

***Territory + High-Speed Rail - (Agriculture-Zones + Eco-Parks + -Seashores)***

## **Proposal for Strategic Planning of China's Coastal Region Starting with No-build Zones**

**Stefan Rau**

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# *HYPOTHESIS*



Proposal for "Meta-Regional-Planning":  
The Coast of China  
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***WE NEED TO DEVELOP A KIND OF “META-REGIONAL PLANNING”  
FOR AREAS OF GLOBAL POPULATION CONCENTRATION HOT-SPOTS***

*IF NOT:*

*LOCAL INTEREST TO DEVELOP WILL MAKE URBAN AND SUBURBAN  
GROWTH SPRAWL CONTINUOUSLY BETWEEN CITIES AND TOWNS*

*LAND RESOURCES FOR FARMING, NATURE, FORESTS, SEAHORES  
ETC. WILL LIKELY BE IGNORED REGARDLESS*

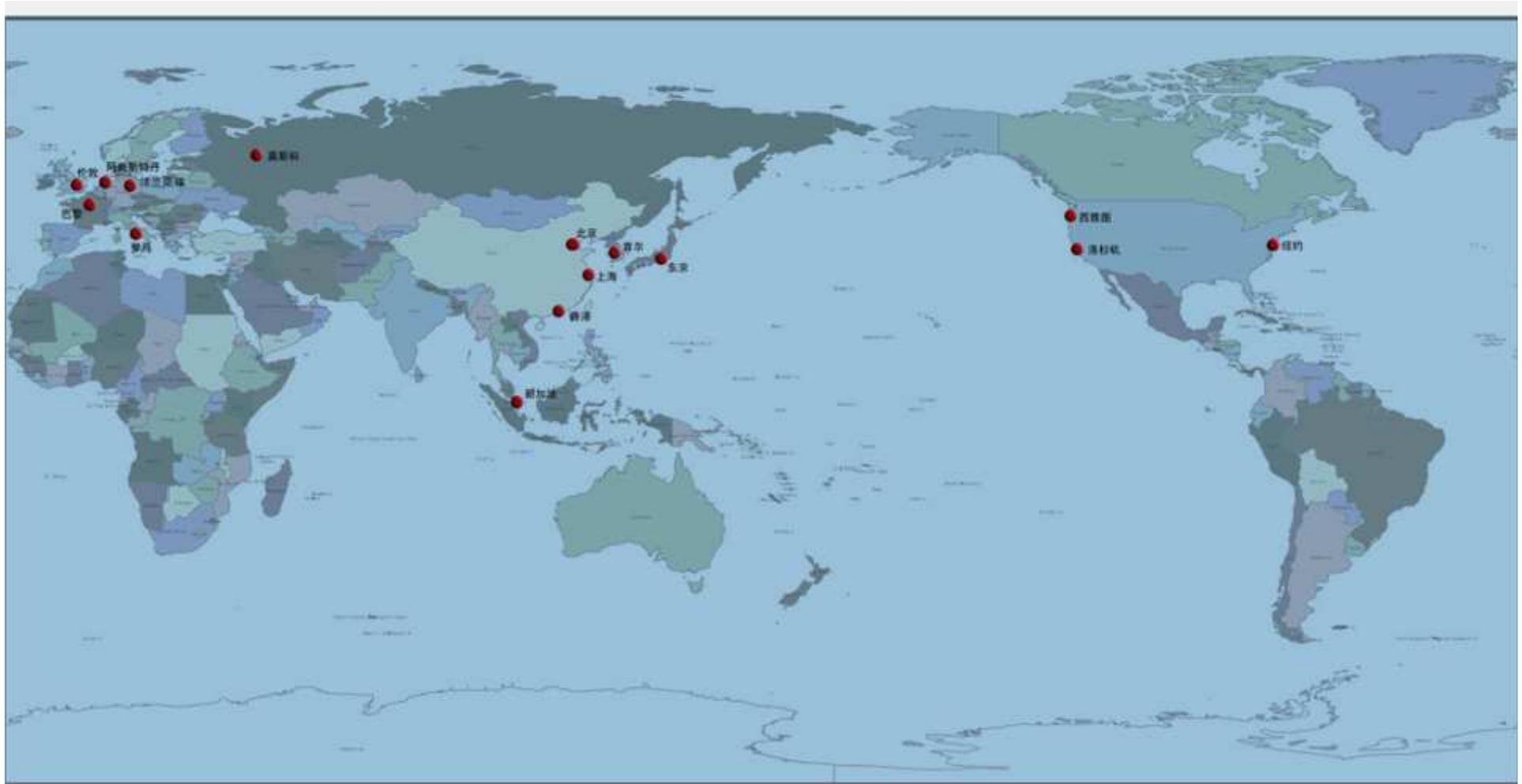
# TRENDS



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## Distribution of the World's Cities in 2020



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## ***ECONOMIC UPGRADING & DIFFERENTIATION OF LOCATIONS: “PULLS AND PUSHES” OF THE TRANSFORMING NEW ECONOMY***

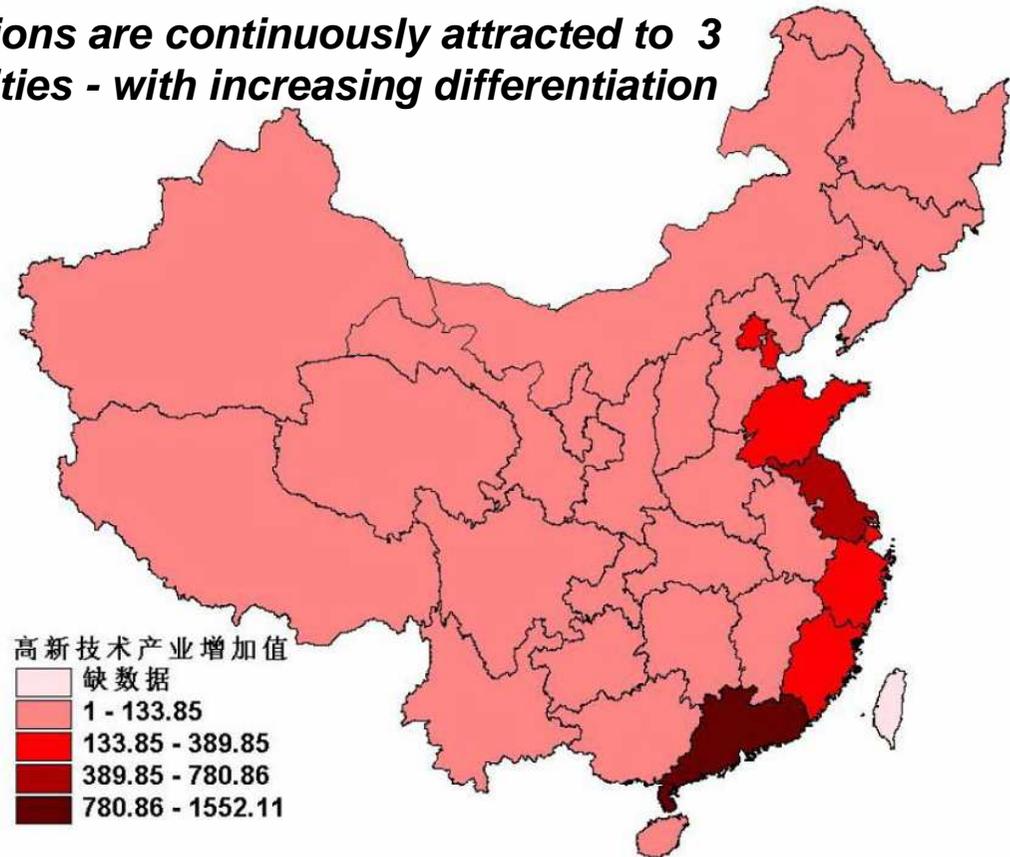
### ***1. Labor force movements are adapting to opportunities & rising real estate prices***

- a) Population migration from the rural areas into towns and cities both blue & white collar workers is ongoing trend in China.
- b) Many are coming to 3 Megalopolises in two steps: 1. move to next town or city, gain experience or study and 2. move to megalopolises for job opportunities
- c) *Second-tier* cities within the 3 Megalopolises are now becoming attractive for young white collar professionals
- d) 3 Megalopolises are experiencing difficulties retaining their migrant blue-collar workforce from the provinces

## ***ECONOMIC UPGRADING & DIFFERENTIATION OF LOCATIONS: “PULLS AND PUSHES” OF THE TRANSFORMING NEW ECONOMY***

### ***2. Companies & international corporations are continuously attracted to 3 megalopolises - emerging global cities - with increasing differentiation***

- a) FIRE industries to prime CBD locations, export-oriented companies into the SEZ's, High-Tech companies into prime industrial parks – but it's not quite always by the books...
- b) Relocation of companies within Megalopolises to lower-cost locations but still within reach of a functioning supply-chain
- c) Factories are moving inland from east to west and from south to north-west following the workforce and lower costs of production
- d) In the process of the 3 Megalopolises advancing to global cities, they will continue to attract residents and businesses from within China as well as from abroad



Schematic diagram of the spatial difference of high-tech development  
From: National Urban System Plan 2005 - 2020

## ***ECONOMIC UPGRADING & DIFFERENTIATION OF LOCATIONS: “PULLS AND PUSHES” OF THE TRANSFORMING NEW ECONOMY***

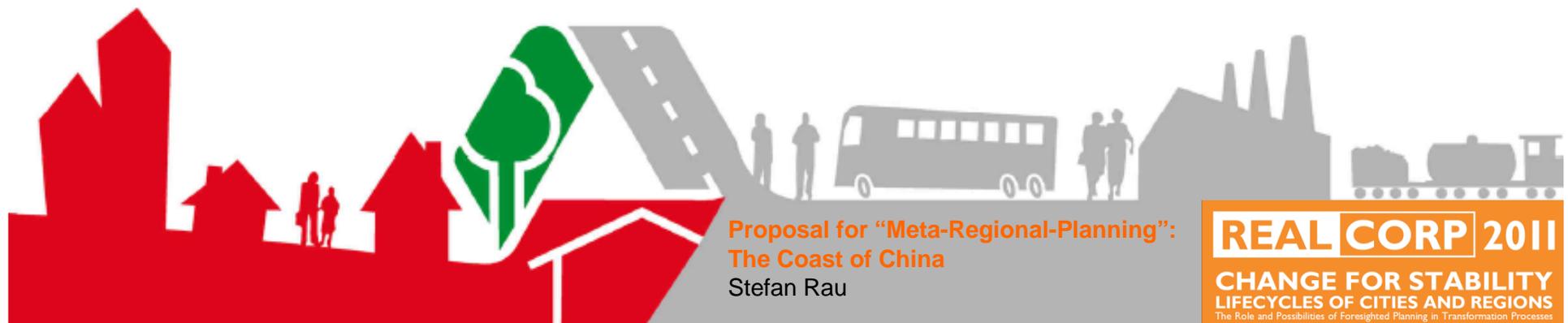
### ***3. Physical planning, transportation & energy infrastructure and policies support moves within megalopolises and increasingly moves inland***

- a) Urbanization, industrialization and the development of service industries along with infrastructure construction is a planned and structured development process following China's current planning paradigm
- b) economic development – export- and more and more import oriented
- c) infrastructure development with wide roads
- d) real estate development in functional separation following charter of Athens



High-Speed Rail Network for 2020  
[http://blog.sina.com.cn/s/blog\\_537d5d740100p5cf.html](http://blog.sina.com.cn/s/blog_537d5d740100p5cf.html)

# *THREATS*

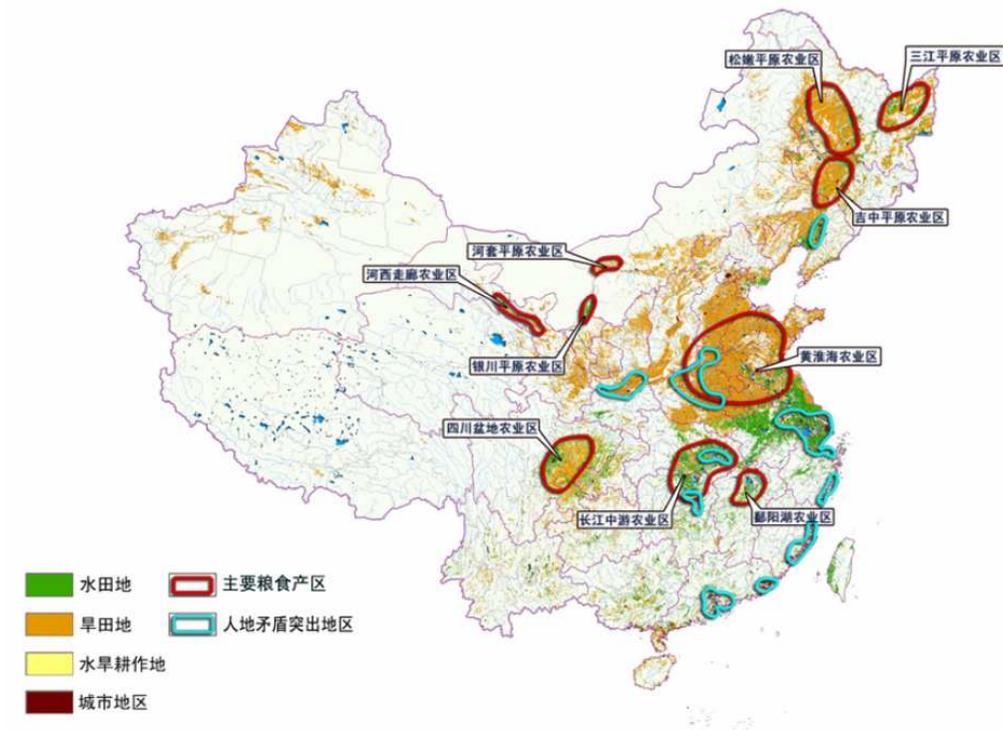


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## ***RURAL-URBAN MIGRATION OF THE NEXT 300 MILLION IN CHINA MANY WILL MIGRATE TO THREE COASTAL MEGALOPOLISES***

- (1) Suboptimal distribution of population and economic activities with respect to short distances for services and products - meant in a holistic way - including recreation, food supply, water cycles, ecological functions and environmental quality,
- (2) Overburdened and/or “overscaled” infrastructure,
- (3) Threat to valuable natural and cultural land becoming largely urbanized with utter consequences for resources like agricultural and ecologically sensitive areas including environmental quality challenges for water, soil, air, biodiversity.



National grain producing areas and the obvious contradiction between people and land area

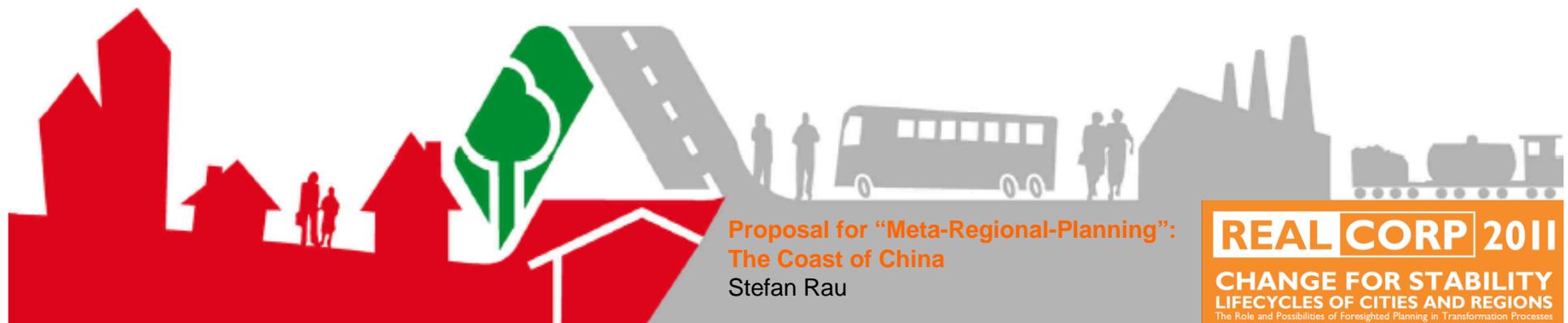
From: National Urban System Plan, 2005 – 2020

## ***URBANIZATION & SPRAWL VERSUS CONSERVATION OF GREEN THREATS: SPRAWL IN-BETWEEN MEGALOPOLISES ALONG THE COAST***

- Urban, suburban, industrial areas are „growing“ together along highway corridors and cities, towns, counties are competing for developments locating within their jurisdiction.
- Commercial and industrial developments are lining highways and are sprawling into the fringes of cities, towns and villages – much like we know it from north american and european territories.
- This is happening within the three primary regions. But this is increasingly also happening between these regions along the coast – in Guangxi, Guangdong, Fujian, Zhejiang, Jiangsu, Shandong, Hebei, Liaoning.

**And this is what I would like to call attention to!**

# OPPORTUNITIES



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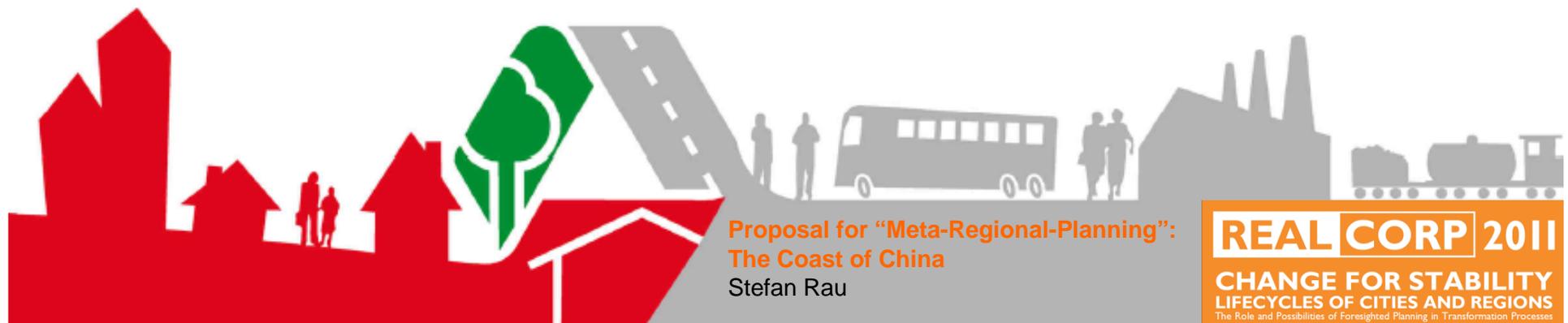
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## ***DEVELOPMENT CONCENTRATION + CONSERVATION OF GREEN PRIME OPPORTUNITY: NODAL DEVELOPMENT PLUS CONSERVATION***

- Almost all larger existing, ongoing and planned infrastructure projects would suggest nodal development.
- Nodal infrastructure suggest concentration of development. (High-Speed-Rail stations, ports, SEZ's, export processing zones, innovation industry zones etc.)
- This concentration ought to be promoted while development away from infrastructure should be restricted.
- This is the key opportunity for a balance between development and green space.



# ACTIONS



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## ***SELECTED PAST & PRESENT REGULATORY & PLANNING INITIATIVES***

*Overall strategy of regional development in eleventh & twelfth five year plans*

„...Advancing Western Region development, revitalizing Northeast China and other industrial bases, promoting the rise of the central region, encouraging the eastern region to take the lead in development, supporting the development of old revolutionary bases, ethnic minority areas and border areas...“

(some strategic goals of 11<sup>th</sup> 5-year plan and many have been accomplished from 2006 and 2010)

12<sup>th</sup> 5-year plan 2011 – 2015:

Special role of the eastern region has been reaffirmed as „to make innovations in systems and mechanisms and transform the pattern of development, and in continuing to take the lead in development“ for China as a whole.

## ***SELECTED PAST & PRESENT REGULATORY & PLANNING INITIATIVES***

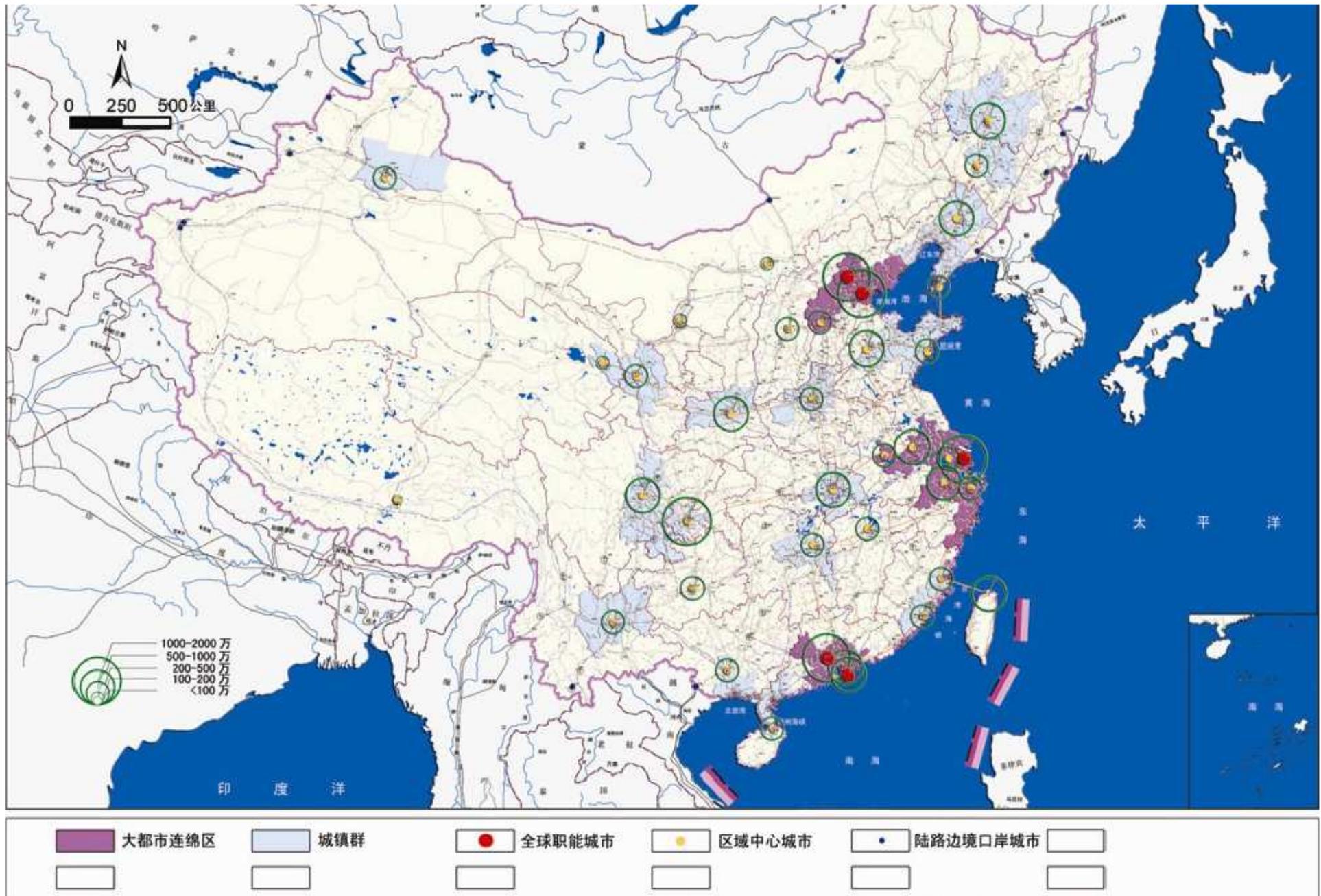
*Previous national and regional planning Initiatives affecting the coastal region*

Of course many plans, developments and infrastructures have been executed. Some are:

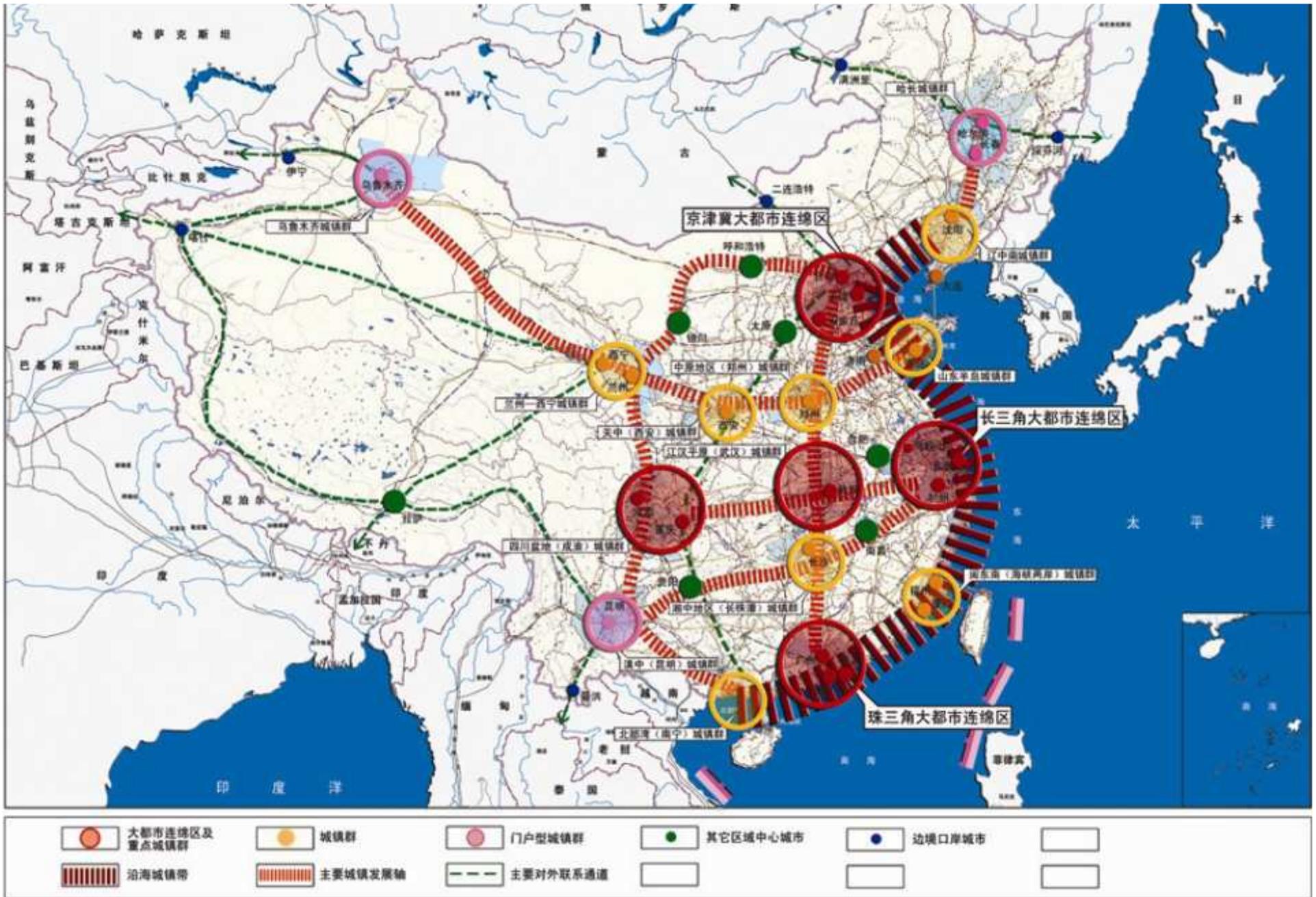
- City development plans: 20-year comprehensive masterplans (2000–2020 / 2010–2030)
- Some regions have produced strategic and structural plans
- Provinces have produced structural plans
- Beijing-Tianjin-Tangshan “JingJinTan” Regional Structure Plan
- Yellow River Delta – Shandong Urban System Plan
- Yangtze River Delta Structural Plan
- Pearl River Delta „Super“- Region Integrated Strategy
- National Urban System Plan 2006 – 2020

...

All included profound research - and that may be used as a start and basis for the here suggested more specific, large scale “Meta-Regional” Plan for the China Coastal Region.



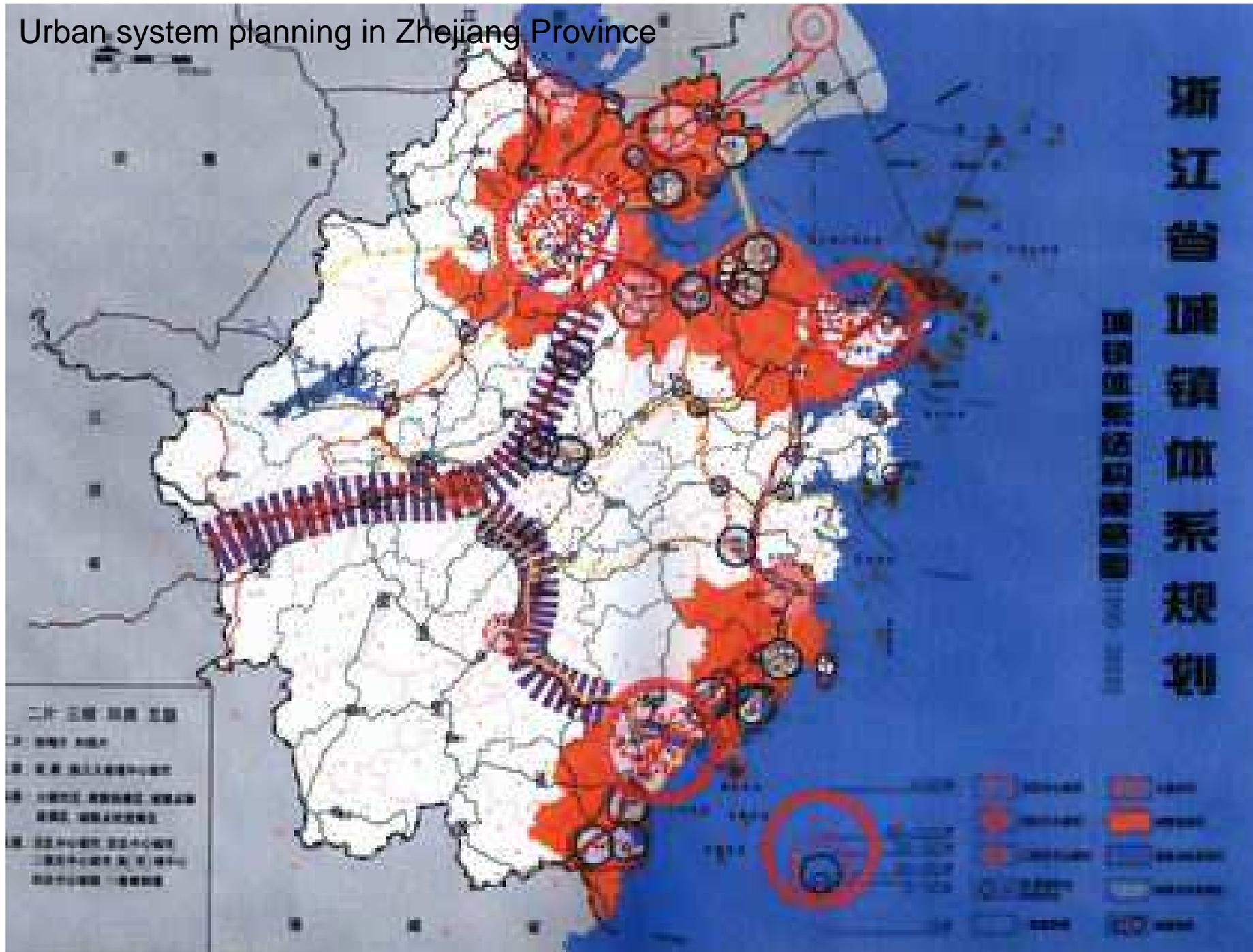
Schematic diagram of the Urban Population Forecast of Municipalities, provincial capitals and sub-provincial cities  
 From: National Urban System Plan 2005 - 2020



National urban spatial structure plans

From: National Urban System Plan 2005 - 2020

# Urban system planning in Zhejiang Province



# Urban System Planning Fujian Province Distribution Structure



## ***SELECTED PAST & PRESENT REGULATORY & PLANNING INITIATIVES***

*Legal categories: from development concentration zones to no-build zones*

Implementation started of land type categories based on 11th 5-year plan:

„Promoting the Formation of Development Priority Zones:

***Development-Optimized Zone:*** regions with high density of land development & declining resource and environmental bearing endowment

***Development-Prioritized Zone:*** regions with relatively strong resources and environmental bearing endowment, as well as favorable gathering conditions of economy and population

***Development-Restricted Zone:*** regions with weak resource and environment bearing endowment, poor gathering conditions of economy and population, which are crucial to ecological safety in a wider area or across the country

***Development-Prohibited Zone:*** natural reserves of all kinds...“

## ***SELECTED PAST & PRESENT REGULATORY & PLANNING INITIATIVES***

### *Nature and culture protection and conservation*

China has a series of development regulation policies and land categories restricting development and land use. National & international development prohibition zones are:

- National Natural Reserves (243),
- World Cultural and Natural Heritages (31),
- National Landscape Parks (187),
- National Forest Parks (565),
- National Geology Parks (138).

Many are in coastal region and some are very small some are extensive.

# National Parks



# UNESCO World Heritage Sites



# 富春江-新安江-千岛湖

Fuchun River, Xinan River, Thousand-island l



- 第一批国家重点风景名胜区——富春江-新安江-千岛湖风景区位于浙江省上起淳安下至富阳的新安江、富春江流域，跨越富阳、桐庐、建德三县、市。
- 新安江和富春江均为钱塘江的上游。新安江源于安徽省休宁县，流经黄山市，再经淳安、建德、桐庐，流入富阳县境。新安江与兰江汇合后的河段始称富春江，其中桐庐县境河段称桐江，到了萧山县的闻家堰，称钱塘江。
- 风景区有东、南、西三条旅游线。南线以灵栖洞天和江南悬空寺大慈岩为主；西线以新安江水电站、千岛湖为主；东线以富春江七里泷风光带和富春江国家森林公园为主体。
- The first national key scenic spots - Fuchunjiang - Xin'anjiang - Lake Scenic Area is located in Zhejiang Province, Fuyang played down to the Xin'anjiang Chun, Fuchun River watershed, across Fuyang, Tonglu, Jiande three counties and cities. Xinanjiang and the Fuchun River are upstream of Qiantang River. Xin'anjiang from Anhui Xiuning, through Huangshan City, and then by Chun, Jiande, Tonglu, into the Fuyang County. Xin'anjiang confluence with the Blue River before the river, said after the Fuchun River, which said the Blessing Tonglu River County, to hear Jia Yan Xiaoshan County, said the Qiantang River. Scenic Area east and south, west three destinations. Habitat south line to the Spirit Cave and the main southern Daci Rock Monastery; West to Xin'anjiang Hydropower Station, Lake-based; east to Mile Long River Fuchun River Scenic Belt and the Fuchun River National Forest Park as the main body.



# 杭州西湖

## West Lake of Hangzhou



- 第一批国家重点风景名胜区——**杭州西湖**处于平原、丘陵、湖泊与江海相衔接的地带，位于浙江省杭州城西，三面环山，东面濒临市区。西湖南北长3.3公里，东西宽2.8公里，水面面积约5.7平方公里，湖岸周长15公里，平均深度1.5米。
- 孤山、白堤和苏堤将湖面分隔为外西湖、里西湖、后西湖、小南湖及岳湖，其中外西湖面积最大。**孤山**是西湖中最大的天然岛屿，苏堤、白堤越过湖面，小瀛洲、湖心亭、阮公墩三个人工小岛鼎立于外西湖湖心。整个景区由一山（孤山）、两堤（苏堤、白堤）、三岛（阮公墩、湖心亭、小瀛洲）、十景构成。
- 历史上除有“钱塘十景”、“西湖十八景”之外，最著名的是南宋定名的“西湖十景”和1985年评出的“新西湖十景”。在以西湖为中心的60平方公里的园林风景区内，分布着主要风景名胜40多处，重点文物古迹30多处。
- The first national key scenic spots - the West Lake in Hangzhou, plains, hills, lakes and areas of convergence Jianghai, located in Hangzhou, Zhejiang Province, west of the city, surrounded by mountains, the eastern verge of the city. West Lake north to south and 3.3 kilometers, 2.8 kilometers from east to west, the surface area of about 5.7 square kilometers, 15 km lake perimeter, with an average depth of 1.5 meters.  
Gushan, Bai Causeway and Sir Georg Solti will be separated into the lake outside the West, in West Lake, after the West Lake, a small South Lake and Yue Lake, West Lake, the largest one outside. Gushan is the largest natural lake in the island, Sir Georg Solti, Bai Causeway across the lake, Lesser, pavilion, three artificial islands utmost Nguyen Cong pier outside the West Lake in the heart. The whole area from the mountain (Solitary Hill), two levees (Sir Georg Solti, Bai Causeway), Mishima (Nguyen Cong pier, pavilion, Lesser), Ten composition.  
In addition to the history of the "Ten Qiantang", "West-eighth King", the most famous Southern naming of the "West Lake" and the Top 1985 "New West Lake." In the center of West Lake Scenic Area of Justice for 60 square, the distribution of 40 major scenic spots, 30 places on key cultural relics.



## ***SELECTED PAST & PRESENT REGULATORY & PLANNING INITIATIVES***

### *Farmland Protection*

The **Town and Country Planning Act from 2008** spells out in article 17 that it **prohibits** “any unit or individual in basic farmland protection areas to build kilns, building, graveyards, quarrying, mining, piling of solid waste or **destruction of basic farmland for other activities.**”

In article 41 it says: “...**agricultural land shall not be occupied** and if it is unavoidable, the occupation of agricultural land shall be in accordance with the "PRC Land Management Law" ... relevant provisions of agricultural land use change requires the approval by the city and county government planning departments for urban and rural construction permits are issued by the village...”

But:

An **increasing number of violations** against this law was reported & published.

# *ENOUGH?*

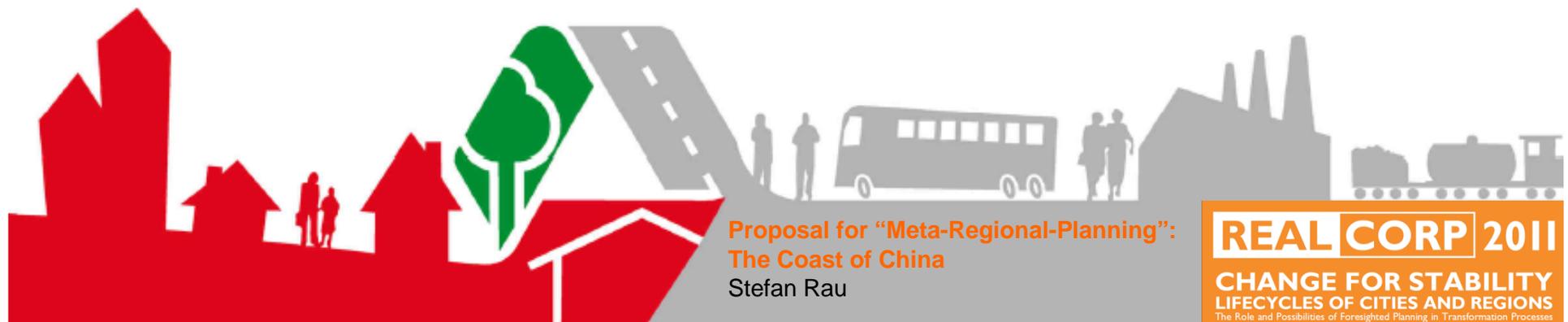


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# *PROPOSAL*

## META-REGIONAL PLANNING INITIATIVE FOR THE ENTIRE CHINA COAST



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# THOUGHTS ON RESEARCH ORGANIZATION FOR COASTAL PLANNING

- Comprehensive research is needed to identify opportunities, challenges and conflicts between urban development, nature, culture, farming & rural development - between economic, social and ecological concerns.
- Inclusiveness is a must: from top to bottom and from bottom to top
- A balance has to be found between researching enough detail while keeping an eye on the relevance for the bigger picture of the overall coastal region.

## **CATEGORIZING THE ISSUES – A PROPOSAL**

I wish to suggest organizing the issues along an interdisciplinary set of 10 systems I have developed previously to plan, monitor and evaluate eco-efficient territories:

**Green Economy, Social harmony, Land use efficiency, Transportation efficiency, Landscape ecology, Water efficiency, Energy efficiency & - sustainability, Materials- and Waste efficiency, Culture & Tradition integrity and Eco-efficient lifestyle choices.**

Along these systems issues can be arranged, communicated, visualized and evaluated. A framework of topics and methods along these 10 systems needs to be developed as a research grid for the project at large in such a way that all the local findings can integrate into the overall coastal region research.

## COMPREHENSIVE MAPPING AND ONLINE GIS BASE

In the process of this planning effort visualization and mapping to clearly communicate and locate the various results are extremely critical. I would suggest, that for this kind of meta-regional planning a specific kind of visual language ought to be developed to be specific enough while leaving enough flexibility for the local players to micro-adjust spatial planning decisions. What needs to be mapped and overlaid is existing land uses, all plans from all levels and all themes, comprehensive environmental information, ecological and social sensitivities, environmental challenges and opportunities. The four land categories as defined in the 11th five year plan: development-optimized zones, development-prioritized zones, development-restricted zones, development-prohibited zones should all clearly be mapped. Different views of things and conflicts will be made apparent as well as numerous redundant and sprawling developments will become obvious. The research findings and all the mapping will be fed into a large GIS base that allows complex thematic analytical maps for clear communication of economic, ecological and social concerns.

## **HORIZONTAL & VERTICAL COMMUNICTATION AMONG CURRENT Administrative responsibilities for spatial planning in China**

The national level is evidently strong, producing guidelines, plans and policies for the whole country. The provincial level governments are relatively weak as the tax income base is comparably smaller. The local level has a very strong influence on local planning and implementation.

Spatial planning in China falls under the responsibility of at least five ministries/ departments overseen by the Standing Committee and the People's Congress and the CPPCC. Five ministries on the national and the provincial level as well as departments on the municipal level each produce their own national/provincial and local plan according to their respective agendas:

- National/Provincial/Municipal Development and Reform Commission
- Ministry/Department/Bureau of Housing Urban and Rural Development
- Ministry/Department/Bureau of Land and Resources
- Ministry/Department/Bureau of Transportation
- Ministry/Department/Bureau of Environment

Further ministries are related to the issue of planning.

## THOUGHTS ON INSTRUMENTS FOR COMMUNICATION, REGULATION & APPROVAL

- formal legal instruments – like the four zones types defined in the 11th FYP
- informal recommendations and initiatives ought to be allowed to be contributing
- Zoning of land categories be clearly mapped and with legalized status.
- Key projects be identified
- involvement of many individuals, institutions, companies and government
- projects public and private partnership.
- transparency and predictability – Visualizations

## **STAKEHOLDER & COMMUNITY PARTICIPATION REQUIRED IN CHINA**

Town and Country Planning Act from 2008 requires planning to inform and involve locals  
„collective landownership“ lends strong rights to the local farming communities.

experts knowledge plus locals knowledge suggested  
engage local governments, experts, universities and local, national and international  
consultants

Local task forces ought to be formed to research and polling

Communication platforms: websites, qq-blogs, local-, regional- and overall conferences

## **SOME SUGGESTED POSSIBLE RESULTS**

What could be added to the list of great planning initiatives in China?

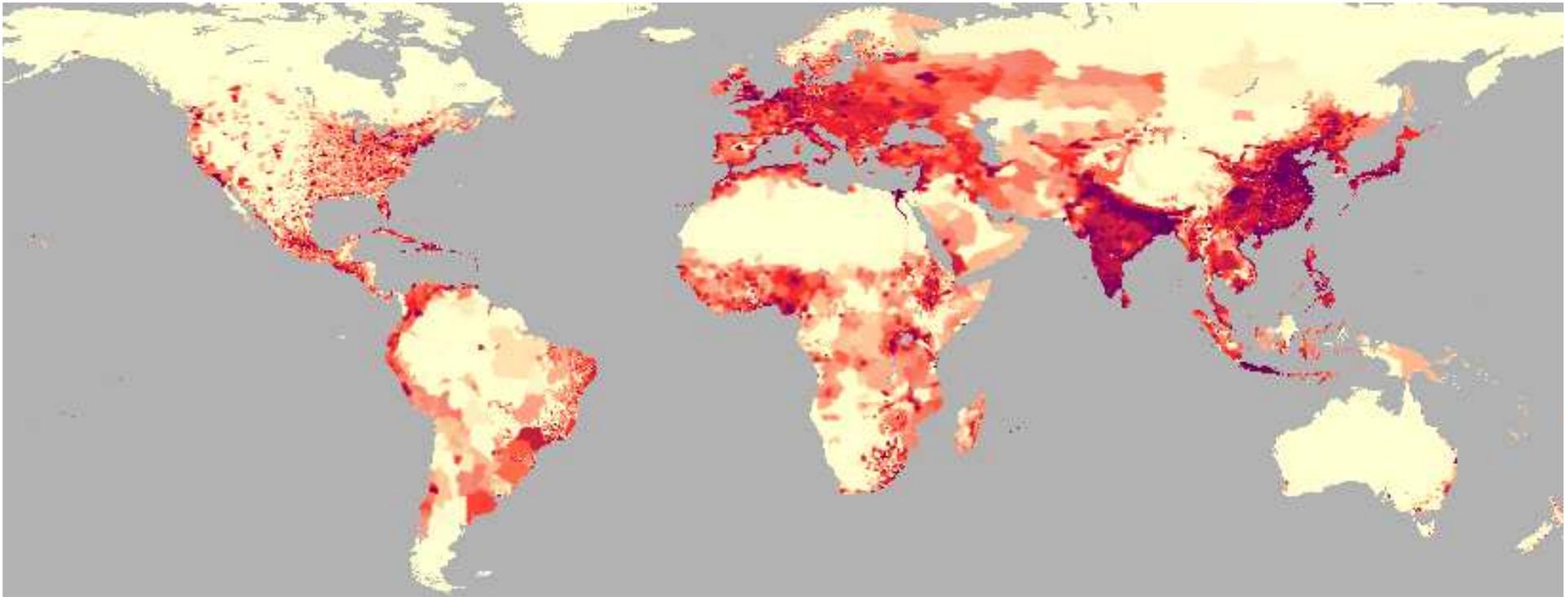
- Comprehensive visualization and overlay of the various interests: infrastructure, development, farming, ecology etc.
  - Identification of negative developments (i.e. unpermitted developments)
  - Review and if needed revision of plans
  - Specifically allocating the intended farmland protection zones and enforcing them
  - Initiatives to educate, train and involve local leadership
  - Maybe a law could be considered that provides a clear distinction between areas inside a consolidated built-up zone (city, town, village, industrial park) and areas outside these, drastically restricting construction permitted outside. A law like this quite successfully prevents unplanned sprawling development in Germany.
- 
- Create new UNESCO and National Culture and Nature Reserves along with every newly planned infrastructure project

# *THE POINT*



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## CONCLUSION – SYNERGIES BETWEEN: RES ECONOMICA, RES PUBLICA & RES ECOLOGICA

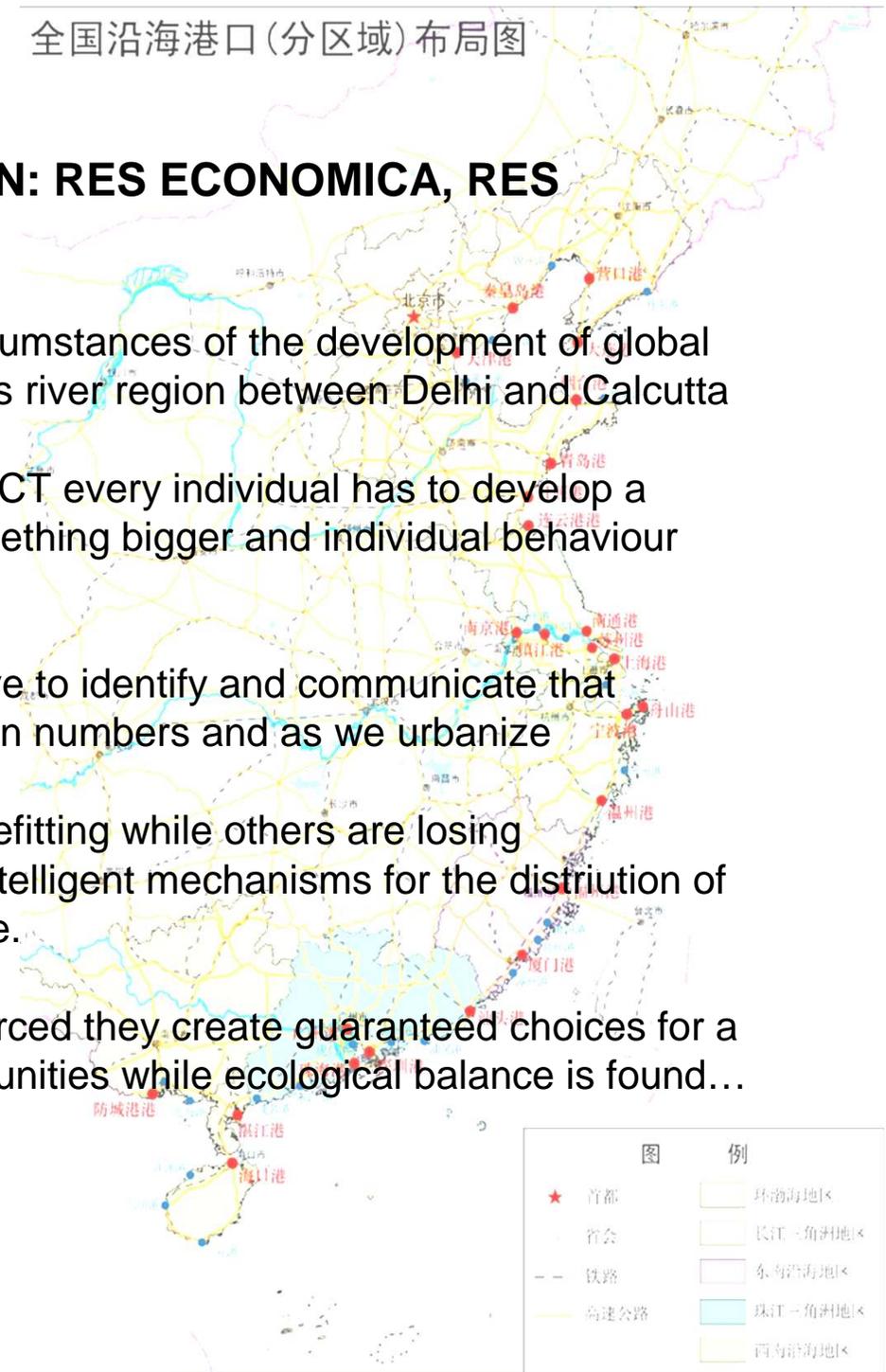
Need for meta-regional planning under the circumstances of the development of global population hotspots I.E. China's Coast, Ganges river region between Delhi and Calcutta

As a human race increasingly connected with ICT every individual has to develop a sense and knowledge that one is a part of something bigger and individual behaviour directly affects the systems at large

Regarding land use change as a whole we have to identify and communicate that conservation of green is essential as we grow in numbers and as we urbanize

The consequence we know that some are benefitting while others are losing economically - and for this we ought to find intelligent mechanisms for the distribution of wealth that are transparent, fair and acceptable.

If conservation areas are guaranteed and enforced they create guaranteed choices for a variety of lifestyles as well as economic opportunities while ecological balance is found...



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Thank you for your kind attention

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