion which would help to identify the processes and magnitudes of change affecting China's land base. This paper relies on recent land statistics of China prepared by SLA, focusing on conversion of farmland to other land-use categories, including horticulture, forestry, grassland, and urban/infrastructure development.

The statistics prepared by SLA include estimates of cultivated land at the beginning and the end of each year based on detailed survey information available. The SLA statistics show the extent of land having received a detailed survey and the estimate of cultivated land obtained without such detailed survey. Table 1 provides a compilation of the respective estimates for recent years. Between 1988 and 1995 the cultivated land listed as having received detailed survey increased from about 8.9 million hectares to 128.3 million hectares. Mirroring this situation, the estimates relating to cultivated land without such detailed survey decreased from 113.7 million ha to 3.2 million ha.

In the process of obtaining improved and detailed survey information, the estimates of total farmland derived from these two 'pools' of cultivated land were corrected upwards from 122.6 million ha in 1988 to 131.1 million hectares in 1995. This has resulted in an increasing estimate of cultivated land despite of apparent farmland

losses during that period. When interpreting this statistical information, it is therefore important to separate these two elements, namely, that on one hand there is a *real ongoing process of farmland loss* due to economic and environmental driving forces, while on the other hand estimates of cultivated land have been corrected upwards due to more detailed survey information that has become available during recent years.

**Table 1. SLA estimates of China's cultivated land (thousand ha)**

Year	Extents at the <b>beginning</b> of the year			Extents at the <b>end</b> of the year		
	With detailed survey	Without detailed survey	Total cultivated land	With detailed survey	Without detailed survey	Total cultivated land
1988	8,916	113,687	122,603	8,770	113,528	122,298
1989	13,979	107,988	121,967	13,833	108,105	121,938
1990	22,999	99,411	122,410	22,771	99,739	122,510
1991	41,602	81,659	123,261	41,256	81,982	123,238
1992	59,439	64,984	124,422	59,202	64,926	124,128
1993	83,864	42,810	126,674	83,607	42,745	126,351
1994	108,672	21,634	130,306	108,427	21,441	129,868
1995	128,313	3,209	131,522	128,254	2,859	131,113

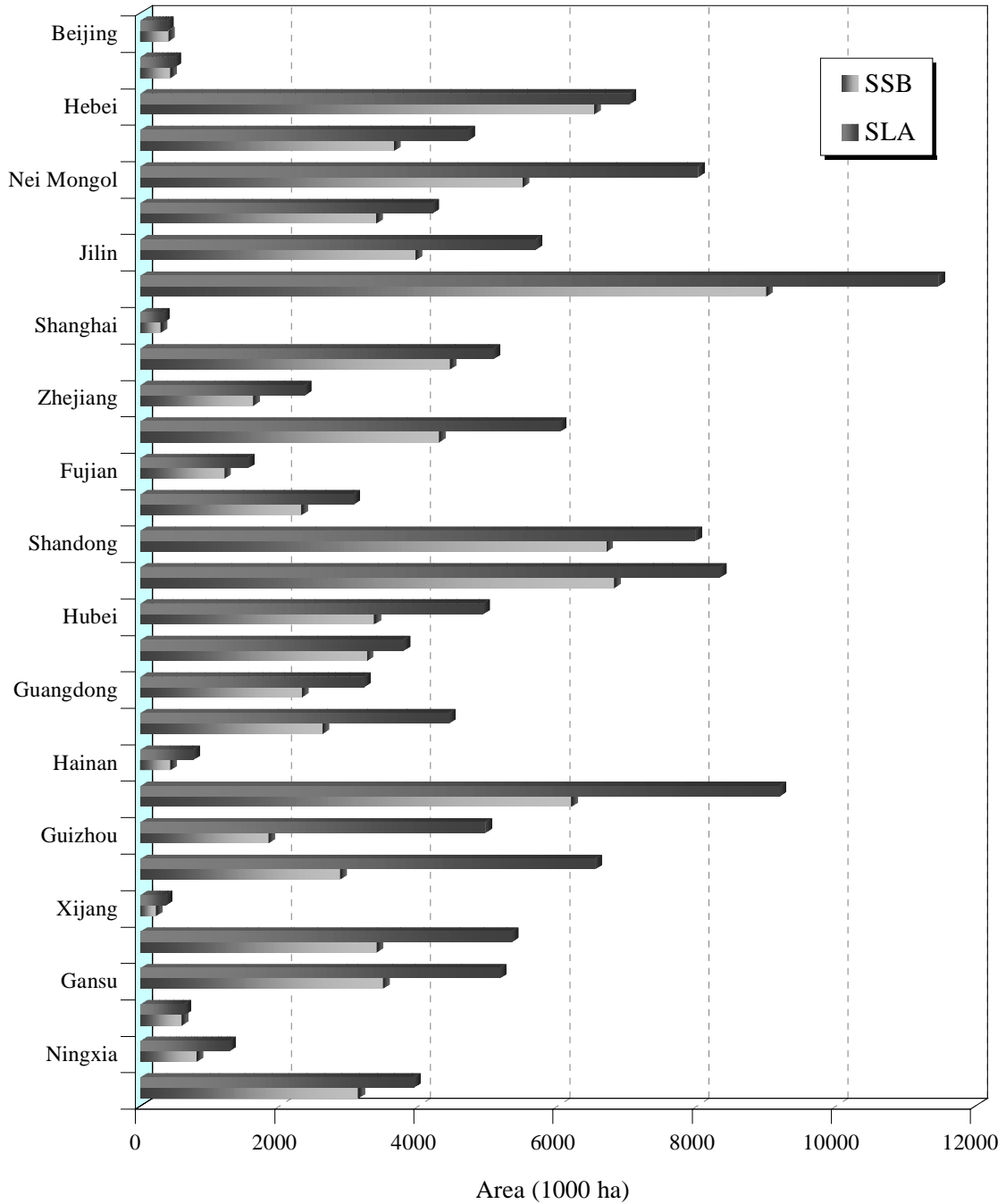
Source: State Land Administration (1989 to 1996)

The large difference between estimates of total cultivated land in 1995 of 95.0 million hectares published by SSB and of 131.1 million hectares as communicated by SLA (SLA, 1996) have invited various interpretations of the causes for this massive underreporting. The general conclusion has been that the grim outlook presented by Brown (1995) has to be revised in favor of improved prospects for Chinese agriculture, both for the sake of a larger available resource base as well as for consequently reduced estimates of input use per hectare of cultivated land.

Here we do not want to follow up on such discussions but rather concentrate on the regional distribution of discrepancies between estimates of the two organizations. Figure 16 compares by province the SSB and SLA estimates of total cultivated land for (end-year) 1995. For all of China, the SLA estimate is some 38 percent higher than the value published by SSB. For eight provinces the discrepancies are less than 20 percent (Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Shandong, Hunan, and Qinghai)<sup>9</sup>. On the

<sup>9</sup> Beijing is the only province-level administrative unit for which SSB reports an estimate of cultivated land higher than SLA, though the difference is small (less than 4 percent).

other extreme, for seven provinces and autonomous regions the discrepancies range from 57 to 170 percent (Guangxi, Hainan, Guizhou, Yunnan, Shaanxi, Gansu, Ningxia). For the remaining provinces, discrepancies fall within the range of 20 to 50 percent.



**Figure 16. A comparison of SSB and SLA province-level estimates of total cultivated land in 1995 (end-year).**

This analysis suggests that there is a strong geographical bias in SSB underreporting. While the estimates for the central and eastern part of China are quite comparable, the SLA estimates for south-west China (Yunnan, Guizhou) are more than twice the SSB levels. Large differences, of about 50 percent, are found also for some northern provinces (Gansu, Ningxia, Shaanxi).

A summary of regional conversion balances derived from the SLA land statistics is presented in Table 2, showing aggregate totals for the period 1988-1995 of increases, decreases, net increases, and abandonment of cultivated land. Also shown is the estimate of cultivated land at the end of 1995 compiled by SLA and a corrected estimate for the beginning of 1988 calculated by the authors based on the 1995 SLA estimate and the reported net changes of cultivated land. The column showing the percentage of cultivated land lost during the study period is based on the estimated stock of cultivated land in 1988.

**Table 2. Balance of cultivated land in China during 1988-1995 (in thousand ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net Increase	% net increase	Abandoned
North	29,250	28,910	455	795	-340	-1.16	45
Northeast	21,567	21,347	485	705	-220	-1.02	100
East	14,150	13,771	143	523	-379	-2.68	6
Central	12,040	11,757	127	411	-284	-2.35	2
South	9,958	9,947	458	469	-11	-0.11	24
Southwest	20,782	20,677	498	603	-105	-0.51	25
Plateau	976	991	36	21	15	1.54	2
Northwest	24,112	23,714	879	1,277	-398	-1.65	236
<b>CHINA</b>	<b>132,835</b>	<b>131,113</b>	<b>3,082</b>	<b>4,804</b>	<b>-1722</b>	<b>-1.30</b>	<b>439</b>

Source: State Land Administration (1989 to 1996), and calculations by the authors

Accordingly, net diversions have been largest in the East and Central LUC economic regions, respectively 2.7 and 2.4 percent of the farmland in 1988. While construction and conversion to horticulture are mainly responsible for changes in the East region, conversion of farmland to horticulture, forestry and fish ponds were the principal driving forces of decrease in the Central region. Looking at conversion from and losses of cultivated land only, the Northwest region scores highest with 5.3 percent of the 1988 cultivated land converted to horticulture, forestry and for establishing

improved grassland, or lost due to disasters (e.g., desertification). Construction, conversion to horticulture and fish ponds are the dominating causes of an almost 5 percent gross decrease in the South region. All province-level results can be found in Appendix 2.

This study, based on recent data compiled by China's SLA, has greatly improved our understanding of the magnitude and the fate of farmland in different regions of China. Still, much less is known about other major land categories. It is, therefore, suggested that exploitation of the growing potential of remote sensing and geographical information systems in analyzing macroscopic land use change processes should be emphasized in future work in addition and complementary to land statistics.

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## Appendix 1:

### Data sources

State Land Administration, Statistical Information on the Land of China in 1988, Beijing: 1989.

State Land Administration, Statistical Information on the Land of China in 1989, Beijing: 1990.

State Land Administration, Statistical Information on the Land of China in 1990, Beijing: 1991.

State Land Administration, Statistical Information on Land of China in 1991, Beijing: 1992.

State Land Administration, Statistical Information on the Land Administration of China in 1992, Beijing: 1993.

State Land Administration, Statistical Information on Land Administration of China in 1993, Beijing: 1994.

State Land Administration, Statistical Information on Land Administration of China in 1994, Beijing: 1995.

State Land Administration, Statistical Information on Land Administration of China in 1995, Beijing: 1996.



## Appendix 2:

### Tables on balance of cultivated land during 1988-1995 at level of provinces and LUC economic regions

**Table A2.1. Balance of cultivated land in North region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Beijing	413	384	4	33	-29	-7.11	0
Tianjin	499	489	6	15	-9	-1.85	0
Hebei	7,108	7,027	134	215	-81	-1.14	2
Shanxi	4,765	4,712	111	163	-52	-1.10	42
Shandong	8,025	7,971	154	208	-54	-0.68	0
Henan	8,441	8,327	47	161	-114	-1.35	1
<b>NORTH</b>	<b>29,250</b>	<b>28,910</b>	<b>455</b>	<b>795</b>	<b>-340</b>	<b>-1.16</b>	<b>45</b>

Source: State Land Administration, and calculations by the authors

**Table A2.2. Balance of cultivated land in Northeast region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Liaoning	4,310	4,197	92	204	-112	-2.60	0
Jilin	5,768	5,683	84	169	-85	-1.47	1
Helongjiang	11,489	11,466	308	331	-23	-0.20	99
<b>NORTH-EAST</b>	<b>21,566</b>	<b>21,347</b>	<b>485</b>	<b>705</b>	<b>-220</b>	<b>-1.02</b>	<b>100</b>

Source: State Land Administration, and calculations by the authors

**Table A2.3. Balance of cultivated land in East region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Shanghai	358	324	6	40	-34	-9.61	0
Jiangsu	5,247	5,069	72	250	-178	-3.39	0
Zhejiang	2,425	2,356	32	101	-69	-2.84	1
Anhui	6,120	6,023	33	131	-98	-1.60	5
<b>EAST</b>	<b>14,151</b>	<b>13,771</b>	<b>143</b>	<b>523</b>	<b>-379</b>	<b>-2.68</b>	<b>6</b>

Source: State Land Administration, and calculations by the authors

**Table A2.4. Balance of cultivated land in Central region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Jiangxi	3,074	3,056	27	44	-17	-0.56	0
Hubei	5,098	4,921	51	228	-177	-3.46	1
Hunan	3,869	3,779	50	140	-90	-2.33	1
<b>CENTRAL</b>	<b>12,040</b>	<b>11,757</b>	<b>127</b>	<b>411</b>	<b>-284</b>	<b>-2.36</b>	<b>2</b>

Source: State Land Administration, and calculations by the authors

**Table A2.5. Balance of cultivated land in South region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Fujian	1,565	1,541	20	43	-24	-1.51	0
Guangdong	3,310	3,214	157	253	-96	-2.90	9
Guangxi	4,323	4,435	262	151	112	2.59	10
Hainan	760	757	19	23	-3	-0.43	5
<b>SOUTH</b>	<b>9,958</b>	<b>9,947</b>	<b>458</b>	<b>469</b>	<b>-11</b>	<b>-0.11</b>	<b>24</b>

Source: State Land Administration, and calculations by the authors

**Table A2.6. Balance of cultivated land in Southwest region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Sichuan	9,335	9,184	76	227	-151	-1.62	2
Guizhou	4,993	4,960	39	72	-33	-0.66	1
Yunnan	6,454	6,533	383	304	79	1.23	21
<b>SOUTH-WEST</b>	<b>20,782</b>	<b>20,677</b>	<b>498</b>	<b>603</b>	<b>-105</b>	<b>-0.51</b>	<b>25</b>

Source: State Land Administration, and calculations by the authors

**Table A2.7. Balance of cultivated land in Plateau region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Xijang	368	361	7	15	-7	-2.00	0
Qinghai	608	630	29	6	23	3.73	2
<b>PLATEAU</b>	<b>976</b>	<b>991</b>	<b>36</b>	<b>21</b>	<b>15</b>	<b>1.57</b>	<b>2</b>

Source: State Land Administration, and calculations by the authors

**Table A2.8. Balance of cultivated land in Northwest region, 1988-1995 (in 1000 ha)**

Region	Cultivated land		Period 1988-1995				
	Begin 1988	End 1995	Increase	Decrease	Net increase	% net change	Abandoned
Nei Mongol	8,225	8,013	262	474	-212	-2.58	89
Shaanxi	5,699	5,337	142	504	-362	-6.36	8
Gansu	5,157	5,164	62	55	7	0.13	104
Ningxia	1,260	1,273	34	21	13	1.04	1
Xinjiang	3,770	3,927	380	223	157	4.16	34
<b>NORTH-WEST</b>	<b>24,112</b>	<b>23,714</b>	<b>879</b>	<b>1,277</b>	<b>-398</b>	<b>-1.65</b>	<b>236</b>

Source: State Land Administration, and calculations by the authors

## Appendix 3:

Tables on increase of cultivated land during 1988-1995 at level of provinces and LUC economic regions

Source: State Land Administration, 1989 to 1996

**Table A3.1 Increase of cultivated area in 1988 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	5	2	0	0	0	2	0
Tianjin	3	0	0	0	0	1	2
Hebei	77	60	7	0	0	13	4
Shanxi	107	77	3	5	1	8	17
Shandong	129	93	6	1	0	31	4
Henan	29	14	2	1	0	6	8
<b>NORTH</b>	<b>349</b>	<b>247</b>	<b>18</b>	<b>7</b>	<b>1</b>	<b>60</b>	<b>35</b>
Liaoning	86	77	11	2	1	5	2
Jilin	65	35	4	1	0	7	21
Helongjiang	366	321	92	9	0	21	16
<b>NORTHEAST</b>	<b>517</b>	<b>433</b>	<b>107</b>	<b>11</b>	<b>1</b>	<b>34</b>	<b>39</b>
Shanghai	0	0	0	0	0	0	0
Jiangsu	20	8	3	5	0	5	3
Zhejiang	24	10	0	5	0	4	5
Anhui	9	3	0	0	0	2	4
<b>EAST</b>	<b>54</b>	<b>21</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>13</b>
Jiangxi	18	14	1	0	0	2	1
Hubei	73	37	1	2	0	6	27
Hunan	69	56	2	1	0	4	8
<b>CENTRAL</b>	<b>159</b>	<b>107</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>35</b>
Fujian	17	8	0	5	0	1	2
Guangdong	208	93	1	27	22	2	85
Guangxi	249	220	1	2	0	10	17
Hainan	40	37	0	0	0	0	3
<b>SOUTH</b>	<b>514</b>	<b>358</b>	<b>2</b>	<b>35</b>	<b>22</b>	<b>14</b>	<b>108</b>
Sichuan	86	49	1	2	0	23	12
Guizhou	35	28	2	0	0	2	5
Yunnan	510	396	6	3	0	20	91
<b>SOUTHWEST</b>	<b>631</b>	<b>473</b>	<b>9</b>	<b>5</b>	<b>0</b>	<b>45</b>	<b>108</b>
Xijang	9	9	1	0	0	0	0
Qinghai	73	50	0	0	0	4	18
<b>PLATEAU</b>	<b>82</b>	<b>60</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>18</b>
Inner Mongolia	287	194	17	7	0	14	73
Shaanxi	201	97	0	0	1	49	54
Gansu	77	65	2	1	0	8	3
Ningxia	52	37	4	0	0	5	10
Xinjiang	795	641	48	64	2	49	42
<b>NORTHWEST</b>	<b>1,413</b>	<b>1,034</b>	<b>72</b>	<b>72</b>	<b>2</b>	<b>125</b>	<b>182</b>
<b>CHINA</b>	<b>3,720</b>	<b>2,733</b>	<b>216</b>	<b>144</b>	<b>27</b>	<b>306</b>	<b>537</b>

**Table A3.2 Increase of cultivated area in 1989 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	1	1	0	0	0	0	0
Tianjin	13	12	0	0	0	0	1
Hebei	126	82	1	2	0	18	25
Shanxi	188	118	4	10	0	21	39
Shandong	187	155	21	5	0	19	8
Henan	65	42	0	3	0	15	5
<b>NORTH</b>	<b>580</b>	<b>410</b>	<b>27</b>	<b>19</b>	<b>0</b>	<b>73</b>	<b>78</b>
Liaoning	119	84	14	7	0	23	4
Jilin	73	37	6	6	0	17	13
Heilongjiang	429	368	88	14	7	26	21
<b>NORTHEAST</b>	<b>621</b>	<b>489</b>	<b>108</b>	<b>27</b>	<b>7</b>	<b>67</b>	<b>39</b>
Shanghai	12	0	0	5	5	0	7
Jiangsu	46	19	0	6	0	16	5
Zhejiang	38	12	0	6	1	9	11
Anhui	14	3	0	0	0	6	5
<b>EAST</b>	<b>109</b>	<b>34</b>	<b>0</b>	<b>17</b>	<b>5</b>	<b>30</b>	<b>28</b>
Jiangxi	27	10	1	8	0	3	6
Hubei	72	32	1	3	0	5	32
Hunan	64	47	1	2	0	6	9
<b>CENTRAL</b>	<b>163</b>	<b>89</b>	<b>2</b>	<b>12</b>	<b>0</b>	<b>15</b>	<b>47</b>
Fujian	26	17	0	5	0	1	4
Guangdong	245	113	2	6	2	4	123
Guangxi	268	215	2	3	2	13	37
Hainan	46	34	3	0	0	3	9
<b>SOUTH</b>	<b>585</b>	<b>378</b>	<b>7</b>	<b>13</b>	<b>4</b>	<b>21</b>	<b>172</b>
Sichuan	98	64	1	2	0	20	12
Guizhou	35	26	0	0	0	6	3
Yunnan	544	416	4	2	0	40	85
<b>SOUTHWEST</b>	<b>677</b>	<b>506</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>65</b>	<b>100</b>
Xijiang	9	9	1	0	0	0	0
Qinghai	48	41	0	0	0	5	1
<b>PLATEAU</b>	<b>57</b>	<b>51</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>
Inner Mongolia	404	340	98	9	0	15	39
Shaanxi	182	104	5	6	0	36	36
Gansu	91	82	30	0	0	5	3
Ningxia	46	36	5	0	0	2	8
Xinjiang	369	276	82	14	0	68	11
<b>NORTHWEST</b>	<b>1,091</b>	<b>838</b>	<b>219</b>	<b>30</b>	<b>0</b>	<b>126</b>	<b>96</b>
<b>CHINA</b>	<b>3,883</b>	<b>2,795</b>	<b>370</b>	<b>125</b>	<b>16</b>	<b>403</b>	<b>560</b>

**Table A3.3 Increase of cultivated area in 1990 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	2	1	0	0	0	1	0
Tianjin	26	26	0	0	0	0	0
Hebei	153	101	2	3	0	31	18
Shanxi	141	91	6	8	0	16	26
Shandong	231	165	0	5	0	41	20
Henan	84	51	1	5	0	25	3
<b>NORTH</b>	<b>637</b>	<b>436</b>	<b>9</b>	<b>21</b>	<b>1</b>	<b>113</b>	<b>67</b>
Liaoning	152	125	5	10	0	15	2
Jilin	259	144	3	52	0	48	15
Helongjiang	459	383	90	1	0	40	35
<b>NORTHEAST</b>	<b>869</b>	<b>651</b>	<b>97</b>	<b>63</b>	<b>1</b>	<b>103</b>	<b>52</b>
Shanghai	6	0	0	0	0	0	6
Jiangsu	97	51	9	14	4	22	10
Zhejiang	51	16	0	15	0	10	11
Anhui	27	5	0	5	1	11	6
<b>EAST</b>	<b>181</b>	<b>71</b>	<b>9</b>	<b>34</b>	<b>5</b>	<b>42</b>	<b>34</b>
Jiangxi	42	36	1	3	0	1	1
Hubei	59	38	2	3	0	5	13
Hunan	57	43	1	2	0	7	6
<b>CENTRAL</b>	<b>158</b>	<b>117</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>13</b>	<b>20</b>
Fujian	18	14	0	1	0	1	2
Guangdong	228	85	1	24	1	10	108
Guangxi	318	257	14	1	0	10	50
Hainan	29	23	1	0	0	2	3
<b>SOUTH</b>	<b>593</b>	<b>380</b>	<b>16</b>	<b>26</b>	<b>1</b>	<b>24</b>	<b>163</b>
Sichuan	106	68	3	4	0	25	10
Guizhou	39	32	2	0	0	4	3
Yunnan	591	433	6	1	0	25	130
<b>SOUTHWEST</b>	<b>736</b>	<b>533</b>	<b>11</b>	<b>5</b>	<b>0</b>	<b>54</b>	<b>144</b>
Xijang	9	9	5	0	0	0	0
Qinghai	46	33	11	3	3	9	0
<b>PLATEAU</b>	<b>55</b>	<b>42</b>	<b>17</b>	<b>3</b>	<b>3</b>	<b>9</b>	<b>0</b>
Inner Mongolia	322	299	36	1	1	22	1
Shaanxi	231	128	2	10	0	47	45
Gansu	63	35	10	1	0	12	15
Ningxia	57	20	3	0	0	5	32
Xinjiang	560	463	156	6	6	64	27
<b>NORTHWEST</b>	<b>1,232</b>	<b>945</b>	<b>207</b>	<b>18</b>	<b>6</b>	<b>149</b>	<b>120</b>
<b>CHINA</b>	<b>4,462</b>	<b>3,176</b>	<b>371</b>	<b>178</b>	<b>17</b>	<b>507</b>	<b>601</b>

**Table A3.4 Increase of cultivated area in 1991 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	4	2	0	0	0	1	0
Tianjin	1	1	0	0	0	0	0
Hebei	156	120	6	5	0	25	5
Shanxi	146	113	5	3	0	10	20
Shandong	244	175	0	28	0	29	13
Henan	73	41	0	2	0	23	7
<b>NORTH</b>	<b>624</b>	<b>452</b>	<b>11</b>	<b>38</b>	<b>0</b>	<b>89</b>	<b>45</b>
Liaoning	164	135	45	7	1	10	12
Jilin	135	102	2	17	0	9	8
Heilongjiang	531	478	110	0	0	27	27
<b>NORTHEAST</b>	<b>830</b>	<b>714</b>	<b>156</b>	<b>23</b>	<b>1</b>	<b>45</b>	<b>47</b>
Shanghai	8	0	0	0	0	0	8
Jiangsu	107	27	1	31	9	30	18
Zhejiang	45	23	1	6	1	6	10
Anhui	38	18	0	0	0	7	12
<b>EAST</b>	<b>197</b>	<b>68</b>	<b>1</b>	<b>37</b>	<b>10</b>	<b>43</b>	<b>48</b>
Jiangxi	36	23	0	1	0	4	7
Hubei	64	46	2	1	0	5	11
Hunan	61	48	2	2	0	6	5
<b>CENTRAL</b>	<b>160</b>	<b>117</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>15</b>	<b>23</b>
Fujian	34	25	1	5	0	1	2
Guangdong	188	87	7	23	7	9	69
Guangxi	333	281	8	1	0	5	45
Hainan	35	33	1	0	0	1	1
<b>SOUTH</b>	<b>591</b>	<b>428</b>	<b>16</b>	<b>29</b>	<b>7</b>	<b>17</b>	<b>118</b>
Sichuan	94	64	2	5	0	15	10
Guizhou	43	33	1	2	0	5	3
Yunnan	533	374	3	1	0	23	135
<b>SOUTHWEST</b>	<b>671</b>	<b>471</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>44</b>	<b>148</b>
Xijiang	9	9	5	0	0	0	0
Qinghai	50	23	0	3	3	12	12
<b>PLATEAU</b>	<b>59</b>	<b>32</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>12</b>
Inner Mongolia	254	241	20	0	0	7	7
Shaanxi	216	109	2	5	3	59	43
Gansu	118	90	37	3	1	11	14
Ningxia	31	18	3	0	0	2	11
Xinjiang	500	418	110	0	0	66	15
<b>NORTHWEST</b>	<b>1,119</b>	<b>877</b>	<b>171</b>	<b>8</b>	<b>3</b>	<b>143</b>	<b>90</b>
<b>CHINA</b>	<b>4,251</b>	<b>3,160</b>	<b>372</b>	<b>152</b>	<b>26</b>	<b>409</b>	<b>531</b>



**Table A3.5 Increase of cultivated area in 1992 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	10	9	0	0	0	1	0
Tianjin	1	0	0	0	0	0	0
Hebei	123	96	3	2	0	18	6
Shanxi	120	88	7	7	0	13	11
Shandong	197	150	0	4	0	25	18
Henan	63	31	2	4	0	15	12
<b>NORTH</b>	<b>513</b>	<b>376</b>	<b>12</b>	<b>18</b>	<b>0</b>	<b>72</b>	<b>47</b>
Liaoning	103	91	19	3	0	4	5
Jilin	65	56	1	1	0	4	3
Heilongjiang	369	352	141	3	0	9	6
<b>NORTHEAST</b>	<b>537</b>	<b>499</b>	<b>161</b>	<b>7</b>	<b>1</b>	<b>17</b>	<b>14</b>
Shanghai	23	0	0	18	18	0	5
Jiangsu	112	20	0	25	2	62	5
Zhejiang	46	29	1	9	0	4	3
Anhui	54	18	1	1	0	12	23
<b>EAST</b>	<b>235</b>	<b>67</b>	<b>3</b>	<b>53</b>	<b>20</b>	<b>78</b>	<b>37</b>
Jiangxi	62	31	0	8	0	14	9
Hubei	132	49	8	11	0	9	63
Hunan	116	91	1	2	0	18	5
<b>CENTRAL</b>	<b>310</b>	<b>172</b>	<b>9</b>	<b>21</b>	<b>1</b>	<b>41</b>	<b>77</b>
Fujian	28	19	1	7	0	1	2
Guangdong	142	71	2	20	0	10	40
Guangxi	315	271	9	1	0	4	39
Hainan	14	8	0	0	0	2	4
<b>SOUTH</b>	<b>499</b>	<b>369</b>	<b>11</b>	<b>28</b>	<b>0</b>	<b>17</b>	<b>85</b>
Sichuan	96	65	2	5	0	16	10
Guizhou	98	58	1	1	0	8	31
Yunnan	482	344	23	15	0	36	87
<b>SOUTHWEST</b>	<b>676</b>	<b>467</b>	<b>26</b>	<b>21</b>	<b>1</b>	<b>60</b>	<b>128</b>
Xijiang	9	9	5	0	0	0	0
Qinghai	21	20	3	0	0	0	0
<b>PLATEAU</b>	<b>30</b>	<b>30</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	423	308	46	0	0	14	100
Shaanxi	199	94	1	18	16	48	39
Gansu	74	55	20	3	1	12	5
Ningxia	52	43	3	0	0	0	10
Xinjiang	575	506	165	2	1	52	16
<b>NORTHWEST</b>	<b>1,323</b>	<b>1,005</b>	<b>235</b>	<b>22</b>	<b>18</b>	<b>126</b>	<b>169</b>
<b>CHINA</b>	<b>4,124</b>	<b>2,985</b>	<b>464</b>	<b>170</b>	<b>40</b>	<b>411</b>	<b>557</b>

**Table A3.6 Increase of cultivated area in 1993 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	2	0	0	0	0	1	0
Tianjin	4	4	0	0	0	0	0
Hebei	77	62	1	0	0	9	5
Shanxi	124	81	6	4	1	14	25
Shandong	154	120	2	8	0	19	6
Henan	58	30	0	5	0	15	9
<b>NORTH</b>	<b>418</b>	<b>297</b>	<b>10</b>	<b>17</b>	<b>1</b>	<b>58</b>	<b>45</b>
Liaoning	80	73	17	1	0	4	2
Jilin	46	42	0	2	0	1	1
Heilongjiang	309	201	11	0	0	98	10
<b>NORTHEAST</b>	<b>435</b>	<b>316</b>	<b>28</b>	<b>3</b>	<b>0</b>	<b>103</b>	<b>13</b>
Shanghai	4	0	0	0	0	0	4
Jiangsu	58	14	0	10	1	28	6
Zhejiang	36	25	1	4	2	5	2
Anhui	34	8	0	1	0	10	15
<b>EAST</b>	<b>131</b>	<b>47</b>	<b>2</b>	<b>15</b>	<b>2</b>	<b>43</b>	<b>27</b>
Jiangxi	22	15	3	1	0	3	3
Hubei	36	25	2	1	0	3	8
Hunan	55	34	2	1	0	7	13
<b>CENTRAL</b>	<b>114</b>	<b>74</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>13</b>	<b>24</b>
Fujian	20	13	0	2	0	1	4
Guangdong	181	89	1	25	9	8	58
Guangxi	313	241	3	1	0	9	62
Hainan	6	3	0	0	0	0	3
<b>SOUTH</b>	<b>520</b>	<b>346</b>	<b>5</b>	<b>29</b>	<b>9</b>	<b>17</b>	<b>127</b>
Sichuan	98	71	3	2	0	15	9
Guizhou	39	30	2	1	0	6	2
Yunnan	419	289	1	2	0	36	92
<b>SOUTHWEST</b>	<b>556</b>	<b>390</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>58</b>	<b>103</b>
Xijiang	9	9	0	0	0	0	0
Qinghai	14	12	0	2	0	0	0
<b>PLATEAU</b>	<b>24</b>	<b>22</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	263	255	100	1	0	7	0
Shaanxi	139	63	1	9	2	44	23
Gansu	70	54	15	4	0	8	4
Ningxia	38	32	0	0	0	2	4
Xinjiang	315	289	127	1	0	20	7
<b>NORTHWEST</b>	<b>826</b>	<b>693</b>	<b>243</b>	<b>14</b>	<b>3</b>	<b>81</b>	<b>38</b>
<b>CHINA</b>	<b>3,024</b>	<b>2,186</b>	<b>301</b>	<b>87</b>	<b>16</b>	<b>373</b>	<b>378</b>

**Table A3.7 Increase of cultivated area in 1994 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	6	2	0	0	0	4	0
Tianjin	1	1	0	0	0	0	0
Hebei	415	47	1	0	0	364	4
Shanxi	170	116	6	22	1	16	15
Shandong	156	116	5	6	0	22	12
Henan	59	32	1	8	1	14	4
<b>NORTH</b>	<b>807</b>	<b>314</b>	<b>13</b>	<b>37</b>	<b>2</b>	<b>420</b>	<b>36</b>
Liaoning	78	60	2	14	3	1	2
Jilin	131	54	1	69	0	3	5
Heilongjiang	226	217	1	0	0	5	4
<b>NORTHEAST</b>	<b>435</b>	<b>332</b>	<b>4</b>	<b>83</b>	<b>3</b>	<b>10</b>	<b>11</b>
Shanghai	3	0	0	0	0	0	3
Jiangsu	171	14	2	4	1	22	131
Zhejiang	43	21	2	11	0	5	6
Anhui	52	13	0	2	0	18	19
<b>EAST</b>	<b>269</b>	<b>49</b>	<b>4</b>	<b>17</b>	<b>1</b>	<b>45</b>	<b>158</b>
Jiangxi	33	16	1	9	0	5	4
Hubei	39	23	2	8	0	2	5
Hunan	36	27	9	1	0	4	4
<b>CENTRAL</b>	<b>109</b>	<b>66</b>	<b>12</b>	<b>18</b>	<b>0</b>	<b>11</b>	<b>13</b>
Fujian	29	18	1	5	0	1	5
Guangdong	173	71	2	25	7	15	61
Guangxi	251	225	5	4	0	4	18
Hainan	6	4	0	0	0	0	2
<b>SOUTH</b>	<b>458</b>	<b>318</b>	<b>8</b>	<b>34</b>	<b>7</b>	<b>20</b>	<b>86</b>
Sichuan	89	63	1	3	0	13	11
Guizhou	38	32	2	1	0	3	3
Yunnan	338	245	9	5	0	23	65
<b>SOUTHWEST</b>	<b>466</b>	<b>340</b>	<b>13</b>	<b>9</b>	<b>1</b>	<b>39</b>	<b>79</b>
Xijiang	9	9	0	0	0	0	0
Qinghai	34	25	2	1	0	0	8
<b>PLATEAU</b>	<b>43</b>	<b>34</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>
Inner Mongolia	305	255	59	0	0	24	25
Shaanxi	148	51	1	11	9	49	36
Gansu	61	46	3	5	1	9	2
Ningxia	31	16	1	0	0	14	1
Xinjiang	337	269	162	1	0	18	49
<b>NORTHWEST</b>	<b>882</b>	<b>638</b>	<b>226</b>	<b>18</b>	<b>11</b>	<b>114</b>	<b>113</b>
<b>CHINA</b>	<b>3,469</b>	<b>2,091</b>	<b>282</b>	<b>216</b>	<b>24</b>	<b>658</b>	<b>504</b>

**Table A3.8 Increase of cultivated area in 1995 (in hundred hectares).**

Provinces	Total	Reclamation		Drainage		Reuse of discarded land	Conversion to other agricultural uses
		Subtotal	State-owned units	Subtotal	State-owned units		
Beijing	7	5	0	0	0	2	0
Tianjin	7	3	0	0	0	0	3
Hebei	212	82	14	1	0	118	12
Shanxi	111	70	2	11	2	17	14
Shandong	242	187	0	4	0	26	25
Henan	43	18	0	10	1	11	4
<b>NORTH</b>	<b>622</b>	<b>365</b>	<b>16</b>	<b>25</b>	<b>3</b>	<b>174</b>	<b>58</b>
Liaoning	141	118	12	1	0	9	13
Jilin	67	62	1	1	0	3	2
Heilongjiang	393	354	133	0	0	10	29
<b>NORTHEAST</b>	<b>602</b>	<b>534</b>	<b>146</b>	<b>2</b>	<b>0</b>	<b>21</b>	<b>44</b>
Shanghai	4	0	0	0	0	0	4
Jiangsu	112	17	1	3	0	24	67
Zhejiang	39	18	1	9	0	7	4
Anhui	101	39	6	17	3	19	26
<b>EAST</b>	<b>256</b>	<b>74</b>	<b>7</b>	<b>29</b>	<b>3</b>	<b>51</b>	<b>101</b>
Jiangxi	26	16	0	1	0	2	7
Hubei	33	12	1	3	1	5	14
Hunan	41	28	0	2	1	5	5
<b>CENTRAL</b>	<b>100</b>	<b>57</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>12</b>	<b>26</b>
Fujian	24	14	0	6	2	2	2
Guangdong	207	78	6	14	4	42	73
Guangxi	577	524	3	12	0	14	27
Hainan	15	7	2	1	0	1	6
<b>SOUTH</b>	<b>823</b>	<b>623</b>	<b>12</b>	<b>33</b>	<b>7</b>	<b>59</b>	<b>108</b>
Sichuan	88	62	1	3	0	15	8
Guizhou	65	51	3	4	2	3	7
Yunnan	416	294	1	23	0	20	80
<b>SOUTHWEST</b>	<b>569</b>	<b>407</b>	<b>5</b>	<b>29</b>	<b>2</b>	<b>38</b>	<b>95</b>
Xijiang	9	9	0	0	0	0	0
Qinghai	1	1	0	0	0	0	0
<b>PLATEAU</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	358	352	210	4	4	1	1
Shaanxi	106	47	0	5	2	37	17
Gansu	68	56	7	2	0	8	2
Ningxia	31	23	2	3	0	3	3
Xinjiang	345	311	160	1	0	21	12
<b>NORTHWEST</b>	<b>908</b>	<b>789</b>	<b>379</b>	<b>15</b>	<b>6</b>	<b>70</b>	<b>34</b>
<b>CHINA</b>	<b>3,889</b>	<b>2,858</b>	<b>568</b>	<b>139</b>	<b>22</b>	<b>425</b>	<b>467</b>

## Appendix 4:

Tables on decrease of cultivated land during 1988-1995 at level of provinces and LUC economic regions

Source: State Land Administration, 1989 to 1996

**Table A 4.1 Decrease of cultivated area in 1988 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservation	Other	Subtotal	Township-village enterprise	Rural water conservation	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	32	6	4	0	2	4	1	0	3	1	21	7	13	0	1	0	0
Tianjin	34	18	1	2	15	4	2	1	1	1	12	6	1	0	5	0	0
Hebei	408	37	14	1	22	12	7	1	4	14	310	142	106	60	2	36	6
Shanxi	312	26	3	0	23	2	1	0	1	8	244	137	69	38	0	33	0
Shandong	471	68	18	6	44	37	10	12	16	14	308	243	64	0	1	43	0
Henan	131	55	14	13	28	23	5	13	4	14	26	4	17	2	3	13	11
<b>NORTH</b>	<b>1,388</b>	<b>209</b>	<b>54</b>	<b>22</b>	<b>133</b>	<b>82</b>	<b>26</b>	<b>27</b>	<b>29</b>	<b>51</b>	<b>921</b>	<b>540</b>	<b>269</b>	<b>100</b>	<b>13</b>	<b>125</b>	<b>17</b>
Liaoning	169	55	13	23	20	4	3	0	1	11	85	56	18	11	0	14	3
Jilin	172	10	3	0	7	4	1	2	0	3	121	14	85	19	3	35	5
Heilongjiang	939	87	3	26	58	5	1	1	2	2	468	23	209	235	2	377	0
<b>NORTHEAST</b>	<b>1,281</b>	<b>152</b>	<b>19</b>	<b>49</b>	<b>84</b>	<b>12</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>16</b>	<b>674</b>	<b>92</b>	<b>311</b>	<b>265</b>	<b>5</b>	<b>426</b>	<b>8</b>
Shanghai	35	11	1	0	10	7	5	0	2	3	13	2	0	5	5	0	0
Jiangsu	161	29	9	2	18	29	6	14	10	13	90	64	19	0	6	0	3
Zhejiang	114	20	10	1	9	13	4	2	6	12	29	22	3	0	3	41	4
Anhui	145	25	6	3	16	29	10	9	10	30	58	36	8	0	14	3	2
<b>EAST</b>	<b>454</b>	<b>85</b>	<b>26</b>	<b>6</b>	<b>53</b>	<b>78</b>	<b>25</b>	<b>25</b>	<b>28</b>	<b>57</b>	<b>190</b>	<b>125</b>	<b>30</b>	<b>6</b>	<b>29</b>	<b>44</b>	<b>10</b>
Jiangxi	35	6	3	0	3	1	0	0	0	1	20	17	2	1	1	8	2
Hubei	228	34	13	6	15	30	3	13	14	11	141	26	72	5	38	14	1
Hunan	121	17	6	4	6	13	1	8	4	4	71	22	35	2	13	16	3
<b>CENTRAL</b>	<b>385</b>	<b>57</b>	<b>22</b>	<b>10</b>	<b>24</b>	<b>43</b>	<b>4</b>	<b>21</b>	<b>18</b>	<b>16</b>	<b>231</b>	<b>64</b>	<b>108</b>	<b>7</b>	<b>52</b>	<b>38</b>	<b>6</b>
Fujian	59	25	2	20	3	2	1	0	0	1	29	20	2	1	6	2	0
Guangdong	260	50	19	2	29	11	7	3	2	3	176	96	20	3	57	21	17
Guangxi	159	8	4	0	4	3	1	0	2	3	100	14	72	9	5	45	5
Hainan	19	6	5	0	1	1	0	0	1	0	9	7	2	0	0	3	16
<b>SOUTH</b>	<b>497</b>	<b>88</b>	<b>29</b>	<b>22</b>	<b>37</b>	<b>16</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>314</b>	<b>137</b>	<b>97</b>	<b>12</b>	<b>67</b>	<b>71</b>	<b>38</b>
Sichuan	247	28	9	4	15	16	2	5	9	13	146	62	63	9	11	45	10
Guizhou	149	21	2	1	17	3	1	0	2	4	101	10	65	18	8	21	1
Yunnan	389	16	5	1	10	5	2	1	3	8	283	10	110	161	2	76	9
<b>SOUTHWEST</b>	<b>785</b>	<b>64</b>	<b>16</b>	<b>6</b>	<b>42</b>	<b>24</b>	<b>5</b>	<b>6</b>	<b>14</b>	<b>25</b>	<b>530</b>	<b>82</b>	<b>239</b>	<b>188</b>	<b>21</b>	<b>141</b>	<b>20</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	30	1	0	0	1	0	0	0	0	2	26	1	0	25	0	0	1
<b>PLATEAU</b>	<b>48</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>37</b>	<b>1</b>	<b>1</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>1</b>
Inner Mongolia	804	6	2	0	4	1	0	1	0	2	279	1	153	119	6	516	314
Shaanxi	336	15	6	0	9	6	2	1	3	17	244	96	87	56	6	54	22
Gansu	86	8	2	0	5	8	1	0	6	13	44	11	8	25	1	14	207
Ningxia	28	2	1	0	1	0	0	0	0	1	21	2	9	11	0	4	0
Xinjiang	670	20	2	13	5	17	1	2	14	12	462	43	243	170	6	159	0
<b>NORTHWEST</b>	<b>1,925</b>	<b>50</b>	<b>13</b>	<b>14</b>	<b>23</b>	<b>31</b>	<b>4</b>	<b>4</b>	<b>23</b>	<b>45</b>	<b>1,051</b>	<b>152</b>	<b>499</b>	<b>380</b>	<b>19</b>	<b>749</b>	<b>544</b>
<b>CHINA</b>	<b>6,763</b>	<b>712</b>	<b>182</b>	<b>130</b>	<b>400</b>	<b>290</b>	<b>77</b>	<b>91</b>	<b>122</b>	<b>220</b>	<b>3,948</b>	<b>1,194</b>	<b>1,553</b>	<b>995</b>	<b>206</b>	<b>1,594</b>	<b>644</b>

**Table A 4.2 Decrease of cultivated area in 1989 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservancy	Other	Subtotal	Township-village enterprise	Rural water conservancy	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	41	10	3	1	6	3	1	0	2	1	25	16	6	0	2	2	2
Tianjin	16	5	1	0	4	5	0	4	1	0	5	2	0	0	3	0	0
Hebei	228	36	9	2	25	8	4	2	1	19	142	22	36	84	0	24	1
Shanxi	139	17	3	0	14	4	1	1	2	6	90	35	36	18	0	21	386
Shandong	204	44	9	3	31	11	2	5	4	7	128	85	43	0	0	15	0
Henan	152	27	7	4	16	12	2	7	3	10	92	70	19	1	1	12	0
<b>NORTH</b>	<b>781</b>	<b>139</b>	<b>34</b>	<b>10</b>	<b>96</b>	<b>43</b>	<b>10</b>	<b>19</b>	<b>13</b>	<b>43</b>	<b>482</b>	<b>230</b>	<b>141</b>	<b>104</b>	<b>8</b>	<b>74</b>	<b>388</b>
Liaoning	117	17	3	3	10	2	1	0	1	11	70	27	41	3	0	17	0
Jilin	181	7	1	1	4	1	0	0	0	3	59	8	49	2	0	112	1
Heilongjiang	483	83	2	46	35	11	1	9	2	2	285	11	97	170	7	102	0
<b>NORTHEAST</b>	<b>781</b>	<b>107</b>	<b>6</b>	<b>50</b>	<b>50</b>	<b>14</b>	<b>2</b>	<b>9</b>	<b>3</b>	<b>15</b>	<b>414</b>	<b>46</b>	<b>188</b>	<b>174</b>	<b>7</b>	<b>231</b>	<b>1</b>
Shanghai	13	6	2	1	3	4	2	0	2	2	0	0	0	0	0	0	0
Jiangsu	151	34	8	2	23	27	2	24	2	11	79	62	12	1	4	0	0
Zhejiang	82	19	8	3	8	5	1	1	3	8	29	25	2	0	2	21	1
Anhui	134	29	4	11	14	52	2	36	14	19	25	18	5	0	2	9	1
<b>EAST</b>	<b>380</b>	<b>87</b>	<b>22</b>	<b>17</b>	<b>49</b>	<b>89</b>	<b>7</b>	<b>62</b>	<b>21</b>	<b>41</b>	<b>133</b>	<b>104</b>	<b>19</b>	<b>2</b>	<b>8</b>	<b>30</b>	<b>2</b>
Jiangxi	25	7	2	1	5	1	0	1	0	1	7	3	4	0	1	9	1
Hubei	138	16	5	5	5	25	1	18	7	4	81	18	42	4	17	13	1
Hunan	135	11	3	4	4	5	0	3	1	2	105	30	66	2	7	12	2
<b>CENTRAL</b>	<b>299</b>	<b>34</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>31</b>	<b>1</b>	<b>22</b>	<b>8</b>	<b>7</b>	<b>193</b>	<b>51</b>	<b>113</b>	<b>6</b>	<b>24</b>	<b>33</b>	<b>3</b>
Fujian	24	14	5	7	2	1	0	0	0	2	6	5	0	0	1	2	0
Guangdong	144	24	11	1	12	5	3	1	1	2	89	45	21	2	20	24	13
Guangxi	124	10	3	0	7	1	0	0	1	2	87	8	64	12	3	25	18
Hainan	55	8	4	0	4	1	1	0	0	0	17	5	10	1	1	28	28
<b>SOUTH</b>	<b>348</b>	<b>56</b>	<b>23</b>	<b>8</b>	<b>24</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>199</b>	<b>64</b>	<b>96</b>	<b>14</b>	<b>25</b>	<b>79</b>	<b>59</b>
Sichuan	219	23	6	3	14	16	1	9	6	7	97	51	33	10	3	77	2
Guizhou	48	6	1	1	4	3	1	0	1	2	29	4	19	5	1	8	1
Yunnan	337	10	2	0	8	2	1	0	1	4	226	17	109	98	2	96	29
<b>SOUTHWEST</b>	<b>604</b>	<b>39</b>	<b>9</b>	<b>4</b>	<b>26</b>	<b>20</b>	<b>3</b>	<b>10</b>	<b>8</b>	<b>13</b>	<b>352</b>	<b>72</b>	<b>161</b>	<b>113</b>	<b>5</b>	<b>181</b>	<b>33</b>
Tibet	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	6	1	1	0	0	0	0	0	0	2	2	0	1	2	0	1	0
<b>PLATEAU</b>	<b>24</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>0</b>
Inner Mongolia	382	21	1	15	5	1	0	1	0	1	84	1	42	42	0	275	553
Shaanxi	231	7	3	0	4	7	1	2	4	13	178	84	63	30	1	27	4
Gansu	64	5	1	1	3	1	0	0	1	8	37	19	5	13	0	13	827
Ningxia	42	1	0	0	0	1	0	0	0	1	31	2	8	21	0	8	0
Xinjiang	237	12	2	2	7	9	0	5	4	4	195	21	99	68	7	17	0
<b>NORTHWEST</b>	<b>956</b>	<b>45</b>	<b>7</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>2</b>	<b>9</b>	<b>9</b>	<b>26</b>	<b>525</b>	<b>126</b>	<b>216</b>	<b>174</b>	<b>9</b>	<b>340</b>	<b>1,384</b>
<b>CHINA</b>	<b>4,173</b>	<b>512</b>	<b>113</b>	<b>117</b>	<b>282</b>	<b>227</b>	<b>29</b>	<b>132</b>	<b>66</b>	<b>153</b>	<b>2,311</b>	<b>692</b>	<b>934</b>	<b>600</b>	<b>85</b>	<b>970</b>	<b>1,871</b>

**Table A 4.3 Decrease of cultivated area in 1990 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservancy	Other	Subtotal	Township -village enterprise	Rural water conservancy	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	17	13	2	0	10	1	0	0	1	0	4	0	3	0	0	0	0
Tianjin	5	3	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0
Hebei	116	38	7	19	12	5	2	1	2	11	57	16	23	19	0	6	1
Shanxi	108	13	2	0	11	4	1	1	2	7	73	16	43	15	0	12	2
Shandong	113	45	8	5	31	10	2	5	4	5	49	37	11	0	1	4	0
Henan	86	30	6	12	12	10	1	6	3	7	34	21	13	1	0	4	0
<b>NORTH</b>	<b>445</b>	<b>141</b>	<b>26</b>	<b>36</b>	<b>79</b>	<b>31</b>	<b>7</b>	<b>13</b>	<b>11</b>	<b>30</b>	<b>217</b>	<b>90</b>	<b>92</b>	<b>34</b>	<b>1</b>	<b>25</b>	<b>2</b>
Liaoning	69	12	2	1	9	3	0	1	1	8	43	27	15	2	0	4	0
Jilin	71	5	1	0	4	0	0	0	0	2	41	0	29	12	0	22	0
Heilongjiang	345	56	1	35	19	44	0	37	6	2	128	1	79	44	4	115	74
<b>NORTHEAST</b>	<b>484</b>	<b>73</b>	<b>5</b>	<b>36</b>	<b>32</b>	<b>47</b>	<b>1</b>	<b>39</b>	<b>7</b>	<b>12</b>	<b>212</b>	<b>28</b>	<b>122</b>	<b>58</b>	<b>4</b>	<b>141</b>	<b>74</b>
Shanghai	12	6	0	1	5	3	2	0	1	2	1	0	0	1	0	0	0
Jiangsu	137	34	6	11	17	24	1	19	4	8	70	50	10	0	10	0	0
Zhejiang	97	16	7	3	6	6	2	2	3	7	33	28	4	0	1	34	0
Anhui	99	32	6	13	13	36	3	25	9	13	16	10	4	0	2	2	1
<b>EAST</b>	<b>344</b>	<b>88</b>	<b>20</b>	<b>28</b>	<b>40</b>	<b>69</b>	<b>7</b>	<b>46</b>	<b>16</b>	<b>30</b>	<b>120</b>	<b>88</b>	<b>19</b>	<b>1</b>	<b>13</b>	<b>36</b>	<b>1</b>
Jiangxi	25	5	1	0	4	0	0	0	0	1	16	13	2	1	1	2	0
Hubei	111	12	4	2	6	24	0	18	6	2	60	17	33	1	9	12	1
Hunan	159	7	3	1	3	11	0	9	2	2	110	17	91	0	3	28	6
<b>CENTRAL</b>	<b>295</b>	<b>25</b>	<b>8</b>	<b>3</b>	<b>13</b>	<b>36</b>	<b>1</b>	<b>27</b>	<b>8</b>	<b>5</b>	<b>186</b>	<b>46</b>	<b>126</b>	<b>2</b>	<b>12</b>	<b>42</b>	<b>7</b>
Fujian	32	9	4	2	3	1	0	0	0	2	8	6	1	0	1	12	0
Guangdong	146	17	8	0	8	6	2	2	2	2	105	64	17	2	23	15	14
Guangxi	116	5	2	1	2	2	0	1	1	1	96	6	79	9	2	13	29
Hainan	18	8	2	0	6	1	0	1	0	0	7	2	2	2	0	1	1
<b>SOUTH</b>	<b>312</b>	<b>38</b>	<b>16</b>	<b>3</b>	<b>19</b>	<b>10</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>216</b>	<b>78</b>	<b>99</b>	<b>13</b>	<b>26</b>	<b>41</b>	<b>44</b>
Sichuan	210	28	6	5	17	24	0	11	12	6	115	68	39	7	2	37	0
Guizhou	46	6	1	0	5	1	0	0	1	1	28	3	16	9	0	9	4
Yunnan	398	10	3	0	7	1	0	0	1	5	284	9	139	135	1	99	67
<b>SOUTHWEST</b>	<b>654</b>	<b>44</b>	<b>10</b>	<b>6</b>	<b>29</b>	<b>26</b>	<b>1</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>427</b>	<b>80</b>	<b>194</b>	<b>150</b>	<b>3</b>	<b>144</b>	<b>71</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	6	0	0	0	0	0	0	0	0	1	3	0	0	3	0	2	0
<b>PLATEAU</b>	<b>25</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>2</b>	<b>0</b>
Inner Mongolia	295	16	1	1	14	7	0	6	1	1	230	5	81	144	0	41	18
Shaanxi	271	9	3	0	5	5	1	2	3	12	193	96	62	34	1	53	1
Gansu	48	4	1	1	3	3	0	2	1	8	27	11	5	12	0	6	0
Ningxia	46	1	0	0	1	1	0	0	0	1	40	2	8	30	0	3	0
Xinjiang	245	10	1	7	2	14	0	8	5	2	193	13	124	57	0	26	39
<b>NORTHWEST</b>	<b>905</b>	<b>39</b>	<b>6</b>	<b>9</b>	<b>25</b>	<b>29</b>	<b>1</b>	<b>18</b>	<b>10</b>	<b>24</b>	<b>683</b>	<b>127</b>	<b>279</b>	<b>275</b>	<b>2</b>	<b>129</b>	<b>59</b>
<b>CHINA</b>	<b>3,464</b>	<b>454</b>	<b>92</b>	<b>121</b>	<b>241</b>	<b>252</b>	<b>21</b>	<b>159</b>	<b>73</b>	<b>121</b>	<b>2,077</b>	<b>536</b>	<b>933</b>	<b>547</b>	<b>61</b>	<b>560</b>	<b>258</b>



**Table A 4.4 Decrease of cultivated area in 1991 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservation	Other	Subtotal	Township-village enterprise	Rural water conservation	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	36	15	4	4	7	2	1	1	1	0	12	7	5	0	1	7	0
Tianjin	9	3	0	0	3	5	0	4	0	0	1	0	1	0	0	0	0
Hebei	93	27	7	1	18	6	3	1	1	8	16	8	7	2	0	36	1
Shanxi	102	14	1	0	13	1	0	0	1	5	58	24	28	7	0	24	12
Shandong	167	50	13	7	31	15	4	3	9	4	84	66	16	1	2	13	0
Henan	132	38	9	5	24	36	1	15	20	5	34	19	14	0	0	21	0
<b>NORTH</b>	<b>539</b>	<b>146</b>	<b>35</b>	<b>16</b>	<b>95</b>	<b>65</b>	<b>9</b>	<b>24</b>	<b>32</b>	<b>22</b>	<b>205</b>	<b>123</b>	<b>70</b>	<b>9</b>	<b>3</b>	<b>100</b>	<b>13</b>
Liaoning	86	19	3	1	15	14	2	9	3	8	28	15	7	6	0	18	0
Jilin	170	8	2	1	5	1	0	1	0	2	71	5	58	1	6	88	0
Heilongjiang	503	38	2	21	14	20	0	16	4	2	98	8	58	29	3	345	452
<b>NORTHEAST</b>	<b>759</b>	<b>65</b>	<b>8</b>	<b>23</b>	<b>34</b>	<b>35</b>	<b>2</b>	<b>26</b>	<b>7</b>	<b>12</b>	<b>197</b>	<b>28</b>	<b>124</b>	<b>36</b>	<b>10</b>	<b>451</b>	<b>452</b>
Shanghai	25	16	5	0	11	8	4	0	4	1	0	0	0	0	0	0	0
Jiangsu	199	33	12	3	19	53	4	41	9	9	86	50	33	0	3	18	0
Zhejiang	81	28	11	3	14	7	3	2	2	7	33	24	7	1	2	7	1
Anhui	254	74	4	46	24	43	2	29	13	6	43	38	5	0	1	87	40
<b>EAST</b>	<b>560</b>	<b>152</b>	<b>32</b>	<b>52</b>	<b>68</b>	<b>111</b>	<b>12</b>	<b>72</b>	<b>27</b>	<b>23</b>	<b>162</b>	<b>111</b>	<b>45</b>	<b>1</b>	<b>6</b>	<b>111</b>	<b>40</b>
Jiangxi	26	6	2	0	4	0	0	0	0	1	13	6	3	0	4	5	0
Hubei	221	37	11	6	20	31	1	21	9	2	127	53	49	2	24	23	2
Hunan	109	12	4	4	3	8	0	5	2	2	62	29	17	0	15	26	1
<b>CENTRAL</b>	<b>356</b>	<b>55</b>	<b>17</b>	<b>11</b>	<b>27</b>	<b>39</b>	<b>1</b>	<b>27</b>	<b>11</b>	<b>6</b>	<b>203</b>	<b>87</b>	<b>70</b>	<b>2</b>	<b>43</b>	<b>53</b>	<b>2</b>
Fujian	34	8	5	0	3	1	1	0	0	2	15	11	2	0	2	8	0
Guangdong	236	29	13	1	15	10	4	4	2	2	179	109	18	1	50	16	23
Guangxi	143	9	2	0	6	2	0	1	1	1	98	9	78	9	2	33	27
Hainan	22	5	1	1	4	3	0	1	3	1	9	3	3	1	1	4	2
<b>SOUTH</b>	<b>435</b>	<b>51</b>	<b>21</b>	<b>2</b>	<b>28</b>	<b>16</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>302</b>	<b>133</b>	<b>102</b>	<b>13</b>	<b>55</b>	<b>61</b>	<b>52</b>
Sichuan	333	35	13	5	17	19	2	11	6	7	231	182	39	6	3	42	7
Guizhou	126	9	1	2	5	4	0	2	1	2	48	15	25	8	0	64	3
Yunnan	370	10	5	1	5	3	0	1	2	4	231	16	111	104	1	122	54
<b>SOUTHWEST</b>	<b>829</b>	<b>54</b>	<b>19</b>	<b>8</b>	<b>27</b>	<b>25</b>	<b>2</b>	<b>14</b>	<b>9</b>	<b>13</b>	<b>510</b>	<b>213</b>	<b>175</b>	<b>117</b>	<b>5</b>	<b>227</b>	<b>64</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	4	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
<b>PLATEAU</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	85	17	1	0	16	12	0	10	1	1	39	0	20	18	0	17	0
Shaanxi	560	9	2	1	6	10	0	4	5	10	499	248	215	35	1	32	48
Gansu	107	5	1	1	3	1	0	0	1	7	83	70	3	10	0	11	0
Ningxia	19	9	0	0	8	0	0	0	0	1	6	0	2	3	0	3	0
Xinjiang	213	16	1	8	7	19	1	12	7	3	132	19	72	40	1	43	139
<b>NORTHWEST</b>	<b>983</b>	<b>56</b>	<b>7</b>	<b>10</b>	<b>40</b>	<b>42</b>	<b>2</b>	<b>26</b>	<b>14</b>	<b>21</b>	<b>758</b>	<b>338</b>	<b>312</b>	<b>106</b>	<b>2</b>	<b>106</b>	<b>187</b>
<b>CHINA</b>	<b>4,483</b>	<b>585</b>	<b>140</b>	<b>122</b>	<b>323</b>	<b>336</b>	<b>34</b>	<b>194</b>	<b>107</b>	<b>104</b>	<b>2,349</b>	<b>1,032</b>	<b>899</b>	<b>295</b>	<b>123</b>	<b>1,110</b>	<b>811</b>

**Table A 4.5 Decrease of cultivated area in 1992 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservancy	Other	Subtotal	Township -village enterprise	Rural water conservancy	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	31	24	8	0	16	3	1	0	1	0	4	1	2	0	1	0	0
Tianjin	7	4	1	0	2	2	0	1	0	0	1	1	0	0	0	0	0
Hebei	101	41	16	0	25	5	4	0	1	6	47	16	17	14	0	1	0
Shanxi	347	9	1	0	8	22	2	9	11	7	259	122	73	63	1	50	6
Shandong	246	86	31	2	53	24	10	7	7	3	124	110	13	0	0	8	0
Henan	153	53	17	5	31	27	4	9	14	8	60	44	14	1	2	4	0
<b>NORTH</b>	<b>884</b>	<b>217</b>	<b>74</b>	<b>8</b>	<b>136</b>	<b>83</b>	<b>21</b>	<b>26</b>	<b>35</b>	<b>25</b>	<b>495</b>	<b>294</b>	<b>120</b>	<b>77</b>	<b>4</b>	<b>63</b>	<b>6</b>
Liaoning	129	42	12	3	27	11	5	4	2	6	66	39	19	6	2	4	0
Jilin	164	12	5	0	7	0	0	0	0	2	132	19	43	67	4	19	0
Helongjiang	215	33	3	20	10	10	1	5	5	1	82	9	51	22	1	88	134
<b>NORTHEAST</b>	<b>509</b>	<b>87</b>	<b>20</b>	<b>24</b>	<b>43</b>	<b>22</b>	<b>6</b>	<b>9</b>	<b>7</b>	<b>9</b>	<b>279</b>	<b>67</b>	<b>112</b>	<b>94</b>	<b>6</b>	<b>111</b>	<b>134</b>
Shanghai	144	94	21	3	71	48	40	0	8	2	0	0	0	0	0	0	0
Jiangsu	370	81	32	9	41	57	6	47	4	6	224	156	3	0	65	2	0
Zhejiang	149	50	32	2	16	14	11	1	2	7	55	39	6	0	10	23	1
Anhui	174	70	14	37	19	39	7	18	14	7	58	50	4	0	4	1	3
<b>EAST</b>	<b>838</b>	<b>295</b>	<b>99</b>	<b>50</b>	<b>146</b>	<b>158</b>	<b>64</b>	<b>66</b>	<b>28</b>	<b>22</b>	<b>337</b>	<b>246</b>	<b>13</b>	<b>0</b>	<b>79</b>	<b>26</b>	<b>4</b>
Jiangxi	50	9	5	1	3	2	0	1	1	2	32	22	2	0	7	5	0
Hubei	382	29	12	3	14	16	2	9	6	4	310	132	87	2	88	23	1
Hunan	183	20	11	2	8	7	1	4	2	2	139	58	38	0	43	15	0
<b>CENTRAL</b>	<b>615</b>	<b>58</b>	<b>27</b>	<b>6</b>	<b>25</b>	<b>25</b>	<b>3</b>	<b>14</b>	<b>8</b>	<b>8</b>	<b>481</b>	<b>212</b>	<b>127</b>	<b>3</b>	<b>138</b>	<b>42</b>	<b>2</b>
Fujian	66	21	12	2	7	2	2	0	0	2	17	10	2	0	5	25	0
Guangdong	559	90	69	2	19	38	21	9	8	3	415	226	15	8	166	13	6
Guangxi	289	74	21	43	9	2	1	0	1	2	166	49	102	11	4	46	5
Hainan	18	12	7	0	4	0	0	0	0	0	3	1	1	0	1	3	4
<b>SOUTH</b>	<b>932</b>	<b>196</b>	<b>109</b>	<b>48</b>	<b>39</b>	<b>42</b>	<b>23</b>	<b>10</b>	<b>9</b>	<b>6</b>	<b>601</b>	<b>287</b>	<b>120</b>	<b>20</b>	<b>175</b>	<b>87</b>	<b>15</b>
Sichuan	380	84	46	6	33	26	6	12	8	7	216	157	45	10	5	47	0
Guizhou	97	10	3	1	6	2	0	0	2	1	70	9	51	9	0	14	0
Yunnan	445	22	8	3	11	7	2	2	3	5	281	12	152	114	2	130	52
<b>SOUTHWEST</b>	<b>922</b>	<b>117</b>	<b>57</b>	<b>10</b>	<b>49</b>	<b>35</b>	<b>9</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>566</b>	<b>177</b>	<b>248</b>	<b>133</b>	<b>7</b>	<b>191</b>	<b>52</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	4	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0
<b>PLATEAU</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	1,275	20	2	2	16	11	0	8	2	1	1,022	5	356	644	18	221	0
Shaanxi	702	14	4	2	8	14	2	5	8	10	590	397	127	64	2	75	7
Gansu	63	9	2	0	7	1	1	0	1	9	27	12	6	8	0	16	0
Ningxia	14	2	1	0	1	2	0	1	1	1	7	2	1	3	0	3	0
Xinjiang	297	15	3	7	5	9	0	3	6	7	111	20	60	29	1	155	17
<b>NORTHWEST</b>	<b>2,351</b>	<b>60</b>	<b>11</b>	<b>11</b>	<b>38</b>	<b>37</b>	<b>3</b>	<b>17</b>	<b>17</b>	<b>28</b>	<b>1,756</b>	<b>436</b>	<b>550</b>	<b>749</b>	<b>21</b>	<b>470</b>	<b>24</b>
<b>CHINA</b>	<b>7,073</b>	<b>1,036</b>	<b>400</b>	<b>156</b>	<b>480</b>	<b>405</b>	<b>128</b>	<b>157</b>	<b>120</b>	<b>114</b>	<b>4,528</b>	<b>1,719</b>	<b>1,290</b>	<b>1,089</b>	<b>430</b>	<b>989</b>	<b>236</b>

**Table A 4.6 Decrease of cultivated area in 1993 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservation	Other	Subtotal	Township-village enterprise	Rural water conservation	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	39	30	17	2	12	2	1	0	1	0	6	3	1	0	2	0	0
Tianjin	27	11	2	0	8	5	2	1	1	3	8	3	0	0	4	0	0
Hebei	265	37	16	0	21	11	6	2	2	8	204	66	88	50	1	5	10
Shanxi	177	16	3	1	12	7	2	1	3	6	124	75	26	23	0	25	7
Shandong	182	43	19	3	20	12	6	1	5	3	112	102	10	0	1	12	0
Henan	246	72	25	11	36	24	10	8	6	8	141	123	17	0	1	2	0
<b>NORTH</b>	<b>937</b>	<b>209</b>	<b>82</b>	<b>17</b>	<b>110</b>	<b>61</b>	<b>28</b>	<b>15</b>	<b>19</b>	<b>27</b>	<b>596</b>	<b>371</b>	<b>142</b>	<b>73</b>	<b>9</b>	<b>44</b>	<b>18</b>
Liaoning	134	44	14	4	27	11	8	1	2	5	70	57	11	1	2	3	0
Jilin	339	14	4	2	8	3	2	0	1	2	187	25	130	30	2	133	0
Heilongjiang	214	17	3	2	11	24	1	22	1	2	147	9	80	51	7	25	132
<b>NORTHEAST</b>	<b>687</b>	<b>75</b>	<b>21</b>	<b>8</b>	<b>46</b>	<b>38</b>	<b>11</b>	<b>23</b>	<b>4</b>	<b>9</b>	<b>404</b>	<b>91</b>	<b>220</b>	<b>81</b>	<b>11</b>	<b>161</b>	<b>132</b>
Shanghai	73	45	30	1	14	27	16	0	10	1	0	0	0	0	0	0	0
Jiangsu	569	46	20	6	20	27	5	21	1	4	491	317	41	0	133	1	0
Zhejiang	209	63	36	3	24	14	9	3	2	6	120	84	13	1	23	5	0
Anhui	205	49	10	14	25	21	5	8	8	8	128	111	3	0	13	1	4
<b>EAST</b>	<b>1,056</b>	<b>203</b>	<b>96</b>	<b>23</b>	<b>83</b>	<b>88</b>	<b>35</b>	<b>32</b>	<b>22</b>	<b>19</b>	<b>739</b>	<b>512</b>	<b>57</b>	<b>1</b>	<b>169</b>	<b>7</b>	<b>4</b>
Jiangxi	99	7	5	0	2	1	0	0	0	2	69	36	11	1	21	20	1
Hubei	253	43	12	8	23	26	3	15	8	4	168	68	47	2	52	12	0
Hunan	402	19	9	2	8	4	1	2	1	3	300	93	96	0	110	76	0
<b>CENTRAL</b>	<b>754</b>	<b>70</b>	<b>25</b>	<b>11</b>	<b>34</b>	<b>31</b>	<b>4</b>	<b>18</b>	<b>9</b>	<b>8</b>	<b>537</b>	<b>197</b>	<b>154</b>	<b>3</b>	<b>183</b>	<b>107</b>	<b>1</b>
Fujian	77	33	19	0	14	8	7	0	1	2	29	16	1	0	12	4	0
Guangdong	625	112	81	3	29	46	27	6	13	4	443	187	13	2	241	20	8
Guangxi	251	36	26	1	10	4	2	1	2	2	171	65	76	9	21	38	7
Hainan	30	21	11	0	10	2	0	1	1	0	2	1	0	0	1	4	3
<b>SOUTH</b>	<b>983</b>	<b>203</b>	<b>136</b>	<b>5</b>	<b>62</b>	<b>60</b>	<b>36</b>	<b>8</b>	<b>16</b>	<b>8</b>	<b>645</b>	<b>269</b>	<b>90</b>	<b>12</b>	<b>275</b>	<b>67</b>	<b>19</b>
Sichuan	268	35	16	4	15	12	3	6	3	8	176	106	49	11	10	37	0
Guizhou	88	18	5	2	12	3	1	0	1	2	49	11	36	2	0	17	0
Yunnan	354	38	18	1	19	9	6	1	2	6	213	14	98	97	4	88	1
<b>SOUTHWEST</b>	<b>710</b>	<b>91</b>	<b>38</b>	<b>7</b>	<b>46</b>	<b>23</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>15</b>	<b>438</b>	<b>130</b>	<b>183</b>	<b>110</b>	<b>14</b>	<b>142</b>	<b>2</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	3	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	14
<b>PLATEAU</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>14</b>
Inner Mongolia	174	10	2	0	8	10	0	6	3	1	80	0	62	18	0	73	0
Shaanxi	710	15	4	0	10	10	1	4	5	8	650	392	192	65	1	27	0
Gansu	41	8	3	0	5	2	1	0	0	7	20	4	4	11	0	4	1
Ningxia	28	3	1	0	2	1	0	1	0	1	8	2	3	3	0	15	13
Xinjiang	152	8	3	1	4	7	1	4	3	3	106	56	40	9	0	27	0
<b>NORTHWEST</b>	<b>1,105</b>	<b>45</b>	<b>13</b>	<b>2</b>	<b>30</b>	<b>30</b>	<b>3</b>	<b>15</b>	<b>12</b>	<b>20</b>	<b>864</b>	<b>454</b>	<b>302</b>	<b>107</b>	<b>2</b>	<b>146</b>	<b>15</b>
<b>CHINA</b>	<b>6,253</b>	<b>901</b>	<b>414</b>	<b>72</b>	<b>415</b>	<b>336</b>	<b>127</b>	<b>118</b>	<b>91</b>	<b>108</b>	<b>4,234</b>	<b>2,025</b>	<b>1,148</b>	<b>398</b>	<b>663</b>	<b>674</b>	<b>204</b>

**Table A 4.7 Decrease of cultivated area in 1994 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservation	Other	Subtotal	Township -village enterprise	Rural water conservation	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	54	28	17	0	11	3	2	0	0	0	18	9	8	0	1	5	0
Tianjin	30	8	1	2	5	9	2	6	1	1	12	5	0	0	7	0	0
Hebei	670	50	22	0	28	9	6	0	3	7	91	69	21	0	0	513	0
Shanxi	276	14	1	0	13	13	3	0	9	5	229	161	61	6	0	14	2
Shandong	228	60	21	3	36	14	7	1	6	4	140	131	8	0	1	9	0
Henan	409	65	17	15	33	30	6	14	10	6	297	265	29	0	3	11	0
<b>NORTH</b>	<b>1,666</b>	<b>225</b>	<b>79</b>	<b>20</b>	<b>126</b>	<b>78</b>	<b>26</b>	<b>22</b>	<b>29</b>	<b>24</b>	<b>786</b>	<b>640</b>	<b>128</b>	<b>6</b>	<b>12</b>	<b>553</b>	<b>3</b>
Liaoning	140	29	5	0	24	5	4	1	1	5	31	21	7	1	3	69	0
Jilin	91	10	3	0	7	3	2	0	1	2	14	3	10	0	0	62	0
Heilongjiang	332	14	1	3	10	10	1	7	2	1	151	12	84	23	32	156	185
<b>NORTHEAST</b>	<b>563</b>	<b>53</b>	<b>10</b>	<b>3</b>	<b>41</b>	<b>19</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>197</b>	<b>36</b>	<b>101</b>	<b>24</b>	<b>36</b>	<b>287</b>	<b>185</b>
Shanghai	74	46	21	0	24	27	15	0	12	1	0	0	0	0	0	0	0
Jiangsu	413	86	40	4	41	22	5	12	5	6	299	187	15	4	93	0	0
Zhejiang	156	75	41	2	32	11	8	2	2	8	46	28	6	0	12	16	0
Anhui	180	46	8	9	29	22	5	8	9	7	98	87	2	0	9	6	0
<b>EAST</b>	<b>823</b>	<b>253</b>	<b>111</b>	<b>16</b>	<b>126</b>	<b>82</b>	<b>32</b>	<b>21</b>	<b>29</b>	<b>22</b>	<b>444</b>	<b>302</b>	<b>24</b>	<b>4</b>	<b>114</b>	<b>22</b>	<b>0</b>
Jiangxi	93	13	4	1	8	1	0	0	0	2	71	39	29	0	3	7	0
Hubei	311	31	11	4	16	14	3	5	6	7	249	57	131	1	60	10	1
Hunan	167	25	10	2	13	7	1	4	2	5	95	45	22	2	26	35	1
<b>CENTRAL</b>	<b>571</b>	<b>68</b>	<b>25</b>	<b>7</b>	<b>37</b>	<b>22</b>	<b>4</b>	<b>10</b>	<b>8</b>	<b>13</b>	<b>415</b>	<b>141</b>	<b>182</b>	<b>3</b>	<b>89</b>	<b>53</b>	<b>2</b>
Fujian	90	35	17	0	18	6	3	0	2	2	19	9	1	0	9	27	0
Guangdong	316	66	45	0	21	27	15	5	7	3	193	54	17	2	121	25	6
Guangxi	245	26	15	0	12	4	1	1	2	3	140	30	89	5	16	72	3
Hainan	21	14	8	2	5	1	0	0	0	0	2	2	0	0	0	3	0
<b>SOUTH</b>	<b>672</b>	<b>142</b>	<b>85</b>	<b>2</b>	<b>55</b>	<b>38</b>	<b>20</b>	<b>6</b>	<b>12</b>	<b>9</b>	<b>356</b>	<b>95</b>	<b>108</b>	<b>8</b>	<b>145</b>	<b>127</b>	<b>9</b>
Sichuan	325	60	22	24	14	8	3	4	1	9	222	149	59	7	7	25	0
Guizhou	57	14	5	2	8	2	1	0	1	2	28	5	21	1	0	11	1
Yunnan	409	40	15	2	23	5	2	1	2	7	267	35	170	56	6	90	2
<b>SOUTHWEST</b>	<b>791</b>	<b>114</b>	<b>42</b>	<b>27</b>	<b>45</b>	<b>16</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>18</b>	<b>517</b>	<b>189</b>	<b>250</b>	<b>64</b>	<b>13</b>	<b>126</b>	<b>3</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	5	1	0	0	0	0	0	0	0	2	1	0	0	1	0	2	0
<b>PLATEAU</b>	<b>24</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>
Inner Mongolia	1,623	12	2	0	10	40	0	31	9	3	1,455	3	550	902	0	114	0
Shaanxi	885	11	5	0	6	10	1	5	4	7	759	552	144	58	5	98	0
Gansu	95	6	3	0	3	1	1	0	1	7	79	61	7	11	0	2	3
Ningxia	7	2	0	1	1	0	0	0	0	1	3	0	2	1	0	1	0
Xinjiang	132	7	3	3	2	7	0	5	2	4	89	35	49	5	0	24	143
<b>NORTHWEST</b>	<b>2,743</b>	<b>38</b>	<b>12</b>	<b>4</b>	<b>21</b>	<b>59</b>	<b>2</b>	<b>40</b>	<b>16</b>	<b>22</b>	<b>2,385</b>	<b>652</b>	<b>751</b>	<b>976</b>	<b>5</b>	<b>239</b>	<b>146</b>
<b>CHINA</b>	<b>7,852</b>	<b>898</b>	<b>365</b>	<b>80</b>	<b>453</b>	<b>316</b>	<b>97</b>	<b>112</b>	<b>107</b>	<b>117</b>	<b>5,111</b>	<b>2,056</b>	<b>1,544</b>	<b>1,096</b>	<b>415</b>	<b>1,410</b>	<b>347</b>

**Table A 4.8 Decrease of cultivated area in 1995 (in hundred hectares).**

Provinces	Total	Construction by state-owned units				Construction by rural communities				Rural private resident housing	Conversion of agricultural structure					Loss due to disasters	Abandoned cultivated land
		Subtotal	Urban expansion	Water conservancy	Other	Subtotal	Township -village enterprise	Rural water conservancy	Other		Subtotal	To horticulture	To forestry land	To improved grassland	To fish ponds		
Beijing	79	17	6	0	11	12	9	0	2	0	50	19	27	0	3	0	0
Tianjin	21	2	0	0	2	4	1	1	1	1	13	5	0	0	8	0	0
Hebei	268	55	21	0	35	15	11	0	3	15	142	131	11	0	0	41	0
Shanxi	168	20	4	1	15	9	4	1	4	6	128	96	24	7	0	5	0
Shandong	473	55	21	3	31	13	5	1	6	4	376	326	43	1	7	24	0
Henan	302	69	25	7	37	40	13	15	12	7	185	122	52	0	11	1	0
<b>NORTH</b>	<b>1,311</b>	<b>218</b>	<b>76</b>	<b>10</b>	<b>132</b>	<b>92</b>	<b>45</b>	<b>19</b>	<b>29</b>	<b>34</b>	<b>896</b>	<b>699</b>	<b>158</b>	<b>9</b>	<b>30</b>	<b>70</b>	<b>1</b>
Liaoning	1,200	68	21	6	41	83	34	10	39	18	692	467	129	85	11	338	0
Jilin	502	9	2	0	8	6	1	4	1	3	279	8	209	60	3	205	0
Heilongjiang	280	21	2	7	12	7	3	2	2	2	92	11	49	30	2	158	10
<b>NORTHEAST</b>	<b>1,981</b>	<b>98</b>	<b>25</b>	<b>12</b>	<b>61</b>	<b>96</b>	<b>37</b>	<b>16</b>	<b>43</b>	<b>23</b>	<b>1,063</b>	<b>486</b>	<b>387</b>	<b>174</b>	<b>16</b>	<b>701</b>	<b>10</b>
Shanghai	29	15	3	0	12	13	8	0	4	1	0	0	0	0	0	0	0
Jiangsu	501	113	56	16	40	61	18	17	26	8	320	273	17	0	30	0	0
Zhejiang	123	71	37	2	33	14	8	2	3	8	20	12	3	0	4	11	0
Anhui	117	30	10	5	15	25	4	9	12	16	40	14	21	0	5	6	0
<b>EAST</b>	<b>771</b>	<b>230</b>	<b>106</b>	<b>24</b>	<b>101</b>	<b>112</b>	<b>38</b>	<b>28</b>	<b>45</b>	<b>32</b>	<b>380</b>	<b>299</b>	<b>41</b>	<b>0</b>	<b>40</b>	<b>17</b>	<b>0</b>
Jiangxi	84	14	5	1	9	8	0	4	4	2	35	19	7	0	9	24	0
Hubei	632	131	41	25	65	25	10	5	10	18	455	167	226	1	61	3	0
Hunan	122	52	9	29	14	3	1	2	1	4	42	34	4	0	4	20	0
<b>CENTRAL</b>	<b>838</b>	<b>197</b>	<b>55</b>	<b>55</b>	<b>87</b>	<b>36</b>	<b>11</b>	<b>10</b>	<b>16</b>	<b>25</b>	<b>533</b>	<b>220</b>	<b>238</b>	<b>1</b>	<b>74</b>	<b>46</b>	<b>0</b>
Fujian	50	27	10	1	15	2	2	0	0	3	12	6	2	0	4	6	0
Guangdong	246	50	29	0	20	26	16	4	5	4	157	67	8	0	81	10	0
Guangxi	179	24	18	0	6	2	2	0	1	2	134	27	89	9	9	17	6
Hainan	42	15	7	0	8	2	0	0	1	1	24	8	4	2	9	1	1
<b>SOUTH</b>	<b>517</b>	<b>115</b>	<b>64</b>	<b>2</b>	<b>49</b>	<b>32</b>	<b>20</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>326</b>	<b>108</b>	<b>104</b>	<b>12</b>	<b>103</b>	<b>33</b>	<b>7</b>
Sichuan	286	46	21	7	18	10	1	4	5	10	125	83	22	10	9	95	1
Guizhou	111	20	6	1	13	4	1	0	2	3	64	34	25	5	0	20	0
Yunnan	340	21	8	1	12	4	2	0	2	6	248	81	120	47	1	61	0
<b>SOUTHWEST</b>	<b>737</b>	<b>87</b>	<b>35</b>	<b>9</b>	<b>43</b>	<b>18</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>19</b>	<b>437</b>	<b>198</b>	<b>167</b>	<b>62</b>	<b>10</b>	<b>176</b>	<b>1</b>
Xijiang	19	5	2	0	3	3	0	0	3	0	11	0	0	11	0	0	0
Qinghai	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
<b>PLATEAU</b>	<b>21</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>
Inner Mongolia	102	11	1	2	7	2	0	1	1	1	58	0	19	39	0	29	0
Shaanxi	1,350	13	3	0	9	24	7	3	14	16	1,257	885	234	137	2	41	0
Gansu	49	5	2	0	2	1	0	0	0	7	35	31	2	2	0	2	0
Ningxia	23	8	1	0	7	2	0	0	2	3	0	0	0	0	0	10	0
Xinjiang	281	10	2	4	4	13	1	8	4	5	121	51	47	22	1	132	3
<b>NORTHWEST</b>	<b>1,805</b>	<b>47</b>	<b>11</b>	<b>7</b>	<b>29</b>	<b>42</b>	<b>9</b>	<b>13</b>	<b>21</b>	<b>31</b>	<b>1,472</b>	<b>967</b>	<b>302</b>	<b>200</b>	<b>4</b>	<b>213</b>	<b>3</b>
<b>CHINA</b>	<b>7,981</b>	<b>997</b>	<b>373</b>	<b>119</b>	<b>505</b>	<b>432</b>	<b>163</b>	<b>95</b>	<b>173</b>	<b>176</b>	<b>5,118</b>	<b>2,978</b>	<b>1,396</b>	<b>468</b>	<b>276</b>	<b>1,257</b>	<b>22</b>