Master Thesis

Implementing comprehensive planning in the People's Republic of China
proposal of a comprehensive planning system exemplified by Kunming Prefecture, Yunnan Province

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Implementing Comprehensive Planning in the People's Republic of China

Proposal of a comprehensive planning system exemplified by Kunming Prefecture, Yunnan Province

Final Thesis, Post Graduate Course in Spatial Planning, Swiss Federal Institute of Technology

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Implementing Comprehensive Planning in the People’s Republic of China

Proposal of a Comprehensive Local and Regional Planning System
Exemplified by Kunming Prefecture, Yunnan Province, the People’s Republic of China

A Postgraduate Paper in Spatial Planning (Raumplanung NDS-ORL 1999/2001)
Swiss Federal Institute of Technology Zurich

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Implementing Comprehensive Planning 
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Proposal of a Comprehensive Local and Regional Planning System 
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1 Introduction

1.1 Summary

Rationale

China is a country with the biggest population in the world. Its economy is expanding rapidly and going towards market-oriented. Meanwhile, its population is still rising steadily, and urbanization of 600 million–1.0 billion population of rural descent is imminent. An extremely strained relationship between increasing resource demands and the poor nature is seen and to be seen more dramatic in the People’s Republic of China (PRC), not in Africa. Emerging city-regions, for example Kunming, show a much more accelerated development than the country as a whole. A demand of sustainable development is all-around.

Despite these strong dynamic and concomitant socio-economic as well as environmental changes, the current planning systems remain in their essence those of a planned economy, and turn obsolete in a changing China. The consequences threaten to be as follows: commonly uncoordinated land uses; a severe lack of protection over spaces for the nature by giving priority to immediate economic and political interests; a serious social incohesion between “urbanized” and rural spheres and inhabitants; a scattered low-density urbanization of the countryside; a fast, uncontrolled growth of the agglomerations of large cities. All these compromise all efforts toward sustainability. In terms of main dimensions of sustainable development, a need to look into the territorial governance and spatial planning system of the PRC from a comparative perspective, regardless of differences in political ideology among countries, appears to be necessary.

Objective

This thesis makes a study of the PRC’s present territorial administration and planning system, focusing on the three layers of territorial entities (the
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prefecture, the county and the commune), their functional organization in governance and corresponding spatial planning for them. The objective of this study is to fill the gap between the need of sustainability and the lack of a sound comprehensive planning instrument in a well-tailored framework of functional divisions among those territorial entities. This instrument ought to be capable of coordinating the uses of space on the appropriate scale in accordance with the Chinese territorial entities. In the end, proposals are given to reform the functions between the prefecture, the county and the commune, to adjust the city governance structure, and accordingly to establish a comprehensive planning system—regional planning at the prefectural level, sub-regional planning at the county level and local planning at the communal level.

Analysis of the existing planning system

Genesis of the current planning system

The thesis starts with the introduction about main spatial planning tools in China and their genesis. Imported from the former Soviet Union, the existing spatial planning system in the PRC has been domesticated after many complications due to political movements. City planning, territory planning, urban hierarchy planning (i.e. urban system planning), overall land utilization planning, village planning (plus villages hierarchy planning) are major spatial planning instruments. They came into being in the course of forty years and finally formed a planning system in the 1980s, each embodied in a separate legislation and oriented toward the management needs for the governments in the age of a planned economy.

Current territorial set-up

At the moment, there are five main levels of territorial administration in PRC:

1. The national level: the state as a whole
2. The provincial level: the province and the province-level municipality
3. The prefectural level: the prefecture-level municipality (regional planning level)
4. The county level: the county and the county-level municipality (sub-regional planning level)
5. The local level: the commune and the township (local planning level)

The thesis examines mainly the prefectural level, the county level and the local level. Due to a historical tradition and the remaining influence of a centrally planned economy, the following particularities are of interest:

- The province is the sole level of government between the state and a locality, responsible for managing a whole provincial region comprising dozens of prefectures (including cities and towns) but not at the same time running any town or city directly.

- The territory is divided into areas which are either „urban“ (named specifically as municipality or township) or „rural“ (in normal names). PRC’s citizens are registered accordingly as either urban or rural, benefit from different rights according to their registration as well. As a result, this institutionalized urban-rural segregation makes it impossible to treat and manage an urban or rural community as an entirety.
The prefectural region (typically ranging between 3,000 km$^2$ and 20,000 km$^2$) and the county entity (between 500 km$^2$ and 4,000 km$^2$) are heterogeneous. The „municipalities“ on the prefectural or county level as well as on the provincial level mix up a region and a locality (a municipality in the western context), and are in fact not the appropriate scale to distinguish between the so-called „urbanized“ sphere and „rural“ sphere currently in China.

Seen from their management function, „municipal“ governments on the provincial level, on the prefectural level and on the county level are allowed to be „one government for two roles“ at the same time as the regional government and the local government in charge of managing directly the master plan area of a main city in the region or the town of county seat.

The city community as a local entity (Eine Politische Gemeinde) as observed in the western sense is not seen in the unique Chinese territorial administrative system. To manage city affairs, three-layers of governments and institutions are set up, involving with the prefectural, county and communal levels and leading to severe functional overlapping and duty evasions. A city (chengshi) is defined to be a „municipality“, which exists mainly on the provincial, prefectural or county level and is thus entangled with a fairly large heterogeneous region. Like this, there is no proper „line of control“ for the territory of a city community. Even basic issues become problems, such as: who in which geographical extent are to be counted as city inhabitants; which are „city“ roads to be taken care of by the public utilities authority of the prefecture-level municipal government. In a way, this also results in the formation of the current city planning approach which has to designate one „planning area“ for each city master plan.

The local level, the main pillar of local governance and spatial planning in western countries, almost has no planning competences and resources in China. The communes are usually governed by the higher level, the county, which is thus the basic unit of territorial administration. What's more, the institutionalized communal governance, established only for the fifty years in China, is nowadays often suggested by both experts and common people for abolition because of its bad performances.

Current spatial planning system

This system is made up of four major components: (1) territory planning, (2) city or town planning, (3) general land utilization planning, and (4) country planning.

1. **Territory planning** is in nature centralized economic planning, which considers and affects spatial development from an economic angle. Meanwhile, it is regarded as regional planning. In this sense, regional planning in the PRC is mainly economic regional planning, not a spatial one. Furthermore, it depends on city planning, land utilization planning and other sectoral planning (of roads, railways etc.) as its concrete tools to make its planned items "visible" on maps.

2. **Town or city planning** in the PRC is consist of two parts: (a) a general planning process and (b) a construction project-oriented process.
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(a) The general planning process is designed to produce city/town master plans and some other plans such as city district plans, regulatory plans and detailed plans. City planning, generally speaking, takes effect only in a designated city master planning area, or sometimes in an additionally defined planning management area which could be much larger than the master planning area. A land-use plan is only made for the master planning area, not for the whole planning management area. The land uses indicated in this plan are in fact a symbolic approximation of "building zones", unlike those in a zoning plan which covers physically a community's territory in the western context. The Chinese city district plans and regulatory plans are only a kind of quasi-zoning plan, separately made for varied parts of the designated planning areas. Infrastructure planning is subsequently confined within the master planning areas, in particular leading to fragmented traffic planning.

(b) The construction project-oriented process concretizes and approves construction sites by means of a separate site selection process. Only after choosing the actual site of a construction project (e.g. for a factory), the land use is definitely finalized—no matter if it is located inside or outside a master planning area. Sitings could be approved even if they are not in accordance with existing land-use plans. In fact, it is the existing plans which are adapted to meet the need of a new construction project, and not the other way round, which might be the usual case in the industrialized countries. By this, the regulatory plans in fact become products from a large number of piecemeal planning processes for different construction projects. Thus, this planning approach is quite "flexible" in controlling land uses, but inevitably leading to uncoordinated land utilization and construction in a great extent.

3. Country planning (planning of rural settlements) came into being in the 1980s. It uses a similar planning approach as city or town planning. Due to the urban-rural segregation, a varied planning and building norm is officially adopted for rural settlements. However, the village planning so far could not prevent rapid expansion of (post-)rural settlements, which consume a great deal of fertile land, and the spreading of polluting Township and Village Enterprises (TVEs), which is fatal to the production of clean food in China.

4. Overall land utilization programs aim at conserving agricultural land-uses by means of a so-called planned system of land consumption. They do not study or suggest settlement development pattern and its corresponding demand of infrastructure, but are trying to constrain the expansion of settlements by issuing annual, five-year or ten-year land consumption quota. With regard to land demand by all kinds of infrastructure, they are fundamentally ready to grant whatever is requested. Thus, the so-called overall land utilization planning is mainly a process which surveys and calculates existing land uses, predicts statistically how much land consumption might happen in the future, and tries to control the land utilization of each construction project on a one-by-one basis.

In addition, the whole planning system is strongly oriented toward managing development on a one-by-one basis of construction projects, according to specified subjects such as manufacturing industrial projects, railways or highways, cultivating more land for agricultural production, hydraulic works and so on. The planning system itself is a rather fragmented one, lack of horizontal coordination in particular. Consequently, environmental planning is also fragmented among many responsible institutions, and there is no coordination between land-use planning and environmental planning. Typically, environmental considerations in town or village planning are mainly represented by drainage and sewerage plans.
This paper examines mainly regional planning on the scales of the prefecture level and the county level, and the local planning for the commune and township.

1. Owing to the unique Chinese territorial setup, local planning for the central city in the prefecture has been done at the prefectural level, and similarly town planning for the county town at the county level.

2. The territory planning, overall land utilization programming and the urban hierarchy planning are basically same on the prefectural level and the county level, only differing in that those on the prefecture level are for a larger region than the latter level.

3. None of the plans on the prefectural and the county levels addresses the uses of space in the region, or the land uses according to spatial locations. In the sense, in China there is so far no regional land-use planning which takes into account economic development, settlements, and infrastructure needs in the region in a comprehensive way and in association with the protection of the environment.

4. The communal planning is actually in the hand of the county level. No plans interlink the economic, environmental and social issues and coordinate their respective land-use requirements on the communal level.

This part addresses the problematic consequences in social, economic, land-use, transportation and environmental aspects, resulted from the existing territorial administration and planning system. Social cohesion, ecological and environmental degradation, and economic pressure are unprecedentedly severe.

In an overview, the current territorial administrative and spatial planning system incorporates the following shortcomings:

- **Severely overlapping** among the prefectural, the county and the local level. The prefecture and county have a controversial double function (managing directly the main city or county town, and the whole territorial entity simultaneously). The overlapping competences among those three levels lead to conflicts between each other and hinder a clearly structured, coordinated and sustainability-oriented planning process.

- **Inappropriate planning scales and distribution of planning competences.** The currently lowest planning level, the county (with an average surface of 2050 km² in the Kunming Prefecture), is too large to implement and manage local i.e. communal planning properly. Meanwhile the local level, which is the right level to do so, has no matching rights and resources.

- **Lack of clear-cut institutional framework** in which sustainable regional and local development can be pursued on the right scale and extent. The worst situation is facing the communes, which are marginalized in the whole decision-making procedure and in achieving access to social, economic, natural resources. Thus, local sustainable development in China is not laid on a solid ground, and could be a realm of fancy to a certain extent.
• **Lack of coordination** between institutions involved in spatial planning. Competences in spatial planning are severely divided up among different institutions such as development programming commissions, city planning bureaus, land administrations and so on. Due to their strict vertical organization, coordination between the concerned institutions is very weak.

• **Lack of a comprehensive surface-covering regional to local planning approach and coordination planning tools.** Comprehensive regional, sub-regional and local planning approaches which in varied detailedness define land-uses for the whole territory on the three levels are so far not implemented in the PRC.

• **Fragmented legal framework regarding spatial planning** There are actually many laws and institutions which have something to do with spatial planning, but they are fragmented and therefore ineffective. However, pressure on land use increases, and the need and importance of coordination and cooperation in the field of spatial management rises exponentially with the intensified (human) use of the territory. No legislation is present which enables a responsible institution (on different levels) to play an integrated planning function.

**Conclusions**

The current functional divisions among the lower three layers of territorial entities and the spatial planning system are not adapted to meet the challenges of the future development in the PRC. Therefore it needs to be reformed.

**Proposal of an alternative comprehensive planning system**

**Territorial functional restructuring**

The thesis suggests first a territorial restructuring with regard to the functions divided among the prefecture, the county and the communal level of entities. Regardless of the political ideology, a basic „universal“ institutional framework, which defines clearly a communal level and those higher-than-the-communal level, is essential for any planning system to work, so as to assure an equitable system of governance for a sustainability-oriented territorial development. After restructuring, cities of different classes, small towns and rural communities would be on a more equal footing for resources than the current extremely inequitable one.

**Precondition for implementing comprehensive spatial planning: the creation of a spatial planning law**

Ideally, the reform is carried out to put up a new spatial planning law, which sets a basic legal framework for spatial planning and organizes collaboration and coordination among administrative bodies and other stakeholders. This spatial planning law constitutes a necessary precondition for a successful implementation of comprehensive planning.

**The proposals of an alternative administrative and territorial setup**

On the basis of the deep-rooted analysis, the following reform is suggested (see also Alternative Administrative and Territorial Setup in fig. 45):

• The prefecture-level governments are to govern solely the prefecture as a whole with improved governmental authority. As well, they are to supervise and monitor the counties and communes. For the main city in the prefecture, a (local) municipal government is to be created separately.
• The county government is to fade out in profit of a county commissioner’s office, which will be in charge of coordinating between the prefecture and commune level in the future.

• The communes will be fully in charge of managing their own territory under the supervision and monitor of the higher levels. Their unified leadership will replace the existing ambiguous, overlapping and segregated urban and rural management system.

• A special case will be larger cities. Their jurisdiction areas are to be re-defined, encompassing at least the territorial surface of neighboring communes related with the contiguous built-up area of a city. Such a whole surface is to be consolidated into one unified municipal leadership. Therefore, such a city commune will be at the same time a municipality and a county (see fig. 45). In some cases this may indicate a new territorial division for the counties bordering those larger cities.

• The rural-urban segregation system is to be abolished in favor of the unambiguous territorial division into communes. Either a municipality (which is at a higher urbanization level) or a commune in the future must be responsible for every local resident at the same time, no matter whether he or she is a farmer or engaged in other sectors. One planning legislation and building code is to be applied for either urbanized or rural territory.

Proposal of a comprehensive planning approach

In correspondence with the reformed territorial administration, a comprehensive planning system is suggested. In order to reinforce direct coordination between the most concerned agencies, the bureaus of territory planning, of the city planning and of the country planning are to be merged. The new bureau is furthermore in charge of coordinating all the other governmental agencies and stakeholders concerned with spatial planning. As main tools for implementing comprehensive and surface covering planning, the following points are suggested:

1. A regional guiding plan at the prefecture level. It covers the whole of the territory and is a symbiosis of all the sector plans of all the government agencies concerned with spatial planning and consist of both texts and maps (drawings). It is recommended to split it up in the following parts: Settlement and landscape, transportation, supply and disposal, and public infrastructure. As well, this spatial planning for prefectures (and special provinces) is to be coordinated with the neighboring prefectures (or special provinces).

2. On the county-level, sub-regional guiding plans are to be carried out for all the counties in a prefecture. It has the same obligations and main characteristics as the regional guiding plan, while being more detailed.

3. On the commune level, a comprehensive local plan is to be carried out for each commune, which is legally binding for the individual user or owner of the land. Its zoning plans cover the whole surface of the commune or the municipality, and are a symbiosis of all the sector plans of the government agencies concerned with spatial planning on this level.

This three-tier system is justified by the planning and coordination requirements of each level, which otherwise cannot be met appropriately: At all the three
levels, a whole territorial entity should be zoned, though in different details; one plan deals with all settlements and residents, no matter urban or rural; infrastructure needs over every corner of a community are to be studied; and ecological and environmental issues are to be addressed, no matter whether they are inside or outside the settlements.

**Assessment of impacts**

In a medium-term to long-term period, a subsequent implementation of comprehensive planning, supported by sustainability-oriented planning policies, could have very positive impacts in ecology, economy, and social issues.

Socially, severe functional over-lapping and duty evasions are expected to decrease. Supplemented by the county level of coordination and supervision, an additional reliable „regional” government on the prefecture level will help achieve a balanced development in the prefectural region. In particular, this is also fit to the proper governance of the emerging Chinese city-regions. Meanwhile, a unified local level of leadership is favorable to strive for remedying social incohesion due to fifty years of urban-rural segregation.

Economically, the enhanced management of the metropolis and the build-up of rural communities may lead to a widespread prosperity in both urban and rural communities. Agriculture will also benefit, assuring enough and clean food production in an adequate number of conserved cropland.

In view of land-uses, transportation and environmental aspects, the integrated development through the comprehensive regional and local planning system, will help assure spaces for the nature, and green and open areas in or around the city. Farmland conservation, and improvement in ecological and environmental quality could be expected.

For example, a GIS-based simulation of future settlement and transportation patterns of the Greater Kunming Area (9,650 km²), built up as a large city-region with a decentralized concentration of urban centers interconnected by an efficient and environment-friendly mass transportation system, shows that many negative impacts of ongoing developments, such as future land use for human settlements, natural environment’s conservation, air pollution due to transportation and industrial activity, soil poisoning, urban congestion, the cost for settlement and transportation infrastructure as well as the average costs for urban transit, could be significantly reduced by implementing alternative planning policies and comprehensive planning approaches. The interpolation of those results suggests that impacts on sustainability could be impressive for the PRC as a whole.

**Suggestions**

The overwhelming strength of current development dynamics being observed, the rapid and step-wise implementation of the functional restructuring of the territorial administration and the comprehensive planning system is highly recommended. This is the only way to face the biggest challenge for China in the 21st century regarding how to manage, settle and engage its huge future population in a sustainable way.
1.2 Motivation

It was not the first time for me to visit a western country in 1999 when I have had the opportunity of learning spatial planning courses in Switzerland. It is, indeed, the first time for me to be able to stay longer than just a visit, to see and hear more cases with regard to a western spatial planning and its corresponding territorial administration in a systematic way.

During the period of time, many things threw me into perplexity. I had to ask myself constantly why similar theories or methodologies did not work properly, according to my knowledge, in our planning system. Now and then, I started to remind myself of all professional experiences and planning cases when I worked as a working planner at the Kunming Municipal Planning and Design Institute for six years and as a civil servant at the Kunming Municipal City Planning Authority (KMCPA) for four years. At the beginning of my work at the KMCPA, a senior colleague, who was once director of the city planning department Kunming, told me that, the only robust part of city planning was the space planned and reserved for roads; land-uses were subject to change in the construction project oriented process; and even existing buildings can be demolished and reconstructed anew with a totally different function. More and more I realized that he did tell me the very essence of the current Chinese town planning system.

I remember, when we, a group of planners, in 1991 were asked to work out a plan for a rural commune of about 200 square kilometers, we in effect made only a quasi-zoning plan and an infrastructure plan for about one square kilometer of planning area at the main village in the commune. The rest, a so-called villages system plan, was not helpful or effective to guide or control land uses and development outside that village, in my opinion of today's.

Another time, the task was to elaborate a master plan for a county. To be accurate, we did make a master plan for the main city in the county, and a so-called county urban hierarchy plan concerned mainly with this city, a few other towns and some big villages in this county.

Later on in 1993-1994, I was involved with the elaboration of the master plan for the Kunming prefecture-level municipality (15,561 km$^2$). In the end, we presented a master plan, which only covers about 200 km$^2$ around the Kunming city, and an urban hierarchy plan for the whole prefecture.

After a "quick and dirty" recall, I wondered how a same planning approach could be adopted to deal with the prefectural planning or communal planning, no matter whether it was a commune (10-200 km$^2$), a county (500-4,000 km$^2$) or a prefecture-level municipality (3,000-20,000 km$^2$). And each time, there was one focus—the main settlement in a corresponding territorial entity of different levels. Particularly, it was not the communal government but the construction authority of the county government who contracted the task of figuring out a plan for that commune. Did the communal government feel that a communal plan was a matter of total indifference to them?
During 1996-1999, when I worked at the city planning authority (on the prefecture-level), the focus of our daily routine was even more on the main city of the prefecture. I would never forget those difficulties when issues were concerned with dozens of authorities at the prefectural level, the qu governments (on the county level), and their subordinate authorities as well as the communal governments. They are all stake-holders on three administrative levels involved in the so-called town planning management area, for which even a symbolic land-use master plan is not available. My feeling at that time was, the prefectural government and its city planning authority could not deal with issues concerning this main city easily when the qu (administrative districts in or around the city at the same level of a county) and the communes had different ideas and interests, even though the prefecture-level institutions were in a position to lead the whole prefecture and the whole city at the same time. Under the circumstance, a unified leadership over the main city and its spatial organization just did not exist.

On the other hand, my department was in charge of infrastructure planning and management. But the most important aspect of our work seemed to figure out the red lines, comparable to the Swiss building lines (*die Baulinien*), for the Kunming city's master planning area. Most of red lines are those planned road routings and are actually a basis for site-selection for all kinds of construction projects and finalization of land uses. According to the elaboration by-laws of the PRC City Planning Law, roads are foreseen and contained as a part of city plans (inside the town master planning areas). Theoretically, if no city plans had been figured out for a part of the city planning area, or if a location were outside the town planning areas, there should be no road plans. What puzzled me at that time, or what was felt illogic was: there is a rule that all land-use applications must be accompanied by the neighboring red lines, wherever their locations are inside or outside the master planning area, or at places where no city plans have been worked out. Further questions are, if there had a city plan, why they could not make land-use decisions based on those plans directly, and how red lines at last are turned into the foundation for land-use decisions which should have been determined at an earlier stage of a general planning process? Why land uses are in practice defined one by one by the construction project oriented process, including the land use for a large-scale project, such as the affordable housing project funded by the national government?

By referring to western planning approach, I tried to find some answers to those and many other questions with regard to the territorial management and spatial planning in China. It was far from easy to do that. Sometimes, the most difficult point was actually to understand our planning system. Although I worked all the time in the field of city planning before I came to study here, it is still beset with difficulty. On the other side, I had to try to get out of my usual ways of thinking which were moulded by the established Chinese city planning framework and approach. Otherwise, things kept on circling on the old tracks.

I felt that it would not be adequate to study the city planning system only, as usually done in many domestic research. In view of overall ecological and
environmental situations around cities and in the wilderness, in view of urban and rural settlement development trends and rising pressures due to expanding population and economy, the existing city planning framework and approach are inefficient and even ineffective in many aspects. Though new to me as well, other parts which form an overall spatial planning system must be subsequently studied. Besides, I found, piecemeal and sporadic explorations could not lead to a complete understanding of general issues and problems regarding a spatial planning system, and only a systematic analysis would make it.

This was a preliminary notion at the beginning of the year (2001). When it was time to decide a subject for my thesis of post-graduate study in spatial planning, I thought it would be interesting to try studying the existing Chinese spatial planning system as a whole from a comparative perspective and foreseeing an alternative one, by means of a systematic research approach. Later on, it was found that the Chinese territorial administrative framework itself needed to be studied as well. Originally, this framework was foreseen only as something that must be introduced as background information for the spatial planning system.

The aim of this work is to envisage a likely future basic spatial planning system which might assure an overall healthy spatial order in the PRC. The work ought to be understood as an input for valuable opinions that may come up, which contribute to a formation of a future-oriented and sustainability-oriented Chinese planning system.

1.3 Acknowledgements

First of all, thanks to the Swiss Development Cooperation, the ORL-Institute and the City of Zurich. Without the great support and help from these institutions, there would be no possibility for me to write this paper and no chance for me to get a better understanding of the society where I live most of my life so far. A Chinese poem says, “one fails to see the genuine appearance of the Mount Lu, just for his staying within the mountains”. So did I fail to see and realize many aspects with regard to planning and territorial administration in the PRC, because one may get used to a custom or a rule whose defects or advantages could be only recognized from different perspectives. Thus, special thanks to Prof. Dr. Willy A. Schmid, Dr. Jacques P. Feiner, Mr. Remo Steinmetz and many other professors and lecturers, who help me one way or the other adjust my angles or change my ways to look at the Chinese world. Consequently, I hope, through my interpretation, it would become easier to understand the PRC’s territorial administrative and planning system, and then one step further, to foresee a feasible restructuring plan for it. Without all those helps and supports, in particular, a lot of discussions with Dr. Feiner on difficult issues in apprehending Chinese systems, I would not be able to realize many aspects I present herewith. In the end, when all has been said and done, the viewpoints expressed here and any mistakes are my own.
2 Analysis of the Current Planning System in the PRC

2.1 Genesis of the Current Planning System

The current spatial planning system in the PRC can be subdivided into three major components, namely city or town planning, territory/regional planning, and overall land use planning. Among them, city planning is the most critical part in the whole system.

2.1.1 Planning between 1950 and 1966

On October 1, 1949, the PRC was officially founded. Among literatures regarding city planning or territory planning in the PRC, a planning history of 50 years is being spoken. It is acknowledged that modern China's planning as a system is imported from the former Soviet Union, not evolved from traditional Chinese planning.\(^1\) The revolutionary change of state power paved the road to introduce and set up a completely fresh socialist planning system for New China on the debris of Old China.

The Cultural Revolution divides the planning history into halves. The Cultural Revolution (1966-1976) is the historical event which can be placed next to the founding of the PRC. It divides the PRC's history of past fifty years into two periods—before and after the Cultural Revolution. This principle applies also with regard to planning.

During those ten years, planning fundamentally ceased to exist. Some five years earlier, city planning could not function normally, because it was made a scapegoat of „the Great Leap Forward“, which lead to a big famine and death of tens of millions of people in China during 1958-1960. Planning authorities, research institutions and teaching departments in universities were all dissolved. Planning professionals were forced to change their profession.

Therefore, there was unfortunately a short-lived life cycle for planning before 1966. That is to say, planning grew out of nothing for the first time between 1950 and 1966, and disappeared before it was systematically established.

Planning for cities and towns

During its first life cycle, city planning was not established as an independent system. It came into being to serve needs of constructing a great number of industrial projects. Planning procedures were just some of the steps regulated for managing capital construction projects in an orthodox planned economy.

During the sixteen years between 1950 to 1966, city plans were first worked out for 150 cities which had been chosen by economic programs as key carriers of industrial construction projects, later on, for most of designated cities and some county towns of the time. A first group of city master plans were produced and revised.

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Planning for the countryside

Before 1966, there was no planning for rural settlements.

Territory planning

Territory planning (guotuguihua), considered as regional planning in the PRC, came into being some time later than city planning. In the beginning 16 years of the PRC, a first group of territory plans were made. Those plans were generally speaking economic development programs focusing on exploitation of natural resources for a province, or sub-provincial regions.

Before the Cultural Revolution, city planners worked out both city plans and territory plans. From the perspective of managing economic development programs, the commissions of planned economy were involved in territory planning as well.

Territory planning was also interfered with after 1961, and vanished together with city planning during the Cultural Revolution.

Land utilization planning

Overall land utilization planning did not appear until the 1980s. For about 30 years or so, land-use planning was only worked out for the designated town planning areas, in such a symbolic way that land uses were somehow defined roughly in a city or county town’s master plans according to certain design concepts. The rest of land was subject to any spontaneous land-use decision from any sector’s point of view, for instance, changing woodland or grassland into cultivated land.

2.1.2 Planning since 1977

After the Cultural Revolution, planning-related institutions have been re-established. Planning has gradually returned to function and stabilized institutionally as it is now. The fundamental working framework for planning remains the same since over twenty years.

City planning

A second round elaboration of city master plans was fulfilled in 1985 for 324 central cities. Till the end of the 1980s, master plans have been elaborated for 95% of designated cities and most of designated (small) towns. In some provinces, plans of provincial urban system were carried out too. On the other hand, planning attention turned to site regulatory plans and detailed plans.

A third round elaboration of master plans for more than 600 cities has been finished by the end of the 1990s.

Efforts were made since 1978 to form a legal base which might allow city planning to function free from the political movements like the Cultural

2. Those territory plans are for regions of Maomin, Gejiu, Lanzhou, Xiangzhong, Baotou, Kunming and Daye; two provinces, Sichuan and Guizhou, conducted intra-provincial economic regionalization plans; regional planning was carried out for prefectures or for key regions in many provinces, e.g. Chaoyang Prefecture, Liaoning Province. Source: Chongqing College of Architectural Engineering & Tongji University. Version of Dec. 1984, Reprinted in June 1998. An Introduction to Regional Planning. China Building Industry Publishing House.

Revolution. So, city planning as a separate system was set up only since the 1980s in China.

On the basis of a city planning regulation enacted in 1984 by the State Council, the PRC City Planning Law was passed by the PRC’s People’s Congress in 1989. The Elaboration Approach of City Plans, a norm on how to draw up different city plans, was issued by the Ministry of Construction (MoC) in 1991. In addition, the Planning, Construction and Management Approach of the Designated (Small) Towns was enacted by the MoC in 1995.

At present, an amendment of the existing city planning law is on the agenda of the Central Government.4

Rural planning

Since 1978, planning was seen as something necessary to guide rural housing construction. In 1981 the Central Government required local governments to make plans for small towns and villages. Till the end of 1986, preliminary plans had been made for 33,000 small towns or big villages as well as 2.8 million (small) villages. 70% of them had been updated until 1994.

In 1993, the State Council enacted the PRC Regulation on Village Planning, Construction and Management. A Norms for Village Planning was separately issued by the MoC in 1994; and another by-law, the Elaboration Approach of Village Plans by the MoC in 2000.

Thus, rural planning appears for about twenty years. City planning authorities are also entitled to take care of rural settlement planning. Yet, “widespread implementation of city planning for small towns in the countryside to promote economic development and rational construction is a new issue facing us (city planners)”5

 Territory planning: economic plans for very large regions

Since the end of the Cultural Revolution, territory plans have been worked out for a large number of sub-national regions, provinces, and sub-provincial regions. Territorial resources had been investigated and a great deal of data had been collected. Territory plans for 33 experimental regions were made as well. In particular, intra-provincial economic regionalization plans were once again made.6 Besides, territory plans for a municipality (shi)7 or a county (xian) as a region (shiyuguihua or xianyuguihua) become common after 1980.

Till the early 1980s, territory plans were still produced by city planning institutions. As a matter of fact, the earliest state regulation with regard to

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5. Tongji University. Nov. 1991. City Planning Theorem (2nd Edition). China Building Industrial Publishing House. 34. Please note the terms and expressions used in the sentence, which means to make city planning or maybe to set up city planning system for certain part of the countryside. According to those concepts, it can be seen that planning for the countryside in China is from the beginning only for small towns which seem need certain construction guidance, not originated from a concept that all communities need development planning and construction guidance.
regional planning was the Tentative Elaboration Approach of Regional Plans, issued by the then State Construction Commission in 1956. However, the Elaboration Approach of Territory planning, enacted by the State (Economic) Planning Commission (i.e. the former State Commission of Planned Economy) in 1987, makes it clear that territory planning or regional planning is a duty resided with this Commission and its lower counterparts at the county level or higher. The State Planning Commission organized the elaboration of the PRC Territory Master Plan (Outlines) in 1990. Afterwards, each province figured out its territory plan.

As of regions in smaller extent, for instance, the Kunming Prefecture-level Municipality (15,561 km² in 1986), a municipal territory plan was made by the city planning institutions in 1986. Since 1994, the making of a new territory plan for Kunming has been under way. This time those who work at the municipal (economic) development planning commission are responsible for its elaboration, while (city) planners only play a secondary role.

### Land utilization planning

The making of land utilization master plan is required by land legislation enacted in June 25, 1986. It’s land administrators who are empowered with this duty, not (city) planners. The division of work has been recently confirmed by the PRC Land Management Law, amended in 1998.

By the end of 1999, land utilization master plans have been elaborated around the country for all five levels—from the national level to the communal level. In April 1999, the Sate Council approved the National Land Utilization Master Plan (Outlines) (1997–2010). 31 provincial level of land use master plans have been made, and approved all by the State Council as well. Of 81 land use master plans (for main cities in those prefecture-level municipalities) that need approval from the Council, 64 have been obtained agreement whereas the rest 17 are under examination. In addition, land utilization planning has been made for all the municipalities, counties, communes and townships all over the country.

6. During 1976 to 1979, Hubei Province made investigations and researches on regional economy, resources and construction conditions. In the early 1980s, a territory plan (outline) was made for the Beijing-Tianjin-Tangshan region (inter-provincial); territory plans were conducted for the following different types of regions as experiments: the western part of Henan Province, Yichang Prefecture of Hubei Province, the coastal area Ningbo of Zhejiang Province, the Songhua Lake area of Jiling Province, Bayingolin Mongol Autonomous Prefecture in Xinjiang Uygur Autonomous Province; regional planning for the Shanghai Economic Region, made up of several provinces near Shanghai, or for Shanxi Province as a base of energy and heavy industries; energy and transportation planning for Northeast China comprised of three provinces; regional planning for Chongqing Prefecture-level Municipality and its counties; and planning for economic regions with a large city as a region’s center. Source: Peng, Zhenwei. August 1998. Regional Research and Regional Planning. Tongji university Publishing House. Shanghai. 50-51.

7. In China, a municipality can be at the lowest level a county-level one, typically ranging from 500 to 4,000 km², or a prefecture-level one, typically ranging from 3,000 to 20,000 km².

2.1.3 Driving Forces behind the Evolution of the System

In 1950, the PRC was basically an agricultural country. Afterwards, a large scale of construction of factories, plants, mines and infrastructure, such as energy and transportation facilities, lead to urbanization and migration of population, which were put under the strict control of the Chinese Government. With the evolution of planning instruments, city planning, territory planning, and environmental protection planning appeared one after the other. As elsewhere around the world, there are universal driving forces like industrialization, social-economic progress, and urbanization. Some are of unique Chinese characteristics, such as ignorance of or attention to rural communities. Ideology is also an important shaper.

Since the 1980s, the concern with environmental and ecological conditions is becoming stronger. So are private economic factors, which are taking the place of former state-run factories, plants and enterprises. Political, economic, social, cultural and environmental factors work together for the formation of the current planning system (and for the possible presence of a different planning structure as well).

Economic development programs decided a need of a great number of factories and mines at the beginning of a large scale of industrialization which happened in China only after the founding of the PRC in 1949. To serve widespread construction at hundreds of existing cities and new towns, city planning emerged and performed well tasks of laying down those construction projects physically in space, and made a great contribution to urban development and industrialization of the stage in China.

From technical perspective, a city planning system made up of two parts was born at the very beginning: city master planning and detailed planning. City master plans emerged to coordinate site-selections for several factories and their matching living facilities as well as residential quarters in or around one city. Detailed plans were then worked out to guide the layout of each part of those „production and living facilities“ after their construction sites had been fixed. This two-step physical planning was fit exactly to the construction demand at that time. It became the classic planning approach for guiding construction projects in a planned economy, and is still valid nowadays.

 Territory or regional planning came into being in accordance with the second stage of industrialization in view of a more complicated construction situation in certain regions where industrial and infrastructure projects were found to be more intensive. It was assumed to play a role of distributing productivity correctly for a large area which should be took into consideration as a whole. Layout of industrial enterprises and urban settlements were required to be considered simultaneously, though agriculture or the countryside was only taken into account as one part of productivity.

Before the Cultural Revolution, city planning and its „subordinate“ territory planning were both duties and responsibilities for the (city) planers. During the
time, environmental protection planning did not show up yet. City planning itself and territory/regional planning were rather flexible, but with bigger general responsibility, when there was no clear-cut planning framework among specialized institutions. Among other reasons, city planning circle’s role as a scapegoat for the Great Leap has made it in a less favorable position in view of function division between different planning instruments. This historical shadow can not be ignored in reviewing the current planning framework.

So far the planning functions have been assigned in such a way that planning power is divided among three major players. City planning or construction authorities are responsible for the designated town planning areas only. Territory/regional planning as a duty is assigned finally to the (economic) development planning commissions. Overall land utilization planning for an entire territorial administrative unit—a prefecture, a county or a commune—is assigned as a duty to the land administrations. In addition, environmental protection bureaus are established to address pollution issues.

A choice with no alternative: urban system planning as regional planning instrument for city planners

After the loss of territory/regional planning competence as an appropriate duty for (city) planners, urban hierarchy planning appears to be more and more significant as a substitute instrument, facing complexity of planning tasks—to make city plans from a regional perspective. In fact, urban hierarchy planning is already an integral part of territory planning, in which it is called the layout of cities and towns.

Before the 1980s, a city’s master plan was elaborated with a single city as the basic unit in view of its reasonable development. Since 1983, administrative division of the jurisdiction territory had been systematically reformed. As a lower level, more counties were attached to be under the leadership of
prefecture-level municipal governments. And a whole county, when with high
industrialization and urbanization, would be designated as a municipality. So a
plan of urban hierarchy was needed for a municipal government to guide
overall development of cities and towns in its whole territory.

Meanwhile, the 1989 City Planning Law requires plans of urban hierarchy in
wider space. Plans of urban hierarchy are asked for the whole country, a whole
province, and a whole designated prefecture- or county-level municipality as
well as a whole county. The city’s master plan must include a plan of urban
hierarchy for a designated municipality or a county. Therefore, spatial planning
in the PRC is said to follow such a sequence: territory plan → plan of urban
hierarchy → city master plan → plans for city districts or quarters → detailed
plans. In view of its rising importance, an exclusive regulation, the Approach
on Elaboration and Approval of the Plans of Urban Hierarchy, was enacted by
the Ministry of Construction in 1994.

Birth of rural planning-a first step toward rational development of rural
communities.

No need of “town” planning for rural communities is rather deep-rooted not
only among common people, but also among some professionals in the PRC. A
single fact that there was no planning for rural settlements for about 30 years
clearly shows how serious rural communities were once ignored.

During the time, agricultural development plans were worked out, but mainly
aimed to serve economic exploitation and rarely considered development needs
of rural communities themselves. In a rapid industrialization, the countryside
was treated just as one big workshop which produced grain, vegetables and raw
materials for industries or industrial workers. In the end, it was found that there
was even no planning concerning the housing construction in the rural
communities in 1978.

Rural settlement planning has been created from scratch in the past 20 years
since the age of reform and openness, let us not go into the question whether
that planning is effective or not. Physical planning for villages can be regarded
as one historical social progress in China. To the majority of Chinese population
living in the countryside, this is just a beginning to go towards an overall
community development.

Environmental protection developed to deal with industrial pollution.

From the viewpoint of Chinese socialists in the 1950s and 1960s, pollution had
nothing to do with socialism. This mentality changed only in the 1970s. Then
came into being environmental protection plans against industrial pollution—the
Three Waste, that is, waste water, waste gas and industrial residue. In this
regard, it was quite successful to decrease discharge of pollutants from
industries by means of environmental monitoring and environmental protection
instruments in dealing with state-run factories in an age of planned economy.

However, not envisaged by any forecasting and thus not prepared in advance,
pollution due to household sewerage and solid waste as well as widespread
industrialization in the countryside since the 1980s has become a serious

problem, and the situation is going from bad to worse. The existing environmental protection instruments have showed ineffectiveness in face of complex and deteriorating environmental conditions all over every corner of the country.

City planning is mainly concerned with the designated town planning area, not an entire local jurisdiction territory. It lacks effective means to deal with widespread ecological and environmental problems all over the country outside the planning areas. The same can be said with regard to rural planning. In this regard, territory planning and environmental protection planning seem to be more capable within the existing planning system.

Commonly, special territory plans and environmental protection plans are made in view of some special environmental issues, such as loss of cropland, soil erosion, deforestation, desertification, water pollution in rivers and lakes, solid waste pollution and so on. Those plans are available in a short time to establish a basis for decision-makers even on the national level to decide treatment projects. Not only the lower levels of governments, but also the national government and national functional authorities are keen to draw up national plans of all sorts. For example, the PRC Plan of Ecological and Environmental Construction is figured out by the SDPC and has been approved by the State Council for implementation to deal with the widespread soil erosion, desertification, water pollution problems around the PRC since November 1998; the PRC Cross-Century Plan of Green Engineering is figured out by the NEPA and has proposed 1,463 projects for implementation around the country. The similar plans are said to have been worked out at the provincial level, prefectural level and county level too.

2.2 Territorial Administrative Framework

2.2.1 General Framework and Settlement Profile

Apart from the state level, there are other four main territorial administrative layers in the PRC. Political power is delegated from a higher level to a lower one, following a top-down procedure (see fig. 2):

- At the national level: the state i.e. the People's Republic of China (PRC)
- At the provincial level: the province and the province-level municipality
- At the prefectural level: the prefecture and the prefecture-level municipality
- At the county level: the county, the county-level municipality and the qu (administrative district)
- At the communal level: the commune and the township or jiedao (a street neighborhood consist of certain blocks of streets)
Profiles on the five layers of territorial administration

**The state** The PRC has 9,600,000 square kilometers of territorial area in total, composed of 33 units\(^{10}\) that have an equivalent status as a province.

**The Province-level Layer** Different names are used officially when units of this level are mentioned, e.g. 23 provinces, 5 autonomous provinces, and 4 municipalities. Their institutional establishments, however, are basically the same. The word “province (sheng)” is used to stand for both provinces and autonomous provinces just for a simplification of relevant descriptions. Besides, a sort of special municipality\(^{11}\) is at the same level of a province, that is a so-called “municipality under the direct leadership of the Central Government (zhixiashi)”, or simplified as “a province-level municipality” in this paper.

**The Prefecture-level Layer** At present, there are 331 administrative units are entities of the prefectoral level. Officially, most of them are entitled as “prefecture-level municipalities (dijishi)” with so-called People’s Governments, while a prefecture is authorized to set up only a commissioner’s office. In this paper, all the non-prefecture-level municipalities, which still vary in some other aspects, are simply grouped as “conventional prefectures”. In the following part of the paper, when only the term “prefecture” is used, territorial entities on this level are meant except where a specific emphasis is needed.

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10. The PRC Statistical Yearbook 1999. China Statistical Publishing House. Beijing. The figure includes Taiwan Province according to the Yearbook. In the paper, total figures with regard to population or others exclude Taiwan, Hong Kong and Macao. Discussions concern with general situations in the mainland China only.

11. The word “municipality” (shi) is officially used in the PRC as an exclusive term for territorial administration. It is correspondingly used in the paper specifically for this sort of entities. Such entities can be seen on three administrative levels, i.e. the province, the prefecture and the county, but named as “municipality” (shi).
The County Layer  The county and the county-level municipality are considered and treated as the basic unit of territorial administration in the PRC, though they are not on the lowest layer. There are at present 2,126 such basic units in the whole country. In addition, there is a kind of entity called qu, totalling 749 in the whole country. Those qu exist mostly in urban and suburban areas of bigger cities and are at the same level as a county. A specific term “qu”, or “administrative district”, is used in the paper to name all those entities. It must be pointed out here that recently a few county-level municipalities are also re-named as qu.

The Commune (xiang) or the Township (zhen)  This is the lowest level of territorial administration with an instituted people’s government and a people’s congress. But this is not the case for the same level of Street Neighborhood.

Additional Level  There is still at least one more lower level of corporations which are not authorized to organize “people’s congress or government” but with certain executive functions. They are not addressed in the paper.

According to current standards of classification, urban and rural settlements in the PRC are divided into following eight grades. Please note that only officially-registered non-agricultural residents in and around a city are calculated as a city’s population. According to the PRC Statistical Yearbook 1999, there were altogether 668 cities till the end of the year 1998.

The extra-large city is a city with more than 1 million non-agricultural official residents in the city and in its suburban areas near the city. So far, 34 cities are identified as of this class, including the cities of Beijing and Shanghai. According to a survey in 1993, the average built-up area of 32 such cities was 150 km²; the smallest among them was 90 km².

The large city is a city with official inhabitants ranging between 500,000 and 1,000,000. The number of the cities of this class is 47. Their average built-up surface is about 62 km².

The medium-sized city is a city with formal residents going between 200,000 and 500,000. 203 cities belong to this class. Their average built-up area is 33 km².

The small city is a city each with an official urban population of less than 200,000, and at least under the leadership of a designated municipality of the county level. There are nowadays 384 small cities in the PRC. Their average built-up area is 17 km², each with a population of 60,000 or more.

12. zhen means originally a garrison post, that is, a settlement of military nature. In modern Chinese, zhen still has this meaning and is used to mention a small town. Since about fifty years, zhen is also used to stand for one sort of territorial administrative entity. The word “township” is specifically used in the paper to stand for all those entities. Correspondingly, the word “town” is used in the paper to mean its main but small settlement which still cannot be called a city (chengshi).
The town of a county seat is generally bigger than ordinary towns, averaging 6 km² in surface and 40,000 in population. There are altogether 1,781 such kind of towns.

The (ordinary) towns amount to 16,535 in total. They are not chosen as the county seats, and are smaller in size, averagely with a built-up area of 0.8 km² and about 6,500 inhabitants.

The large village is a larger rural settlement. There are 30,324 such settlements in China. In average, each large village is about 0.4 km² in built-up surface with 2,000 dwellers or so.

The village is a relatively small rural settlement. There are 3,659,335 such villages, each with villagers ranging from 100 to 1,000.

13. When concerned with Chinese cities and towns, the word “city” is used in the paper to stand for the most important and usually the largest settlement appearing in a designated municipality, which is officially acknowledged by the Central Government. A city is chengshi in modern Chinese language. shi means originally "market" or "to buy". Cheng was originally a big and long-lasting protective facility against wild animals or enemies. Cheng means now either wall or city. Mostly known, changcheng is Great Wall, or long wall. Shi is often used to express abstract conceptions with regard to city, e.g. a level of administration, whereas cheng is more related to concrete objects concerning town.


15. It is called as jizhen in Chinese, indicating a larger village where a market or bazaar is held periodically according to regular dates.

Fig. 4. Left: Main Relationships between Settlements and Administrative Layers
Right: The Class of a City according to the Level of Its Administrative Layer
Crisscrossing relationship between administrative layers and settlements

First of all, city classification is related with levels of administrative entities (see fig. 4 on the right side). This is a unique point and a key to understand the current territorial management and its corresponding planning system. Each of those so-called province-level, prefecture-level, or county-level municipalities and the counties has a focal point—a city or town—under its special administration.

Now that the left side in fig. 4 shows major crisscrossing relationships between settlements and administrative layers in view of direct management in varied degrees. For instance, to a large city, only the prefecture-level municipal government is in a position to take care of its contiguous built-up area (averagely 62 km²) as a whole, whereas each qu government can be responsible only for a part of the city. Meanwhile, communal governments exist but not shown in this diagram because they are less influential than the two indicated.

2.2.2 The Province and the Province-level Municipality

The Province

Among Mainland China’s 27 provinces, one province can be as small as the Netherlands (41,200 km²) or bigger than France (547,000 km²). Each province has a provincial government going in parallel with the Central Government. The provincial government is in fact a part of the national government but stationed in a province, entrusted with responsibilities and duties of managing that whole province. It does not directly run any city or town in the province. At this point, it is fundamentally different from a province-level municipality (zhixiashi). Apart from the national government, a province’s government is the sole governing organ of regional nature among four lower levels of administrative layers. It is important to bear his feature in mind.

In parallel with those at the national level, there are corresponding provincial authorities such as Provincial Development Planning Commission, Provincial Commission of (Urban and Rural) Construction, Provincial Environmental Protection Administration, Provincial Land Management Administration, Provincial Commission of Agriculture, Provincial Forest Administration. Those functional institutions have similar structures and duties as their counterparts at the national level.

A province is divided into a certain number of prefectures (see fig. 5).

The Province-level Municipality (zhixiashi)

There are nowadays 4 province-level municipalities (zhixiashi), namely Beijing, Tianjin, Shanghai and Chongqing. A so-called “municipality” (shi) is actually quite a large region, ranging from 6,300 km² to 82,000 km² in surface. Such a municipality is consist of several qu, some counties and/or county-level “municipalities”. For example, the Shanghai Province-level Municipality has 12 qu and 9 counties (see fig. 6 on the left). An organizational structure of a province-level municipality is given in fig. 6 on the right. Table 7 shows you recent parameters regarding those municipalities and their main cities.

Different from a conventional province, those municipalities are generally identified as “cities”, and a government of a province-level municipality is considered as a city government, and is in charge of running the central city of
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One Government, Two Roles. Thus, “the functions and tasks of a province-level municipal government are much heavier than that of a government of a conventional province. In addition to similar institutions as in the latter, the former has to set up functional authorities in charge of municipal infrastructure, land, real estate, housing, public utilities, civic affairs and so on.”

An interesting discussion on which the biggest “city” in China is.

The Chongqing Province-level Municipality is exceptionally big in territorial surface, and even larger than the two smallest provinces. It was organized in 1998, taken out of the Sichuan Province. Before this change, it was a prefecture-level municipality of 23,114 km² and about 14.7 million population.

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17. This could be described as, if in Swiss context, the Cantonal Government of Zurich would take care of the whole canton and meanwhile manage directly the City of Zurich by means of “restructuring” the Zurich city governing bodies into several qu governments.

The formation of the Chongqing Province-level Municipality lead to a warm discussion in the PRC’s media over the question if Chongqing or Shanghai Municipality (shi) is the largest “city” (chengshi) in China. As a matter of fact, the Chongqing city had a contiguous built-up area of 158 km² and an official urban population of 2.42 million at the time, whereas the Shanghai city had 300 km² and about 7.0 million respectively. This discloses that there is an ambiguity in the definitions of „municipality“ and „city“ in the PRC.

As a city and a state, each of German city-states has one identical geographical boundary and is small in territorial surface: Berlin (889 km², 3.5 million residents), Hamburg (760 km²) and Bremen (404 km²). In comparison, the Chinese province-level municipality each is a rather big region and a city, with double geographical indications. Meanwhile, its functional city area is quite small in relation to the whole region. Obviously, Chinese province-level municipalities are a mixture, similar to normal German states in terms of territorial surface, but resembling German city-states in terms of city-oriented institutional setup.

In addition, each of those German city-states possesses a unified leadership over its whole territory. It is reported that there is one unified local authority empowered to lead the entire community of Berlin, which was finally formed in 1920 when 8 towns, 59 rural communities and 27 estates were consolidated into one leadership. In contrast, each of those Chinese “municipalities” has a three-layer governmental system for its extra-large city (e.g. 395 km², the Beijing city, the biggest in China, less than half of the Berlin’s surface) and the rest of its „municipal“ region (cf. fig. 6 and table 7).

The province-level municipality can be viewed as a prefecture-level municipality which is put under the direct leadership of the national government. Their territorial administrative division and governmental structure are identical. In this paper, discussions and suggestions concerning prefecture-level municipalities basically apply to province-level municipalities of Beijing, Shanghai and Tianjin. As of Chongqing, taken into consideration its size of a conventional province, special measures are needed. For instance, a definition of several sub-regions in the whole Chongqing “municipality” for planning activities is necessary. Hence, province-level municipalities are not to be addressed additionally.

2.2.3 The Prefecture and the Prefecture-level Municipality

This paper focuses on this level and the other two lower layers of territorial administration and spatial planning.

Out of 331 entities of this level, 236 are officially called the prefecture-level municipalities (dijishi) in 1999. Those municipalities have legislative right of
setting up prefectural regulations. Most of them are formed since 1983. They are set up aiming to take advantage of central cities in the prefectural regions to bring about economic development in their hinterland.

A prefecture-level municipality also covers a fairly large region. For example, the Kunming Prefecture-level Municipality governs five administrative districts (qu), one county-level municipality and eight counties, amounting in total to 21,600 km² and 4.55 million officially registered dwellers (See also fig. 8). By contrast, the Kunming city, an extra-large city in China and the main city in the Prefecture is only 132 km² in its contiguous built-up surface with an official city population of 1.5 million in 1998.20

The composition of a prefecture-level municipality is fundamentally the same as that of a province-level one. Similarly, a prefecture-level municipal government is commonly regarded as a "city" government. This government is not only a government for the whole prefecture as a region, but also a government mainly for the capital city in the whole prefecture—Thus the One Government, Two Roles phenomenon takes place.

Notwithstanding, counties and county-level municipalities within the existing territorial administrative system are said to be under the direct leadership of the provincial government. However, the provincial government can’t manage to do that since most provinces are still too big. Thus a prefecture-level municipal government is entitled to play certain roles on behalf of the provincial government. It is in a unique position of incomplete authorization. On one side it is responsible for the whole prefectural corporation. On the other side it can’t be fully in charge of that entity. This is why the next territorial layer—the county—has a greater role to play, an important point to understand the current Chinese territorial administrative and planning system.

Other sorts of entities at this level are slightly different from the above-mentioned, but possess common features in terms of territorial administration and spatial planning. Thus no additional discussion about them is to be given in this paper. What is suggested for prefecture-level municipalities generally applies to them.

In western countries, a municipality is so far mostly linked with a town, a city or local community.21 The concept of a “municipality” for China was imported from the west. According to the Article 3 of the PRC City Planning Law, "cities (chengshi) are meant to be those designated municipalities which are established according to the state civil administrative system". In the sense, a

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21. According to Longman Dictionary of Contemporary English (Version 1995), a municipality is "a town, city, or other small area, which has its own government that makes decisions about local affairs", or "the government of a town, city etc., which makes decisions about local affairs". In the USA, a municipality is a city, town, township, borough, special school district etc., one level lower than a county, by reference to http://www.county.allegheny.pa.us/economic/munis/index.asp.
city in the PRC contains all the areas under the jurisdiction of a designated municipality (shi). Apparently, it is rather indiscreet to say that a whole province-level or prefecture-level municipality is a "city." According to this definition, a physical and functional city becomes mixed up with a big region in China.

The specification of a typical prefecture-level municipality

According to available 1990 statistical figures on 167 prefecture-level municipalities, their territory surfaces range as the following:

- 1,500-2,000 km$^2$: 4 out of 167
- 2,000-3,000 km$^2$: 11 out of 167
- 3,000-20,000 km$^2$: 139 out of 167
- 20,000-25,000 km$^2$: 6 out of 167
- 25,000-30,000 km$^2$: 4 out of 167
- more than 30,000 km$^2$: 3 out of 167

Thus 3,000-20,000 km$^2$ is taken in this paper as a specification of typical prefectural entities. As a matter of fact, this extent is reported to be close to western metropolitan areas ranging between 2,000 km$^2$ and 20,000 km$^2$.  

A simplified evolution history of Kunming municipality

The Kunming Municipality (shi) was much smaller in 1952 than currently (see fig. 9 on the left). Its spatial or geographical extent was approximate to the range of urbanized area at that time, slightly larger than the Kunming old town (8 km$^2$ or so). There was a Kunming County (xian) which surrounded the municipality. This outlying county disappeared in 1953 when it was incorporated as components of the Kunming Municipality (2,089 km$^2$). Most part of the county was restructured to form two administrative districts (qu) (see fig. 9 in the middle). Since then, many counties were made as parts of the Kunming Municipality. In the process, Kunming's "municipal" jurisdiction territory kept on expanding from 8 km$^2$ to 2,089 km$^2$, 3,402 km$^2$, 6,465 km$^2$, 15,561 km$^2$, finally reaching 21,600 km$^2$ in 1998 when the Kunming Prefecture-level Municipality was formed as seen in the fig. 8. Accompanying those changes, the gap in space between a municipality (shi) and a city (chengshi) was turning bigger and bigger.

Urban qu, suburban qu and the loss of city as a community

A central city is meant in this paper to be a main and usually largest settlement in a prefecture-level municipality. The map in fig. 9 on the right shows that the Kunming city (132 km$^2$) covers two urban qu wholly and only a small portion of two suburban qu (involving 9 communes). So far, the majority of city residents live and work in town or in the near suburban area. It's quite rare to see any

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daily commuters in the metropolitan area. City functions are all located within the contiguous built-up area.

In view of the qu division, this functional city is divided among the four qu (c.f. fig. 9 in the middle and on the right). A qu has one people's government of full authorization in a same status as that of a county, and has its own tax, financial income and annual budget. The existence of four qu potentially cuts the Kunming city into four pieces, and each qu can be only in charge of a part of the city. Only the prefecture-level municipal government or authorities are in a position to take care of it as a whole. Due to this unique qu structure, there is no presence of a city community as the core for a metropolis in China, but observed in western countries. Though one can see a Chinese city as a substance, a city community becomes something lost in the complicated Chinese territorial administrative system.

Subsequently, the prefectural regional government is also authorized to play a role as the city government at the same time, resulting in the One Government, Two Roles phenomenon.

Secondly, the loss of the city community exerts statistical difficulties. Who within which boundary are counted as city residents? Which roads are counted as „city“ streets or roads? The Chinese statistical figures with regard to city population, roads, GNP or GDP and so on are thus different from what is meant in the western context. For example, those non-agricultural inhabitants living in the four qu’s jurisdiction areas (2,098 km²) are statistically counted as the Kunming city’s residents, while those farmers who live just beside the second ring roads of the city are not included. Therefore, when one asks how big the Kunming city is, one would be told that the city of Kunming has a built-up area of 138 km² at the end of the year 1998.
Furthermore, this loss has influenced the formation of the current town/village planning approach, which has to define a so-called „town planning“ area for a town master plan or village master plan. Since long a master plan for a city in a western country physically covers the entire community, and its zoning ordinance has the whole territorial surface zoned. This is not the case in China. To make a plan for any city, town or village, planners have to figure out a master planning area or town planning area, which extends at each time of the elaboration of town master plans.

Managing the central city in the prefecture-level municipality

Managing a central city in a prefecture-level municipality is usually entangled with three levels of governments and its delegate authorities (see fig. 10). The prefecture-level municipal government and the qu government are both substantial, that is, „powerful“ city managers. Comparatively, the lowest layer is less influential, including communal or township governments in the suburban qu and street neighborhood offices (jiedaobanshichu)24.

Fig. 10. The central city and its relevant governmental layers in a prefecture-level municipality

Functional overlapping and ineffectiveness due to contradictions between them are inevitably severe, which compromise city development. It is harder to coordinate varied relevant plans and development concepts in such a three-layer structure. The most difficult issue is whether planning power is to be delegated from the prefecture-level to the qu. If that is done, a functional city is indeed cut into pieces in view of spatial planning. In spite of no delegation, the qu authorities actually can still play a role in a public or secret way, a problem

24.The street neighborhood office (jiedaobanshichu) is a kind of corporation which has some executive functions but is not authorized to set up a people’s government in a group of street blocks in the urban qu. It exists only in bigger cities and has nothing to do with planning duty.
for which there is no solution within the existing framework. Once there is a certain degree of power delegation, a chaotic situation in city development appears at once. Then that brings an end to the delegation. Some time later, another cycle of delegating and taking back delegated power will start up again.

In fact, no matter whether there is a planning power delegation, suburban qu governments are officially entitled to make planning and carry out plans and construction programs presumably in the qu’s rural areas, excluding the central city’s town planning area under the direct care of prefecture-level. Then comes another difficult issue—where to draw a line of control in view of a constant change of built-up areas and a large area which remains “rural” but is defined as the town planning area?

To sum up, a unified leadership over a functional city within this multi-layer structure is out of the question. Duties and responsibilities between different layers of authorities can't be clearly tailored.

With no exception, even a smaller central city in a prefecture-level municipality similarly concerns with a three-layer of structure as well (see fig. 11). Identical problems abound, though in a smaller scale.

City management under urban-rural segregation

An administrative system of separated urban and rural management is instituted (see fig. 12), true to all big or small central cities in the prefecture-level municipalities as well as those in the counties.

The prefecture-level municipal government and specialized authorities are mainly responsible for the city and things of urban nature. The suburban qu government or its functional authorities are assumed to directly deal with any thing of rural nature-agriculture, villages, small towns and farmers. Like this, as
one lower layer, they are forced to be more mindful of interests of villagers in the qu jurisdiction boundary, especially for those living around the city fringe and those in „villages in town”. When city growth takes up all cropland of a village, it’s those qu governments that bear the final responsibility to find solutions for problems facing the farmers who lack proper vocational training for other jobs. In the course of time, problems related with former farmers can not be solved, if without a presence and contribution of the qu governments and authorities.

Moreover, what is good to city functions may not be welcomed by villagers and the qu government. For instance, the Kunming Prefecture-level Municipal Government has decided to reserve a green space of 50-100 meters along the city’s second southern ring road, which is meanwhile a section of national expressway (for through traffic only and no access to neighboring land lots), and has formally released a city plan in this regard. But the qu governments had a totally different idea. They supported unnoticeably all kinds of enterprises and trade companies to set up wholesale and retail markets along the expressway. This increases greatly annual tax revenues to qu governments and job chances for former farmers. Today, that national expressway of about 20 kilometers has become a city street with commercial prosperity all along it.

The prefecture-level “municipal” government’s role as a regional government is positive in promoting regional economic development by taking advantage of the central city as the development locomotive. However, One Government, Two Roles brings about a sacrifice of its function as regional coordinator.  

Fig. 12. Separated Urban and Rural Management (cf. fig. 10 and fig. 11)

Usually the city is valued more than the rest area, and most of its attention and finance are put on the main city, often at the expense of the rest part of the prefectural region. Some reports show that agricultural economy is affected and a slow-down is common since the 1980s. Some counties with economic strength are not willing to be subordinate to such a prefecture-level "municipal" government and are not happy to see their own resources taken for use in the main city. They lobby to get promoted to the same prefectural level.

In addition, the three-layer city organizational structure leads to severe functional overlapping and low efficiency. The existence of potential division of one functional city into pieces. The loss of the city community intensifies statistical and spatial planning difficulties. The city management of urban-rural segregation leads to social disruption in a de facto "community". The existing administrative structure mixes up a region and a city, trades off city functions, and is unfavorable for efficient management of the central city.

2.2.4 The County and the County-level Municipality

The county has been a basic administrative layer in China for more than two thousand years since horses, donkeys and oxen were main transportation means. "As a unit of administration, it was a product of agricultural society. With a small town as the administrative center for an area of hundreds of square kilometers and tens of thousands of inhabitants, the county (government) was in charge of calling up military service and labor force, collecting taxes, hearing cases, management, education, organizing and coordinating social lives in a small-scale peasant economy." Up to now, a county is mostly agriculturally based.

A county is a rather big region which comprises several communes and/or townships (see fig. 13). A county’s jurisdiction surface ranges from 460 km² to 4,300 km² among 8 counties and one county-level municipality in the Kunming Prefecture, averagely 2,050 km².

A county’s responsibilities and duties are basically identical to those of a province. But counties have no legislative right. They work according to the frame set up by laws and regulations of upper levels. In principal, the county has all corresponding similar institutions in parallel with its upper levels. In the PRC, the county and the province are so far the most significant and powerful "local" governmental layers.

Till today, "counties in the PRC are still basic spatial units of economic and executive system, possess nature of relative independence and entirety, and each of them is an unity of three elements-economic, social and physical construction." It is widely seen in Chinese planning literature that a county, instead of a commune, is taken as one basic spatial unit. And it can be observed commonly in all kinds of official documents, laws and regulations, and

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2. Analysis of the Current Planning System in the PRC

literatures that county governments are regarded and treated as basic local ruling institutions in China. This is different from an internationally common custom which takes communes or Gemeinden as local communities and basic territorial administrative units.

Under this Chinese structure, in particular during the time of orthodox planned economy, a whole county is taken as one local corporation and bound by both economic programs and administrative relationship. Outlying part of the county is kept as the production base for agricultural and dairy food, while the central part, usually a small city or town, as the industrial base. Now that China is in a transition to a market-oriented economy, some experts appeal that the aforementioned organizational structure “ought not to be kept and used any longer”.

As a traditionally strong executive layer, the county government directly runs the city or town of county seat. Constitutionally, it is regulated to be mainly responsible for organizing agricultural production in the whole county region and advocating development of other sectors. However, the small city or town draws its attention. In the meanwhile, this town or city has its own township government(s) depending on its size. Thus, a two-layer governmental structure is formed (see fig. 14). As seen in the relationship between the prefectural government and the central city in a prefecture-level entity, One Government, Two Roles takes place again for the third time and there is severe overlapping between functions of the county and the communal layers.

Designation of the county-level municipality

When becoming more urbanized and meeting certain standards, counties can be designated as municipalities (county-level). Today, 437 out of 2,126 counties have been designated. However, after designation, a county-level municipality has fundamentally identical duties and responsibilities as a county. Such a change of the title for a territorial unit is said to aim at promoting urbanization. This way of designation has become dominant since 1983. Earlier, it’s more popular to designate a township as a municipality.

Problems regarding the county’s roles as the basic unit of administration

1. It is improper to run a county region either as one “city” i.e. “municipality”, or as one big countryside. At present a city in a county is usually small. The average built-up surface of those small cities is 17 km². The biggest of them can not be larger than 33 km², the average built-up area of Chinese medium-sized cities (cf. fig. 3). However, a small city or a county town (averagely 6 km²) as the center in a whole county needs to be differentiated from the other county region and put under specialized administration. Within the existing system, counties are maintained and consolidated as the lowest layer of powerful territorial administration. So it seems to be a better choice that a whole county is designated as a municipality. As a matter of fact, this might be right for a metropolis or a big city, but not for a dominantly rural region with a small urbanized core. Since “municipality” was imported from the western countries, how to place properly a municipality in the traditional Chinese territorial framework is still a problem up to now.

To adapt to specialization in the 1st sector, development of industries or a service center and other functions in different parts of the county, there is a need to divide a county region into pieces according to their different potentials and strong points. Some experts suggest to set up several county-level entities in one existing county. This is going in a right direction, but is still fettered by the county tradition, keeping on ignoring existing communes as local communities.

31. This first sort of designation standards are as following: 1) A county, in which there are less than 500,000 inhabitants, and there is more than 100,000 non-agricultural population in the township of the county seat, and meanwhile the agricultural population in this township must not be more than 40% of the total inhabitants there, and the annual Gross National Production (GNP) of the county must exceed 300 million Yuan; 2) A county, in which the total population is more than 500,000, and there is more than 120,000 non-agricultural population in the township of the county seat, and whose annual GNP must exceed 400 million Yuan.


33. This second sort of designation standards are as following: 1) A township, which has become the economic center for the area, in which there are more than 60,000 non-agricultural residents, and whose GNP exceeds 200 million Yuan; 2) A township, which is important in its location at the state borders, in the regions of minority nationalities as well as at famous scenery spots, or with industrial or scientific research bases, and which has less than 60,000 non-agricultural population and lower than 200 million annual GNP; 3) Or a township, which is the seat of a prefectural government, when really demanded, despite that it can not meet any of the above-mentioned criteria.

2. The county government’s role as the power center in the county region is helpful to town development of county seat, but at the expense of other communes which are not chosen as the county seat. Those can be seen clearly in a case-study about the Wuxi-Xishan relation. Nonetheless, its function in this way has its limit in an age of market-oriented economy, that is, administrative orders are not so effective to the communal governments as in the old days.

The Wuxi Municipality is a central city which has 71 km$^2$ of built-up areas in an entire region of 1,632 km$^2$ (see fig. 15). A new county town (in red color), 4 km away from the Wuxi city, is planned by the outlying Xishan Municipality and built up as its center, but not as a satellite town for the existing Wuxi city. To create “prosperity” in the new town, the Xishan Municipal Government has moved all officials and workers of its authorities out of the original places in the Wuxi city, to work and live in the new town. The TVEs are also ordered to move in from Xishan’s other communes and townships. But widespread response is cold. Apart from rural residents of local commune, no residents from other communes would like to re-settle here in the new town.

3. The presence of a strong county layer reinforces its contradictions with the prefecture-level municipal governmental layer and cuts off the prefecture-level’s regional function. In fact, quite some municipalities were established by taking out a part of a former county (some communes or townships around a town), such as the Wuxi Municipality (county-level). Afterwards, the remaining outlying county or municipality as one political entity must seek for its own way-out. Thus, the antagonistic relation between those two parties appears. When the prefecture-level municipal government is derived directly from the former municipality in the center, this negative relationship keeps on impeding the establishment of a normal working mechanism between the outlying municipality and prefecture-level municipality. This is nowadays a headache for both regional and the central city’s development.

4. A strong county layer also worsens its contradictions with the communal layer due to overlapping functions and duties, and most often reduces its competitors to silence. While not active to intervene other townships and communes, the county government keeps a tight control over local town planning, development and construction of the capital town in the county. A township government mostly chooses to obey, but sometimes may rise against certain intervenes. For instance, it is reported that the Tongzhou Municipality (county-level) decided in 1997 to make an regulatory plan for the planning area around the Jingsha town, but Jingsha Township Government blocked the work for the sake of defending its own interests.

5. Financial resources at the county level are mostly consumed by its too many employees, not for general development in the county region. Around the country,
more than half of county-level budgets are reported to be in deficit, just adequate to pay governmental workers (averagely 5,000 employees for county-level authorities and institutions\(^{37}\)). The worst case has gone so far that 80–90\% of the budget is used for salary payment.\(^{38}\) The poorest county in Kunming had only 6.8 million US dollars for a yearly budget.\(^{39}\) Consequently, after the county-level financial budget spends most of its money for operations of county institutions, it has only limited ability to pay for infrastructure around the whole county. Thus the county government is normally forced to focus on the town of county seat and neglect development of other settlements.

### 2.2.5 The Commune and the Township

Before 1949, there was no instituted communal layer of government in China. There were only some loosely organized people acting as agents between the county government and ordinary people whom the county government ruled. Today, the commune is defined according to the PRC Constitution\(^{40}\) as the smallest unit of community in which there is a people’s government and a people’s congress. This is a historical progress in the long-standing Chinese history. (See fig. 16)

The communes are not entrusted with the right of making local regulations. Main tasks of communes are to carry out laws, regulations, resolutions, decrees, directions and orders of higher levels. As usually described, communal governments are to “collect grain, collect money (i.e. all kinds of taxes and fees), and dispatch farmers to do this or that as official tasks (but usually unpaid or counted as part of tax)”\(^{41}\). What communal authorities plan to do in general needs to obtain approval from its upper level—the county. Therefore, there is no communal “home rule” in the PRC.

People in a Chinese commune is numerous enough and its land surface is also large. A commune each varies between 10 km\(^2\) to 250 km\(^2\) with an average population of 30,000. The communes which are located near the cities or in the eastern coastal China are usually smaller in surface but dense in population. Without counting 27\% of the PRC’s territory surface which is deserts, sandificated and barren land etc., the average surface of Chinese communes is

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37. Guo, Wei. Oct. 26, 1998. No. 43. Quicken Institutional Reform at the County and Communal Level, Relieve Burdens upon Peasants from the very Sources. Outlook Weekly, China. 18-19. A 1998 survey shows that the total number of workers for county-level governmental authorities and subordinate institutions in 2,126 counties was roughly 11 million, averaging 5,000 employees for each county.


still 58 km². As of Yunnan Province, the average surface of its 1,563 communes is 252 km² and its average communal population is 26,000 persons or so. The average figures regarding 143 communes in Kunming Prefecture-level Municipality are about 150 km² and 32,000 inhabitants respectively. (See also fig. 17)

The total number of communes in the PRC is not too much by contrast with western countries. Although the PRC is 27 times that of Germany in territory, the number of Chinese communes totals 44,501, only 3 times that of their German counterparts. Thus the average size of those Chinese communities is larger than that in western European counties, too. According to German statistics, the number of local communities in Germany amounts to 14,300 (including 116 cities). Averagely, a German commune has a population of 5,730 and is 25 km² in territorial surface. In Switzerland, the Canton of Zurich is 1728.71 km², and has 1.184 million inhabitants in 171 local communes. A Zurcher commune averagely has 10.1 km² and 6,920 inhabitants.

Fig. 17. A commune and settlements

Designation of township

When it is developed less agriculturally based and meets certain standards, a commune can be renamed as a township. As a matter of fact, many townships have been designated even though their non-agricultural population is less than required. In the paper that follows, the word “commune” is used to stand for both existing communes and townships except where there is an emphasis on the township.

Problems concerning the communal government

1. The communal government in reality does not really function as one hierarchy of government. Although being established as the lowest of five level governments, it has no appropriate delegation of political power, no considerable number of personnel of good qualification. Constitutionally, there is even no a communal level of financial budget. Communes are completely a creature of the county level authorization, short of any necessary resources.

2. Ignorance of proper communal governance denys possible build-up of necessary civil service. The official regulation allows only employment of 15-45 personnel for a communal government and its institutions. In reality more are demanded.

43. At present, following standards apply: 1) A commune where the county seat is located; 2) A commune whose total population is less than 20,000, but there is more than 2,000 non-agricultural population at the settlement of communal governmental seat; 3) Or a commune, whose total population is more than 20,000, and the non-agricultural population at the settlement of communal governmental seat exceeds 10% of the total population in the commune.
45. Indirectly financial budgets are regulated in the People’s Republic of China Constitution. The Article 99 says that „a people’s congress of the county level or higher levels is to examine and approve its level of...budget and its execution...”. The Article 107 says that „a people’s government of the county level or higher levels is to administer... public finance... in this level of jurisdiction territory...;” Nothing is stated with regard to communal financial or budgetary aspects. The People’s Republic of China Constitution. Version 2, March 1999. Printed in July 2000. The Laws’ Publishing House. Beijing. 33, 35.
and thus “illegally” employed. Officially unjustifiable, most people with good education and training can’t consider a job at the communal institutions as a lasting and reliable one. They would rather seek other chances unless they have no other choices. Like this, lack of highly qualified personnel is inevitable.

3. Communal citizens’ acceptance toward communal governments is decreasing. On one hand, the communal governments fall as money-taking machines on behalf of upper levels. Annually an astronomical number of taxes is collected from communes for use by upper levels of budgets. On the other hand, there is no official communal revenue based on formal taxations. The existing taxation and financial system makes the county as the lowest "independent" unit with its own budget. The communal government obtains only operation fees from the county government according to the number of its workers, or occasionally some tax income is given back from the county government. Thus the commune has very limited financial ability for local community’s infrastructure. So farmers do not benefit much from governmental budgets. In addition to normal taxation, it is the farmers themselves that regularly pay for their basic public facilities, including schools, roads in villages and country highways. In villagers’ eyes, it’s better not to have such a layer of government.

4. The appeal to do away with communal level of governmental institutions is showing up frequently in China. Owing to the aforementioned reasons, bad performance of communal governments is nothing unusual. Besides, situations worsen because of widespread low qualification of communal personnel. Another report says that some communal and township political powers are no longer capable of playing the roles they should, and warns if there would be more such cases, stability, development and general situation (of the country)

46. Guo, Wei. Oct. 26, 1998. Quicken Institutional Reform at the County and Communal Level, Relieve Burdens upon Peasants from the very Sources. No. 43, Outlook Weekly, China. 18-19. Based upon a 1998 survey, the actual government workers for each commune was averagely 100 personnel, excluding teachers. Thus the total number of workers on the communal level doubled that officially allowed (2 million), reaching 4.5 million. In addition, according to the No. 15 issue of Outlook Weekly, China, 2001, averagely each commune pays for 448 workers of all kinds for the communal governmental institutions, the highest reaching 1,117 persons, in Central China’s Henan Province.

47. As a matter of fact, once one manages to be employed by the county-level institutions, it’s more comfortable to live nicely in all those well-furnished towns of county seat, a kind of small “Beijing” cities in counties.


50. Zheng, Fengtian. December 1997. The Agriculture, the Countryside and the Peasants. Chongqing Publishing House. Chongqing, China. 184-191. The governmental workers at the communal level lack least education and sense to follow laws and regulations in their daily routine. For example, communal officials collectively beat peasants to death; they gave no consideration to life or death of villagers; they took advantage of their powers to bully countrymen; they concocted various pretexts so as to gather money from farmers outside normal taxation; and they even worked only ten days in half a year, leaving the yard of a communal government to be used by peasants as a pigsty.
would be affected. The prevalent problems on the communal level make many Chinese people think that it is not necessary to set up those institutions. To abolish the communal government and authorities is often recommended for consideration to high-ranking decision-makers. Commonly, those people believe, if ancient China did go without them, modern China can do the same.

2.3 Spatial Planning under the Current Legal Framework of Planning

2.3.1 The Current Planning Framework

The national legislative body is the National People’s Congress (NPC). The highest executive setup is called the State Council (SC), or the Central Government (the cabinet in the western context). The NPC issues laws that are binding all over the country (entitled “The PRC Law on...”). The State Council enacts nationally compulsory regulations as well (named “The PRC Regulation on...”). Approved by the State Council, ministries, state commissions or state administrations are also eligible to make and enforce countrywide obligatory departmental regulations and technical norms.

When there is a national law, correspondingly a detailed regulation or implementation approaches is assumed to be enacted by the State Council or by a relevant commission or ministry. Meanwhile, the NPC endorses the Provincial People’s Congress to make a provincial by-law, which is adapted in certain degree to provincial conditions and is compulsory for an individual province only. However, even if there is no national implementation regulation or a provincial by-law, authorities in each relevant field across the country can still work directly according to the national law itself. For example, so far there is no detailed implementation regulation of the PRC City Planning Law.

In addition, municipalities of the provincial government seat, and municipalities exclusively endorsed by the NPC, are also eligible to make and enact administrative regulations, effective only in the specific municipality. Nonetheless, those so-called “local” regulations are mostly repeating national laws or regulations. Sometimes they add some more detailed stipulations or procedures based upon the existing laws or by-laws of higher levels, adapting somehow national laws, regulations or technical norms to “local” social-economic or natural (e.g. climate or geographical) conditions. Conventional prefectures, counties, communes and townships have no legislative right. Thus, so-called „local“ regulations are not addressed additionally in this paper.

52. The municipality here mentioned is at least a municipality at the prefecture level.
Above all, the working framework with regard to planning for each level has been defined fundamentally on the national level. Thus, a unitary planning system is to be observed around the country.

Besides, the currently valid framework was formed in the 1980s, possessing a basic structure designed for planning in an age of planned economy, though some laws and regulations were finalized in the 1990s. Heavy economic and social development pressures upon space and natural resources have been felt. To combat a specific issue or common problems throughout the country, one law or regulation has been created at a time with its own goals and objectives. Like this, the current legal framework for planning has been formed with advent of subjects (see fig. 18). Their main articles closely linked with planning have been translated into English and attached in Chapter 7. Appendix. So far in the PRC, there is no so-called spatial planning law or regulation, or perhaps functioning more or less in the sense of comprehensive spatial planning.

The PRC has a unitary administrative system. In accordance with above-mentioned legal subjects, specialized authorities are established to take the corresponding duty and responsibility. Not only national ministries, commissions and agencies, but also their lower levels of counterparts have their own executive organs and research or design institutions. Following are relevant in terms of spatial organization and development:

- Development Research Center (DRC), a direct research institute of the SC, is in charge of advising general development policies and strategies.
- National Environmental Protection Administration (NEPA) is for general environmental protection planning and environmental management.
- State Development Planning Commission (SDPC) is in charge of development programs and examination and approval of construction projects (e.g. airports, expressways, railways, affordable housing, factories and plants), evolved from old-day Commission of Planned Economy. The SDPC has its research institutes on macro-economy, comprehensive transportation, territory development and regional economy, energy etc.
- Ministry of Construction (MoC) is mainly engaged with planning and management of rural and urban settlements, not in a position to be responsible for all-round spatial planning, but so far is the only one that is formulating spatial plans. The MoC also has its own subordinate research institutes-China Academy of Urban Planning and Design, and Research Institute of Urban Construction.
- Ministry of Land and Resources (MoLR) is in charge of not only cadastral administration, but also general land utilization planning, which differs from that as seen in the western planning systems. It has its subordinate research institute as well.

Others sector ministries: Ministry of Agriculture (MoA), State Forest Administration (SFA), Ministry of Communications (in charge of highways and expressway planning, construction and management), Ministry of Railway (MoR, directly in charge of railway authorities all over the country), Ministry of Information Industry (telecommunication), State Electricity Bureau and so on.
### 2. Analysis of the Current Planning System in the PRC

#### Fig. 18. The Existing Framework of Laws and Regulations of Spatial Planning Relevance (Excluding Sectoral Planning of Infrastructure)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Name of Law or Regulation</th>
<th>Authority of Issue</th>
<th>Date of Issue or Latest Amendment</th>
<th>Current Responsible Authority</th>
<th>Supplementary By-laws or Other Relevant Laws or Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic &amp; Social Development</td>
<td>The Elaboration Approach of Territory Planning</td>
<td>State Planning Commission</td>
<td>1987</td>
<td>State Development Planning Commission or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Territorial Planning</td>
<td>The PRC City Planning Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>December 26, 1989</td>
<td>Ministry of Construction or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Water &amp; Soil Erosion</td>
<td>The PRC Water Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>January 21, 1988</td>
<td>Ministry of Water Conservation or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Environmental Protection</td>
<td>The PRC Environmental Protection Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>December 26, 1989</td>
<td>National Environmental Protection Administration or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Cropland Protection</td>
<td>The PRC Land Management Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>August 29, 1998</td>
<td>Ministry of Land &amp; Resources or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Forest or Woods</td>
<td>The PRC Regulation on Essential Cropland Protection</td>
<td>The State Council</td>
<td>December 27, 1998</td>
<td>Ministry of Agriculture or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Natural Conservation Zones</td>
<td>The PRC Regulation on Natural Conservation Zones</td>
<td>The State Council</td>
<td>June 1, 1994</td>
<td>Ministry of Agriculture, National Animal Husbandry Administration, or its lower levels of counterparts.</td>
<td></td>
</tr>
<tr>
<td>Grassland</td>
<td>The PRC Forest Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>April 29, 1998</td>
<td>National Forestry Administration, or its lower levels of counterparts</td>
<td></td>
</tr>
<tr>
<td>Land Utilization Master Plan, Land Management</td>
<td>The PRC Grassland Law</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>June 28, 1985</td>
<td>Ministry of Agriculture, National Animal Husbandry Administration of Forestry, of Ocean etc.</td>
<td></td>
</tr>
<tr>
<td>Environmental Protection</td>
<td>The PRC Soil Erosion Prevention &amp; Treatment</td>
<td>The Standing Committee of the PRC National People’s Congress</td>
<td>January 21, 1988</td>
<td>Ministry of Water Conservation or its lower levels of counterparts</td>
<td></td>
</tr>
</tbody>
</table>

The PRC Water Law, the PRC Wild Animal Protection Law (issued on December 1, 1994) and the PRC Wild Plant Protection Regulation (issued on September 30, 1996).
Planning instruments under the current legal framework

Planning instruments shown in fig. 19 are employed according to the present legal obligations in the PRC.

First, there is a lack of horizontal planning coordination. Those instruments are devised on the basis of relevant subjects, and each of them has its own responsible authorities from the national level down to, mostly, the county level. Thus, they are vertically divided among different specialized functional institutions. Each sort of authorities mind their own business and are prudent not to step over other’s fields of duty and power. In contrast, planning coordination is quite strong within its linear of specialized institutions between upper and lower levels. Some experts call this „a dictatorship by each specialized functional authorities“.

Second, there is an obvious shortage of compulsory planning at the communal level. This is naturally a result from a so far valid concept in territorial administration in China--counties are treated as basic units for rule, not communes. Only minimum planning is performed concerning rural settlements and farmland conservation at the level.
Third, among those planning instruments, city planning (including urban system planning), village planning (including village system planning), territory planning and overall land utilization planning are identified as main spatial planning instruments.53

Fourth, there is no planning instrument which has a nature of comprehensive function in view of spatial development and spatial organization, and no corresponding institution which is taking care of general coordination.

Development planning commissions54 are fully in charge of social-economic aspects, including long-term (ten years or longer) or short-term (annual or five-year) development programs and territory plans from the national level down to the county level. Those programs and territory plans are the most important basis for an elaboration of other plans, which are devised as tools to materialize those items mentioned by those programs and territory plans.

Territory planning is in fact an instrument for centralized economic planning, because it concerns mainly with exploitation of resources and economic relationships between different territorial units. It is so far regarded as regional planning in the PRC's context. Thus, development planning commissions are also responsible for regional planning. Unfortunately, their territory planning approach of a centralized economic planning nature turns obsolete today. When officially approved, territory plans become social-economic programs.

A program permit is the most important precondition for any investment or construction scheme in a whole management procedure. (See fig. 20, fig. 27 and fig. 28). Any public or private project, including foreign investment, has to be first accepted and approved by a development planning commission. Then, the doors for next steps would be opened. After this, one investor may get to know from city planning bureaus where the site for his project is, and may start to apply for the right to use a certain piece of land.

Viewed from this perspective, the current planning system depends very much on case-by-case management of each single construction project. According to how much an investment is, the national level or the lowest county level of

53. Sun, Shiwen. July 1999. Collection of City Planning Laws and Regulations as Reading Materials (2nd Edition). Tongji University Publishing House. Shanghai. 19. This excerpt is from the Section 12, Auxiliary Explanation of the PRC City Planning Law, which was released when the PRC City Planning Law was made known to the public on Dec. 26, 1989. “...Territory planning, regional planning and city master planning form a complete planning sequence. The former two should be the significant basis for city master planning. And sector plans, such as river catchment plans for the whole country and a region, (overall) land use plans, are important components of territory planning and regional planning. City land use planning is a significant part of city master planning...In our country, the work in the fields of territory planning, regional planning as well as planning for river catchments and land use planning for a region started rather late,...there are no lawful procedures and results which have been examined and approved or produced...”

54. The name of the commission, though, contains a word “planning” in English, its corresponding Chinese word is jihua, not guihua. The planned economy is jihua jinji in Chinese, while spatial planning is kongjian guihua.
development planning commissions are eligible to grant a program permit to a manufacturing production, commercial or residential construction scheme (a factory, plant, shopping center, office building, apartment building etc.) or an infrastructure construction scheme (airport, port, railway, highway, road). As of infrastructure, there is usually some prior or simultaneous planning preparation.

Sector planning

Sector planning with regard to aviation, highway/expressway, railway, electricity supply, and telecommunication is more or less identical to that in the western context. A relevant question is how to enhance coordination between sector planning and main spatial planning instruments on different levels-policy coordination at higher levels and coordination of spatial influences at lower levels.

A rather big difference lies in the following points. Within city planning itself, there are sector plans concerning green space, old town, city traffic, supplies and disposal facilities for cities, city flood prevention, but confined for a designated own planning area only. Yet, city planning does not plan for overall traffic system covering a whole administrative territory, but mainly urban traffic (e.g. city roads and their connection to other highways or expressways). Road traffic planning for the area outside city planning areas or town & village planning areas is a separate duty for highway authorities. Therefore, traffic planning for a prefecture, a county or a commune is torn into pieces.

Special sector plans concerning cultivated land conservation are also figured out together with general land utilization plans by land administrations, in cooperation with agricultural authorities.

Environmental planning problems in a fragmented planning system

Existing legal framework has predetermines such a fragmented environmental planning (c.f. fig. 18 and fig. 19). Though entrusted with overall environmental protection duties, environmental protection institutions draw up so-called
environmental protection plans mainly against air, water, acoustic pollution and solid waste from industries and urban life. Collection, transport, treatment and disposal of urban solid waste is assigned as a duty for sanitation authorities. Against ecological problems such as desertification and soil erosion, special territory plans are also elaborated by development planning commissions. However, water conservancy authorities are compulsory of working out plans for river catchments regarding water resources (including groundwater) and soil erosion. Forestry administrations are responsible for natural protection zones, while husbandry authorities for grassland conservation, and so on.

Methodologically, city and rural planning process does not take into account the ecology and environment in a whole territorial administrative unit. City plans, town plans or village plans are only involved with land uses in the designated planning areas and their geometrical visual effects. Ecological aspects, such as water, air, and those which are outside the planning areas, are basically neglected. Instead, drainage and sewage planning is regarded simply as replacements for environmental planning. In addition, specifically-made environmental protection plans are usually not closely linked with or are even completely divorced from the city or rural plans. At last but not least, a common city planning and rural planning process itself does not have a step to assess environmental impact. For example, there is no corresponding environmental impact assessment on the use of natural resources, such as land and rivers, or on new takings of „building zones”.

Spatial planning instruments

The spatial planning system in the PRC is mechanically subdivided into four major components: (1) territory planning, (2) city or town planning, (3) general land utilization planning, and (4) rural planning. Among all plans of an equal level, territory plans are assumed to be of the supreme class and guide the making of other plans.

1. Territory planning is in nature centralized economic planning, which considers and affects spatial development from an economic angle. Meanwhile, it is in a place as regional planning in the PRC.

A means to control allocation of natural and economic resources and a forgotten corner

Territory planning is an instrument in a planned economy for governments from top, the national level, down to the county level to allocate capitals and resources in space according to economic and social development programs. In nature, territory plans belong to economic planning for a socialist planned economy. Within this system, it is quite obvious that the communal level is not taken into consideration for receiving resources—a corner that is forgotten is thus given birth to, because there are no social-economic program and territory planning required at this level at all (c.f. fig. 19).

Territory planning is economic planning not spatial planning.

Territory planning is comprehensive, strategic, from macro point of view and for the whole country or a large region which has a certain configuration of resources.55 It is a preparation for drawing up social-economic development

programs, and is the most significant link between social-economic programs and other plans. Basically, territory planning does not study spatial influences or effects but make plans on the basis of an economic exploitation concept of natural resources and manpower.

<table>
<thead>
<tr>
<th>Territory Planning</th>
<th>Urban or Village System Planning</th>
<th>City or Village Planning</th>
<th>Land Utilization Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the National Level</td>
<td>Map scale not defined. Only required to indicate the extent and position of the area with which the planning task is involved.</td>
<td>Urban System Plan 1: 2,500,000</td>
<td>Represented by Urban System Planning</td>
</tr>
<tr>
<td>At the Provincial Level</td>
<td>Map scale not defined. Only required to indicate the extent and position of the area with which the planning task is involved.</td>
<td>Urban System Plan 1: 1,000,000 - 1: 500,000</td>
<td>Represented by Urban System Planning</td>
</tr>
<tr>
<td>At the Prefectural Level</td>
<td>Map scale not defined. Only required to indicate the extent and position of the area with which the planning task is involved.</td>
<td>Urban System Plan 1: 100,000 or 1: 200,000. -- 1: 500,000</td>
<td>As of city master plan of the (usually) medium-sized city or beyond for the central city in the prefecture-level entity. 1: 10,000 - 1: 25,000 map is used. Besides, 1: 25,000 - 1: 50,000 map is used to show suburban areas.</td>
</tr>
<tr>
<td>At the County Level</td>
<td>Map scale not defined. Only required to indicate the extent and position of the area with which the planning task is involved.</td>
<td>The same as at the prefectural level.</td>
<td>As of city master plan of the (usually) central city or town of the county seat in the county or county-level municipality. 1: 5,000- 1: 10,000 map is used.</td>
</tr>
<tr>
<td>At the Communal Level</td>
<td>No territory planning is required.</td>
<td>Village system planning is required to be addressed in the county level of planning. But customarily it is made separately or additionally. Map use is subject to choices by planners.</td>
<td>As of a small town in a designated township. 1: 5,000 map is used. Map use for country planning is subject to choices by planners by referring to those stipulated for city planning.</td>
</tr>
</tbody>
</table>

Fig. 21. Main Spatial planning Instruments and Map Use

Spatial relations/locations are to become concrete through city planning and sector planning.

At all four levels from the national level to the county level, by means of territory planning or programming, not only big infrastructure projects but also production projects—all kinds of state-owned plants or factories—are defined. Only through sector planning, spatial forms of those suggested items of infrastructure, such as railways, highways or expressways, aviation etc., can become concrete or "visible" on maps (see also fig. 21). When production projects are made certain in a certain part of the country, city planning is the means to figure out the concrete locations where projects are to be constructed. In the age of planned economy, this tool was effective because main investors were the national government, provincial governments and the municipal governments or their functional authorities.

An out-of-date planning approach

A market-oriented economy is a new and great challenge facing territory/ regional planning of a planned economic nature. Before the beginning of the 1990s, the national, provincial, prefectural and county governments and their functional authorities were the most important investors and managers of all sorts and all sizes of factories and companies, whereas they were meanwhile regulators. By means of territory planning, they got a basis to figure out
potential production projects (e.g. mines, plants, factories, power stations and water conservancy works) and infrastructure of regional importance (e.g. railways, highways). Today, more and more economic power is delegated from top-level down to county level, a process of changing state-owned enterprises from "state-run" to "province-run", or "prefecture-run", or "county-run". On the bottom level, most of TVEs are in effect "communally-owned" enterprises. In the meanwhile, foreign and private investments become common. The sources of investments become pluralistic. The role of governments and authorities is switching from investors and managers to regulators. Attention is being turned away from establishing and managing factories to guiding development through provision of infrastructure. Those makes the centralized economic planning approach obsolete on all different levels.

2. Town or city planning in the PRC is consist of two parts: (a) a general planning process and (b) a construction project oriented process. Products of the general planning process-a city or town's master plan and other quasi-zoning plans-are mostly rough, and are thus usually and easily self-denied in the construction project oriented process.

(a) The general planning process is designed to produce city/town master plans and some other plans such as city district plans, regulatory plans and detailed plans. City planning, generally speaking, takes effect only in designated master plan areas. The land-uses indicated in the city master plan are in fact only a symbolic approximation of "building zones". There is no overall land-use control similar to a zoning plan as in the western context. The quasi-zoning plans, i.e. city district plans, regulatory plans, are separately made for certain parts of the designated planning areas. Infrastructure planning is of course also confined within the master plan areas.

(b) The construction project-oriented process concretizes and approves construction sites by means of a separate site selection process. Only after choosing the actual site of a construction project (e.g. a factory), the land use for a land lot or lots then finalized—no matter if it is located inside or outside a master plan area, in an urban or rural context. Selected sites can be approved even if they are not in accordance with existing land-use plans. Most often at this time some regulatory plans or detailed plans can be made in view of individual construction projects. In fact, it is the existing zoning plans which are adapted to the new construction project(s), and not the other way round, which might be the usual case in industrialized countries. By this, the regulatory plans easily become a result of a large number of single uncoordinated construction projects. Thus, this instrument is not very helpful and effective to control or guide land uses.

Legal force of city plans

Only detailed plans at the last step of the aforesaid double-track city planning procedure are legally binding to individual constructors and investors. City master plans and urban system plans are not binding to individual property owners but detailed plans are.

Urban hierarchy planning as a supplementary means to city planning when no regional planning in true sense exists.

City planning lies in the extent of local planning. However, another element of city planning-urban system planning or called urban hierarchy planning- can be seen at five main administrative levels in the PRC. Urban system planning is a supplementary tool to support the elaboration of city plans. Urban system plans
stand alone both at the national level and at the provincial level, while city master plans and urban system plans are combined together and show up together at the prefectural level and at county level. At the communal level, village system planning for (small) towns or village plans is seen.

As described in Chapter 2.1, urban hierarchy planning is adopted to take the place of a missing regional planning approach. In fact, an urban system plan is supposed to be one component of a territory plan. Rigid division of administrative power and duty leads to a separation of urban system planning out of territory planning—a choice with no alternative.

Ineffective implementation of urban hierarchy plans

With regard to usefulness of urban hierarchy plan, there have been studies according to practice. It is reported that, city/town planning and construction exceeds what is fixed by the urban system planning, and each goes its own way; urban system planning has no least adjusting, controlling and binding force when interests of each city or town are concerned, such as water resources allocation, distribution control of pollutant sources. Owing to lack of necessary executive power, elaboration of urban system plans at the national and provincial level is commonly delayed and thus fails to guide elaboration of city plans, which underlines that things may go without those national or provincial plans. As of municipal plans of urban system for prefecture-level and county-level municipalities, municipal governments are at the same time city or town governments, those plans can be only be made from a narrow view in favor of interests of those cities and towns and be unfair to other cities and towns in the prefecture or the county. Thus, it is self-evident that those plans would never be implemented and turn ineffective. Such plans are of on sense.56 In addition to those, the weakest point possibly lies in that so-called urban system planning at the lower levels does not address land-uses according to spatial locations of land on regional or local scales. Besides, urban system planning at the higher levels are not consolidated into city or town plans, e.g. city master plans, which are too rough to materialize technical indices or concepts of higher levels and to make them less fluid for easy manoeuvres of later stages of planning.

3. Rural planning (planning of rural settlements) came into being in the 1980s. It uses a similar planning approach as city or town planning. Due to the urban-rural segregation, a varied planning & building norm is officially adopted for rural settlements. However, this planning instrument could not so far prevent a rapid expansion of (post-)rural settlements, which consume a great deal of fertile land, and the spreading of polluting TVEs.

Country planning under urban-rural segregation

Using a similar planning and construction control approach as seen in town planning, country planning can only be less effective, because that approach is devised for industrialization and its corresponding urbanization in a planned economy. Country planning is valid only towards items of urbanized or state-owned nature in rural communities, not to those of private agricultural or rural nature. For instance, most of villagers build their new homes on those pieces of

cultivated land, of which they are assumed to have the-right-of-use,\textsuperscript{57} wherever that piece of land is near or far away from existing villages. So it is with a disperse distribution of TVEs around the countryside. Rural planning just fails in those two aspects.

In the western context, planning succeeds in its exercise of "police power" over privately owned land property. But, in the PRC, planning becomes ineffective to exercise control over publicly owned but privately used land. One way or the other, users just use those land as they like, being "approved" later on or never.

Villages in a town planning area, according to laws and regulations, should be subject to a town planning process. However, nowadays, town planning has been found to be only valid toward items of urban nature. Besides, in the town planning process, a city master plan is usually worked out as if there were no villages in the designated town planning area. This assumes that those villages are not considered as elements for future city texture and are going to give way to coming new buildings. Unfortunately, before the arrival of new things, old things—those existing villages—won’t vanish automatically and need to be dealt with by means of proper planning, but not a total ignorance. Thus "villages in town" become unavoidable due to the existing urban-rural segregation and problematic planning approach, and become analogous to "cancers in a city texture", which may be cured at a great price if there would be corresponding innovations as far as breakthroughs.

4. **Overall land utilization programs or plans** aim at conserving agricultural land-uses by means of a so-called planned system of land consumption. They do not study industrial or settlement development pattern and their corresponding demand of infrastructure, but try to constrain occupation of farmland due to expansion of urban and rural settlements by issuing annual, five-year or ten-year land consumption quota. With regard to land demand by all sectors of infrastructure, those programs or plans are fundamentally ready to grant whatever is requested. They are by no means zoning plans in a western context.

Overall land use master plans classify land into eight types of land-uses: cropland, garden plot, woodland, grassland, urban & rural settlement and independent industrial/mining land-use, transportation land-use, waters, and the un-used. This land use classification is based upon agricultural zoning conceptions, differing greatly from a land use classification which is development-oriented, e.g. that used by town/village planning. Land utilization plans, however, do spatially cover the whole territory of an administrative entity.

\textsuperscript{57} According to the PRC Constitution, the land of the city belongs to the state while the land in the countryside is owned collectively by the villagers. Though without the ownership, a villager family is allocated certain amount of land according to the number of family members at the time of allocation and use that land as its own. City residents, however, have no such privilege. Thus, any individual or institution, who wants to "use" land in a city, must be agreed by the authorities to "get" a piece of land first of all. Villagers don’t need this procedure, for they have land already.
Centralized top-down quantitative control over land consumption, not over uses of the land and spaces

There is a strong intention of top-down command over land consumption. A quota in land consumption is first figured out at the national level, and then decomposed into provincial sub-quotas. All the same is done down to the communal level. According to the quotas from upper levels as well as “actual conditions” of land utilization in a municipality, a county or a commune/township, a scheme of quantitative control over future land consumption is given in a land use master plan, as the foundation for a planned land use system for each level of government.

Additionally, those land use plans indicate which type of land-use should or could be encouraged by means of text explanations, but not by showing spatially which piece of the land at which place is suitable for what function in five or fifteen years.

2.3.2 National Planning and Provinces’ Planning

Since this paper concentrates on territorial administration and spatial planning of lower three levels—the prefectural region, the county region and local communes, national planning and provinces’ planning are briefly discussed only.

Spatial dimension and planning instruments

Among 27 provinces in Mainland China, the smallest one is an island province of 33,000 km$^2$, which is bigger than Belgium and slightly smaller than the Netherlands (41,200 km$^2$) or Switzerland (41,400 km$^2$). The second smallest is 67,000 km$^2$ and the third one 99,800 km$^2$. The average dimension of 21 central and eastern provinces is 202,000 km$^2$. Indeed, in terms of spatial dimension, planning for Chinese provinces is in a sense similar to national planning in most European countries. The PRC national planning and provinces’ planning must be addressed in a way foreseen and devised differently from that for lower levels.

However, this is not the case at the moment due to a unitary territorial administrative system and a strong centralized economic planning tradition at those two levels. Almost identical planning instruments and approaches are adopted on the four major territorial administrative layers—from the national level down to the county level (c.f. fig. 19 and fig. 21). Compared with the USA, it is said that the USA has never had a national plan nor a standing national planning agency. The USA national government only provides guidelines and funding, while many states institute growth management programs over large-than-local issues, frequently environmental ones. Spatial plans are mostly worked out by sub-state entities and private parties. 58

Who’s Who? Sub-national, inter-provincial regional policy and regional planning?

In the PRC, it seems that no difference is made between sub-national or inter-provincial regional policy and regional spatial planning as spatial planning instruments. It is also unclear at present what a regional plan is. National,

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provincial territory plans and plans for a (prefecture-level or county-level) municipal territory or county territory are said to regional plans. On the other hand, plans of urban system or urban hierarchy are also said to be regional plans. Thus, it is not surprising that how to make regional planning is questioned by the Minister of the MoC. The "region" that he means appears to be smaller, such as two neighboring cities or in a radius of 150 km. Another leader of higher ranking talks about regional planning differently. In his mind, a region is bigger, e.g. sub-national regions or supra-provincial regions. Some existing problems facing the two levels are summarized as the following:

1. Centralized economic planning approaches still prevail, nowadays unfit to demands in a „socialist” market economy. A strong centralized economic planning tradition has lead to that regional policy and regional planning are lumped together and regional planning is expected as an instrument to solve problems due to economic disorders in sub-national, inter-provincial regions or intra-provincial regions.

2. Planning instruments are out of date to fulfill responsibilities and duties that national planning and provinces’ planning are entrusted. Though dozens of territory plans, urban system plans, land use master plans and city master plans are examined and approved by both levels, none of them functions effectively in controlling land uses according to locations.

59. “A territory plan for a region is a regional plan.... The both belong to comprehensive plans from a strategic level with regard to a region, focusing on land & natural resources exploitation, utilization and layout of construction.”(Source: Chongqing College of Architectural Engineering & Tongji University. Version of Dec. 1984. Reprinted in June 1998. An Introduction to Regional Planning. China Building Industry Publishing House. 7.) “The difference between the two is of no absolute implication.... The regional plan is influenced by national economic programs and focuses more on spatial arrangement of each construction in a region, in general includes concrete layout plans for exploitation and construction in the region....” (Source: Peng, Zhenwei et al. August 1998. Regional Research and Regional Planning. Tongji University Press. 43, 50 and 51.)

60. Yu, Zhengsheng, Minister of the MoC, the PRC. 1998.3. To Recognize Urbanization Problem from Strategic Level. City Planning Review. 7. He mentioned that, territory planning and regional planning are a competence for the SDPC, while the MoC has made some urban system planning, but there is still much to do concerning institutions, systems and approaches. With no regional planning, it is impossible to solve the problem of duplicate construction (of same infrastructure) only by means of examination and approval of each construction project. He raised one example of lacking regional coordination in Shandong Province. In a region of 150 km radius, five airports were built. The similar can be found regarding harbours. In Fushan Prefecture, houses of two cities have been built closely merged, but city planning of two cities still goes its own way respectively.... Therefore, "How to deal with regional planning? How to elaborate? How to implement? Those need to be studied carefully.... I suggest that we (the MoC) and the SDPC go together to ask for opinions of the Central Government concerning the issue, trying to find a way.

61. Wen, Jiabao, Vice Premier of the State Council, the PRC. Vol. 24 No.2 February 2000. Promoting Urban and Rural Planning to Accelerate the Process of Modernization. City Planning Review. 9. This was a speech made at the national meeting on urban and rural planning in December 27,1999. He said, "at present, exploitation and utilization of resources and layout of infrastructure in an inter-provincial context lack unified planning and effective coordination, contradictions become more and more serious. Inter-provincial regional planning must be stressed and effective implementation mechanism ought to be explored."
3. Development policies and concepts of the state and provinces regarding (transportation) infrastructure and settlements are either unclear or uncoordinated, or not integrated and consolidated into concrete land-use plans of lower levels owing to the lack of an appropriate planning tool. In particular, in view of a coming rural-urban population shift of 900 million–1.3 billion, there is a basic shortage of clear, realistic urban policies and concepts with regard to a sensible settlement and transportation development pattern.62

4. Planning functions are not realized, and consequently authorities of both levels very much depend on managing individual construction programs and individual land use applications63 as means for certain control over other lower levels due to the fact that the national authorities and the provinces’ authorities are the only true regional managers within the existing administrative system. Results can be speculated from aforementioned speeches by the two leaders in the preceding passage.

2.3.3 Planning for a Prefecture-level Municipality

1. The (regional) territory plans of this level, made in a same approach as seen on higher levels, are identically economic construction schemes concerned with exploitation natural resources, a basis for decision-making of all kinds of mines, plants, factories etc. A great deal of effort is devoted to statistical processing and projection of economic and population changes. Rural population exists only as a total number for each county and as a background for appraisal of urbanization rate.

2. Counties and qu are basic units for consideration over three sectors and demographic issues. Since it is „shared“ or divided among several qu, the central city in the prefectural region is usually looked into by means of an approximate study of the existing urban qu. Besides, local communities or rural settlements are just out of sight in this planning process. However, major cities or towns are studied, normally shown in a Layout Plan of Cities and Towns (named today as Urban System Plan in the city planning circle, c.f. fig. 22 and fig. 24).

3. Infrastructure consideration is mainly on highways and electricity (for industries), while aviation and railways are taken as things that have been decided on higher levels. In particular, a traffic study considers only passenger and freight circulation between each main town in a county and the central city (c.f. fig. 25 in the middle), leaving the rest of communes unattended.

4. Maps are not always used for expression of plans or spatial relationships. For example, the map scale used in the 1986 Kunming Municipal Territory Plan is 1:

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63. According to the 1998 land legislation, a provincial land administration is entitled to give a final approval of land use application (larger than 2000 m² of cultivated land or 2/3 hectare of other land) in one province. When a construction project needs to take more than 66.7 hectares of cultivated land or 133.3 hectares of other land, its permission can only be granted by the State Council i.e. the Chinese Central Government itself.
450,000. An economic zoning is made, in which the whole prefecture is divided into three zones, with counties as division units. Land-uses are not addressed at all.

Town planning

In accordance with the current territorial administrative framework, the focus of spatial planning on the prefecture-level is on the prefecture-level city, a central city in the prefectural region, because the prefecture-level governing body is also the city's government. An urban system plan and a city master plan are elaborated together. Town planning as a main planning instrument in the PRC draws up a quasi-land-use plan only for the main city planning area. The rest is left for planning of lower levels.

The urban system plan is concerned mainly with the central city and other important towns in each county, pointing out a hierarchy of those cities and towns—a series of different sizes of cities and towns of varied function types and distributed along this or that transportation axis, river etc. (See fig. 24). It is not a complete plan or concept regarding overall development of both urban and rural settlements.

As of the city master plan, among other general city nature, development goals and principles, the most important is a city land-use plan. However, it is only a symbolic land-use plan for the central city, and is not a zoning plan but more like a definition of building zones in western local zoning plans. Distinctively, a city master planning area or city planning (control) area is defined. Sometimes the city master planning area (c.f. fig. 25 on the left: the planning area in brown color in relation to the whole prefecture can be seen on the map) is the city planning control area, sometimes much smaller than the latter, different case by case. This master planning area of the Kunming city proper is 320 km² or so,
Building outside the master planning area and a self-denial of plans of earlier time

While the city planning area Kunming is 1,975 km\(^2\). In addition, due to a lack of land-use planning covering the whole prefectural territory, areas of wonderful sceneries and areas along key transportation corridors (mostly highways and expressways) can also be declared as town planning control area.

To build outside this area is possible. According to fig. 20, every construction project or program, inside or outside the city master planning area, must go through a site-selection process. By means of this, whether a project or program justifies the taking of one piece of land outside the city master planning area is examined. A positive evaluation may allow further preparation, including a regulatory plan as well as a detailed plan for the site or its surrounding areas. Thus many city plans are made for many locations outside the city master planning area like this, and most of spontaneous land-uses are approved. This project oriented planning process is so elastic that it makes possible buildings outside the so-called master planning area and also make plans of earlier time inside the master planning area exist in name only.

City master plan under the urban-rural segregation

First, a city master plan considers urban development only and ignore farmers even though they are residents in villages or small towns located within the designated planning area. Seen from the plans on the right and in the middle in fig. 25, there seemed as if there were no rural settlements in the city planning area. In reality the area is full of villages and small towns, among the densest in the prefecture. Second, the infrastructure plans go correspondingly without considerations for the rural populace in the area, for instance, the roads are devised as a city road network, containing no road envisioned for the existing

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64. The surface of a master planning area is calculated in two steps. First, a city population is predicted. Next, it is easy to know per capita land-use according to a national per capita land-use norm for different classes of cities. Then a product by multiplying the city population and the per capita land use is the total land which might be built-up at the end of a planning term (ten or twenty years) and be shown in the form of a city master planning area.
villages. Most probably, the villages are assumed to disappear completely sooner or later. Hence, they are not even thought to be an element for integration in physical planning.

**Overall land utilization planning**

For the first time in 1997, the Kunming prefecture worked out a land utilization master plan on the basis of a land survey which tells quantities of eight land-use types in the whole prefecture. According to this classification, current land-use and 2010 land-use plans are drawn up. Essential Cropland Protection Zones are also defined on a 1: 100,000 map. However, the main content is a quantitative control program, which says till the end of the planning term 2010, how much cropland will be taken for other uses, how much is for settlement expansion (including industrial uses), how much for transportation, how much for waters and how much for garden plots or afforestation. In particular, settlement land-use is said to increase by 200.75 km² in total, but meanwhile rural settlements are to decrease by 22.5 km². After all, it is hoped that adequate cultivated land would be secured through a strict quantitative control of land consumption by each construction project and new exploitation of cropland.

**Sector planning**

Sector plans are divided into two parts. The city master plan has addressed infrastructure needs for the town planning area. Special attention is given by city planning to a city road network, while railways, conventional highways, expressways, and airways etc. are in general regarded as „external“ transportation means for the main city. The infrastructure planning outside the city master planning area is left for other specific sectors respectively. For instance, highway or expressway planning is a duty at the communication authority, which will consult the city planning institutions on how to connect those highways or expressways to the city road network. Generally speaking, there is no overall integrated or coordinated development concept in terms of settlement and infrastructure, especially transportation, for the whole prefecture-level municipal jurisdiction territory. Even railways are not considered for „internal“ service under a comprehensive development concept for cities and towns in the prefectural region ranging from 3,000 to 20,000 km².

**2.3.4 Planning for a County or County-level Municipality**

Spatial planning approaches adopted for a county or county-level municipality are fundamentally the same as those for a prefecture-level municipality, but in a smaller extent, usually for a county region ranging between 500 to 4,000 km². Again, regional planning of the level is made rather rough, whereas a master plan for the city or town of county seat is elaborated in detail.

**Territory plan/regional plan**

As basic units of higher levels of territory planning, county-level of territory planning is said to address a mostly rural region. Planning contents focus on sectors' structural adjustment in the countryside, establishment of agricultural production bases, layout of towns in the countryside, and agricultural labor shift for other sectors. Economic issues are cores for the county territory planning and used as foundations for further planning of infrastructure and urban settlements due to industrial development and subsequent urbanization.
Separately, an urban system plan is usually worked out for the county region (See fig. 26 on the left side\textsuperscript{66}). It can be more clearly seen at this level that main regional planning instruments are strongly oriented towards industrial development and urban settlements, take almost no notice of rural settlements, and thus present no overall settlement development concept and no coordinated consideration over settlement and infrastructure needs in the county region.

**Land utilization planning**

The county level land utilization plan sorts out eight type land-use zones for the whole county territory and their quantities according to the land legislation, which provides a basis for controlling land uses and approving land use changes. Land consumption indices are decomposed from the prefectural level and examined to make sure that they are adapted to this level of reality. More attention is given to construction zones of cities/towns and villages, isolated land uses for industrial and mining enterprises and their residential quarters, zones of agricultural production. Distribution and locations of key construction projects concerning energy, transportation and water conservancy works are to be found, by means of gathering relevant plans or decisions from each sector.\textsuperscript{67}

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\textsuperscript{66} This plan is made according to The Introduction of Jinning County Town Master Plan reported in Yunnan chengshi Guihua (Yunnan City Planning Journal), 2000.4. Page 31. According to its urban system plan of the county, apart from the main town, other towns are planned to develop as follows. Jincheng, 2 km\textsuperscript{2} and 20,000–25,000 inhabitants in 2000, 5 km\textsuperscript{2} and 45,000–50,000 inhabitants in 2015; Baofeng, 1 km\textsuperscript{2} and 10,000 inhabitants in 2000, 2 km\textsuperscript{2} and 22,000 inhabitants in 2015; five towns of Shangsuan, Xinjie, Liujie, and Erjie, 4 km\textsuperscript{2} and 40,000 inhabitants in 2015 respectively; three towns of Huale, Shuanghe and Xiyang, 2 km\textsuperscript{2} and 10,000 inhabitants in 2015 respectively. Besides, some villages are found to be too small and located too sparsely, so they are planned to be moved to combine with some villages at an central and optimal location.

The land utilization planning result is basically a quantitative control program for agricultural land use conservation.

**Town planning**

As seen at the prefectural level, after an urban system plan, the planning focus turns immediately to a city or town master plan for the county-level city or town (see fig. 26 on the right side). For instance, a schematic town land-use plan covering an area of 20 km² or so is worked out for the county town of Jinning (see fig. 26 on the left-side plan for the relation between the main town planning area in yellow color and the county region). This plan further says that the town’s urban population and built-up surface are going to rise from 20,000 and 3 km² in 1997 to 65,000 and 6 km² in 2005, and 90,000 and 9 km² in 2015 respectively. Similar estimations are also made for other towns and big villages in the aforementioned urban system plan, but no corresponding land-use plans are figured out.

**2.3.5 Communal Planning**

**Limited planning competence at the communal level**

As a rule, communal or local planning is the pillar of western planning systems. However, this is not the case within the existing territorial administrative and legal framework in the PRC. Although they are quite big, the PRC’s communes are not authorized to be responsible for communal planning. Instead, counties are granted of power to be in charge of the making and implementation of most kinds of plans (c.f. fig. 19). Those plans are elaborated on the basis of counties as basic territorial administrative units, and the corresponding communal plans are not demanded by laws and regulations. In this regard, there are most probably only two exceptions—planning for small towns or villages and essential cropland conservation oriented land utilization planning. But communes are just assumed to be organizers for drawing up those two kinds of plans while county authorities are entitled to issue land-use planning permits and building permits (c.f. fig. 27 and fig. 28)
On the other hand, local planning for 668 cities (corresponding to the designated municipalities on the province, prefecture and county levels) and 1,781 towns of county seat (corresponding to the number of counties) has been made at corresponding higher levels, and thus is not a business at the communal level. Communal planning discussed in this part applies only to common local communities which are not county seats.

Moreover, the differentiated procedures are stipulated in view of communes and townships. The townships seem have more saying about the construction projects not belonging to the villagers’ housing than the communes. This reflects unequal rights among local communities. From another angle, this also points to a subconscious or intentional negligence of the planning of the farmers’ housing.

**Land utilization planning**

A communal level of land use master planning process first considers land use quotas given at the county level. Those figures tell how much land in the community can be used for what purpose, e.g. how much cultivated land to be taken for other uses (including for construction of roads or houses), or how much un-used land is to be changed into garden plots or woodland. Land utilization plan maps show different land-use zones, such as agricultural land use zone, village construction land-use zone, land uses of isolated industrial & mining enterprises and their residential quarters. Among them, zones of essential cultivated land are not allowed to be occupied for other use in a long run, and giving up growing crops in such zones is not allowed either.

A land-use master plan in the scale of 1:10,000 is shown in fig. 29, which is much detailed than those at the county or prefectural level. The land in dark yellow belongs to the essential farmland conservation zone. The part in light yellow is to be maintained as cropland or „planned cropland“. The rose color
2. Analysis of the Current Planning System in the PRC

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Small town planning and village planning

indicates the land that is planned for construction purpose. The blue color tells us the existence of a water pond. The rest is built-up area. Typically, those clearly indicate that neither current nor future development pattern and concept, including infrastructure needs, are dealt with. Existing (overall) land utilization planning can be only one of data bases that are necessary for spatial planning.

A plan for a communal entity is consist of a village system plan and a plan for the main village or small town in the commune. The village system plan commonly divides settlements in the community into three grades—a big village or at most a small town, central villages and natural villages (see fig. 30 on the left side). Then, a "detailed" plan for the most significant settlement in the commune, is customarily again confined in a designated „planning area“ as seen in city planning approach (see fig. 30 on the right side).

This two-step planning approach applies to all communes and townships of varied sizes—as small as 15 km² or as big as 300 km².

Sector planning

Land utilization master planning process itself does not study settlement or industrial development and their infrastructure needs or concepts. The village system plan and the village plan do not present a plan regarding overall transportation and other infrastructure, for instance, a network of country roads for the whole community. Instead, the village plan suggests only roads in or around the planning area. Thus, an important sector plan concerning all communal roads is to be made by highway designers. The same applies to other sector plans.
2.4 Impact Assessment of the Current Planning System

The current system of territorial administration and planning, on one hand, is one outcome resulted from the political, social and economic process of the past fifty years. On the other hand, it is an instrument which contributes to those consequences seen and heard of today.

![Bar chart showing population distribution in settlements (Total PRC Population as 100%)](image)

**Fig. 31. Population Distribution in Settlements (Total PRC Population as 100%)**

2.4.1 Social Impacts

By the end of the year 1998 the total population in the PRC was 1.248 billion. An urbanization rate of 30.4% in 1998 is reported. According to fig. 31, it is quite obvious that about 70 percent of the PRC population, or 900 million, are official inhabitants of rural household registration identity. This form of population distribution results in many other social, economic and environmental problems.

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68. The PRC 1999 Statistical Yearbook, China Statistical Publishing House, Beijing 1999. However, an independent population research institute, United Nations, says that the current population in the PRC is actually 1.5 billion based upon the study of grain consumption. See BBC (British Broadcasting Co.) news under http://news.bbc.co.uk/hi/chinese/china_news/newsid_911000/9113461.stm. Besides, Japanese population research institution has made the same conclusion based upon studies of salt consumption in the PRC. Those researches show that the population explosion problem in the PRC is more pressing than usually estimated.

69. With regard to the urbanization rate as the statistical figure, all the agricultural and non-agricultural population in the urban and suburban administrative districts in the municipalities at the provincial and prefecture levels are counted as urban, which means some rural agricultural residents are included. But in the designated townships of a county and the municipalities at the county level, only the non-agricultural population is counted as urban, which means some urban inhabitants working in the 1st sector but living in the towns are not included.

70. The chart shown in fig. 31 is drawn up according to data provided by Ren’s article. Ren, Shiying et al. No. 2 February 1999. The 1997 Profile of the PRC Urban & Rural Settlements, Characteristics of Planning Development of Small Towns in China. City Planning Review. 45.
Apart from population explosion\(^\text{72}\) and political factors, the fore-mentioned territory planning approach, oriented strongly towards industrialization and its matching necessary get-together of non-agricultural population, is also responsible for this disadvantageous distribution. No sensible regional planning functioned to lead to a different form no matter what a huge population there is. No general concept, program or plan were ever made with regard to an integrated urban-rural settlement development. On the contrary, counter-urbanization happened, such as relocating 26 million of urban residents back to villages and 17 million of urban youth to labor together with farmers in the countryside in the later 1950s, in the 1960s and in the 1970s. Of course, it must be mentioned that those happened in an age when planning could not function normally, regardless of methodological problems in planning.

However, attention to the industrialized communities can be seen in relation to the ignored rural communities. As a matter of fact, there is so far certain restriction on realistic urban development-controlling or constraining growth of large and extra-large cities is still valid. Lack of city infrastructure is common. Since the middle of the 1990s, cities themselves are facing a wave-upon-wave of laid-off workers due to restructuring of urban industries, not in a position to meet a huge challenge due to immigration of surplus rural labor force.

At present, out of 450 million rural labors, surplus amounts to 250 million.\(^\text{73}\) Though already unprecedentedly huge, forecasts say that both numbers of rural population and labor force are steadily on rise until in 50 years when the PRC’s population reaches “zero growth”. The rural surplus labor force is estimated to exceed 300 million in 2010.\(^\text{74}\) Under such circumstances, the Chinese Government has adopted strategies of allowing development of TVEs in the countryside, allowing farmers to enter cities for “odd jobs”, and recently advocating active development of small towns. It is estimated that currently 120 million of rural labor force takes employment in cities and towns. However, a dilemma is facing those poor people. They become amphibient Floating

\[\text{71. Due to demographic urban-rural segregation, before 1980, those inhabitants of rural registration identity were not allowed to enter cities for odd jobs. As agricultural population, they are assumed to be engaged in the first sector. Since the 1980s, they are allowed to go into cities and take “odd jobs”. It is next to nothing for them to change their rural civil household registration to an urban one. Without official urban residential identity, it’s impossible for them to enjoy nowadays very limited urban welfare like formal city residents and very difficult for their children to register for proper education, even if they could and would like to pay more than that is required to children from official city families.}
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\[\text{72. The Chinese scientists pointed out that the most appropriate population for the PRC was 700 to 950 million, and the maximum would be 1.6 billion. They warned, when population exceeding this figure, it’s hard to imagine what would happen, and the PRC would either need a large-scale import of agricultural products or export people in a large scale to other parts of the world. Survival and Development–The State Conditions Research Report. 1989. The State Condition Analysis and Research Team, China Academy of Science. Science Publishing House. Beijing.}
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\[\text{73. Zhang, Qing. 1997.2. Active and Orderly Urbanization. City Planning Review, China. 33.}
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Factories come into being all over the countryside and their disperse distribution due to the failure of rural planning.

"Villages in town"-cancers in a city texture beyond the reach of city planning.

Population--working and living mostly in town whereas not being integrated into urban society but not yet totally drifting away from the countryside.75

It is said that the TVEs have absorbed 120 million of the surplus rural labor force. TVEs has come into being everywhere in rural areas since early 1980s, described as "every village lights fire and every household has a workshop chimney". This is the so-called industrialization in the countryside, which was devised to solve unemployment issue in the countryside due to too much rural surplus labor. However, it is reported that 80% of the TVEs are located in villages, 12% in big villages and 7% in the designated townships. In this regard, rural planning and construction management did not contribute to prevent that from happening.

Influx of Floating Population and segregated urban-rural administration in cities (cf. fig. 12) have brought about booming of "villages in town" around large or extra-large cities all over the country. As a matter of fact, those villages turn slums in modern China. They can be characterized as places full of the jobless, low-qualified villagers, drug dealers and other criminals, rural couples who flee out of home villages due to breaking family planning laws. Or as places which are constructed as local villagers wish, with building density so high as 60%-80% and floor area rate up to 3, bad lighting and ventilation, limited or no drainage or sewers, narrow and tortuous paths in villages, awful rubbish dumping, no fire prevention facilities and so on.76 One such village of 1,400 local residents nowadays accommodates 45,000 people in total.77

"Villages in town" is a product of the urban-rural segregation system, showing an illness in a city organism. City planning is utterly useless in producing a way to deal with such a situation. There is a sole choice left, that is, delimiting a clear border between them and the rest of the city, and as a rule, approving villagers to build or re-build as what they would like. "Enclosing and allowing them to go as they wish" has a potential of making those villages turn into "malignant

75. Most of time, cities do not welcome them, and they are not being integrated into urban society. And official city residents usually regard them as competitors for jobs and potential criminals. Chances in cities are actually limited to them. On the other hand, they are also restricted by their own bad qualification due to lack of education and vocational training. Furthermore, existing old management policies function well in preventing more rural population from entering cities as well. Usually city governments tend to control the influx of the rural residents, make efforts to send those rural people with no proper jobs or skills back to their original homes in the countryside. It was reported that since 1995 some big cities started imposing restrictive measures on employment of "external" workers. However, they all have some cropland at home places, and they "own" the right-of-use of land, thus this land is up to them to decide if they would like to plow or rent it. They are happy to keep those fields. In case of their loss of jobs in the cities, they could still go back home and keep on growing crops in the countryside.


tumors, or cancers" in cities, influencing the health of city texture and hindering city modernization course.78

Rural communities commonly face gigantic pressures, such as growing adequate grain for the whole country, huge surplus labor force with limited education and vocational training, vacant rural societal welfare and insurance system, development of 2nd and 3rd sectors at the expense of the 1st one, and far too less investment.79 However, local communities do not benefit much from current communal territorial administration and planning as well as a huge sum of taxes they have contributed. Due to a shortage of financial and executive capacity at the communal level, they are stripped of rights and resources to set up minimum infrastructure and public facilities. In contrast with cities and county towns, common (small) towns and villages look alike, lacking sensible planning, water supply, drainage and sewage facilities, proper schools, libraries, sports grounds or installations, medical and other public infrastructure. To build a school or a clean drinking water supply stem, the communal governments commonly depends very much on money raised in the communities or from the outside world. In this regard, the most famous example is a so-called „Hope Project“.80 It indicates that the existing administrative system has lost its capability of providing local communities with appropriate schools and of realizing a promised Nine-Year Compulsory Education (for children) through its normal financial channels.81 Apparently, incapability of the communal government in the whole administrative and planning system is a critical cause why the PRC's countryside remains underdeveloped and lacks essential management.

Quite some experts nowadays call for an end of designating municipalities and townships. “Except for a few areas, such designations should be stopped”, “and it should be prevented that urbanization be turned into a game with words”.82 Studies show that a quickened pace of urbanization in the PRC was mainly a

80. The „Hope Project“ is launched in 1992 by the PRC Ministry of Education and the Communist Youth League, participated by the whole society to help rural children-dropouts return to school. The Hope Project raised 40 million Yuan in total in three years since 1992. While there was a total number of 50 million dropouts, which was estimated to increase annually by 4 million. Zheng, Fengtian. December 1997. The Agriculture, the Countryside and the Peasants. Chongqing Publishing House. Chongqing, China. 85.
81. For instance, Beijing Municipal Government helped build a Hope Middle School in Fanzipai Township, Miyun County. Motorola Co. presented its donations three times to the Project Hope. Ironically, Miyun County is a county under the leadership of the Beijing Province-level Municipal Government, which could not manage to provide children in its jurisdiction territory with a proper school through the normal administration, but through donation. Fighting Against Poverty. China in Brief. 1998. New Star Publishers. Beijing, China. 8, Impressum, b. 11.
result of those designations of counties as municipalities and communes as townships. After designation, the same population in the same villages or communes all of a sudden would statistically be counted as urban residents. An unreliable impression is thus formed as if cities and towns are being built up tremendously, and more and more residents are becoming city dwellers. In fact, the problem lies in that those designations are made on an improper level—the county as the basic territorial administrative unit. In addition to this, such designations of municipalities and townships happen twice instead of once. In western countries, a highly urbanized, bigger local community can be called a city (or Stadt in German). There is no additional, intermediate Zhen as in China.

2.4.2 Economic Impacts

**Overall impact upon economy**

Within the existing administrative framework, fragmented and thus ineffective management of natural resources and environmental issues results colossal economic loss. Loss due to environmental pollution amounts to 5%-10% of the PRC’s annual GDP (Gross Domestic Production), and loss due to ecological damage doubles the aforementioned figure. According to different assessments, the total loss owing to environmental pollution and ecological damage varies from 7.5% over the PRC’s annual total GNP (Gross National Production), made by the US Eastern and Western Research Center, to 10.0%, by the Environment and Development Research Center, China Academy of Social Sciences, as far as 15.6%, by individual Chinese scholars.

**Impact upon agriculture**

Loss of cultivated land, shortage and low efficient use of water resources in agriculture as well as abuse of groundwater, and deteriorating agricultural ecological environment i.e. environmental pollution become three of five most significant factors affecting China’s ability to provide its huge population with enough grain it produces. All forecasts have made a same conclusion that China’s grain gap will be turning bigger and bigger. Mr. Brown, director of US World Watch & Research Institute said in 1994 that this gap would be 369 million tons in 2030. Chinese agricultural experts were optimistic, saying that the gap could not be so huge and China would not import grain in a large scale, with no concrete figure cited. Since 1980 the total grain that the world market offers for exports has annually averaged 200 million tons. It is certain that the world cannot feed China, and Chinese people must find a way to keep themselves alive.

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83. Between 1985 and 1995, the number of cities doubled from 324 to 640, and their corresponding built-up area increased from 9,386 km² to 19,264 km². Urban population in cities and towns expanded from 251 million to 352 million. Zhao, Min et al. No. 6 1997. On the Effective Planning and Management of the City’s Land-Use During the Rapid Phase of Urbanization. Urban Planning Forum. Tongji University Shanghai. 12.


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Impact upon rural economy and its backfire on national economy

Before 1949, China was basically an agricultural country. Most of non-agricultural sectors were developed after 1950. The 1st sector’s composition in GDP decreased from 50.5% in 1952 to 18.4% in 1998. A large extent of industrialization and dynamic growth of the PRC’s national economy for recent years have brought about economic development and rising of life standard. However, general economic level of rural population makes progress rather slowly. Long-term of ignorance of rural communities, non-existence of public budgets at the communal level, lack of public and municipal facilities in the countryside and ineffective rural planning lead to incompatible development in the countryside.

As consequences, the difference between urban and rural economic levels is still huge. Averagely, the city per capita income is three times the rural. Meanwhile, rural inhabitants have more debts and more taxes to pay, but fewer chances to increase their incomes. Thus, rural population as a whole (70% of the total PRC’s population) has a considerably low buying ability, a big disadvantage to the national economy, contributing in a great degree to economic stagnation and inadequate demand in the PRC at the moment. After prosperous urban market is saturated, that national economy lacks further drive is just natural.

China’s employment pressure

Highly disperse layout of TVEs can not trigger off industrial professionalizing and tertialization. If factories, plants or trade companies would concentrate in certain locations, results could be different. TVEs’ low-tech and low quality of products become more and more unpopular in the market. Since 1996, the TVEs have been in difficulty or decline. Tens of millions of employees in the TVEs have returned to unemployment. This hints that the TVEs’ ability to employ rural labors decreases and would further decrease. It is unrealistic to expect that, the TVEs would play a major role in employing more rural surplus labors in a more market-oriented economy when China’s membership in the World Trade Organization takes effect. In the meanwhile, industrial restructuring and bad business management lead to more and more laid-off workers in cities day by day. Facing double pressures from both the countryside and cities, the PRC’s economy has to increase yearly so as to provide as many as 20 million new jobs.

2.4.3 Impacts on Land-uses

So far, some planning experts still insist that only coastal regions of „advanced economic development“ in China need an integrated land-use planning for a whole municipal territory. They ignore a vital point, that is, high level of land exploitation for agricultural production has been a major destroyer to vulnerable ecology, especially in the west of the PRC.88 The 1st sector, like the 2nd and 3rd sectors, consumes land resources greatly and also invades natural space severely. The economic development level ought not to be the sole decisive factor for comprehensive land-use planning.

In fact, China is in history a country of high agricultural exploitation. Still, in the past fifty years, cultivation reached a new peak. Land exploited for agricultural production amounts to 400,000 km² or so, 4.2% over the PRC’s territory. During the same period of time, settlements, manufacturing industries and mines consume 241,000 km² of land, or 2.5% over the total territory. Apparently, agricultural economic activities impose influences on land and the environment no less than impacts due to industrial, residential and traffic construction.

Inappropriate utilization of land resources has been leading to more and more consequences, such as big floods, and worsening soil erosion. More than 30% of the PRC’s existing cultivated land is located on mountain slopes, which was exploited most possibly by means of deforestation and destroying grassland. Total soil erosion area so far has risen to 3,670,000 km², endangering functions of cultivated land or other land. Those are mostly resulted from shortage of coordinated land uses covering all sectors, in particular agricultural land consumption. Thus, agricultural land utilization must be put under comprehensive spatial planning coordination and control.

88. Zhang Shanyu et al. June 1996. Study on Vertical Distribution of Population and Rational Redistribution of Population in Mountainous Areas. East China Normal University Press. Shanghai. Mountainous areas (including high-plateaus) in the PRC account for 71.3% of the total territory. Too much rural population which exceeds environmental carrying capacity has endangered ecological balance in the west, and is leading to deeper and deeper ecological crisis. The impoverished people in mountainous areas are going in a vicious circle between poverty and over-cultivation of land. That leads to further ecological deteriorating, and then the poor change into the poorer. The consequent ecological problems influence both the west and east of China. There is 21% of the PRC population in West China’s mountainous areas (including high-plateaus), which account for 61% of the PRC total territory, 80% of 80 million impoverished rural population is distributed there. In contrast, only 10% of the PRC territory in the east is mountainous. It is also suggested that, there are urgent needs to relocate half of that population out of those mountainous areas either to nearby basins or flat lands in the west, or to plains in the east where people can live in high density due to favorable natural conditions such as its abundance in water; meanwhile, urbanization must be promoted as a measure to reduce rural population.

A system ineffective in conserving natural space

Comparative studies indicate a harsh situation in natural ecology. Figures according to a land survey by the SLA in 1996 are showed in fig. 35. So-called un-used land is just close to desert or desertificated surface. Only one third or at most one half of the woodland reported in the table is actually covered with forest or woods. In the old days, grassland takes 40% of the PRC’s territory, of which 70%, or 2,742,200 km², is prairie in the north and northwest of the PRC. Nowadays, half of the prairie has reached a medium level of degradation (including sandification and alkalization) according to the PRC’s RSE ‘1999. Most probably this kind of area could have been included in the “un-used” in the table, i.e. desertificated land. Moreover, it is reported that the desertificated land has been increasing at an annual rate 2,460 km² since the 1980s. Among other consequences, sand storms in Spring are intensifying year by year, strongly affecting not only North China, for instance, Beijing, but also South Korea and Japan (See fig. 34 on the left and middle-upper).

Fundamentally, it is not only just a matter of non-existence of land-use planning as usually seen in Western European countries, but a long-lasting problem of wantonly use of land resources. For example, farmers went to cultivate prairie into fields; they filled out shallow lake beds to make paddy fields; forestry administrations of all levels seldom planted trees but were rather involved with cutting trees for timber production before 1998. Seen in a photo on the middle-lower part of fig. 34, soldiers are planting trees at the fringe of the Beijing city. At least, this illustrates that there are problems regarding land-

<table>
<thead>
<tr>
<th>land-use category</th>
<th>surface area (km²)</th>
<th>its percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cultivated land</td>
<td>1,300,392</td>
<td>14</td>
</tr>
<tr>
<td>garden plots (fruits yards)</td>
<td>100,238</td>
<td>1</td>
</tr>
<tr>
<td>woodland</td>
<td>2,276,087</td>
<td>24</td>
</tr>
<tr>
<td>grassland</td>
<td>2,660,648</td>
<td>27</td>
</tr>
<tr>
<td>land-use for settlements, industries and mining</td>
<td>240,753</td>
<td>2</td>
</tr>
<tr>
<td>land-use for transportation</td>
<td>54,677</td>
<td>1</td>
</tr>
<tr>
<td>waters</td>
<td>481,506</td>
<td>4</td>
</tr>
<tr>
<td>un-used</td>
<td>2,660,648</td>
<td>27</td>
</tr>
<tr>
<td>total</td>
<td>9,774,949</td>
<td>100</td>
</tr>
</tbody>
</table>

Fig. 35. Different land surface and its percentage over the total PRC territory (%)
use where trees are being planted. What is original land-use for it? If there were
no tree-planting movement due to the sand storm, what is it planned for? If it is
properly used, how it is all of a sudden being changing into a place for trees?
Willful utilization of land is quite obvious. Like this, even an effective system is
to be made invalid. In reality, the fragmented land-use planning is itself a
problem to be solved.

Generally speaking, uneconomical use of land resources for settlements has
been encouraged so far. In the past, rural planning was just thoroughly ignored
while urban-rural segregation in territorial and demographic administration
was fully adopted. Up to now, state policies are advocating development of
small towns whereas constraining growth of land-effective large cities.

Of the whole settlement consumption of land, waste of land by rural
settlements is hidden from view on most occasions. At first, per capita land-use
surveys, as seen in fig. 36, indicate inefficient use of land by small towns and
villages in the countryside.93 Moreover, rural settlements consume a great deal
of land, taking 76.3% of the total land for human habitats (see fig. 37).

![Fig. 36. Per Capita Land-use according to Settlement Classification](image)

<table>
<thead>
<tr>
<th>Settlement type</th>
<th>per capita land-use</th>
</tr>
</thead>
<tbody>
<tr>
<td>extra-large cities</td>
<td>74</td>
</tr>
<tr>
<td>large cities</td>
<td>88</td>
</tr>
<tr>
<td>medium-sized cities</td>
<td>108</td>
</tr>
<tr>
<td>small cities</td>
<td>143</td>
</tr>
<tr>
<td>towns</td>
<td>239</td>
</tr>
<tr>
<td>villages</td>
<td>168</td>
</tr>
</tbody>
</table>

![Fig. 37. Percentage of Settlement Surface in the PRC (Total PRC Settlement Area as 100%)](image)

When it comes to farmland protection, many people immediately accuse cities
of taking too much „valuable“ cropland since they are used to ignoring what has
happened and is happening in the countryside. If the current planning policies

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91. Territory Development & Regional Economy Research Institute. October 1997. Study on China’s
Sustainable Development Indicator System and Its Approach. The State Development Planning
Commission. Beijing. 36. It says „desertified land adds up to 2,622,000 km², or 27.3% over
the total PRC’s territory surface“.

92. A forest area of 1,589,400 km², or 16.6% over the total PRC’s territory is given. Source:
However, an air survey proves a forest coverage rate of 8.9%. Source: Zheng Fengtian.
December 1997. The Agriculture, the Countryside and the Farmers. Chongqing Publishing
House. 66.

City Planning Review, China. 13.
and approaches keep on prevailing, a specific study finds out that there is a risk that China's rural settlements are going towards a post-rural land-use pattern, i.e. a large scale of low density urbanization in the existing countryside will swallow a great amount of fertile soils.  

A study in 1994 shows that TVEs have occupied 66,667 km$^2$ of land. In comparison, urban settlements, rural settlements and transportation infrastructure consume 43,500 km$^2$, 140,000 km$^2$ and 54,677 km$^2$ respectively. The sum of land-use by all settlements and TVEs is 250,000 km$^2$, right close to 240,753 km$^2$, land-use for settlements, industries and mines given in the 1996 land survey. TVEs become a big land consumer in a time less than 20 years, overtaking urban settlements and transportation sectors.

On the other side, the average per capita land-use of TVEs is 555 m$^2$. In contrast, the average per capita land use for the state-owned 2nd sector in PRC is just 52 m$^2$. If TVEs could be organized as compactly as earlier developed state-run factories, 60,000 km$^2$ land can be saved. This surface is almost three times as big as 22,400 km$^2$, the current total built-up area for 668 cities.

Like family planning, farmland conservation has become one state policy in China. To safeguard food production in China, one most significant task is to keep as much as possible cultivated land away from being built-up or used up for other functions. In general, China's farmland is very limited in relation to its huge population, although a large scale of cultivation has been carried out in the past five decades.

However, the existing fragmented planning system has no coordinated plan over land uses for farmland, urban and rural settlements, transportation infrastructure as well as TVEs over each an entire territorial surface of a prefecture, a county or a commune. Under the circumstance, farmland conservation can't be secured, as what has been observed so far.

Severe waste of land and too much occupation of farmland due to rural industrialization and functional failure of rural planning

No comprehensive land-use planning, farmland conservation is not assured.

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96. The USA has more or less the same amount of land surface (9,363,520 km$^2$) as that of the PRC (9,600,000 km$^2$), but has only 266.7 million population (in 1996) (Alterman, Rachelle. 1997. The Challenge of Farmland Preservation: Lessons from A Six-Nation Comparison. Journal of the American Planning Association, 63 (2):220-243.), or just one fifth of the PRC's population. The USA has 1,878,800 square kilometers of farmland, that is, the USA has 578,408 km$^2$ or 44.5% more than that of the PRC. So, firstly, PRC's cultivated land is not much in total. Secondly, its 0.1 hectare per capita is much lower than 1/3 hectare of the international average figure, and is too little to be compared with that of the USA. What's more, most of the PRC's cropland is in its eastern part where population density is already rather high. 94% of the PRC's total population is distributed in its eastern part, 43% of its total territory. Population density in eastern coastal provinces can be so high as 800 to 2000 persons/km$^2$, while the national average is about 220 persons/km$^2$. 

### 2.4.4 Impacts on Transportation

**Countrywide automobile dominance**

Before 1949, walking, horses, sedan chairs and ships (in certain places) were main traffic modes in China. Only some coastal areas and areas once influenced by colonial forces saw use of trains or automobiles. Since the founding of the PRC, China has developed railways and highways in a great scale (see fig. 38). In general, railways are less developed than highways. Passenger transportation depends very much on highways.

### Bicycles are predecessors of cars in road-based cities.

Chinese cities since 1949 have entered simultaneously an era of trains and automobiles, unlike other western cities which experienced usage of trains, trams, and automobiles one after the other. However, cities in PRC have been developing on an automobile-based pattern so far, and are said to be short of urban traffic facilities. What's more, urban public transit, which is overwhelmingly based on conventional buses since long, has been in all-round recession in modal split since 1980. For instance, trips by public transit in total split decreased from 68% in 1980 to 50% in 1990 in the city of Shanghai. So before popular ownership of private automobiles, there exists a strong tendency that bicycles become a dominant traffic mode in town.

### Big city-regions tend to be road-based as well.

Since fifty years, all urban and rural settlements are accustomed to being organized without any short-range train service. Trains have never been defined as a traffic mode for urban or suburban function, according to division of roles

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98. Zhao, Hesheng. August 1999. City Planning & City Development. Southeast University Press. Nanjing, China. 124. A 1994 survey on 622 cities finds that road surface rate is 6.6%, per capita road surface is 6.6 m² or so, and road density is 6.2 km/km², much lower than a group of comparative average figures of same perimeters on some western cities, 25%, 30 m² and 20 km/km² respectively.
that different transportation means are assumed to play in the state. A prime function of railways in PRC is for transportation of freight, and additionally of long-distance (100 km or more) inter-city passengers. Small cities, towns and rural settlements in the city-regions are not served or planned to be served by railway systems. Or if there is any service in this regard, it is not convenient for residents to take use of it due to low frequency (e.g. one or two services in a day).

So far a majority of dwellers in a central city and in towns of neighboring counties live and work locally. Few of them commute between their working places in the central city and outlying residential places. There is no metropolitan area in the sense of Daily Urban System as seen in western countries, and the metropolitan area in China exists at present in a different sense.99

62% of Chinese cities have a mono-centric structure and usually high density in the city centers and along major city axises in the built-up areas. Most of the large cities are going in such a way that sooner or later they need rail-bound mass transit systems—a subway or an elevated Light Rail Transit (LRT). At present, subways or LRTs are in operation only in 4 cities. With 21.5 km elevated on viaduct, a 25-kilometer LRT line in Shanghai takes use of the original right-of-way of the former railway alignment, and thus is not a fast suburban train system (S-Bahn), a cheaper choice for the Chinese cities or city-regions.

Owing to divided traffic planning system between city planners, highway planners and railway planners, there is no integrated planning with regard to settlement and transportation development pattern in city-regions. Efforts by each sector focus on its own “traditionally set” goals at the moment when big-city regions are developing swiftly. Moreover, regarded as a burden and a foreign matter for city development, main railway stations in cities were pushed out of their former downtown locations, and rebuilt on the outskirts of the cities, a widespread phenomenon seen all over the country. Hundreds of thousands of new railways have been built every year recently, the basic railway function and the design concept still remain the same as in the old days. To establish the suburban train system as an innovative traffic mode between a central city and its potential satellite towns, there is still a long way to go.

99. Gu, Chaolin et al. 2000. Economic Globalization and Chinese Urban Development-Study on the Crossing-Century Development Strategies of the Chinese Cities. The Commercial Publishing House. Beijing. 111. In 1992, the Metropolitan Area of Beijing was demarcated on the basis of the percentage of monthly passengers who went from neighboring counties to the Beijing City. If in a month more than 50% of passengers from a county went to the Beijing city as their destinations, that county would be counted as part of the Metropolitan Area of Beijing.
2.4.5 Environmental Impacts

It is on the safe side to say that ecological and environmental degradation prevails.

Multitudinous rivers, lakes and streams are seriously polluted. Deterioration in water quality (e.g. groundwater pollution, lakes’ severe eutrophication, discharging of a great quantity of untreated household sewerage and industrial waste water into natural waters) brings about widespread crises in drinking water sources. Stream stops in the Yellow River, the second largest river in the PRC, as long as 683 km and lasting 136 days as recorded. The Yangtze River, the second largest river in the world, has been changed into a beginning stage of the second Yellow River. Water in half of about 200 tributary rivers in the Huaihe River Catchment is no longer fit for agricultural irrigation.

Air quality is bad in most of monitored cities due to high values in TSP and SO2, and serious NOx pollution in Chinese extra-large cities by vehicle emission. 30% of the PRC territory is facing acid rain, mostly in East China and in certain parts of North China.

Hazards resulted from improper handling and disposal of solid waste are increasing. Two thirds of all China's cities find themselves tightly besieged by garbage. Besides, about 95% of urban rubbish is moved to the countryside or dumped into rivers.

Widespread pollution due to TVEs is reported to be more difficult to be treated and "endangering agricultural ecological system". In simple words, provision of clean food is endangered. "The polluted surface of cultivated land is at present 15% over the total, producing 80 million tons of polluted grain yearly (the total grain production in the PRC was 329 million tons in 1990). If there would be no reinforced control and treatment, main agricultural and dairy products would be all polluted more or less, reaching mid-level of pollution according to indices of comprehensive health-care evaluation, and vegetables could go so bad that they would be unfit for eating any more." TVEs are widely engaged with mining (coal mines, quarries), metallurgical processing (e.g. sulphur-refining, gold-refining), chemical industries, paper-making etc.

As usually observed in other laws and regulations, the Environmental Protection Law stipulates environmental protection as a responsibility and duty to the basic Chinese territorial unit—the county level of people's government and its environmental protection bureau. Administrations at the communal level are not required to be responsible for environmental protection, and are supposed to be subject to the county level of management. Moreover, the environmental legislation does not ask for environmental protection plans specifically for a

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commune or township, whereas the county environmental protection plans, which focus on main cities or towns of county seat, can not substitute communal environmental plans themselves.

Under the circumstance, if the county level of institutions cannot fulfill their tasks properly, environmental problems is then an issue facing the county, not the commune. Thus, governmental, public and private corporations at the communal level in effect have free hands in this regard. Justified by doing good to communal economic development, they are not at all concerned with any environmental consequences from their doings. When the county as a regional entity takes the place of a communal government to exercise authority over local businesses, ecology and environment in the countryside is just like „meat on a person’s chopping block“. This is the basis which easily allows any ecological and environmental destruction to take place in the communes—a majority of the PRC territory. A large scale of environmental problems in the countryside in China are the best proofs.

2.5 Conclusions Concerning the Current Territorial Administrative and Planning System of the Lower Three Levels (Prefecture, County and Commune)

Positive Aspects

With regard to the prefecture  

A preliminary territorial administrative framework has been formed.  
The prefecture-level municipal government has played a role in leading the whole prefectural region, though not yet with full authorization. The Central Government has made a resolution that existing 72 conventional prefectures are about to be restructured as the prefecture-level municipalities.¹⁰² It seems that things are going in a way that prefectural regional administrative functions would be reinforced.

With regard to the county  
The county region benefits from the regional role of the county government.  
Under the current circumstance, the prefecture-level government is mainly a city governing body for the central city. So, the county’s regional role seems indispensable as the representative of the next higher level of regional government—the province.

With regard to the commune  
The communes as one layer of territorial administration are progressive.  
Although there are a great number of problems at the communal government, social, economic and scien-technological development, complexity and interconnectedness demand this level of administration. Its function can not be otherwise substituted, and rather be enhanced. The abolition of the communal governments in China is the least thing that should be done.

¹⁰² Pu, Xingzu et al. September 1999. The Political System of the PRC. Shanghai People’s Press. 395.
A unified leadership over those cities is necessary.

Those cities have been always put under control of one authoritative government though at too high level. That insures a city function as a whole. Medium-sized cities or beyond in the PRC have usually developed crossing communal boundaries. The prefecture-level "municipal" governments play an significant role so far in preventing those cities from developing unplanned.

Negative Aspects

With regard to the prefecture

„One Government, Two Roles“ compromises the prefecture-level government's greater function in regional administration.

As a regional government for the whole prefectural region and as the local government for the central city in the region, this player has to be more careful about the center and makes it prosperous like a show window. It easily takes advantage of its favorable position to get more resources for the city at the expense of the rest of the prefecture.

„One Government, Two Roles“ is not the sole way to make sure an efficacious leadership over the subordinate layers.

The provincial government does not possess such an executive structure to exercise its functions, but it does succeed in accomplishing its tasks as the provincial regional manager. Other means such as financial and tax adjustments could be more effective in the age of a market-oriented economy.

Regional planning for the whole prefecture lacks a comprehensive spatial planning instrument.

Each current instrument has its own fatal defect. Regional territory planning is in essence centralized economic planning, oriented towards construction projects. Urban system planning is too rough and is not a surface-covering instrument, proved to be ineffective in binding all kinds of authorities and in playing a role to coordinate spatial planning and sector planning. Besides, the urban system planning does not present an overall concept tackling with integrated urban-rural development. Town planning at this level is too much concerned with the central city in excessive detail, instead of a relatively rough planning involving big and small settlements, and does not produces a land-use plan that is legally binding. Consequently, spatial planning for the prefectural region is done only for selective planning areas around the cities, small towns and some big villages. No comprehensive and coordinated plan is figured out in association with a general settlement and transportation development concept.

With regard to the county

A strong county interferes with the functioning of both the prefecture and the commune.

The presence of a strong county administrative layer exerts fundamentally negative effects upon the prefectural and communal layers of administration. Because of its long history before the widespread use of modern transportation and tele-communication means, the county is so far always being thought of highly. What's more, a versatile county very much induces common people and experts as well to believe that a communal government is something
unnecessary. In effect, today's technologies make it possible that a strong prefectural layer could take its role with the assistance of a standing commissioner's office in the county and the enhanced communal administration.

The county is not a proper dimension for local administrative function.

As the basic local territorial administrative unit, the county is of such a size that is in most western countries treated rather as a region, not even as a sub-region. In a specification near an American county, a Chinese county is just too big to be an appropriate unit for local management, and might be rightly presumed to play a regional coordinative role.

Regional planning for the county region has similar problems as seen in the prefectural regional planning.

Two-layer of administrative structure facing the small city or county town obscures duties and responsibilities and trades off efficiency.

The co-existent two managers for one town or city lead to unclear-cut obligations and severe functional over-lapping between the county or county-level municipal government and the township government. This easily creates conflicts and duty evasions between them.

With regard to the commune

The communal government is not really authorized to fulfill its role in managing local community and is not working properly either.

In view of the current legal framework, the communal government is short of both competence and financial means, whereas the county is empowered as the last „reliable“ level of administration. In social and economic development planning, in distribution or re-distribution of social and economic resources, rural communities and peasants, 70% of the PRC citizens, do not benefit much from the existing administrative, financial and planning system. Stripped of proper obligations, duties and resources, communes have to try to find a way. When the county could not exercise its „local“ administrative functions over the whole county region, the communes would become easily out of control. This is the case that is normally observed and heard of. Under such circumstance, the communal administration is not just a matter of in-reliability. It rather turns into a matter that others must mind that the communal governmental workers would not do wrong. Indeed, a good communal government is the No 1 issue that must be addressed timely and properly.

There is a lack of comprehensive, surface-covering spatial planning for the local communities.

According to the existing planning competence, there is no communal or local planning as seen in the western context, and even no environmental protection planning for the communes is required. Following the same planning approaches as those for the higher levels, spatial planning only done for a limited planning area around the main settlement in a commune. All planning of the level can't be expected to safeguard sufficient, clean farmland and water for safe food production in view of current post-rural settlement expansion and diffuse pollution in the countryside.
With regard to urban-rural oriented administrative system

This system is not good for an integrated management in an inseparable society.

Cities are so much valued that they are put under direct care of the province-level, prefecture-level and county-level municipal governments, lost as local communities within the whole territorial administrative framework. The city planning system, as indicated by the name of the relevant law and its customary planning approaches, is strongly city-oriented, losing the ability to integrate urban and rural development as an entirety even at the nearest fringe of a city. The whole territorial administrative and planning framework has paralyzed its ability to take care of those three layers of territorial corporations each as an integrated society. The cities have to be regained as local communities, and an alternative frame must be sought.

Institutionalized urban-rural segregation hurts integrated development in local communities.

Apart from the designation of municipalities, efforts are also made to designate „urbanized” communes as townships. Different administrative procedures and power delegations are adopted. It seems that townships are given more autonomy than „rural” communes. A varied planning and building norm for rural settlements is also enacted. According to this, the houses of rural nature in a same local community would and could be planned and constructed differently from those of „urban” nature, which tends to lay a foundation for a lasting urban-rural physical difference.

With regard to managing medium-sized or bigger cities

The three-layer management structure for those cities leads to severe overlapping administrative functions and increases difficulties for coordination.

In view of a city’s contiguous built-up surface and its near suburban areas, three levels of governments are involved and two higher layers can impose substantial influence over city development and city functions. This is different from the western situation that is basically a matter of coordination and cooperation between communes in the metropolitan area. In the Chinese context, there is additionally a delicate problem regarding „power delegation” from the prefecture-level municipal government to the qu government in one functional city which demands a unified leadership.

With regard to the fragmented spatial planning

Each current planning instrument is oriented towards specialized subjects, no comprehensive, land-use oriented one which addresses an entire surface in one territorial administrative unit.

The existing planning instruments either concentrate on limited pieces of designated town or village planning areas or focus on selective subjects. There is no integrated land-use planning which covers a whole territory in a prefecture, a county or a commune and which is at the same time drawn up dealing with an overall concept including settlement and transportation development pattern, and coordinated with other sector plans.
3 Proposal of a Comprehensive Local and Regional Planning System

3.1 Main Concepts

3.1.1 Reforming Functional Division of Prefecture, County and Commune

Decision-making values, structures and processes is the foundation for the economic, social and ecological dimensions of sustainable development (see fig. 39). They are related with an institutional framework which defines, among other things, a clear-cut functional division in territorial administration in terms of regions and localities. In this regard, as shown in the last chapter, there are quite some problems with regard to Chinese territorial entities of the prefecture, the county and the commune as well as the city communities. To improve spatial planning setting, relevant territorial division is a fundamental issue that must be addressed, regardless of other aspects such as political ideology. To go toward sustainable development in the PRC, it is necessary to carry out a reform in territorial administrative framework.

The objective of the functional reform among the three lower levels of Chinese territorial entities is to clarify their organizational structures, rights and responsibilities. The following are four general goals to be achieved in the sustainability-oriented territorial administration.

• A really regional governing body with full power authorization for the entire prefectural corporation as the sub-provincial level.

• A county coordinating and supervising organ as the representative of the prefectural government for the county region.

• A local commune as the basic unit of territorial administration in full responsibilities and duties.

• A medium-sized or bigger city formed as one territorial entity under the unified leadership of one (true) municipal government, and restructured based upon the existing city's contiguous built-up area and surrounding communes and townships.

On the prefectural level

Modern transportation and telecommunication means allow the prefectural government to take over the traditional role of the county as the regional management institution, e.g. in charge of so-called macro-economic adjustment and control. The financial and taxation system ought to be restructured so as to guarantee that the prefecture and the commune each have their own fund. For poor communes and local capital-intensive infrastructure projects, special funds or joint funding mechanism would be necessary to keep regional equity. Moreover, the prefectural government should give up its role as
a "municipal" government, that is, it would no longer manage a city or town directly.

After the restructuring, the prefecture-level municipalities (dijishi) are recommended to be re-named as jun (a prefecture), by taking use of an ancient name for a territorial entity larger and also higher in rank than a county.

On the county level

We do not suggest to do away with the county as one layer of territorial administration. Rather, to reduce its conflicts with both the prefectural and communal layers, the county is to be adapted for modern coordinating and supervising functions. In the future, a commissioner's office and a county board could be set up respectively, where representatives of both the prefecture and communes would work together, discussing matters related with sub-regional development and looking after the implementation of resolutions and decisions to the interests of the county sub-region as a whole. Like this, the county institutions would be stripped of its role to take the place of any town government.

New management structure for a medium-sized or bigger city

Since the former prefecture-level "municipal" government is to function really as the prefecture government, a new municipal government must be formed and a new municipal jurisdiction boundary be organized. When there is either a medium-sized, large or extra-large city in the prefecture, a municipal territory is to be re-defined and put under the direct leadership of a "new" municipal or city government. This would be done according to varied geographical, economic, social and historical features, and fundamentally based upon the existing city's built-up area and surrounding communes, instead of treating qu or county as units of consideration. Generally speaking, the first to third circles of communes surrounding the built-up areas of the city could be taken into consideration, addressed case by case.

The fig. 40 shows an amalgamated jurisdiction territory of Kunming as an extra-large city community (in comparison with "old" structure in fig. 9). In the future, a unified municipal government will take care of this whole area, and there is no qu government any longer. In fact, qu division around the central city would disappear when the existing qu governments would be restructured into the new municipal governing organ as recommended.

On the communal level

When the county would be made to fade out as the Chinese basic unit of strong territorial administration, communes should be beefed up as the basic territorial entity, taking full charge of local management function, being authorized of real executive powers and staffed with capable personnel.

We suggest that, most of the power and financial means be delegated and most of the government officials be transferred from the county level to the communal level, once for all. That is the only way to activate the communes as
one important and grass-root governmental layer in China, which could not be otherwise attained or substituted by the counties. In the past twenty years, it was repeatedly required by the Chinese Government in several institutional reforms that some executive powers inappropriately taken by the county governments should be given back to the communal governments. Such a goal has never been achieved within the existing administrative framework.

After the restructuring, the existing communes and townships which would not be merged into one municipality, would stand on their own accord (see fig. 41). Their own communal governments would be in full duty and responsibility for local matters, subject to the leadership of a prefectural government aided by its commissioner’s offices in the counties. For sub-regional planning coordination and management, those communes could be attached to their neighboring counties according to geographical, topographical and infrastructure conditions, such as convenient railway service or road links, middle schools or hospitals.

**A new standard for designation of a „municipality“**

The ambiguous use of the term "municipality (shi)" lumping a large region with a city or town is recommended to be substituted by specific words such as special province, prefecture and county to avoid likely misunderstandings and unnecessary confusions. On deciding designation, it is recommended that a commune be separately considered and disconnected with the county layer. Based upon suggestions from the State Development Planning Commission, we suggest that, a commune in which there is a town with over 30,000 inhabitants and there is certain basic public and municipal infrastructure, can be named “municipality” (shi). Accordingly, that town can be called chengshi (city).

In accordance with the PRC’s other valid classification of cities and villages, a sequence of settlements in relation to population dimensions can thus be listed as in fig. 42.

**Communes and municipalities be set up equally as local communities**

With this proposed framework of territorial administration, all the cities which are at present put under the direct leadership of the province-level, the prefecture-level or the county-level should be brought down to the same communal level. Only greater municipalities with over 200,000 residents would be considered additionally as sub-regions in the light of spatial planning. The commune and municipality become independent entities and stand equally in face of the prefectural government or other higher ones. Although a municipal government of the same status may lead a city of different specifications, a municipality would only go in parallel with one community of a same jurisdiction boundary.

An exclusive explanation must be given here to a future supporting „district“ establishment in a greater municipality. To facilitate its city management, a municipality of a larger size, with more than 100,000 inhabitants in the city for instance, would need to organize subordinate districts with management
functions in civil affairs. But this rule would not apply for smaller cities of
30,000-100,000 inhabitants and communes.

Abolition of the designation of “township” (zhen)

All the communes should have equal political rights and responsibilities. The
current way to differentiate between common communes and give some
privileges to more „urbanized“ townships encourages negligence of agricultural
production. In effect, each commune, including the municipalities, is more or
less affected by an universal urbanization process, and must pay attention to
settlement construction and the 1st sector at the same time. After those
communes of high urbanization level have been sorted out as „municipalities“
according to the aforementioned suggestion, there is no need to tell again
townships and communes.

Additionally, it is proposed to use the word zhen in its original and traditional
meaning, meaning a kind of settlement. After the abolition of “township” (zhen)
as one specific entity of territorial administration appearing since the past fifty
years, we suggest that the settlement of the communal government seat, or a
bigger settlement with 3,000 inhabitants is to be called zhen (small town)
without any exception, so as to bring an end to the differentiation between
jizhen (market or bazaar town, considered as rural) and jianzhizhen (designated
town, considered as urban according to the PRC City Planning Law). That has
since long resulted in confusion and puzzle rather than help, if any, as well as
the adoption of differentiated building norms between „rural“ and „urban“
communities.

The same management procedure and building codes to all communes

Currently, if in a village or in a jizhen, all is going to be planned and built
according to village norms; if in a jianzhizhen, it is then compulsory to construct
according to city norms. In the future the building norms for houses in any
commune should be basically the same. As a matter of fact, all the communes
must be required to pay attention to agriculture on the one hand, and the
organization of their communities in a sustainability-oriented way on the other
hand, especially at the communal nucleus which may serve as the places where
the communal residents convene to live together. It may thus contribute to a
fundamental change of the existing chaotic settlement situation in China’s rural
communities. No discrimination should be made to any „rural“ commune, and
no commune should be left uncovered by the same planning and building
management procedure, as has happened in developed western countries.
Otherwise, if local construction in each community is not to be guided from
now on by the same building codes, so-called urban and rural difference, at
least in physical form, would keep on going in a long run in China.

An overview about the result of the functional reform

After the above-mentioned adjustments and amendments, a new hierarchy of
territorial administration can be seen as in fig. 43. Each city, town or rural
settlement is tailored to be under one direct governmental leadership. The
future governments are responsible either for a region or for a local community.
Like this, severe overlapping and great duty evasion potentialities in the existing
multi-layer administrative structure could be turned down to a low level as much as possible.

Changes regarding governmental bureaus and staff in the functional division reform

To achieve the above-mentioned reform, governmental restructuring as showed in fig. 44 are necessary, taking place only from the prefecture level downward.

As of medium-sized cities and bigger ones, certain small portions of the old prefecture-level "municipal" governmental authorities closely linked with municipal infrastructure administration would be kept as the backbone for new city government and its specialized authorities. The rest would be consolidated into the future prefectural institutions.

Most workers of the future city government and bureaus are supposed to come from the existing qu governments and their functional bureaus, mainly from the former urban qu. Some of those who work for the former suburban qu are to be assigned to work in the communes which would be left outside the "new" municipal areas.

As of the former county-level municipalities or counties, most of governmental workers on the county level are to be allocated to work in the existing communal governments. Only a limited number of them would remain for future county commissioner's office, or for future coordinating committee made up of representatives from communes and smaller municipalities.
3.1.2 Introducing Comprehensive Local and Regional Planning

After the aforementioned functional reforms in territorial administration, communes and municipalities could be endowed with equal rights and responsibilities for communal territorial development and planning according to one identical planning and building codes. Other territorial entities should be prevented from exercising the authority instead of local communities. This local planning is about to be the pillar of the proposed planning system in the PRC.

Ecological and environmental issues as well as suburbanization trends in some metropolises demand a coordinated development and planning beyond the communal level. When prefectures would be taken as the most important layer of regional planning which goes in accordance with territorial entities, the elaboration and implementation of the future regional plans could get an institutional base.

Supplemented by sub-regional guiding planning on the county level, prefectural guiding planning could play a role on a metropolitan scale, or in most cases on a larger-than-the-metropolitan-scale in the Chinese context, e.g. the kunming Prefecture of 21,600 km². Moreover, the prefectural guiding plans can be useful.

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103. Inspired by the concept and the structure of the Swiss cantonal guiding planning and local planning system.
Characteristics of the comprehensive planning system

The comprehensive local and regional planning ought to possess the following features:

- It is an integrated urban and rural planning. Both urban and rural needs in each territorial entity on the three levels are to be addressed simultaneously. A community, no matter whether it is a commune or a municipality, must be taken as an entirety. It should be avoided that a communal space as a whole be mechanically cut into two parts such as an urbanized component and the country, and even the urbanized part or the city is regarded highly and taken seriously while the countryside is subconsciously or on purpose being neglected. And no city planning or village planning would be separately elaborated. The existing planning system itself is a product of the urban-rural dividing policy, whose side-effects are to be remedied by an integrated system.

- It covers every piece of territorial surface in a prefecture, county, commune or municipality in varied detailedness by means of one plan on one level, no matter where the land is inside the town or in the countryside, already built-up or left unused. The existing planning approach, which at the end works out a planning area suggested for either urban or village construction or planning control whereas the rest of the space left unstudied, is not to be continued. Or the idea that planners take care of the designated planning area by city or village master planning while land administrators manage the land outside it by land utilization plan has to be reformed. The two plans with regard to land use must be combined as a whole, which simultaneously considers the conservation of cultivated land, biotops, historical and natural relics, and the development-oriented utilization of all land.

- It is a community development planning, not only dealing with physical planning issue but also addressing social, economic and cultural issues. Every commune or municipality is expected to draw its communal plan, that is, its community development plan, on matter whether it is thoroughly rural, highly urban or going inbetween. It would be not rational that only a more urbanized commune be asked to make its community development plan while an agriculturally-based one be not required to do so, or even subconsciously be judged as unnecessary to do so.

- It is a participative and cooperative planning. Public participation is by no means just an exhibition of city plans, which could be visited by the public. For future regional and sub-regional planning, it means an involvement of representatives of sub-regional corporations and communal governments, NGOs, different sectors as well as interests groups. At the communal level, it means that citizens or private parties are engaged in the formulating process of local comprehensive plans.

- It coordinates between all the sectorial plans concerning urban roads, country roads, ordinary highways and expressways, supplies and disposal for both the city and the countryside, railways and airports, etc. Infrastructure
demands by both urban and rural communities or inhabitants ought to be taken into account in the formulation of either regional plans or local plans in one planning process.

### 3.2 Alternative Legal Framework for Planning

#### 3.2.1 The Alternative Legal Setup for Territorial Administration and Spatial Planning

The functional reform with regard to territorial administration on the prefectural, county and communal levels and a corresponding local and regional planning system must be agreed and adopted by the State. The state is to define by law the following points:

- The restructured governmental establishments as shown in fig. 45 (a contrast with the existing governmental hierarchy)
- The spatial planning competences, tasks and institutions on different levels (see fig. 46). Above everything else, this alternative planning system is to be set up according to a spatial planning legislation which entails each prefecture, the county and the commune or municipality to make regional plans or local plans as symbiosis comprising departmental plans that may influence spatial development and uses (see fig. 47)
### Competence with regard to spatial planning and construction management
- Issuing laws, regulations, ordinances etc. with regard to spatial planning and spatial organization
- Issuing principles of spatial organization, specific provisions for development and old town conservation and renewal
- Coordinating state policies concerning social and economic development, land, traffic, housing, taxation etc.
- Drawing up and issuing state development concepts, sectoral plans of aviation, railways and expressways etc.
- Announcing and adopting special regional policies in view of differences among parts of the country (social, economic and ecological features)
- Adopting and implementing special policies and measures aiming at promotion of urbanization mainly in metropolitan regions of (extra-) large cities and small towns at the same time
- Approving prefectoral guiding plans, and zoning plans of cities of provincial capital or of cities with over 1 million inhabitants

### Planning laws, regulations, resolutions, development concepts and plans
- Laws, Regulations, ordinances etc. with regard to spatial planning procedure and construction management steps, potential planning contents and norms, building codes, eg. land-use and map sign ordinances
- Principles of spatial organization, specific provisions for development and old town conservation and renewal
- State policies concerning social and economic development, land, traffic, housing, taxation etc.
- State development concepts, sectoral plans of aviation, railways and expressways etc.
- Regional policies in view of differences among parts of the country (social, economic and ecological features), eg. toward poor and mountainous provinces
- Policies and measurements promoting urbanization in metropolitan regions of (extra-) large cities, eg. supporting development of public mass transit means and corresponding settlement patterns

### Responsible Authorities
- State Development Planning Commission
- Ministry of Construction, Ministry of Land and Resources, Ministry of Water Conservancy, Ministry of Agriculture
- Ministry of Energy, Ministry of Communication (water navigation and highways), Ministry of Railways, State Administration of Radio, Telecommunication Industry (telecommunication)
- State Environmental Protection Administration, State Forestry Administration

### At the National Level
<table>
<thead>
<tr>
<th>Competence</th>
<th>Planning laws</th>
<th>Responsible Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- arterial planning regulations, principles and decisions</td>
<td>- arterial planning regulations</td>
<td>- State Development Planning Commission</td>
</tr>
<tr>
<td>- drawing up and issuance of national planning and development programs</td>
<td>- drawing up and issuance of national planning and development programs</td>
<td>- Ministry of Construction</td>
</tr>
<tr>
<td>- announcing and adopting special national plans, policies and regulations</td>
<td>- announcing and adopting special national plans, policies and regulations</td>
<td>- Ministry of Water Conservancy</td>
</tr>
<tr>
<td>- final approval of provincial plans of smaller cities, urban areas</td>
<td>- final approval of provincial plans of smaller cities, urban areas</td>
<td>- Ministry of Agriculture</td>
</tr>
<tr>
<td>- examining and approving prefectoral planning plans</td>
<td>- examining and approving prefectoral planning plans</td>
<td>- Ministry of Energy</td>
</tr>
</tbody>
</table>

### At the Provincial Level
<table>
<thead>
<tr>
<th>Competence</th>
<th>Planning laws</th>
<th>Responsible Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- forecasting provincial requirements of each province according to national laws, regulations etc.</td>
<td>- forecasting provincial requirements of each province according to national laws, regulations etc.</td>
<td>- Provincial Development Planning Commission, Provincial Ministry of Construction, Ministry of Land and Resources, Ministry of Water Conservancy, Ministry of Agriculture, Ministry of Communication, Ministry of Environmental Protection, Ministry of Forestry, Electricity Generation &amp; Supply, Railway Bureau, Aviation Administration, Telecommunication Bureau etc.</td>
</tr>
<tr>
<td>- drawing up provincial development programs and its development concepts as well as provincial sectoral plans of aviation, railway and expressways etc.</td>
<td>- drawing up provincial development programs and its development concepts as well as provincial sectoral plans of aviation, railway and expressways etc.</td>
<td>- Ministry of Energy</td>
</tr>
<tr>
<td>- announcing and adopting specific provincial development policies</td>
<td>- announcing and adopting specific provincial development policies</td>
<td>- Ministry of Communication</td>
</tr>
<tr>
<td>- final approval of provincial plans of smaller cities and communes, sub-prefectoral guiding plans</td>
<td>- final approval of provincial plans of smaller cities and communes, sub-prefectoral guiding plans</td>
<td>- Ministry of Forestry</td>
</tr>
<tr>
<td>- examination and approving prefectoral planning plans</td>
<td>- examination and approving prefectoral planning plans</td>
<td>- Electricity Generation &amp; Supply</td>
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### At the Prefectural Level
<table>
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<tr>
<th>Competence</th>
<th>Planning laws</th>
<th>Responsible Authorities</th>
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</thead>
<tbody>
<tr>
<td>- forecasting prefectoral planning regulations according to conditions of each prefecture according to national and provincial laws, regulations etc.</td>
<td>- forecasting prefectoral planning regulations according to conditions of each prefecture according to national and provincial laws, regulations etc.</td>
<td>- Prefectural Authority of Planning &amp; Construction, Ministry of Land and Resources, Ministry of Water Conservancy, Ministry of Agriculture, Ministry of Communication, Ministry of Environmental Protection, Ministry of Forestry, Electricity Generation &amp; Supply, Telecommunication Bureau etc.</td>
</tr>
<tr>
<td>- drawing up and issuing prefectoral planning plans and responsible for carrying them out</td>
<td>- drawing up and issuing prefectoral planning plans and responsible for carrying them out</td>
<td>- Prefectural Authority of Planning &amp; Construction</td>
</tr>
<tr>
<td>- announcing and adopting specific prefectoral development policies and subsidy programs</td>
<td>- announcing and adopting specific prefectoral development policies and subsidy programs</td>
<td>- Ministry of Energy</td>
</tr>
<tr>
<td>- giving attention to implementing daily urban system in the metropolitan areas defined by the state</td>
<td>- giving attention to implementing daily urban system in the metropolitan areas defined by the state</td>
<td>- Ministry of Communication</td>
</tr>
<tr>
<td>- examining and approving sub-prefectoral guiding plans and local guiding plans, local zoning plans etc.</td>
<td>- examining and approving sub-prefectoral guiding plans and local guiding plans, local zoning plans etc.</td>
<td>- Ministry of Forestry</td>
</tr>
<tr>
<td>- legalizing all approved prefectoral and sub-prefectoral guiding plans as prefectoral regulations</td>
<td>- legalizing all approved prefectoral and sub-prefectoral guiding plans as prefectoral regulations</td>
<td>- Electricity Generation &amp; Supply</td>
</tr>
<tr>
<td>- responsible for giving planning and building permits to those projects in special zones or outside building zones as well as any trans-communal or trans-municipal infrastructure projects</td>
<td>- responsible for giving planning and building permits to those projects in special zones or outside building zones as well as any trans-communal or trans-municipal infrastructure projects</td>
<td>- Telecommunication Bureau</td>
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</table>

### At the Urban Level
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<tr>
<th>Competence</th>
<th>Planning laws</th>
<th>Responsible Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- setting up sub-prefectoral development concepts for a county or a greater municipality</td>
<td>- setting up sub-prefectoral development concepts for a county or a greater municipality</td>
<td>- As greater municipalities as sub-regions Municipal Authority of Planning &amp; Construction, Ministry of Water Conservancy, Ministry of Agriculture, Ministry of Urban &amp; Rural Communication, Ministry of Environmental Protection</td>
</tr>
<tr>
<td>- elaborating sub-prefectoral guiding plans and zoning plans, issuing them and responsible for their execution or supervising their implementation by local communities</td>
<td>- elaborating sub-prefectoral guiding plans and zoning plans, issuing them and responsible for their execution or supervising their implementation by local communities</td>
<td>- As counties as sub-regions, the County Commissioner's Office and the County Coordination Committee</td>
</tr>
<tr>
<td>- organizing specific development programs within the whole or part of the sub-prefectoral region, and helping assure inter-communal cooperation and get it go on.</td>
<td>- organizing specific development programs within the whole or part of the sub-prefectoral region, and helping assure inter-communal cooperation and get it go on.</td>
<td>- Relevant authorities of the prefectoral level</td>
</tr>
<tr>
<td>- examining local plans and applications for building projects outside building zones before forwarding them to the prefecture</td>
<td>- examining local plans and applications for building projects outside building zones before forwarding them to the prefecture</td>
<td>- Bureau of Electricity Supply, Bureau of Telecommunication etc.</td>
</tr>
</tbody>
</table>

### At the Local Level
<table>
<thead>
<tr>
<th>Competence</th>
<th>Planning laws</th>
<th>Responsible Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- drawing up socio development guidelines or concepts</td>
<td>- drawing up socio development guidelines or concepts</td>
<td>- As greater municipalities as sub-regions Municipal Authority of Planning &amp; Construction, Ministry of Water Conservancy, Ministry of Agriculture, Ministry of Urban &amp; Rural Communication, Ministry of Environmental Protection</td>
</tr>
<tr>
<td>- elaborating local guiding plans and zoning plans, legalizing and issuing them, and responsible for their implementation</td>
<td>- elaborating local guiding plans and zoning plans, legalizing and issuing them, and responsible for their implementation</td>
<td>- As counties as sub-regions, the County Commissioner's Office and the County Coordination Committee</td>
</tr>
<tr>
<td>- making up quarter plans, building frontage lines plans and development plans for new building zones</td>
<td>- making up quarter plans, building frontage lines plans and development plans for new building zones</td>
<td>- Bureau of Electricity Supply, Bureau of Telecommunication etc.</td>
</tr>
<tr>
<td>- giving planning and building permits to those which are in accordance with approved local plans and relevant norms (eg. energy saving, environmental protection, fire-prevention) in the normal building zones</td>
<td>- giving planning and building permits to those which are in accordance with approved local plans and relevant norms (eg. energy saving, environmental protection, fire-prevention) in the normal building zones</td>
<td>- As greater municipalities as sub-regions Municipal Authority of Planning &amp; Construction, Ministry of Water Conservancy, Ministry of Agriculture, Ministry of Urban &amp; Rural Communication, Ministry of Environmental Protection</td>
</tr>
</tbody>
</table>

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Fig. 46. Each Level of Planning Competence, Laws, Regulations and Plans etc., and Responsible Authorities
Implementing Comprehensive Planning in the People’s Republic of China

Prefectural planning, city & village planning and land utilization planning instruments. The corresponding land management authorities in the future are to be in charge of cadastral registry only. Accordingly, at the national level, a spatial coordination all the other sectoral plans of the same level which are contained in blocks of red color.

2. Apart from those plans or programs either at the national or the provincial level mentioned here in this table, other necessary preconditions can be referred to planning laws, regulations, resolutions, development concepts and plans in the figure regarding planning competence & responsible authorities in the previous part. Besides, though out-of-date, territory plans and land utilization programs can still be employed.

3. From the prefectural level down to other lower levels, it is suggested that a new authority of planning & construction is to take over spatial planning duties which are divided among former development planning agencies.

5. Fundamental principles of national spatial organization
6. Inventories in the fields of natural conservation, environmental protection, landscape protection, ancient cultural relics or sites of built heritage

Notes: 1. Every two items of all kinds of plans or programs are to be co-ordinated one another horizontally. Prefectural Planning Guidance and Sub-Prefectural Planning Guidance should be so comprehensive that they integrate and coordinate all the other sectoral plans of the same level which are contained in blocks of red color.

The second part is a planning & construction ordinance, binding to individual land owners and land users, consist of a use plan (in text and map 1: 150,000 - 1: 20,000) and building regulations. The third part is (sectoral) master plans concerning traffic (eg. individual traffic, public transit), supply and disposal facilities etc, eg. a master plan of water resources & water supply, a master plan of highways, streets & roads, a master plan of sewage treatment facilities & sewers, a master plan of natural disasters prevention (against floods, fire, earthquake, landslides, mudslides, etc.). The fourth part is (sectoral) master plans, development plans or programs etc for a certain part of a community. In a prior to a planning and building permit, detailed plans and design schemes are also obligatory.

Fig. 47. The New Relationships between Comprehensive Regional & Local Planning and Other Planning (cf. fig. 19)
3.2.2 Adaptation in National Planning and Provinces’ Planning

Briefly addressed in the paper, some first ideas with regard to adaptation at those two levels are given in fig. 46 and the following additional points.

First priority for authorities in charge of national planning and provinces’ planning is to set a sound legal and administrative framework and make clear rules, policies and development concepts for others to play, instead of trying to manage and approve individual land-use applications and development projects directly. Though out-of-date somehow, territory plans and land utilization plans, better to be re-named as social & economic development or land conservation strategies and programs, still could be kept for corresponding ministries or commissions at both levels to tell their lower levels of general guidelines regarding respective subjects.

Secondly, this author considers a regional planning system based upon prefectures as the basic tool to coordinate spatial organization and development not only just downward or horizontally, but also upward. By means of this instrument, a national spatial planning agency and provinces’ spatial planning agencies can look into whether national or provincial development concepts and guidelines be implemented and consolidated into the prefectural guiding plans.

Thirdly, in view of severe weakness of comprehensive planning capability at the provincial, sub-provincial and local levels, the national government needs to organize strong financial support to planning efforts at all those lower levels, for planning staff, maps and data base, and application of geographic information system etc.

In addition, under fast changing international and domestic political, economic and social circumstances, authorities at the both levels are expected to update relevant norms, policies and strategies, e.g. „controlling“ growth of large cities, developing metropolitan regions of large cities in response to challenges due to economic globalization and intensified international competition.

3.2.3 Regional Planning-the Prefectural Guiding Planning

The reform in territorial administration ensures an additional prefectural governing bodies of regional nature, in addition to the provincial government. The prefectural government plays a role to coordinate and regulate between local communities through all the means they have, including financial subsidies to either agricultural production or community facilities. Therefore, they are in full power and with all means like provincial governments, strong enough to safeguard a wide and somehow balanced development over the prefectural region. As such, interests of poor communities, for instance those in the mountain regions would be truly considered at the prefectural level.

Subsequently, a two-tier comprehensive regional planning system can be conceived, comprised of a prefectural guiding plan for the entire prefecture and a sub-prefectural guiding plan for counties and a greater municipality in the
prefecture. The prefectural guiding plans are legally binding only to governments, all kinds of authorities and political parties, not to individual property owners. Apart from this, the prefectural government or its functional planning authority is to grant a planning and building permit for any construction outside the building zones and inside a historic district according to the local zoning plans.

In the paper, what are discussed and suggested concerning spatial planning for prefecture-level municipalities apply in principle to all this level of entities as sub-provincial regions. Some adaptations are anticipated for special cases. In particular, sub-prefectural planning regions are to be defined for future prefectural guiding planning when some of this level of entities are unusually big in territory surface. When the territorial surface of a prefecture is smaller than the adopted specification, no additional sub-prefectural planning region is needed, except a county as a sub-region.

**An introduction about the prefectural guiding planning**

According to the suggested planning framework, the prefecture is to draw up a prefectural guiding plan. Prior to elaboration of this plan, the prefecture needs to study the prefecture's economic, social, environmental and spatial conditions, and then figure out a development strategic plan on the basis of the upper levels of development policies, concepts, plans or programs. This strategic plan contains an economic & social development strategic study which sets forth goals regarding social & economic development and ecological & environmental conservation and improvement. And it contains a spatial development strategic study which suggests a settlement development concept and its corresponding infrastructure needs, for instance, a settlement and transportation pattern which may enable a decentralized but concentrated development mode for the metropolitan area in the prefecture, or a settlement pattern for rural communities which may promote and ensure at least one small town for one commune as the site for concentrated urbanization in the future.

Then, the prefectural guiding plan is to define three kinds of priority areas: an area of ecological and environmental priority, an area of urbanization priority and an area of agricultural priority (or a rural area not for urbanization promotion). The first kind of area is the area where measures must be taken to protect ecology and environment, e.g. all kinds of environmental conservation zones, or measures to repair and improve environmental conditions, e.g. planting trees or technical methods against soil erosion, mud-rock flow or land slide. The second is the area where settlements, 2nd sectors and services are to be promoted. The third is the area where the first sector is of greater importance, other industries must be restricted, and the prefectural government must give subsidies for the communities in the area.

**Goals of the prefectural guiding planning**

Guiding planning is integrated planning which addresses specifically the interlinks between economic, social and environmental issues and basically aims at the coordination of the different land-use requirements on the prefectural level. The prefectural guiding plans have the following goals:
- Spatially in a scale which differs from that of local planning, they will address economic development space, urban and rural settlement as well as ecological and environmental room in view of the whole prefectural territory.

- They make up a general development concept concerning all the communities in the region, and show an overall view about the future spatial development which organizes various demands and functions of the regional importance, and coordinates their influences and consequences, particularly in terms of interactions between transportation modes and settlement pattern in the prefecture or in the county.

- They harmonize and balance any spatially influential activity or construction that may affect or change land-use or settlement, for example, building of expressways or highways and possible consequences in the whole region.

- They are going to be legally binding to the governments and authorities of all hierarchies, but not to the individuals. Still, the people and the investors can get assess and be informed about planned uses or specific development situation in a certain area.

Apart from those, the prefectural guiding planning can be further a coordinating tool with regard to the upper levels of development concepts or programs and sector plans, guiding plans of the neighboring prefectures, the sub-regional guiding plans and local zoning plans in the prefecture.

**Components of the guiding plan**

A prefectural guiding plan is made up of following parts, which are coordinated one another and presented both in text and map (1: 100,000 - 1: 50,000):

1) A settlement and landscape plan;

2) A traffic plan (concerning railways, highways and expressways, roads, individual traffic, public transit, parking, goods transportation, air transportation and navigation etc.);

3) A supply and disposal plan (concerning water, energy, telecommunication, sewage or waste water, solid waste, industrial residue, etc.);

4) A plan of public buildings and facilities (governmental administration, healthcare, education, recreation and sport, etc.).

Those should be followed by an additional document which assembles supporting materials such as some specific studies on certain subjects like cultivated land, natural environment, statistics, concepts, conflict analysis, etc. When necessary, other documents can be added for explanations regarding administrative or legal aspects.

**Use zones for the whole prefectural surface**

Land uses of all the land in the Prefecture are to be defined according to the classification that follows.

1. Settlement.

1) Rural settlement area; 2) Urban settlement area; 3) Area of isolated industrial and mining enterprises and their residences; 4) Development area; 5) Central
2. Landscape

1) Agricultural land-use; 2) Essential cropland; 3) Forest or woods; 4) Recreation area; 4) Natural conservation area; 5) Biotops; 6) Biotops that need to be rehabilitated; 7) Landscape protection area (including archeological sites); 8) Area of tourism development; 9) Area that must be kept free from development (buffer zones etc.); 10) Water or groundwater conservation zones; 11) Mining area of raw materials; 12) Area where unpolluting waste heaps; 13) Landfill(s); 14) Area where environmental rehabilitation is needed (e.g. treatment of soil erosion, mud-rock flow, land slide etc.); 15) Desertificated or sandification area (deserts, or other barren land which can not be classified as deserts).

Prefectural planning institution and planning process

A prefectural agency of planning and construction is to be organized with comprehensive functions. Employees include professionals in the fields of planning, environmental science, civil engineering, economics, agriculture, forestry, transportation engineering, and railway engineering etc. The civil servants, planners and engineers at the existing prefecture-level planning authority and planning & design institute could be assigned either to the future prefectural planning agency or to the future (local) city planning authority.

Besides the standing planning agency, an ad hoc organization is to be formed for the elaboration of a prefectural guiding plan. It is to be consist of prefectural leaders, representatives from sub-regional responsible authorities and local communities as well as economic circles and interests groups, other prefectural authorities, officials from provincial planning authorities, and institutions of aviation, railway, electricity, telecommunication etc. which are not subject to leadership of either a provincial government or a prefectural government.

An example of regional development concept

For some big prefectures like the Kunming prefecture (21,600 km$^2$), it might be difficult to formulate a guiding plan for the whole prefecture at the very beginning. One alternative might be at first the making of a guiding plan for the greater region of the central city, e.g. the Great Kunming Area (9,654 km$^2$) which covers a metropolitan area that could be imagined for Kunming to develop in foreseeable decades. To go in another way instead of a mono-concentric expansion of the extra-big city of Kunming, which is inevitable within the existing framework, an integrated metropolitan development Vision Scenario for the Greater Kunming Area (GKA) is suggested by the ORL Institute (see fig. 48)\textsuperscript{104}, which sets forth a decentralized but concentrated urban development pattern in the region. The GKA had 1071 km$^2$ flat land and 3.2 million inhabitants in 1997. Such a visionary development form would help bring the mono-concentric urban sprawl of the Kunming city to an end. Realization of the concept needs to be supported by short-range passenger train service, other means of public transportation and land-use control measures.

Fig. 48. Vision Metropolitan Kunming
Furthermore, this case study is used hereby to show that the future urbanized population is assumed to be relatively "concentrated" in the developed metropolitan area around an extra-large city, not just in the individual large city itself. By means of GIS modelling, the ORL research shows that the monocentric urban sprawl will take 391 km² of flat and fertile cultivated land, whereas the Vision Scenario would consume only 270 km² in the same period of time, 120 km² less than by uncontrolled development pattern. With such a development pattern, the GKA can be assumed to embrace 10 million, one quarter of the Yunnan province's population, rather than the projected 6.9 million.

To achieve the sensible Vision Scenario development, the land-use control measures are exactly a regional guiding plan in which a land-use plan is contained, and a local zoning plan for the whole Kunming city territory.

3.2.4 Sub-Regional Planning-the Sub-Prefectural Guiding Planning

After restructuring, sub-regional planning is to be carried out for counties and greater municipalities.

The sub-prefectural guiding planning aims to attain certain goals of the sub-regional importance. A sub-prefectural guiding plan constitutes an integral part of a comprehensive regional planning system, together with a prefectural guiding plan. A sub-regional guiding plan physically covers the whole sub-region of either a county or a greater municipality of over 200,000 inhabitants, produce results in the form of text and maps (1: 50,000 - 1: 25,000). Those plans are basically similar to those of the prefectural guiding plans but in more detail, and they shall not conflict with the prefectural guiding plans. In addition, as of specific subjects, special zoning plans in text and map (1: 25,000 - 1: 15,000) can be worked out to address issues such as cultivated land conservation, soil erosion treatment, land slide, etc. in the whole region.

The sub-regional guiding plans are legally binding to governments and all kinds of authorities.

Due to difference between a county and a greater municipality, varied goals or approaches are envisioned for either of them.

Counties as sub-regions

As one intermediate level between the prefectural planning and the local planning, this sub-prefectural planning process shall guarantee the cooperation between the communities in the county region. Goals of sub-regional planning for counties are as follows.

1. Seeking sustainable social, economic and environmental development in the sub-region, assuring minimum basis of safe agricultural production, conservation of cultivated land and balance between different sectors;

2. Clarifying a settlement pattern according to development potentials and strategies for the entire sub-region and different parts of the region considering resources, economic capacity and industrial structure; arranging infrastructure needs in parallel with overall settlement development;

3. Promoting an integrated urban-rural development in terms of all communities in the whole sub-region;

4. Managing environmental and ecological issues concerning the county sub-region, such as conservation of some areas (forest or woods, parks, open space or green space), water and groundwater protection;

5. Achieving a rational distribution of large-scale services, such as markets, hotels, shopping supper centers, hospitals, middle schools and sports facilities in certain settlements of regional importance;


Different from the existing planning system, the whole county is to be zoned in view of conservation and development needs.

Greater municipalities as sub-regions

What is most significant regarding planning for those city of medium-size or beyond, is that a general plan made for all the settlements including small towns and dozens of villages in this sub-region, not just for the central city. Social and economic issues facing both city residents and farmers inside the city or in outlying areas must be taken into consideration at the same time. The same applies with regard to infrastructure and environment.

Secondly, planning effort must be made to prevent the entire city territory from being built-up contiguously. A system of parks and open space ought to be secured. Some cultivated land shall also be conserved, which may function as green and open space and buffer zones between different parts of the city.

3.2.5 Local Comprehensive Planning

No matter whether it is urban or rural, big or small, each municipality or commune is to be required to carry out local comprehensive planning which addresses economic, social, and demographic issues. The goals of a local comprehensive planning might include issues of health, public safety, circulation, provision of services and facilities, fiscal health, economic development, environmental protection and so on in the community. 105

In the Chinese context, the comprehensive local planning is different from the existing town or village master planning in the following aspects:

- The local comprehensive plan physically covers the whole jurisdiction territory of each community. After the reformed territorial division, there is no need to designate the so-called „town or village planning areas“. Each piece of land in a community is to be covered by one integrated land use

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3. Proposal of a Comprehensive Local and Regional Planning

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plan, instead of the current two separated land use plans—one city/town/village land-use plan for the designated town or village planning area, figured out by a city/rural planning organ, and one general land utilization plan, produced by a land administrative authority;

• The comprehensive local planning treats a community as an entirety, and addresses needs of both urban and rural elements in one same commune or municipality, instead of the existing systematic urban–rural segregation which even ignores rural settlements in the planning area (like the present Kunming city master plan shown in fig. 25);

• As an important document, a zoning and building ordinance is to be produced, which is to be legalized through legal procedures, instead of the current city land-use plan in a town master plan with only symbolic implication;

• The local planning addresses infrastructure needs for all different parts of the community, instead of suggesting only infrastructure such as city road network which forgets rural communication and transportation demands even within the so-called city planning area.

• As one basic principle, a communal government is to give planning or building permits for those projects located within building zones. Outside building zones, only a prefectural government or its authorized functional bureau is entitled to grant a planning or building permission to any construction project.

The comprehensive planning process is completed with quarter plans, development plans or programs for a certain part or parts of a community, as well as a planning and building application and permission procedure. Prior to a planning and building permit, detailed plans and design schemes are also obligatory. Those, however, can be considered in a way as the steps to implement local plans and thus are not to be further discussed. This paper focuses on the steps which lead to formulating a comprehensive local plan.

A comprehensive planning process

The comprehensive planning process can be divided five major steps. 106

1. A research phase, including data-gathering (e.g. land-use inventory), population forecasting, economic base study, traffic flow study, infrastructure study (concerning water supply, provision of sewer service etc.), recreation studies and fiscal studies;

2. Clarification of community goals and objectives. The research helps the formation of a realistic view of the options open to the community and contribute to formulate a limited number of goals which have a definite meaning, do not contradict one another, and represent an implementable consensus of the community’s populace.

3. A period of plan formulation. It can be divided into three steps: first draft, consolidation, and adjustment of the plan.

4. A period of plan implementation. When it is finalized, the plan must be approved by some authorities of corresponding competence. Then implementation starts.

5. A period of review and revision.

Planning institutions
In large or small communities, the plan is suggested to be drawn up by an ad hoc institution which is specifically comprised of communal leaders, people's congress representatives, representatives of industrial circles, interests groups and citizens as well as officials and professional workers at the community's planning-related authorities. After the formulation of the plan, such an ad hoc institution is to be dissolved. For the large communities, there is generally a planning agency which is to be in charge of implementation. As of smaller communes, it is suggested that a comprehensive commission of land, planning and development affairs is to be responsible for implementation, advised by a planning consultative institution (e.g. the Kunming Prefectural Planning and Design Institute) under a regular contract agreement.

Local planning instruments
Following comprehensive planning instruments are recommended for consideration and adoption.

- Establishing basic principles or a development concept for a community

- A communal guiding plan (in text and map 1: 25,000 - 1: 5,000), which is only compulsory to governments and public authorities

- A communal zoning and construction ordinance, legally binding to individual land owners and land users, consist of a use plan (in text and map 1: 25,000 - 1: 2,000, or for settlement 1: 2,000-1: 15,000 and for landscape 1: 5,000-1: 25,000) and building regulations.

- Sector plans concerning traffic (e.g. individual traffic, public transit), supply and disposal facilities, e.g. a master plan of water resources or water supply, a master plan of communication and transportation (including public transit and highways, streets or roads for urban and rural settlements), a master plan of sewage treatment facilities and sewers, a master plan of natural disasters prevention (against floods, fire, earthquake, land slides, mud-rock flow etc.).

- Capital facilities planning. On basis of zoning planning and sector planning, capital facilities planning and public investment schemes can be worked out so that capital projects can go in accordance with land development projects.

A classification of land uses for local zoning
At first, some land uses would have been determined by regional and sub-regional guiding plans, such as forest or woods, essential cropland conservation zones and zones that must be kept free from development. Then at the local level, the rest of a communal territory is to be classified into following types: 1) forest or woods; 2) grassland; 3) garden plots; 4) waters; 5) prime or secondary
cropland zones; 6) building zones: the building zones can be divided into residential zones, zones for public utilities or municipal facilities, zones of industries or handcrafts, warehouses, mixed zones, center zones, etc.; 7) zones that must be kept free from development; 8) recreation zones; 9) conservation zones (e.g. natural conservation zones, landscape or built heritage conservation zones, conservation zones for architectures of local feature, conservation zones of archeological relics site, of geological importance, of groundwater); 10) reserved zones; 11) ecological or environmental improvement zones or zones of natural disaster protection and prevention (e.g. against flood, land slide, soil erosion, mud-rock flow and the like); 12) other zones (e.g. deserts, barren areas, mining zones, land-fills).

Public Participation

With regard to public participation, an ad hoc organization provides participatory chances open to the community's citizens and groups who have a stake in the outcome of the planning process. Those who have a hand in shaping a plan are more likely to support its implementation than those who have not. Within the existing planning framework, a city or village's master plan or other plans in general, is just a product of a team of professionals, officials and local leaders. Public participation is at present limited to a plans' exhibition which is open to the public and thus functions as a means to inform people that a "magnificent" plan as such has been drafted. In rural communities, there are most probably no such exhibitions for peasants. If they would not involved in the planning process, it would be extremely difficult to realize what had been envisioned for rural settlement developments, such as some farmers living in remote villages which are far and few distributed in the countryside as well as those TVEs are required to be relocated and concentrated to some villages or towns at a central location of the community. It would be easier for the communal government to achieve a sustainable development goal by reaching a consensus with villagers in advance at the planning phase, than just by means of trying to command the villagers to do this or that according to a plan which is made through no public discussion.

Implementing Local Agenda 21 on the right scale in the true sense of „local”

The reforming in territorial administration and spatial planning system provides a basis framework in which the „real” local level is identified and charged with duties and responsibilities for sustainability issues and Local Agenda 21. The provincial, prefectural, and county levels, which are referred to as „local” in relation to the national level in the PRC, are actually „regional”. With the recommended proper competences can the true local layer, that is, the communal layer, finally respond to the local sustainable development requirements, draw up local agendas and take actions on the communal in China. Otherwise, the local or communal sustainability issues cannot be really addressed on the appropriate level.

Conceptual applications of comprehensive local planning according to types of communities

Through the comprehensive regional process, communes and municipalities can be in general sorted into two categories: these inside the designated areas for urbanization promotion or those outside.
Type I – A commune outside the designated areas of urbanization promotion

Such a commune is the so-called rural community, mainly depended on revenues from agricultural sector. It is typically located outside the metropolitan area. The overall communal population is growing naturally or actually decreasing due to the fact that surplus labors need to seek employment elsewhere. The community development is mainly internally oriented. Its communal planning concept could take following points into consideration:

1. Housing: Each family in the commune has the right to keep the existing houses. From now on, any family of new generation would be allowed to build its house or buy an apartment in the central village of the community or other selected 2 or 3 bigger villages. This gradually leads to a concentrated settlement development, and at the same time farmers still have their „old“ homes near the fields where some of them need to keep on working. We do not recommend to relocate families in small villages to large ones once for all, without special reasons such as ecological destruction or natural disaster prevention. Researchers have also warned that any proposal to merge villages must be made very cautiously.107

2. A center village or villages: Non-agricultural sectors are to be promoted in those places. Local zoning plan prepares corresponding land-uses and building regulations for the industrial and service development as well as for housing, schools, health clinics, public utilities and others. One most important rule is that communal residence family should not charge additional fee for setting up its new home than that is needed at its original village. The central settlements should be designed in such a form that they would consume prime farmland as little ad possible and grow compactly. It would be a realistic goal to attain one or two settlements of concentration for population and industrial development in one existing commune. And it might be too ambitious trying to get industrial development and other functions gathered in one location for several communes or even for a whole county region.

3. Farmland conservation: Long-term agricultural exploitation has reached such a degree that land fit for farming has been basically cultivated when the population tripled in the past fifty years. Further cultivation should be restricted to the areas classified nowadays as „barren land“, otherwise implying further intrusion into natural space. These potential areas must be indicated in the communal zoning plan. The agricultural land uses of good quality are to be zoned for long-term conservation, and not to be used for buildings under no circumstances. When the existing and potential farmland is fixed, the planned settlement development should only take up the land of low quality, „barren land“ or as less cropland as possible.

4. Non-agricultural development, environmental pollution and surplus labor: It can be assessed according to the cultivated land in the whole commune how

many farmers are essential and necessary labor force for farming. Surplus farmers according to families could be given advantageous conditions to move to central villages or establish small businesses there, or they should be free to leave for jobs elsewhere if they could find jobs and register there. Industrial development in the commune is allowed only within the industrial zones according to the local zoning plan, or at the specific mining locations for stone, coal or other ores. The communal government supervises that mining would not become detrimental to local landscape and amenities of the countryside. Industrial sectors must pay for the internal pollution treatment facilities, and the communal government must be charged with the responsibility for environmental pollution issues, taking care of establishing municipal infrastructure, such as sewers and sewerage treatment system, according to the local plan and capital facilities planning. Non-agricultural development should be carefully directed so that it will not destroy preconditions for adequate and safe food production.

5. Natural space and land improvement: The local zoning plan should fix natural space such as forest (woodland), wetland, waters, biotops, and also point out the areas where natural space needs to be reclaimed, and where soil erosion needs to be dealt with, by means of reforestation or by engineering measures for example. Because of deforestation and unchecked mining of the past dozens of years, recovering the nature’s functions and land improvement are important in terms of ecological betterment. Those are meaningful not only to local natural environment and natural habitats, but also to flood prevention in the downstream watershed of the large rivers. These natural spaces may include natural protection zones, or the area of outstanding natural beauty or geological landscape, where a certain degree of tourism development is allowed.

6. Social aspects: When the communal financial budget is constitutionally put up, certain revenue from local taxes should be directed to put up social security, health-care, education and vocational training system for the rural community. Special subsidizing funds should be organized by combining national, provincial and prefectural contributions for the agriculturally based communities, in particular for those in the mountain regions. Such a mechanism could mitigate social division on the one hand, and improve the qualification and eligibility of the existing majority of Chinese population in the countryside on the other hand, allowing farmers some preparation in face of social and economic shift. This would, in addition, benefit to stabilizing Chinese society and keeping the desperate poor from going in for things that might be harmful to the society (e.g. crime) or the environment (e.g. deforestation, digging any herb roots, hunting rare animals and so on for cash).

Type II – A municipality outside the designated areas of urbanization promotion Self-contained, such a community is the center of tertiary services and industries for a fairly large rural area, typically situated in the former county region. The town used to be a county seat or is usually a city with good transportation connections and many commercial, trading and service functions. Apart from its natural population growth, immigrants become
common. In the market-oriented economy, a place as such is attractive to small, private enterprises. Besides those mentioned in Type I, attention is to be paid to the following aspects:

1. The city structure and building zones: A concentrated settlement pattern is also to be achieved in this type, aimed at farmland conservation. According to prefectural and county guiding plans as well as regional traffic plans, a town form must be well designed to adapt to the potential growth of the city. To facilitate its public traffic links with the neighboring communities, the railway station and bus stations as well as parking lots need to be placed one near the other. The town center must be made easily accessible to users of both public transit means and cars. Through traffic is to be directed away from the center area. Freight exchange facilities and warehouses are also to be situated in favor of town landscape, amenities and with ease for drivers to living infrastructure. Industrial zones are to be distanced from the town center and residential areas. As such, building zones are to be well arranged not to take too much prime farmland around the city.

2. Old town conservation: The elements of the ancient town are expected to be maintained, regained and integrated into appropriate functions of today, if the community had the legacy of the past in this regard. The former county towns usually can trace out ancient built heritage. These relics, including both temples and vernacular houses, must be considered in the formulation of a sustainable city structure.

3. Green spaces and recreational areas: First of all, natural spaces must be secured if there is any in the municipal territory. Though not far away from the nature, green spaces and recreational areas must be fixed in the local zoning ordinance, in forms such as public parks, a combination of temples and a park, or agricultural land-uses. While a compact development is advocated to increase efficient use of land, a small city should not be built up continuously. When a local zoning plan is legalized, land uses for land lots in the whole community is ascertained. Legally, in view of the present and the future, the possibly permitted uses for land lots are clear. Nobody or no authority could change any land use at will, except through another regular local planning process. Thus, the legal status of each land parcel in the long run is not subject to any arbitrary change. It is clear for the community that the land at certain locations must be kept as prime cropland, green space or open space and so on.

4. Infrastructure provision and the protection of waters: As a rule, the municipal government should promote the building development in the community to go in accordance with the provision of infrastructure. With the aid of the local zoning plan, implications of land-use decisions in most cases can be predictable to both the government and investors. The government would not grant land-use permits to land lots which are far away from sewers and water supply lines, or, a permit in such a case could be given only under the requirement that a development fee which charges investors twice as much as where there is enough infrastructure. This encourages the investor to reconsider the economic advantages or choose another appropriate site. Meanwhile this ensures no
additional communal expenditure to provide with municipal facilities and utilities. Like this, complete infrastructure, including drainage and sewer system, may operate when buildings are delivered for use. Water pollution is thus hopefully avoidable.

Type III – A commune or municipality inside the designated areas of urbanization promotion

These communes or municipalities would mostly exist in the metropolitan area of a central city that is at least a medium-sized city in China. First of all, the comprehensive local planning for them needs to take into account their roles and functions in the city region, according to their varied locations, land surface and land qualities, positions in the existing and planned regional transportation network, development potentials and so on. For instance, some municipalities would play roles as satellite towns of the central city, carrying some functions which are unfit to site in the central city, such as manufacturing industries. Fast, convenient, frequent and safe public transit service between the new towns and the central city is recommended, while planning efforts are to be made to assure those towns self-reliant to a great degree. Some communes would also host new settlement development. In general, mixed land-use is to be advocated. Apart from those, the basic principles mentioned in Type I and Type II should be followed at the same time.

Type IV – A greater municipality as the central city in the metropolitan area

After the suggested territorial restructuring, such a municipality may contain the above-mentioned types. Fundamentally, apart from those points mentioned for each type respectively, additional considerations in view of the entire municipality ought to be given as follows:

The center of the designated area of urbanization promotion

The municipality with a medium-sized city or a larger one is suggested to be the center where urbanization is to be promoted in a large scale, complemented with other secondary cities, satellite towns and villages in the metropolitan area. Besides the population influx, the city is also foreseen to be the economic center where public administrations and important service facilities concentrate. To keep a continuously prosperous town center, mixed land-use for residence and the third sector ought to be promoted.

Guiding the growth structure instead of trying to restrict the growth scale

Dozens of years of practice proves that no central city has ever developed according to the maximum population figure that is defined by the city master plans. It would be better to direct the efforts to pursue or guide the city development structure instead of restricting the scale of the city. No matter whether there would a big or small population increase, a robust growth structure for the city is to be assured by both a local zoning ordinance and capital facilities plans matched with development schemes of the municipal government.

Promoting public transportation

Regulation rules are to be set up for the siting of businesses, recreational facilities and residential estates. Good public transit would be a prerequisite for these developments, especially for every
considerable extension on the outskirts of the city. Companies or amenities which attract a large number of visitors would be located near the public transport trunk lines or nodes. Only companies or logistic services that depend heavily on road-based goods transportation would be allowed to site near expressways.

**Farmland conservation, green spaces and open areas between built-up areas instead of city sprawl**

Farmland conservation is a state policy which requires both urbanized and rural communities to abide by. Even for a central city, the local zoning plan within a certain planning term (10-15 years) should delimit prime cropland, which can be at the same time functioning as green spaces and open spaces or some of which could be adapted further as recreation areas, e.g. parks, forest. Governments, land owners, land users or investors could be made clear that land at certain locations is promoted for what function and in which intensity, or some land is definitely to be kept from being built-up. The government would not give permission to any development in non-building zones. Nonetheless, the changes in the local zoning plan can be made through regular planning and legal procedures.

By means of the legalized local zoning ordinance, the physical development of the community could be improved hopefully, which provides inhabitants obtain access to the nature in the areas near their residences. This might contribute to prevent cities from extending contiguously with almost no land left unbuilt-up. In particular, this might succeed in maintaining reserved green buffers at the fringe of large cities from being swallowed by all kinds of so far uncontrollable legal or “illegal” land occupation.

**Urban-rural integrated planning on the municipal territory and social cohesion**

The city's master plan would not only plan for the urbanized sections of the municipality and assume that existing villages are something that is expected to be demolished thoroughly. Rather, like the old town of the city, villages are to be considered also as parts of historical development in or around the existing built-up area of the city. Socially, the problems confronting the farmer residents in the municipal territory are a city's problems. Rural parts of the community cannot be disconnected with a general planning process regarding the future development of the municipality. Physically, in one way or the other, the villages need to be incorporated into the city's future fabric as component elements. Infrastructure demands for the villagers ought to be taken into account in the same planning process. In particular, roads or traffic facilities in general must be planned, addressing the mobility need of all residents in the whole municipal jurisdiction surface.
3.3 Impact Assessment of the Proposed Planning System

3.3.1 Social Impacts

The power delegation and the establishment of a strong governing body of pure regional nature for a prefecture-region

An additional regional government could be brought about on the prefectural level, one level below the provincial government. Thus, those powers and rights, suggested by many scholars to be taken over by the province, could be vested with the prefecture. After the functional division in territorial administrative framework, for instance, people would not need come to the capital city of a province for a land-use application and approval procedure. At most, this should be done within a prefecture.

Safeguarding regional sustainable development on varied scales and local sustainability

In addition, the national government and provincial governments could spare more attention to coordinating development issues regarding even larger regions. The prefectural governments are in charge of sustainable development issues of smaller prefectural regions (3,000-20,000 km$^2$). Meanwhile, the municipal and communal entities would be enabled to be responsible for local sustainability. Like this, sustainable development in terms of regions and localities can be really on the ground with a sound institutional framework, not just a realm of fancy.

The communes are strengthened and become indispensable to combat problems in the countryside.

As the basic communities which find themselves in serious social, economic and environmental problems, more means must be given to them with obligations and duties clarified. When rules of play are regulated, competences of the communal governing bodies are clear, and financial revenues are ensured, there is then a foundation for those communities and the people there to find concrete solutions and ways out, to build up their own homes and public facilities.

Social cohesion

When one government in either a municipality or a commune is responsible for all the inhabitants in one community and can not shirk or shift responsibility to a lower level any more, can that systematic urban-rural segregation system be finally dismantled. A local comprehensive planning process addresses needs of both the urbanized and those who are not. When the prefectural government and the county commissioner's office assume their regional and sub-regional roles, they are both ready to carry out an overall care of urban and rural parts in their respective jurisdiction territory. Thus, the suggested system would be a framework good for urban-rural integrated development.

The reform would enable the communal government work to realize an envisioned concentration of population and factories in a best adapted place in the community.

So far, villages in a rural community are diffuse everywhere. The villagers live there for generations. One can not just order or command a farmers family to move to another location, on matter how good an idea it is to get rural population to get-together at one or two villages, so as to promote town development and none-agricultural sectors. It is difficult to reach such a goal if there would be no recognition, agreement and cooperation from the villagers involved. A reformed working framework would set the communal government in a well-furnished position to explain, persuade and help those who would be
relocated. A participatory planning process would make all parties involved to know exactly what needed to be done and reach a consensus in advance. Such a proceeding would be of great help to realize the vision of rural population and industrial concentration. A realistic goal in this aspect is that one community would successfully realize one such concentration place, instead of trying to do such a thing at a time for two or three communities simultaneously.

### 3.3.2 Economic Impacts

**Good regional & local planning and governance help build up city-regions to be the nodes between the world economy and China’s economy**

Although there is a big economic difference in different parts of the PRC in terms of a total strength, big city-regions could take a lead in joining global economy. At present, China’s eastern coastal part is rich and active in domestic and international economy, while there is a vast poverty-stricken wester part and a transitional middle part between the two extremes. However, there are 81 big cities which spread around the country. And soon China’s membership in the World Trade Organization (WTO) will effect, different parts of China will face a same challenge. Before anything else could be prepared, improved regional & local planning and governance may result in dozens of prosperous city-regions, which may become connecting points between different parts of China and the world in an era of economic globalization.

**Safeguarding agriculture**

Nowadays, no matter whether it is in a commune or a county, priority is given to industrialization and the TVEs, a great many cultivated land is taken for non-agricultural businesses, and even safe food production for a gigantic Chinese population is not secured. The proposed territorial and planning system could end the urban-rural segregated administration, make a differentiation between agriculturally-based communities and those more none-agriculture oriented by subsidies or other means. Negligence of agriculture could be expectably relieved, spreading of pollution in the countryside be properly checked and precious but scarce cultivated land be well saved. Those are basic for China to be able to produce adequate and safe food for its people, which is an issue beyond the ability of the world grain market.

**Rural centers of economic prosperity and national economic progress.**

The reformed system basically admits one reality, that is, diffuse development of settlement and industry in the countryside in the PRC cannot be changed overnight or in a short term by force, and a minimum goal is to achieve concentration of population and factories in each community as one basic unit. Not every community but most of the communes may at least form one center where not only 2nd sectors but also 3rd sectors may come into being. To a certain degree this could create some centers of economic prosperity in the existing countryside. More farmers could become consumers, which in general would push the national economy to develop further and in a greater scale.

**Save the investment costs**

The suggested coordinated settlement and transportation development pattern through the comprehensive planning could reduce investment costs for transportation infrastructure (modeling results for Kunming: -2.8 billion US$). Moreover, the potential savings from the urban infrastructure for the city-regions than that for a scattered low-density urbanization throughout the
3.3.3 Impacts on Land-uses

The dispersal of industries in the countryside and mono-concentric city expansion are the main reasons of loss of cultivated land in the PRC. How settlements would develop further, and how the land would be used effectively or kept free from construction lie in a critical place regarding land consumption. The decentralized but concentrated development of settlements in a metropolitan region, as seen in Hong Kong, is the way in which China needs to go, which will lead to saving of land. The comprehensive planning and development management can support the realization of that innovative settlement structure in a prefectural region. That may lead to a saving of about 3.5 million hectares of farmland, a surface bigger than all the existing built-up areas of the cities and towns.109

Regional and local land-use control by three different levels secures buffer zones between built-up areas.

Villages, towns and big cities in highly urbanized areas turn into a complete piece, leaving no open space or green space as buffer zones between settlements. This phenomena is more common along most highways in economic active areas. To reverse the situation, enhanced regional and local land-use control by the prefectural guiding planning, the county sub-regional guiding planning and the local zoning ordinance is the only way to safeguard land uses for public open or green spaces.

3.3.4 Impacts on Transportation

High-density in a Chinese city requires a good public transportation service, in particular a high-capacity of public transportation mode in a large city. Current dense suburbanization in a close range of the big city denies a widespread use of individual cars either. There are two ways to go in front of most Chinese cities-a popular use of cars or public transits. The need to advocate the latter has been recognized. The prefectural guiding planning and comprehensive local planning are instruments devised to convey the concepts in this aspect and function to realize them.

Railways would be promoted as a metropolitan transit means.

To achieve the envisioned poly-centric settlement structure for decentralized but concentrated development in a metropolitan area, rail-bounded mass transit means as the back-bone for a regional public transportation system must be promoted. The first choice is a fast short-range suburban train service system, which is cheaper than subways and Light Rail Transit (LRT) on viaduct.

Implementing Comprehensive Planning in the People's Republic of China

A regional public transit system in accordance with poly-centric concentration of population decreases car dependency.

If there would be a prefectural regional planning and development advocacy, it would be possible to see an appearing of satellite towns and functional metropolitan areas. But, that will not turn true if nothing changes, because big cities are forecasted to keep on sprawling contiguously at least in the next ten years. A governmental encouragement to prefectural regional development is necessary, and can be done by means of promoting a reliant, efficient and convenient regional public transit system in parallel with poly-centric concentration of population in the metropolitan region. That could contribute greatly to decrease car dependency, consumption of fossil fuel and subsequent air pollution. Otherwise, China could easily become a second car-based America. The total reduction of future car-based transportation can be at about 30%.

Improvement of farmers’ circulation and transportation

Urban-rural segregation regards highly urban transportation and ignores rural transportation. It is then natural that public transit is conceived mainly to serve urban residents so far. It is not hard to imagine what a difficult situation is facing farmers. In a city or its nearby area, they may take use of those “urban public transportation network”. In wide rural areas, some smart peasants find the markets and provide regular service for their fellowmen.

The new planning and management system is in a position to plan, design and organize one unified traffic network. And local and regional public transit service should connect all settlement centers, including those in a commune. Like this, comprehensive transportation planning, infrastructure provision and integrated service for all parts of the prefectural region and of a community may improve traffic conditions for farmers.

Improvement of regional ecological environment.

The majority of population in the countryside and of low industrialization result in a great deal of improperly but highly cultivated land on ecological fragile places such as steep mountain slopes, high-plateaus and river or lake shores. Unless there is a decrease of population in those areas can such land not be systematically organized for re-plantation of trees or grasses. People would only leave those areas of harsh ecological and environmental conditions when there were chances for them in small rural centers or in a metropolitan area of a prosperous large city.

3.3.5 Environmental Impacts

A prefectural efforts in soil erosion treatment, reforestation etc. can lead to improvement of regional ecological environment. By gaining financial aid from the national and provincial governments and by its own capacity, the prefectural governing bodies can do a lot in this regard. This differs greatly from the existing situation that there are no regional interests in those things beyond the local ability but far away from the national or provincial sight.

Concentration of population in the metropolitan region and compact towns makes it possible to return improperly but highly cultivated land for reforestation.

Nearby access to the nature for the city residents

When the green and open spaces are secured, residents in the cities and city-regions would still find places to reach the nature nearby.

Chaotic and dirty city fringes might vanish.

One city with three levels of governments or two levels of governments and urban-rural segregation make chaotic and dirty city fringes and “villages in
4 Conclusions and Suggestions

4.1 Conclusions

Spatial development and organizational issues appear at all five territorial administrative levels and need to be dealt with from differently levels. Inspired by the saying "think globally, act locally", this paper focuses on an extent of smaller regions and localities, and presents only a rough discussion over the planning issues for greater regions that are bigger than the prefectural regions.

Some adaptation in spatial planning instruments at the national and provincial levels is imagined as necessary with the advent of times. Among others, the recommended regional and sub-regional planning tools can be a fundamental and useful aid to make regional coordination for inter-prefectural, intra-provincial or inter-provincial regions. This paper views a prefectural (regional) guiding planning as a basic instrument for higher levels of spatial planning coordination.

At the lower three levels, the existing framework is also mostly respected and limited adjustments concerning the prefectural, county and communal administration are suggested, in order to set up a workable administrative background for a comprehensive regional and local planning system. The commune and municipality are thought to be local planning entities, instead of the existing counties. In particular, communes are essential social cells which deserve appropriate means and competencies in territorial administration and planning, and should not be treated just as tax-paying machines. Counties are suggested to fade out as a core layer of government and to play a role of supervision and coordination in a future system. To obtain one more layer of governing bodies of pure regional nature, the prefecture is suggested to be enhanced to take care of the prefecture (3,000-20,000 km²) as an entirety and to be in a position to fairly treat different communities in the prefecture. The prefectural government can be viewed as one for a "small province", that is, a representative of the national government for a smaller region. This
Restructuring would enable delegation of powers to communal governing bodies in a well-tailored logical basis.

The suggested comprehensive planning system is composed mainly of a prefectural guiding planning process, a sub-regional guiding planning process and a local zoning planning process. Equipped with sound planning instruments and competencies, all three lower levels of governments may work to achieve sustainable development goals in their respective jurisdiction boundary.

To implement those ideas, a precondition is to update legal foundation of planning framework and necessary reforming in relevant parts of the executive system.

The impacts of the suggested administrative and planning system are appraised. The prefectural and local governing bodies would make great efforts to attain improvements in regional and local ecology and environment, to achieve envisioned settlement structure, a poly-concentration of population in the prefectural region, and its corresponding transportation pattern, a regional and local public transit system with high efficiency, reliability and convenience. The problems which those lower levels of governments have used to feel indifferent to them would become obligations and duties respectively, such as spreading of pollution in the countryside versus communal governments, soil erosion of a large area versus the prefecture-level governments. The adverse effects due to urban-rural segregation could be relieved socially, economically, and environmentally.

## 4.2 Suggestions

It would be ideal to implement the proposal as a complete package of administrative reforms and planning adaptations at the same time. More often than not, there is a long process for people to realize what are problems and what are appropriate remedies. Although they are made based upon analysis of existing situations in face of territorial administration and spatial organization, this series of proposals are devised to tackle those issues in a systematic way. Most probable is a step-by-step implementation, but each action taken at a time ought to go in accordance with one aspect of the proposal package. This paper may envisage steps in the institutional reform as following.

**Step one.** A prefecture-level municipal governing body is to be separated from the municipal affairs of the central city in the prefecture and be established as the prefectural government. Simultaneously, a transitional municipal government must take the places left by the leaving institutions. Future financial means and personnel assignments have to be organized in such a way that future governing bodies would be financially strong and equipped with able staff.

**Step two.** Existing *qu* (administrative district) governments and their functional bureaus are to be streamed into the transitional municipal government and its functional authorities. A municipal jurisdiction territory is to be defined...
Step three. On one hand, new county regions are to be organized mainly because remote communes ought to be incorporated into existing counties as future units of sub-prefectural coordination. On the other hand, the existing county government has to phase out from its direct involvement in the local affairs of the major city or town in the county. A few county leaders and civil servants need to keep working for the small municipal government or the township government of the city or town of county seat, for which a “new” jurisdiction territory is to be re-defined carefully.

Step four. The county governing bodies are to be decommissioned. Most of county workers are to be assigned to work in the existing communes outside the town of county seat. And at the same time those communes would gain powers and means to care for their own communities, which are now vested with the counties. After decommissioning, there would be two institutions envisioned for the county level of administration. One is a county commissioners’ office as the delegation institution of the prefectural level, responsible for supervision and coordination at the sub-prefectural level on behalf of the prefectural governing bodies. The other is a committee composed of representatives of all communities, with rotating chairmanship.

There must be many other adjustments with regard to legislative system, judicial system and other aspects of executive system in accordance with those changes at the prefectural, county and communal level. This paper is concerned mainly with those above-mentioned, which are closely related with administration from a planning and construction perspective.

Generally speaking, it might be quite out of the question to carry out any experiment with regard to territorial administration. Within the existing framework, experiments concerning planning instruments could be conducted at all those three levels without corresponding territorial administrative reforms, although implementation of the suggested guiding plans and local plans would remain an open question. However, since the founding of the PRC, its territorial administration has undergone several changes all the time, as you can see from the evolution of the kunming Prefecture-level Municipality.

There are possible chances for experiments regarding different aspects of the proposal package. The best choice and also a wise one is to make an experiment for all reforming aspects in one prefecture-level municipality under the direct leadership of the national government. If results would prove positive, a full scale of implementation might proceed in a province, aided with
the experience obtained in the trial prefecture. And then administrative reforms may take place across the country.

Before a wished administrative framework would be installed, efforts can be made to draft a prefectural guiding plan, a county guiding plan, a local zoning plan for a greater municipality, and/or a local zoning plan for a smaller municipality and a commune respectively.

- Although an official jurisdiction boundary for a "new" Kunming municipality is not yet formally anchored, a local zoning plan could be made for the suggested 530 km² of the Kunming city area. Up to now, land-uses for the land surrounding the city are mostly open. So, an experimental local zoning plan is necessary and helpful to make clear what could be feasible and environmental-friendly land-uses for all 530 km² of land.

- A sub-prefectural guiding plan could be worked out as one component of planning experiments for an existing county region. A sensible settlement pattern which may allow surplus rural labor force come to run businesses, or to be employed, and settle down in towns or big villages in the county lies in the core of planning issues. This county guiding planning test has to explore some experiences on how to take full use of land-use control means from the county sub-regional perspective.

- The last part of the test is a local zoning plan for a commune and a smaller municipality respectively. As the future basic unit of territorial administration and planning, a commune first of all has to learn fresh experience how to consider itself as an entirety and a community which must take some obligations and responsibilities rather than only get certain unimagined power. Next, we need get to know from their perspective what is a sensible, feasible and practical development form regarding their own community. Then, it is possible to figure out a local zoning plan that is implementable, not just some ideal, grand ideas that are to be shown only on paper, as those so far formulated for the rural communities.

When those experiments could be fulfilled, some first-hand information would be gathered. Until then, we may see, there is still how long a way for a sustainability-oriented system regarding territorial administration and planning to go in the PRC in the future.

Revision and new concept? At least, planning effort in the trial formulation of plans according to the proposals package in the paper can provide a foundation to review whether the concepts behind those "new" planning instruments are suitable to the reality and whether practice in the planning process shows certain encouraging results. A revision and updating procedure of those concepts is foreseen, which would help improve practicability of the suggested system.
5 Abbreviations

GDP: Gross Domestic Production
GNP: Gross National Production
LRT: Light Rail Transit
MoC: Ministry of Construction of the PRC
MoLR: Ministry of Land and Resources of the PRC
NEPA: National Environmental Protection Agency of the PRC
NGOs: None-Government Organizations
NPC: National People's Congress (the national legislative organ of the PRC)
NSB: National Statistical Bureau
PRC: People's Republic of China
RSE: Report on the State of the Environment of the PRC
SC: State Council (the national executive organ of the PRC)
SDPC: State Development Planning Commission of the PRC
SLA: State Land Administration of the PRC, which is substituted by the MoLS in 1998
TVEs: Township and Village Enterprises
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