

# **China's Circular economy in action**

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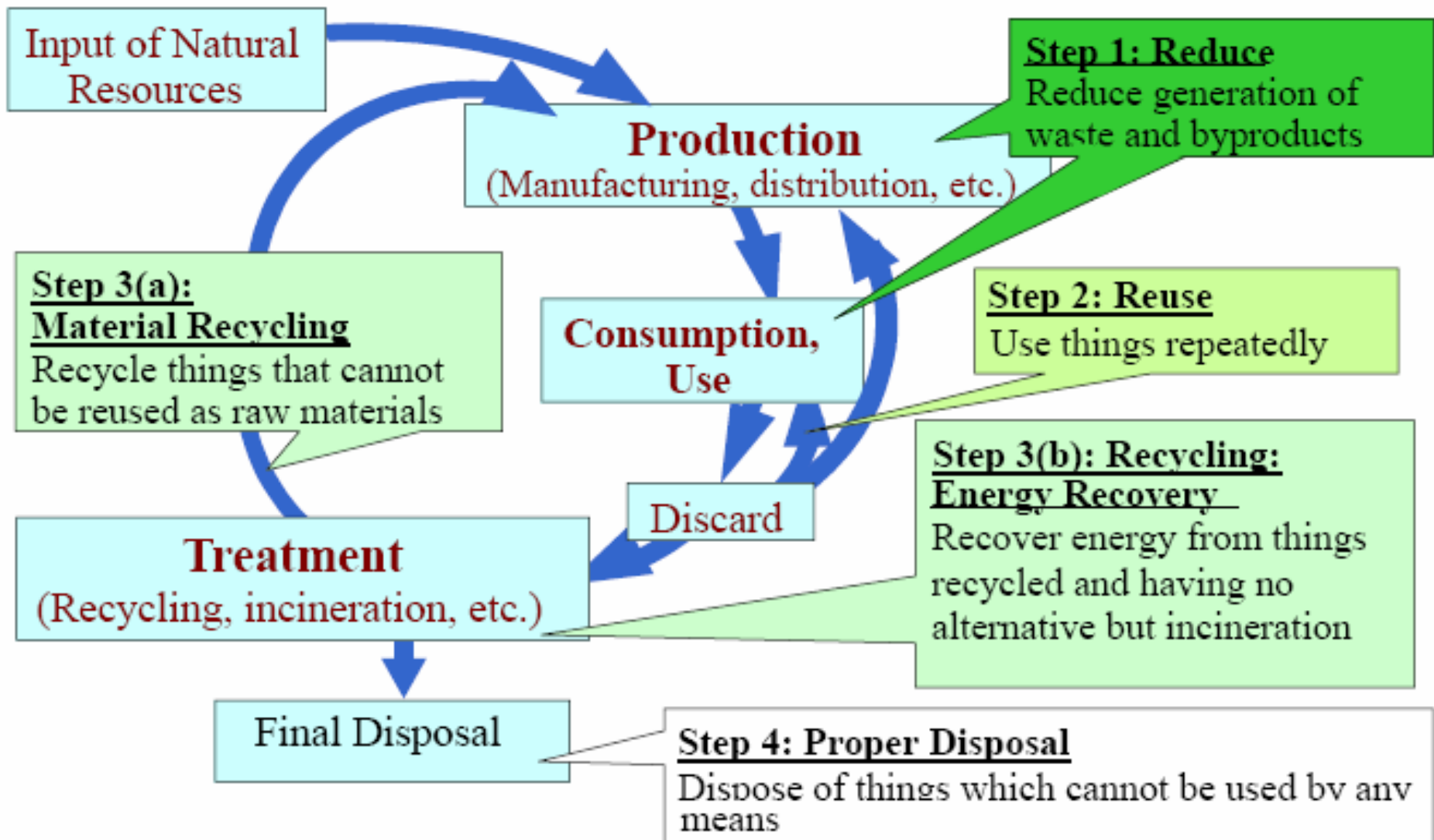
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- Definition and background
- Practice of Circular Economy in China
- Progress of Circular Economy

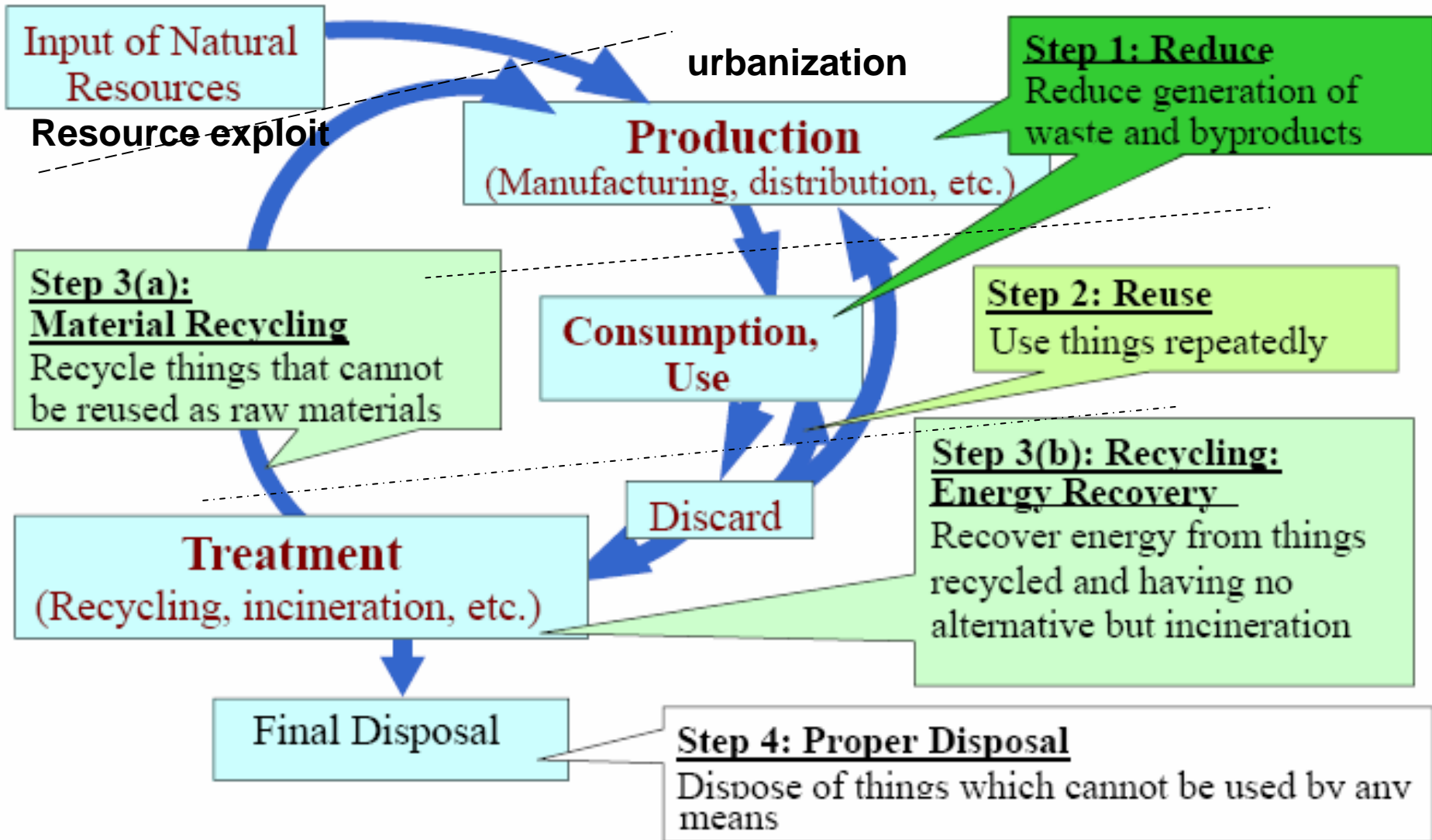
# **1. Definition of Circular Economy**

- New development strategy, new economic development pattern, aiming at maximizing resource efficiency as well as minimizing waste discharge, and realizing sustainable economic and social development.**
- At present, the Chinese Government chooses some priorities of the circular economy as follows: energy conservation, water saving, arable land saving, material saving, and comprehensive resource utilization.**

## Concept of the 3Rs in a Sound Material-Cycle Society



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# products output in China

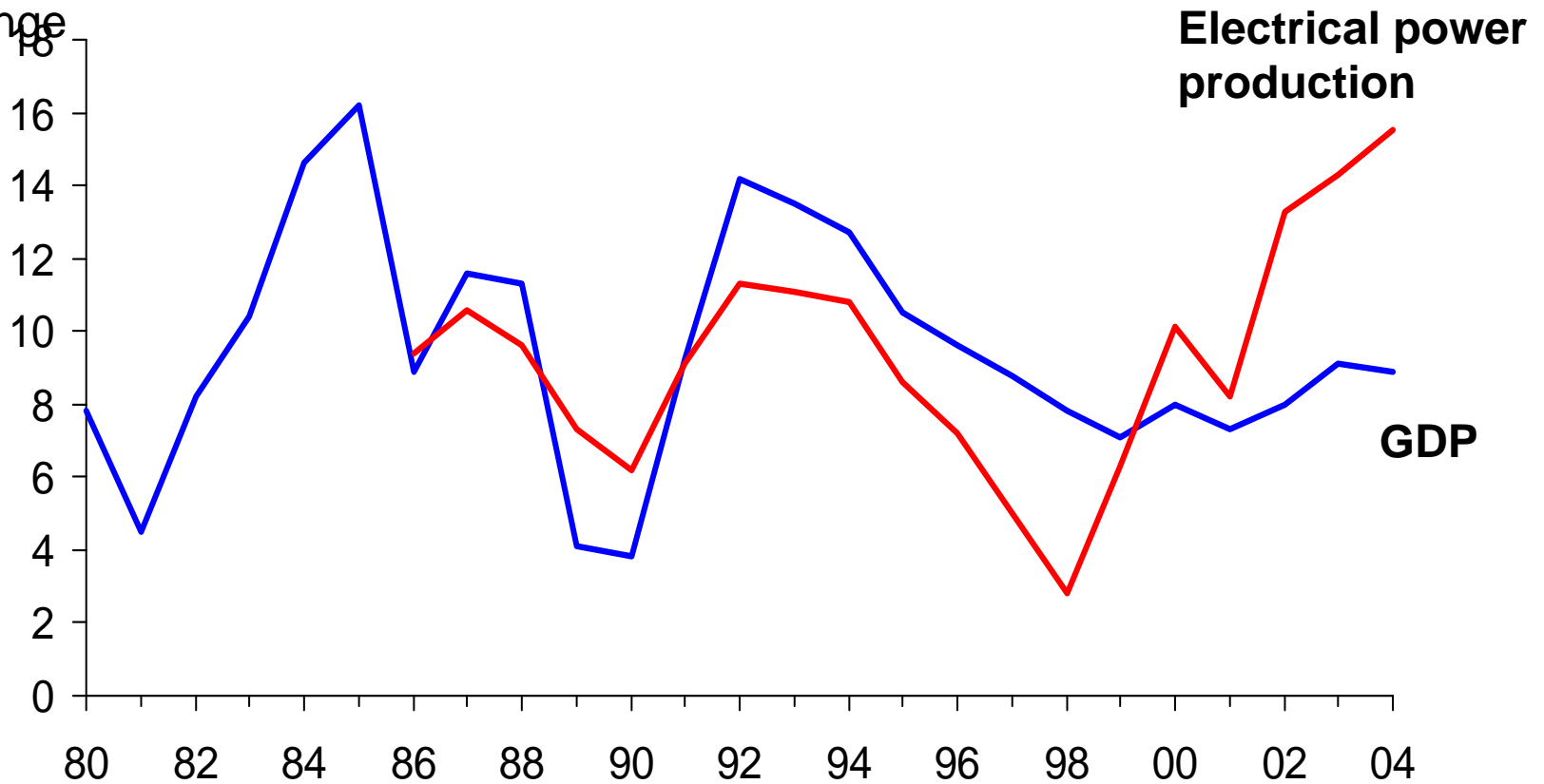
products	unit	2002	2003	2004	2005
iron	Mt	171	202	263	
Steel	Mt	182	222	297	352
Cement	Mt	725	862	970	1060
10 Non-ferrous	10 <sup>4</sup> t	1012	1205	1430	1635
in which: Cu	10 <sup>4</sup> t	163	184	217	260
Al <sub>2</sub> O <sub>3</sub>	10 <sup>4</sup> t	547.84	609.39	699	851
Ethylene	10 <sup>4</sup> t	541.35	611.77	626.58	756
Chemical Fiber	10 <sup>4</sup> t	991.20	1181.14	1424.54	
Rubber	10 <sup>4</sup> t	113.3	127.2		

# Building constructed since 1996 $10^8\text{m}^2$

	<b>Total</b>	<b>New buildings in urban area</b>	<b>New buildings in rural area</b>
1996	16.19	3.95	8.28
1997	16.61	4.06	8.06
1998	17.09	4.76	8.00
1999	18.74	5.59	8.34
2000	18.20	5.49	7.97
2001	18.24	5.75	7.29
2002	19.67	5.98	7.42
2003	20.26	5.50	7.52
2004	20.70	5.69	6.80
2005			

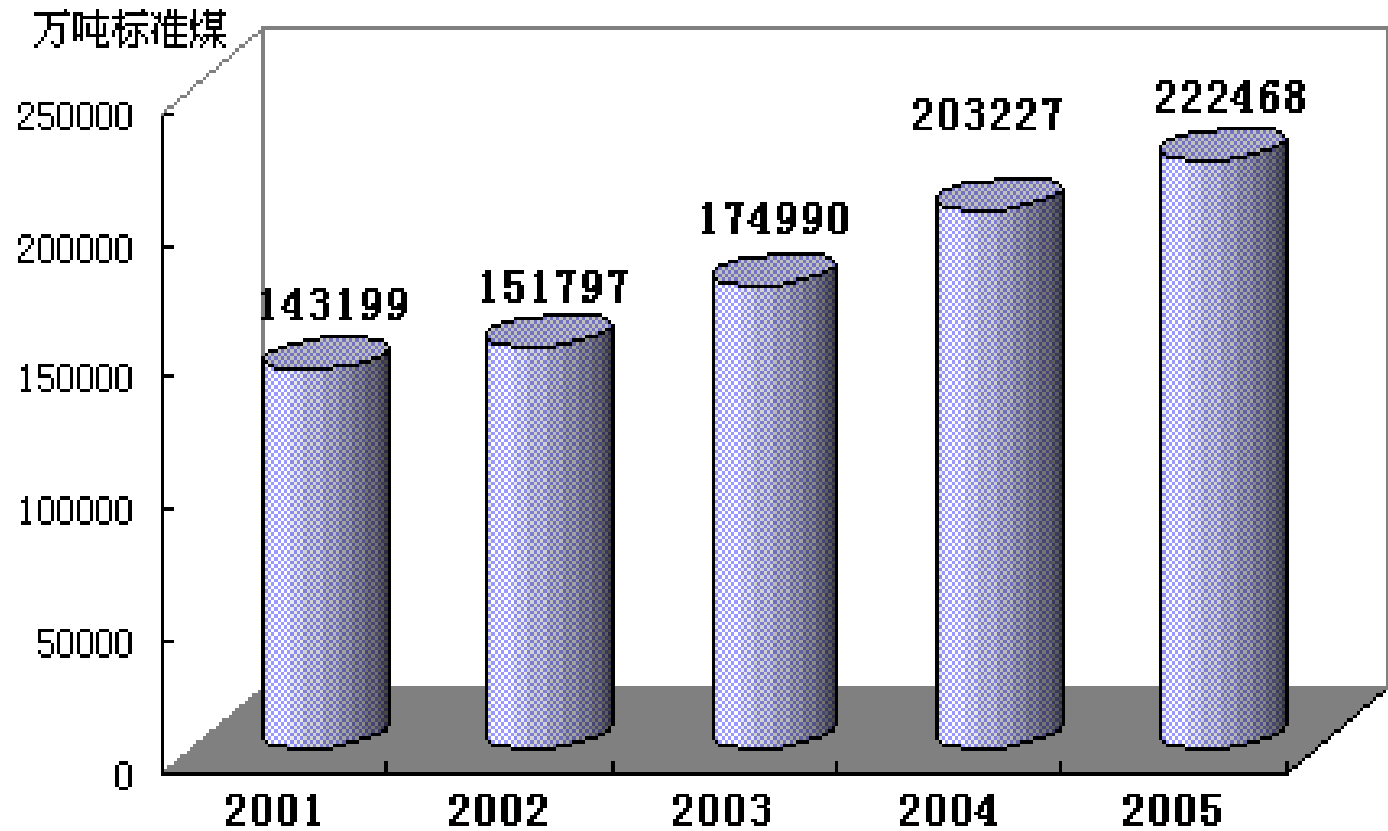
# Growth in GDP and Power output

Year on year %  
change

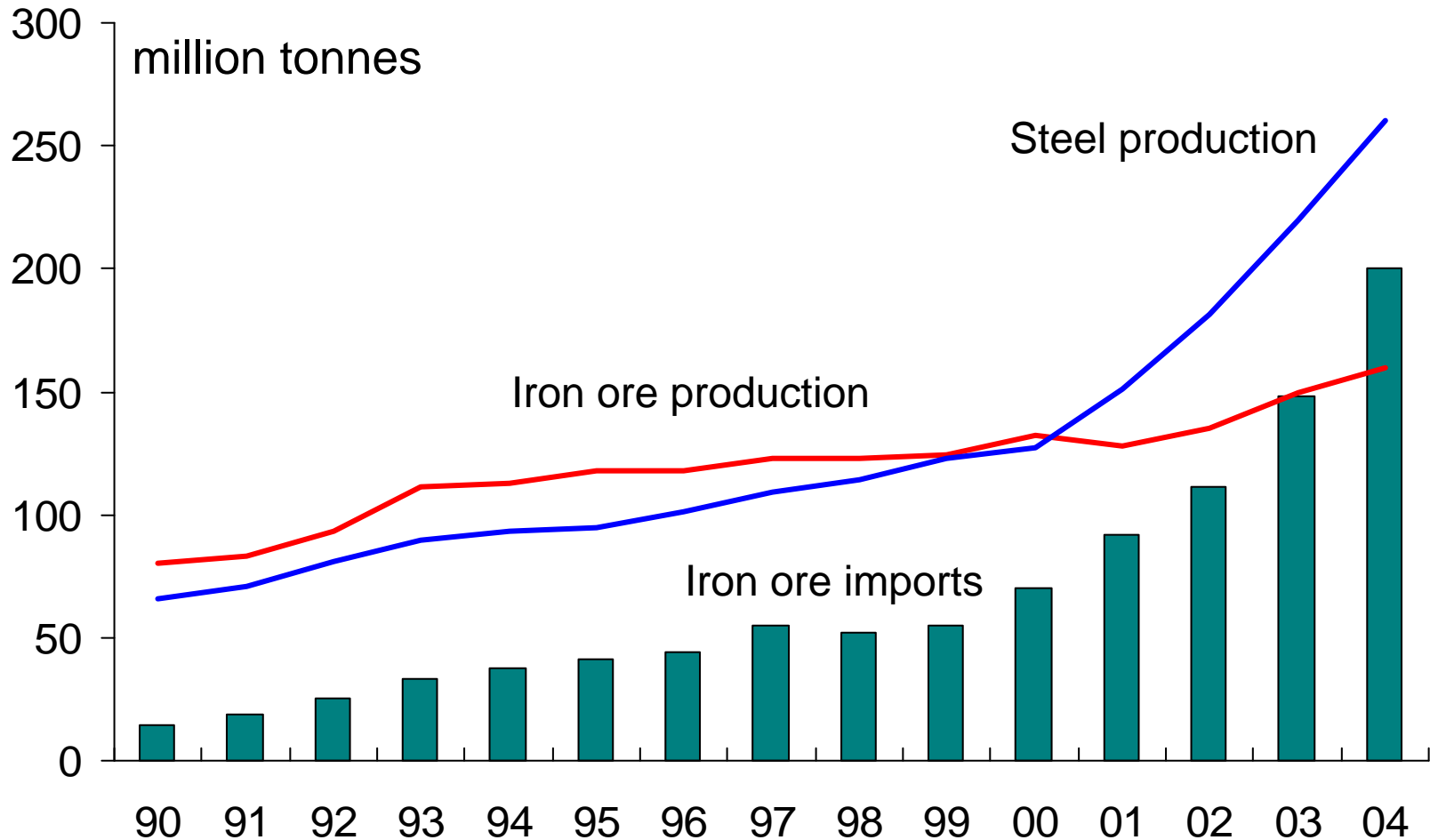


Source: IEA and IMF

# Energy Consumption from 2001-2005



# China: steel and iron ore

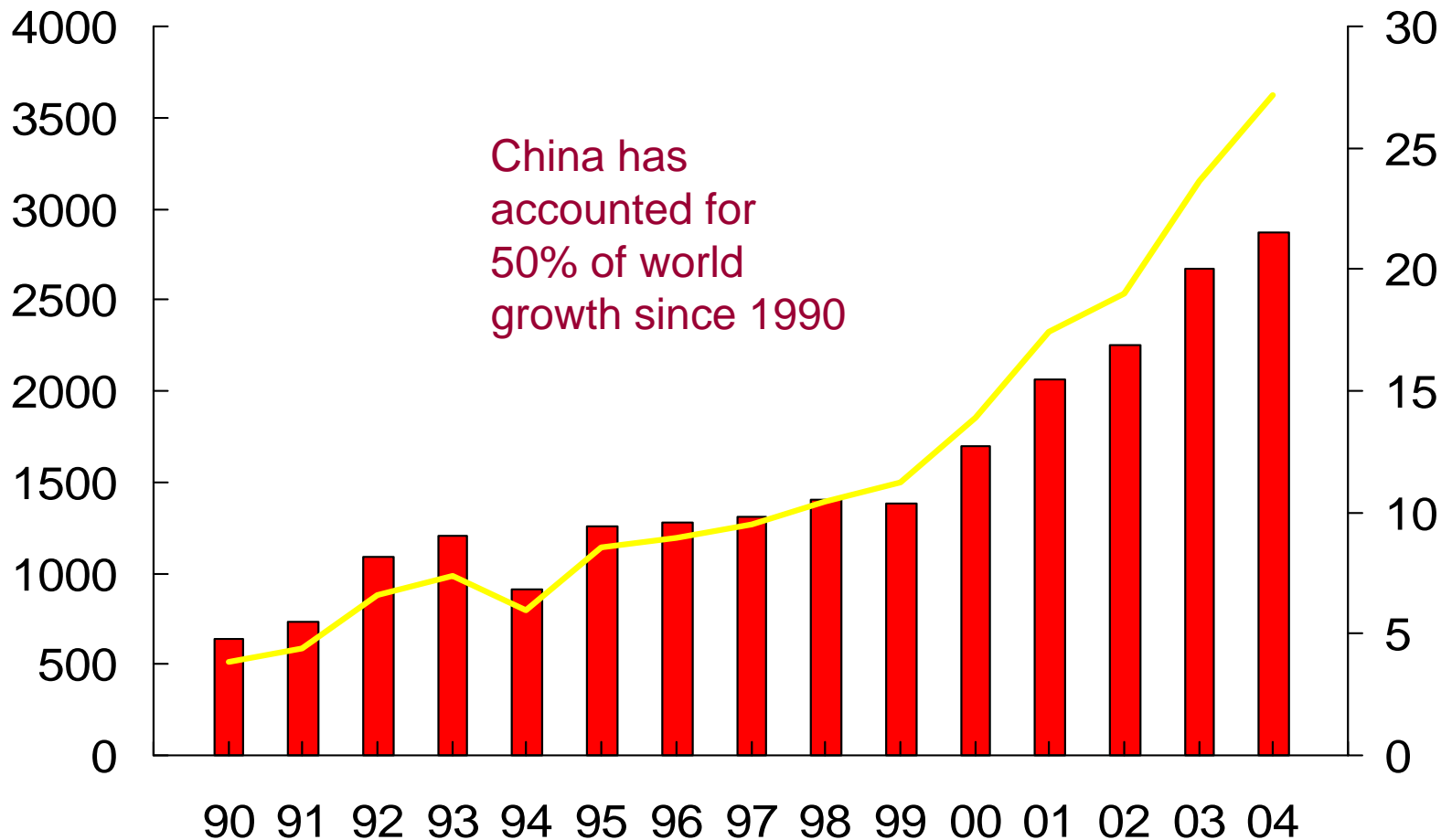


Note: Figures on the production of domestic ore have been adjusted to make them comparable with internationally traded ores.

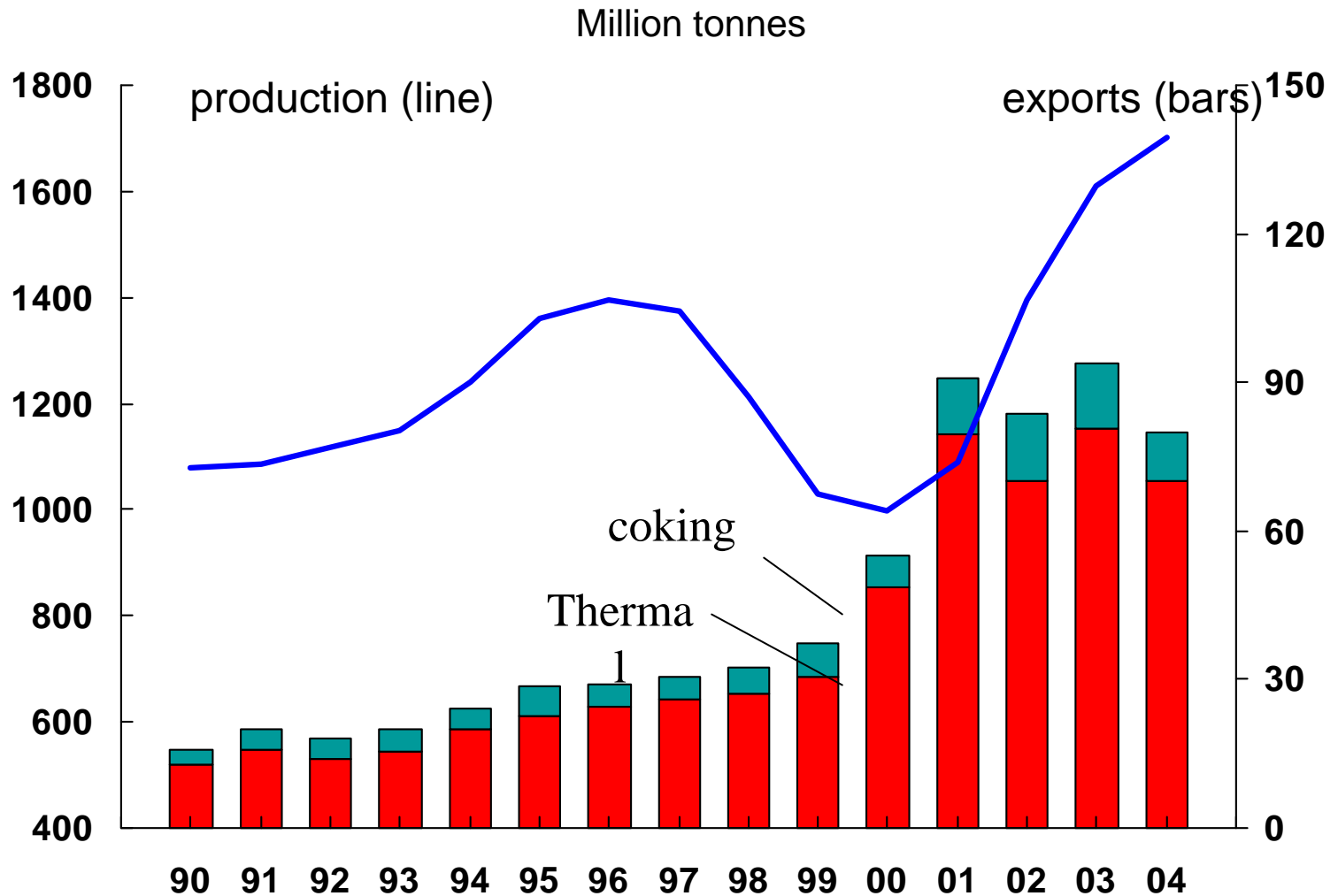
# China's consumption of copper

Million tonnes (line)  
(bars)

% of world consumption



# Coal import and export in China

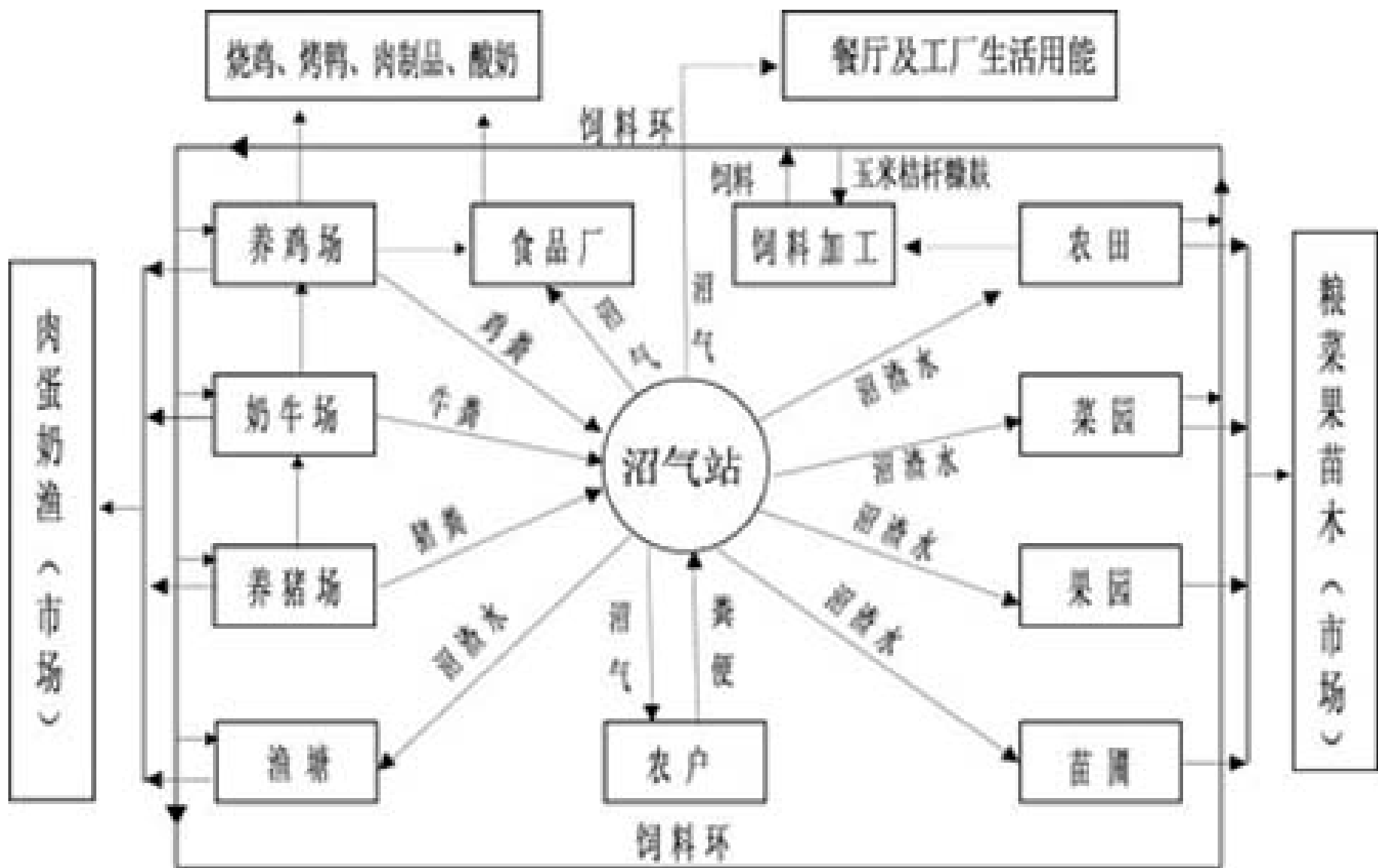


## **2、 Circular Economy model**

- **Typical mode of Eco-Agriculture**
- **——”pond-tyke” mode**
- **——”rice-duck” sharing mode**
- **——”four-integration” mode**

# ecological agriculture practices

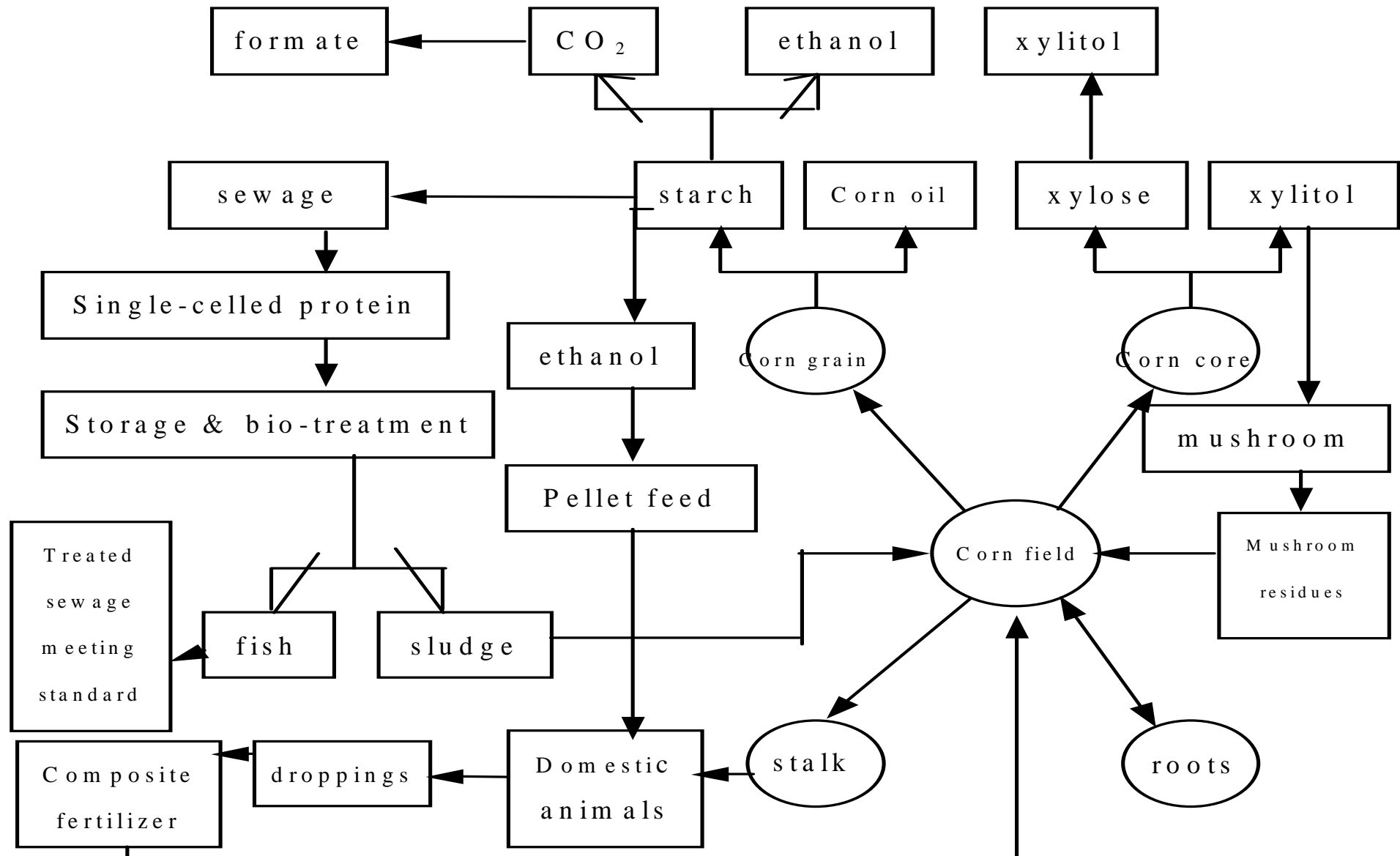
- In the Chinese textbook in 1950's, there were the ecological agriculture activities as "the Shunde Mode". At present, Shunde is no longer exist, and along east costal line because of land use change.
- This does not mean that "the ecological agriculture" has disappeared. There still exists in the mid-west region and the mountainous area.
- This fact at least shows that, "the ecological agriculture" is the most effective method of using resources in the time of agricultural economy — sustainable agricultural development pattern. where there is different output per unit land, the output of good benefits will inevitably substitute the poor ones (for example, industrial activities replacing agricultural activities), which is also the consequence of the development of productivity.
- In other words, the development of Circular Economy follows the principles of industrial structure upgrading



留民营农业生态系统综合利用循环图

# **Ecological Industry**

- **Eco Agri-Industry model in Guiyang;**
- **Multi-Gen model of coal-based;**
- **Comprehensive use in steel plants**
- **Used products recycling**



Droppings and corn stalks produced in grain and animal farming can be used to generate biogas, and the residues can be utilized as organic fertilizer: Jilin Province.



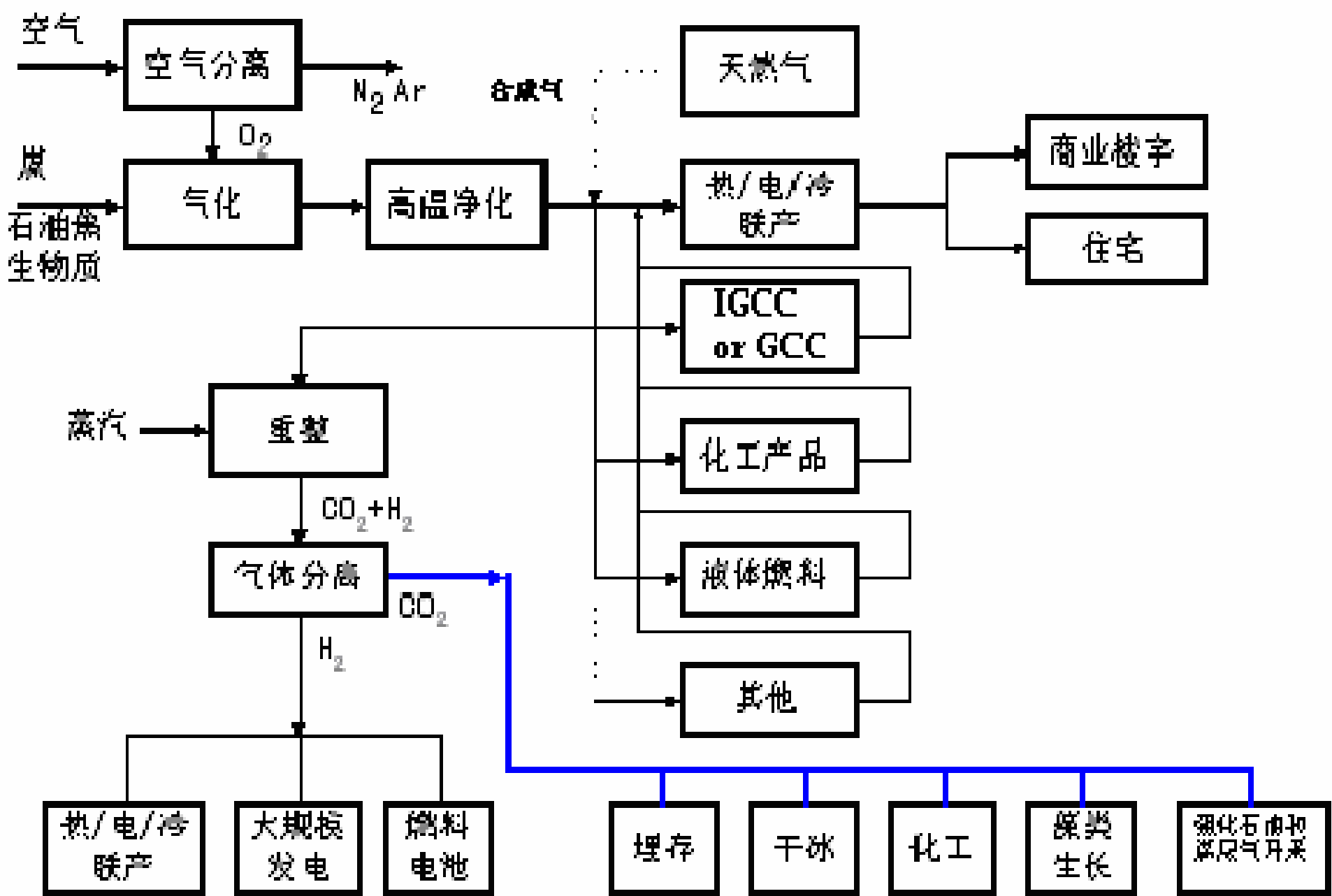
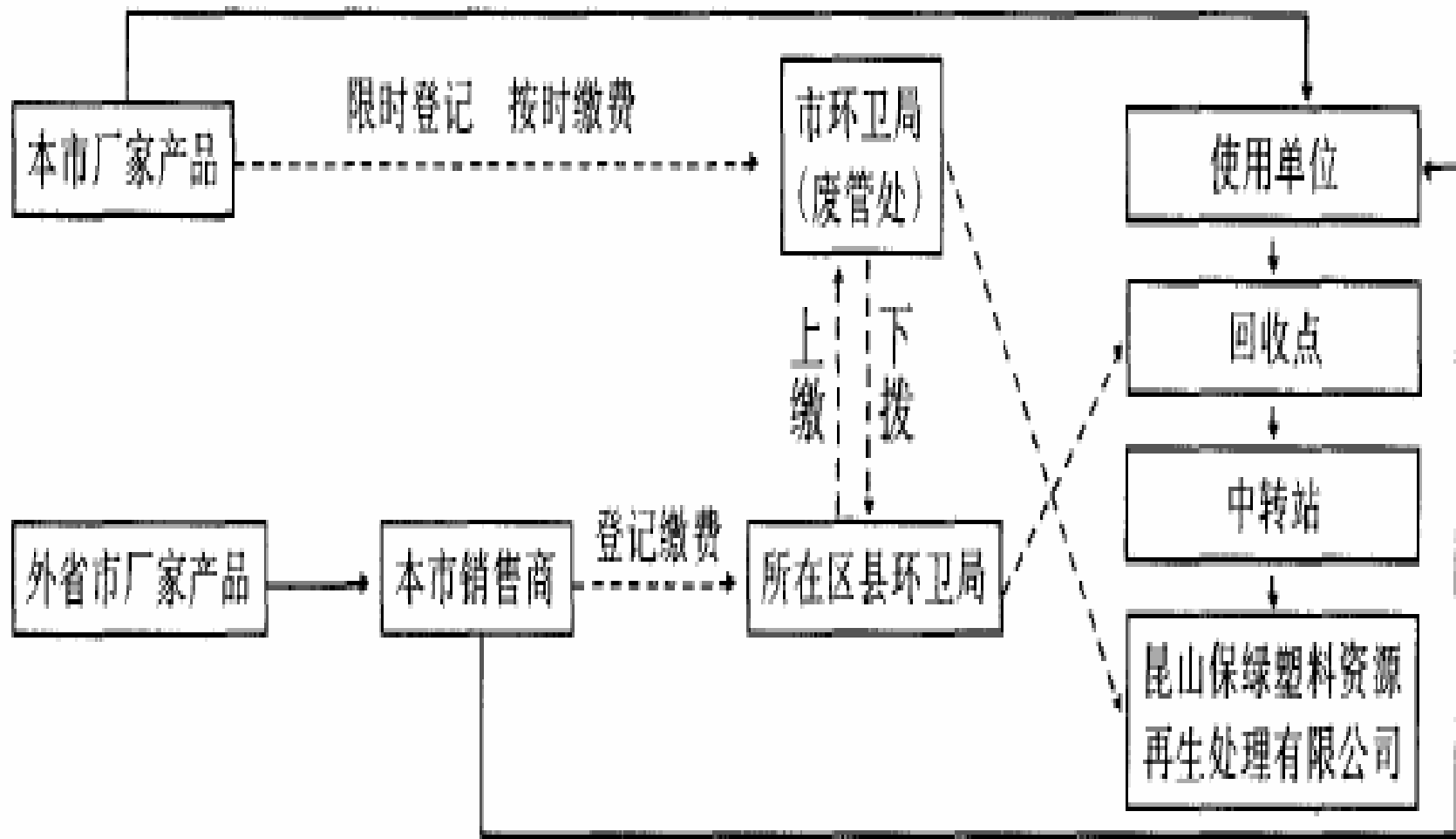


图1 能源资源-环境保护一体化系统



——→ 物流    - - - - - → 资金流

# III. Progress of Circular Economy

There are three levels to promote the circular economy :

- Firstly, to integrate the idea of the development of Circular Economy to regional economic development and urban and rural constructions;
- Secondly, to transform the mode of economic growth, and
- Thirdly, to develop new type of industries.

# Directives

- Directive of the State Council (22/2005): Some guideline of quickening the Circular Economy Development, released in June last year;
- Circular Economy has been intergraded into the Eleventh-Five-Year Plan;

# Legislations

- Law of the circular economy of the People's Republic of China is under research and draft;
- Some localities have released relative legislation; and
- Relative legislation.

# Policies

- Economic policies has reconstruction, such as prices of water, electricity, gas, import and export tax refund;
- Industrial policy change: guideline and contents for investment in different area;
- Forbidden and incentive, and so on.

# Cont.

- Pilot and Demonstration projects (First tranche) covering typical enterprises, industries and localities;
- Research: Key technological tackle, standards, development strategy, statistic indicators, and institutional innovation, and
- Public understanding, through TV, broadcast, exhibition and so on.

# Thanks!

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