

# Kreislaufwirtschaft in China

## Circular Economy in China

### 中国的循环经济

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生态经济学 边缘学科学院

*2010-7-14 Heidelberg*



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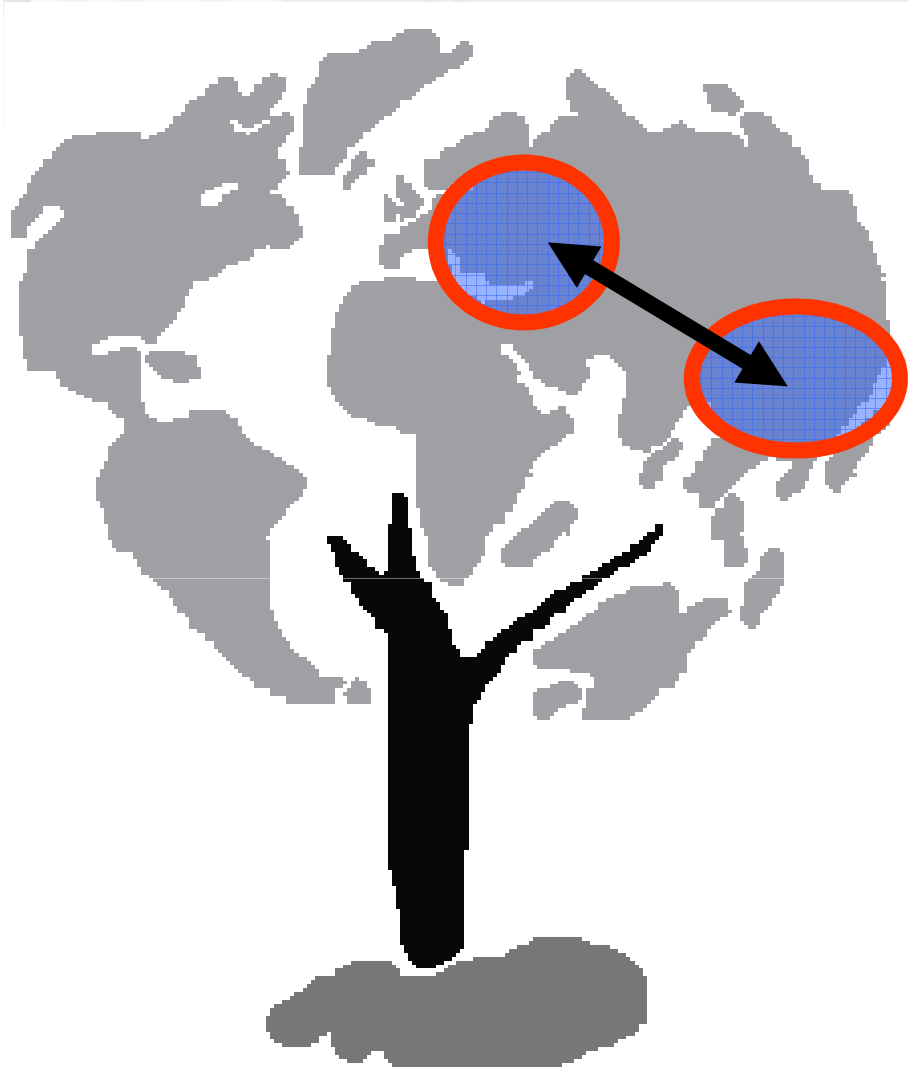
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Zusammen auf dem Weg des Wissens  
求知同道



## Kreislaufwirtschaft in China Circular Economy in China 中国的循环经济



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# 中华人民共和国循环经济促进法 中华人民共和国主席令 第四号

《中华人民共和国循环经济促进法》已由中华人民共和国第十一届全国人民代表大会常务委员会第四次会议于2008年8月29日通过，现予公布，自2009年1月1日起施行。

中华人民共和国主席 胡锦涛  
2008年8月29日

第一条 为了促进循环经济发展，提高资源利用效率，保护和改善环境，实现可持续发展，制定本法。

.....

## Circular Economy Promotion Law of the People's Republic of China

(Passed in the 4th meeting of the Standing Committee of the 11th National People's Congress on Aug. 29, 2008)

**Article 1** The Law is formulated for the purpose of facilitating circular economy, raising resources utilization rate, protecting and improving environment and realizing sustainable development.



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# Circular Economy Promotion Law of the People's Republic of China

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Chapter 1 General Provisions

Chapter 2 Basic Administrative System

Chapter 3 Decrement

Chapter 4 Recycling and Resource Recovery

Chapter 5 Incentive Measures

Chapter 6 Legal Responsibilities

Chapter 7 Supplementary Provision

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第五章 激励措施

第六章 法律责任

第七章 附 则



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## Circular Economy Promotion Law of the People's Republic of China

**Article 1** The Law is formulated for the purpose of facilitating circular economy, raising resources utilization rate, protecting and improving environment and realizing sustained development.

**Article 2** The Circular Economy herein is the general term for the activities of decrement, recycling and resource recovery in production, circulation and consumption.

**第一条** 为了促进循环经济发展，提高资源利用效率，保护和改善环境，实现可持续发展，制定本法。

**第二条** 本法所称循环经济，是指在生产、流通和消费等过程中进行的减量化、再利用、资源化活动的总称。



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## Circular Economy Promotion Law of the People's Republic of China

**Article 3** The promotion of circular economy is an important strategy for the national economic and social development, thus, the following guidelines shall be adhered to: comprehensive planning, reasonable layout, taking measures according to local conditions, emphasis on actual effects, government promotion, market orientation, enterprise implementation and public participation.

**第三条** 发展循环经济是国家经济社会发展的一项重大战略，应当遵循统筹规划、合理布局，因地制宜、注重实效，政府推动、市场引导，企业实施、公众参与的方针。



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## Circular Economy Promotion Law of the People's Republic of China

**Article 4** The promotion of circular economy shall be implemented on the basis of being feasible in technology, reasonable in economy and conducive to saving resources and protecting environment in accordance with the principle of the priority of decrement.

**第四条** 发展循环经济应当在技术可行、经济合理和有利于节约资源、保护环境的前提下，按照减量化优先的原则实施。



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## Circular Economy Promotion Law of the People's Republic of China

**Article 8** People's governments above county level shall establish a goal-responsibility system for circular economy promotion and take measures with respect to planning, finance, investment and government procurement, etc. to promote circular economy.

**第八条** 县级以上人民政府应当建立发展循环经济的目标责任制，采取规划、财政、投资、政府采购等措施，促进循环经济发展。



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## Circular Economy Promotion Law of the People's Republic of China

**Article 7** The State encourages and supports the research, development and promotion of science and technology regarding circular economy, as well as the publicity, education and popularization of scientific knowledge of and international cooperation on circular economy.

**第七条** 国家鼓励和支持开展循环经济科学技术的研究、开发和推广，鼓励开展循环经济宣传、教育、科学知识普及和国际合作。



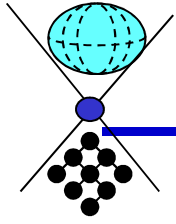
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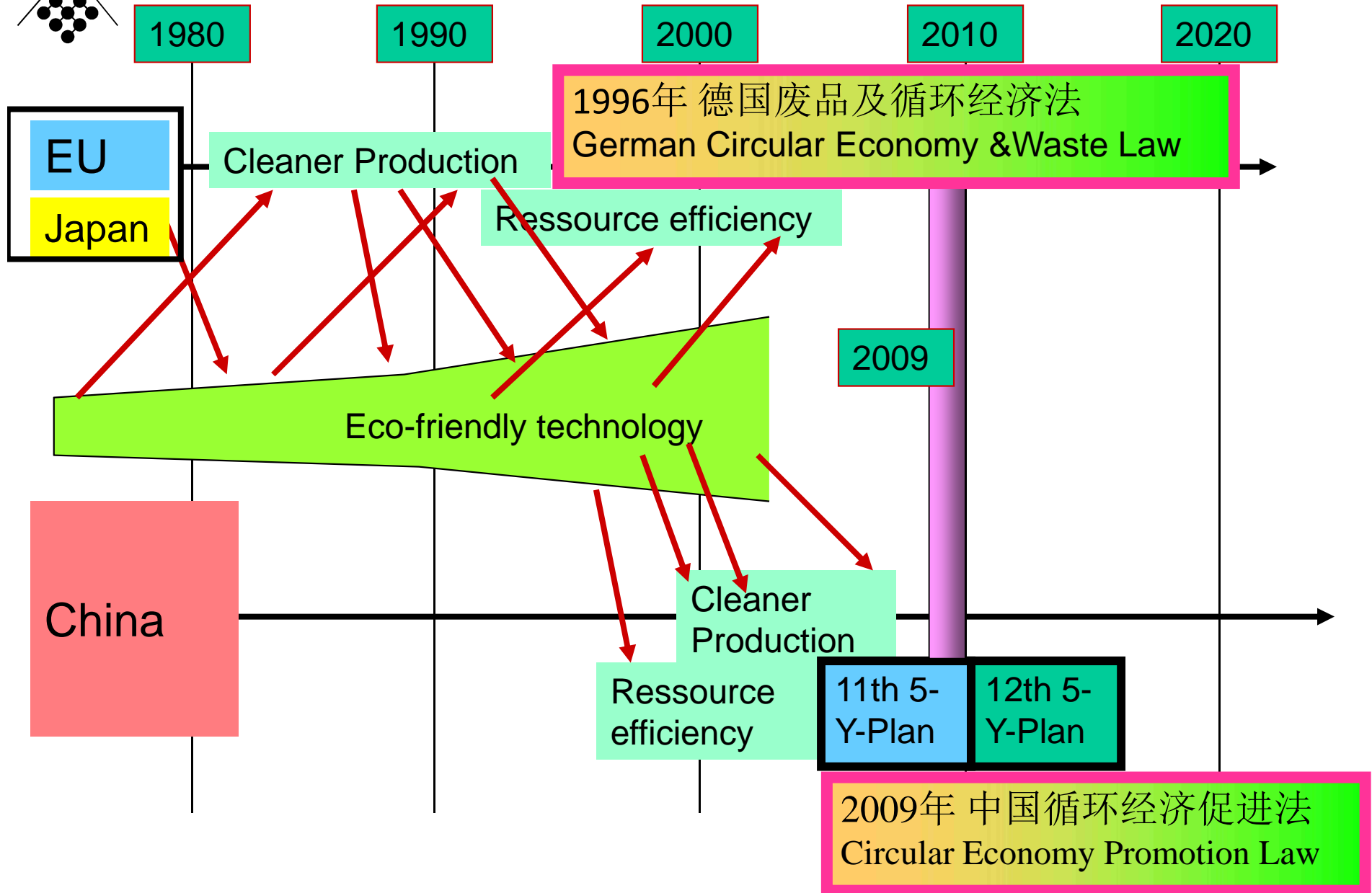
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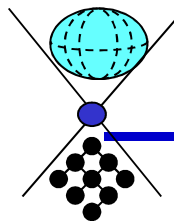


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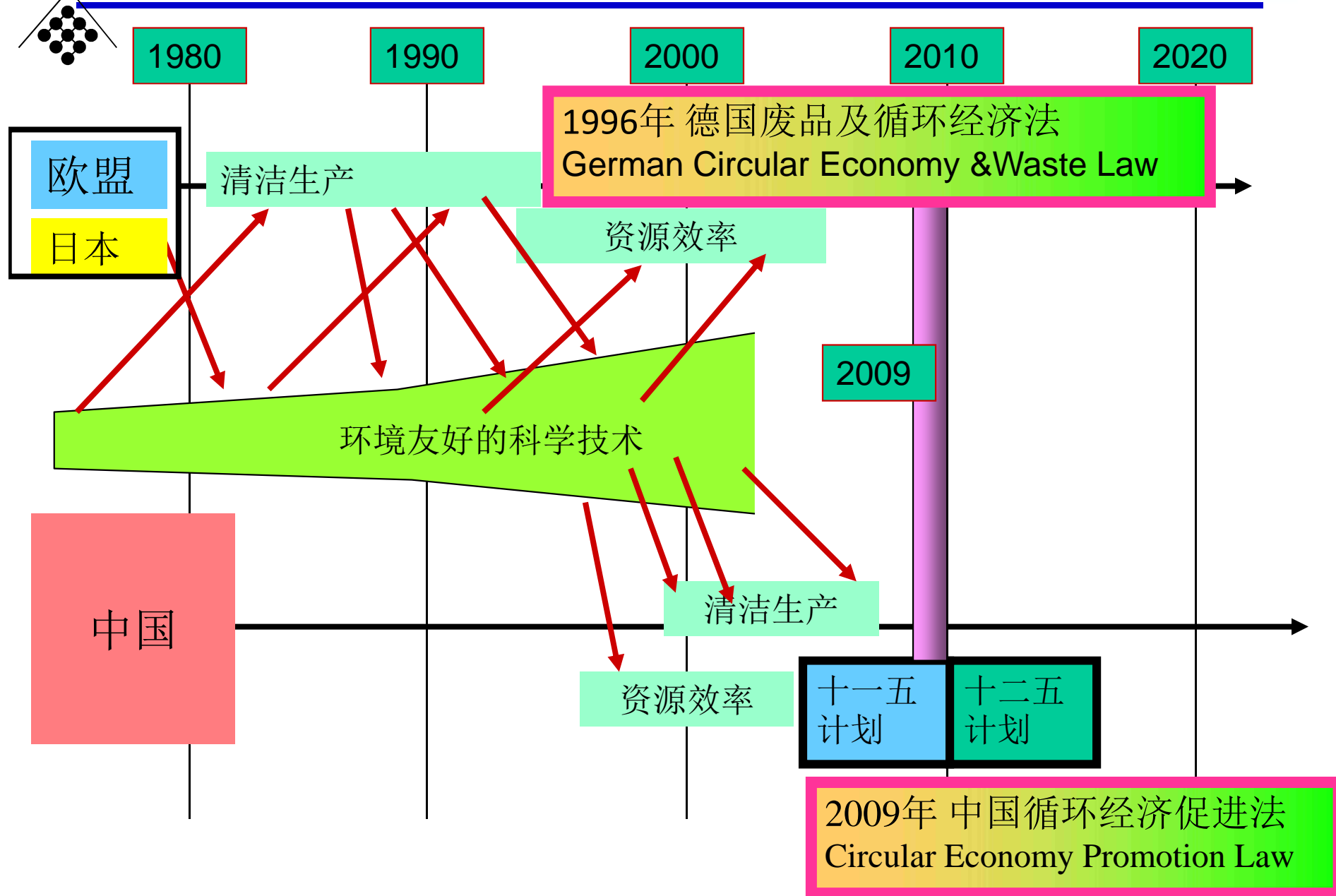


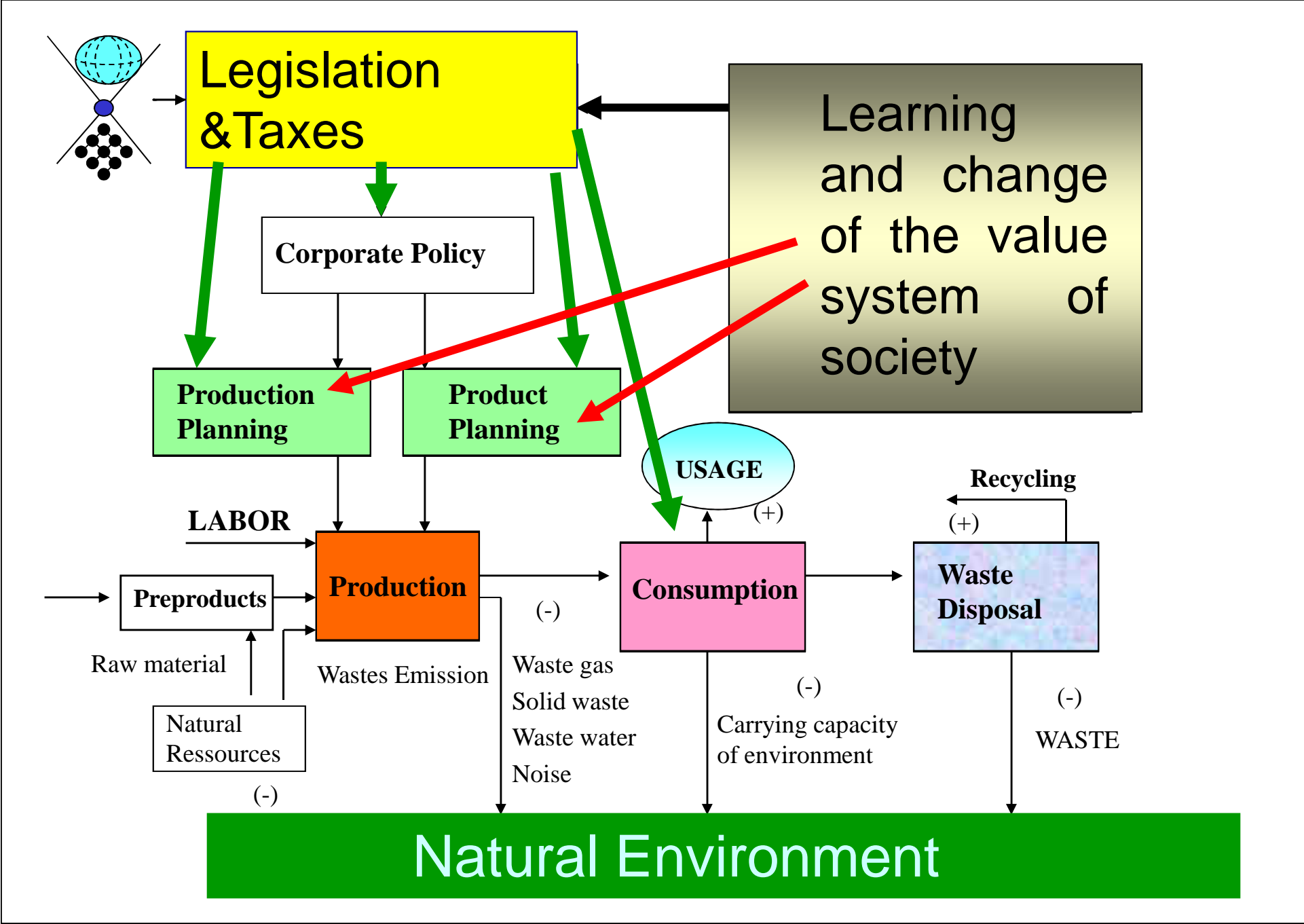
# Circular Economy Development- Global Learning Processes

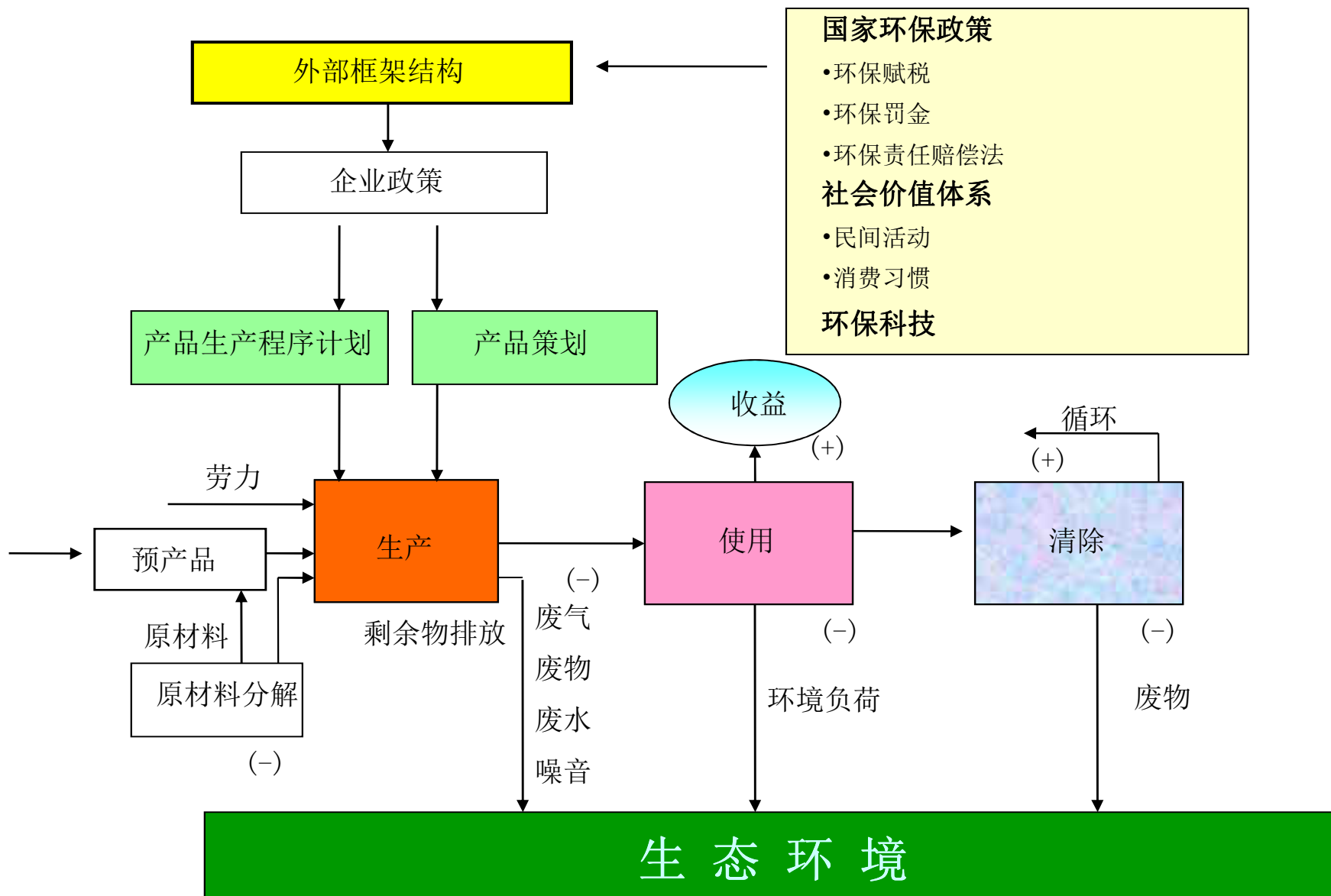


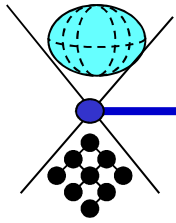


# 循环经济发展——全球学习进程



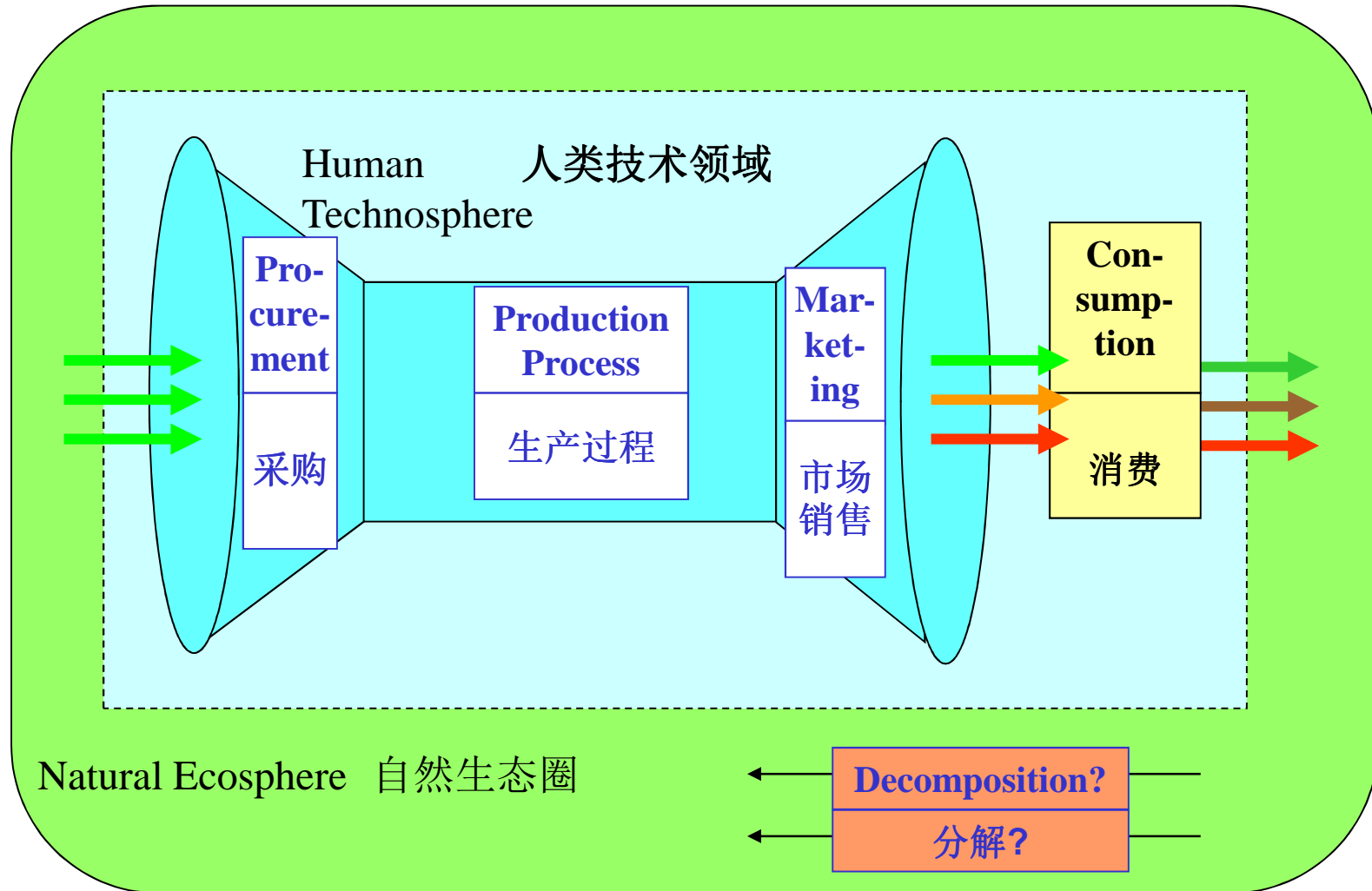






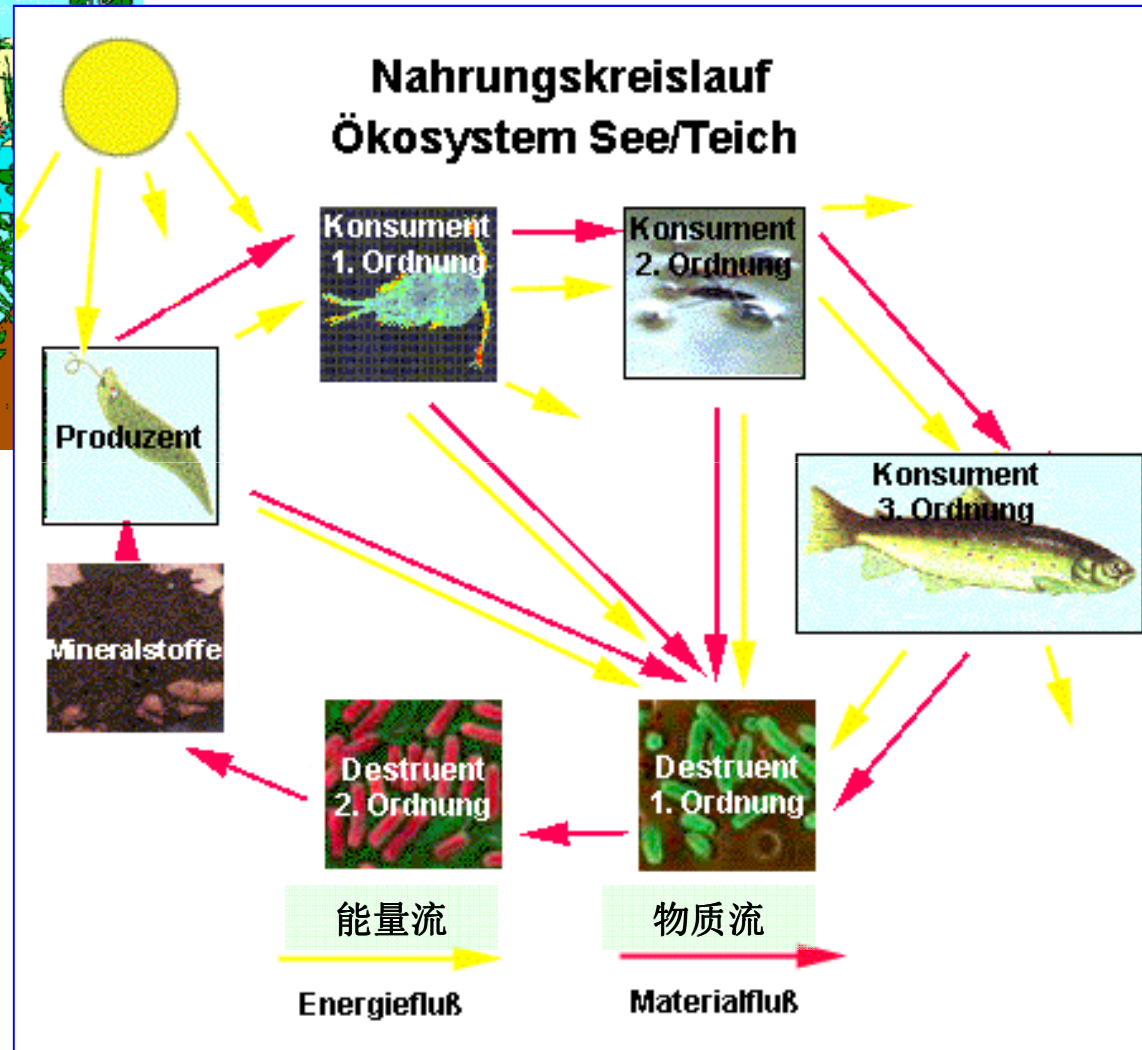
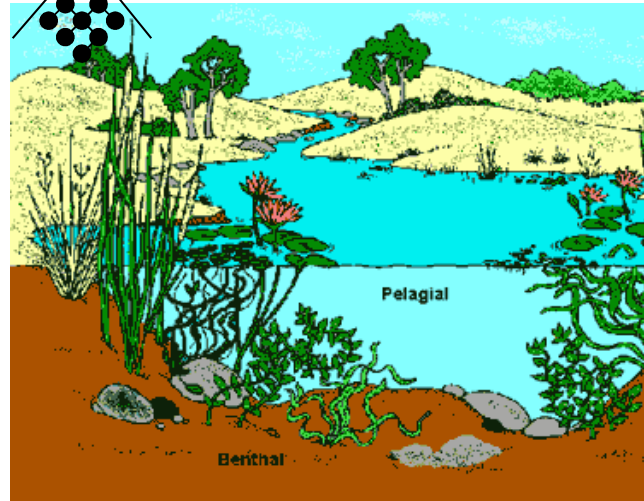
# Model of traditional industrial throughput system

## 物质经济的发展历程



# 生态循环经济系统要素

## Elements of an ecological „Circular Economy System“

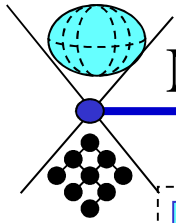


The chain of nutrients in a local ecosystem

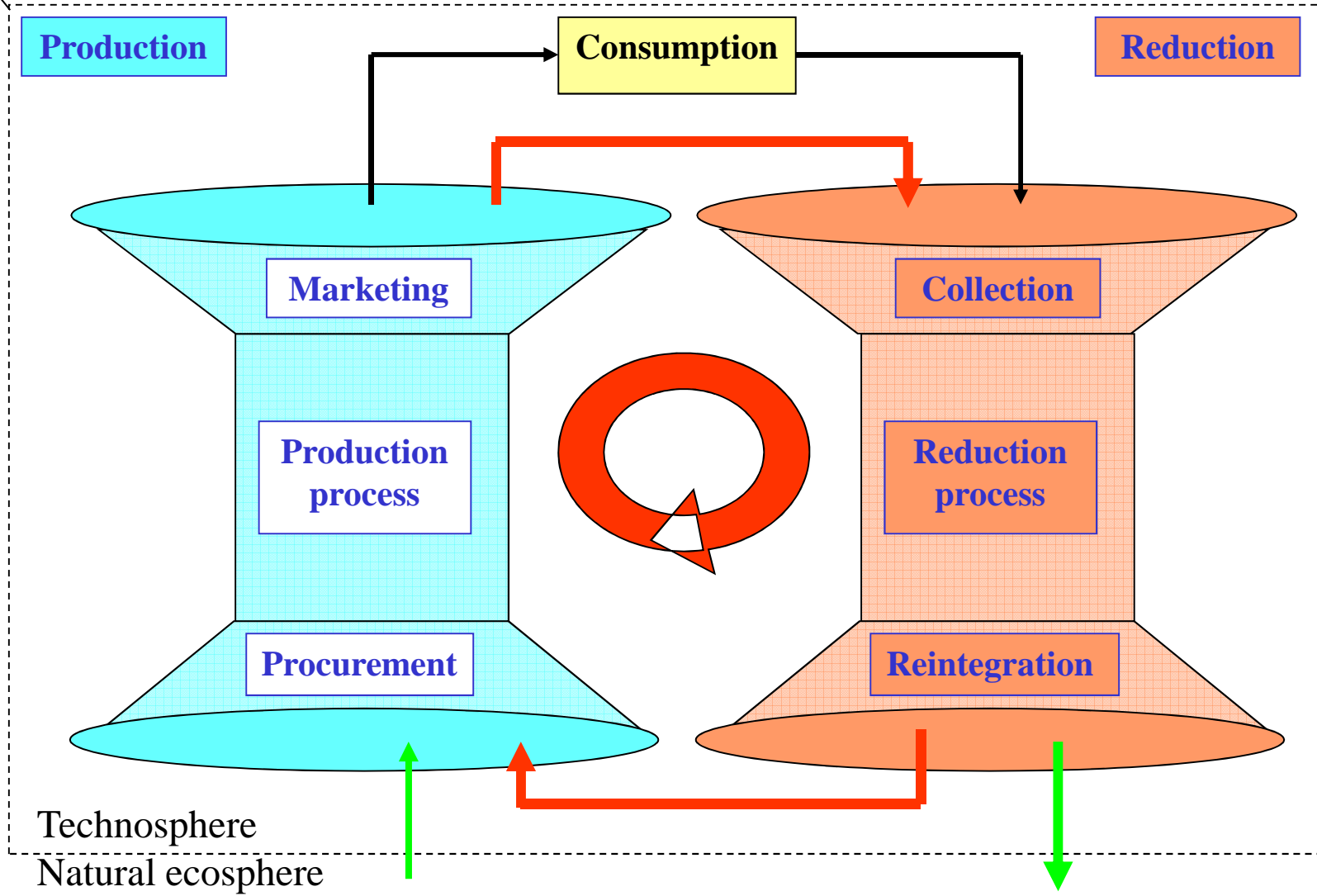
局部生态系统食物链

Quelle:

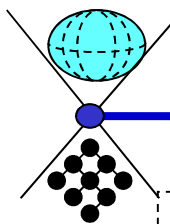
<http://www.egbeck.de/skripten/bs11-25.htm>



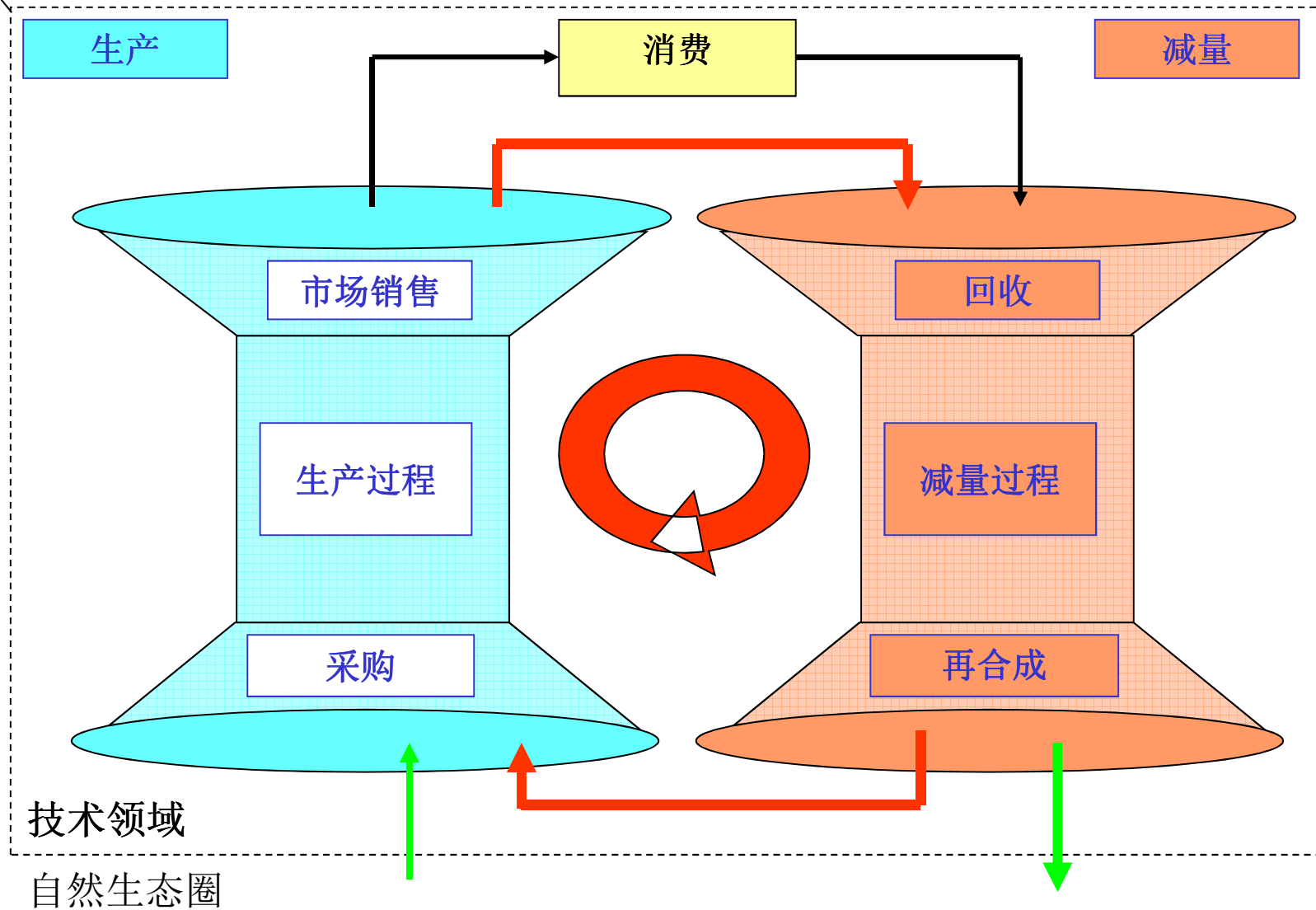
# Model of sustainability oriented material flow management

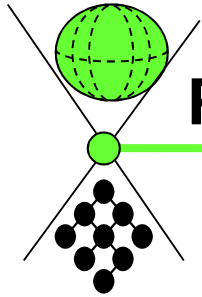




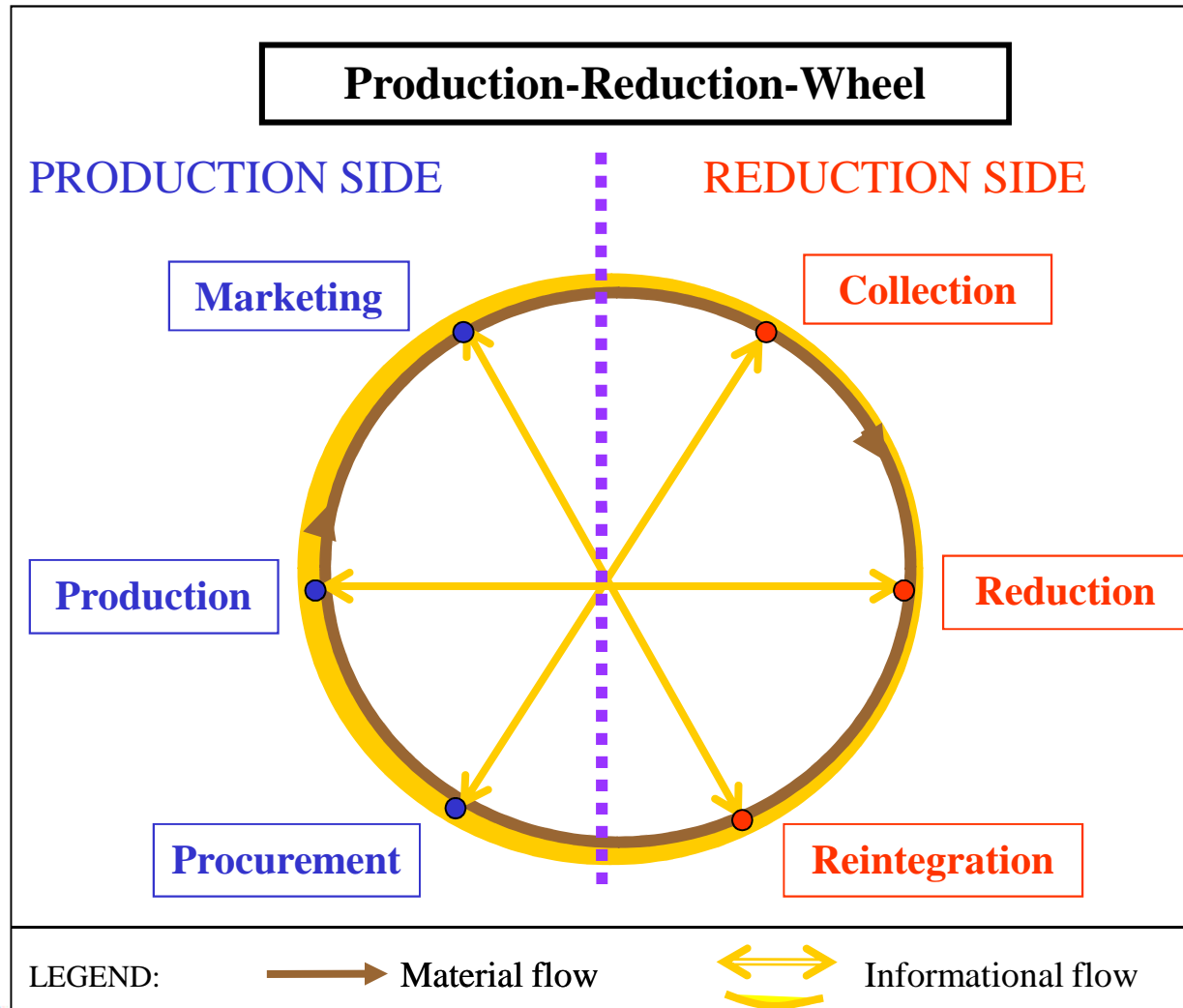


# 面向可持续发展的物质流管理模型





# Production and Reproduction in Industry



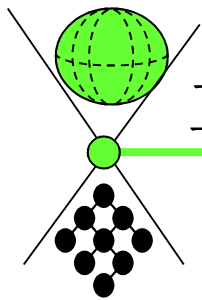
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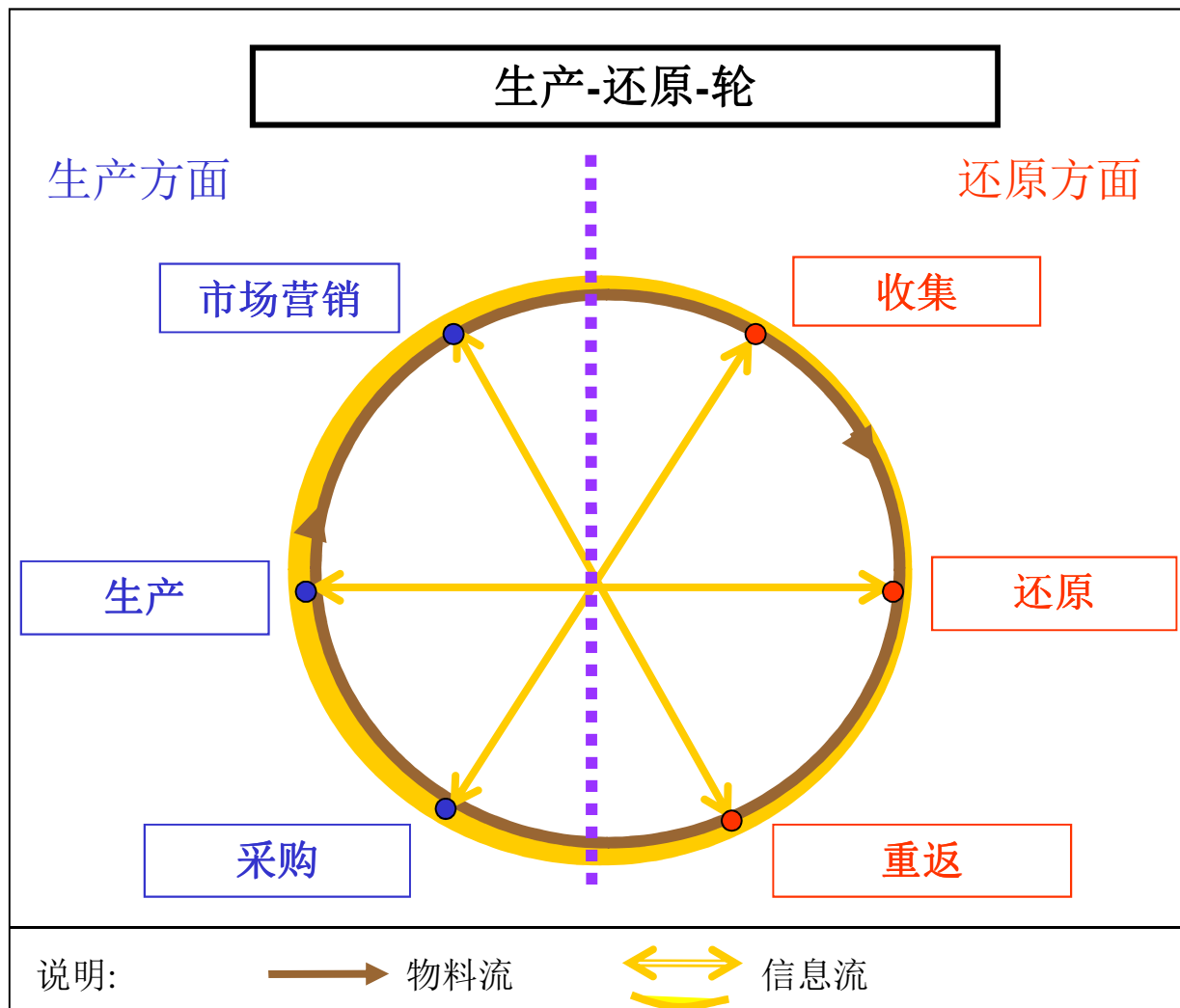
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# 工业中的生产及再生产



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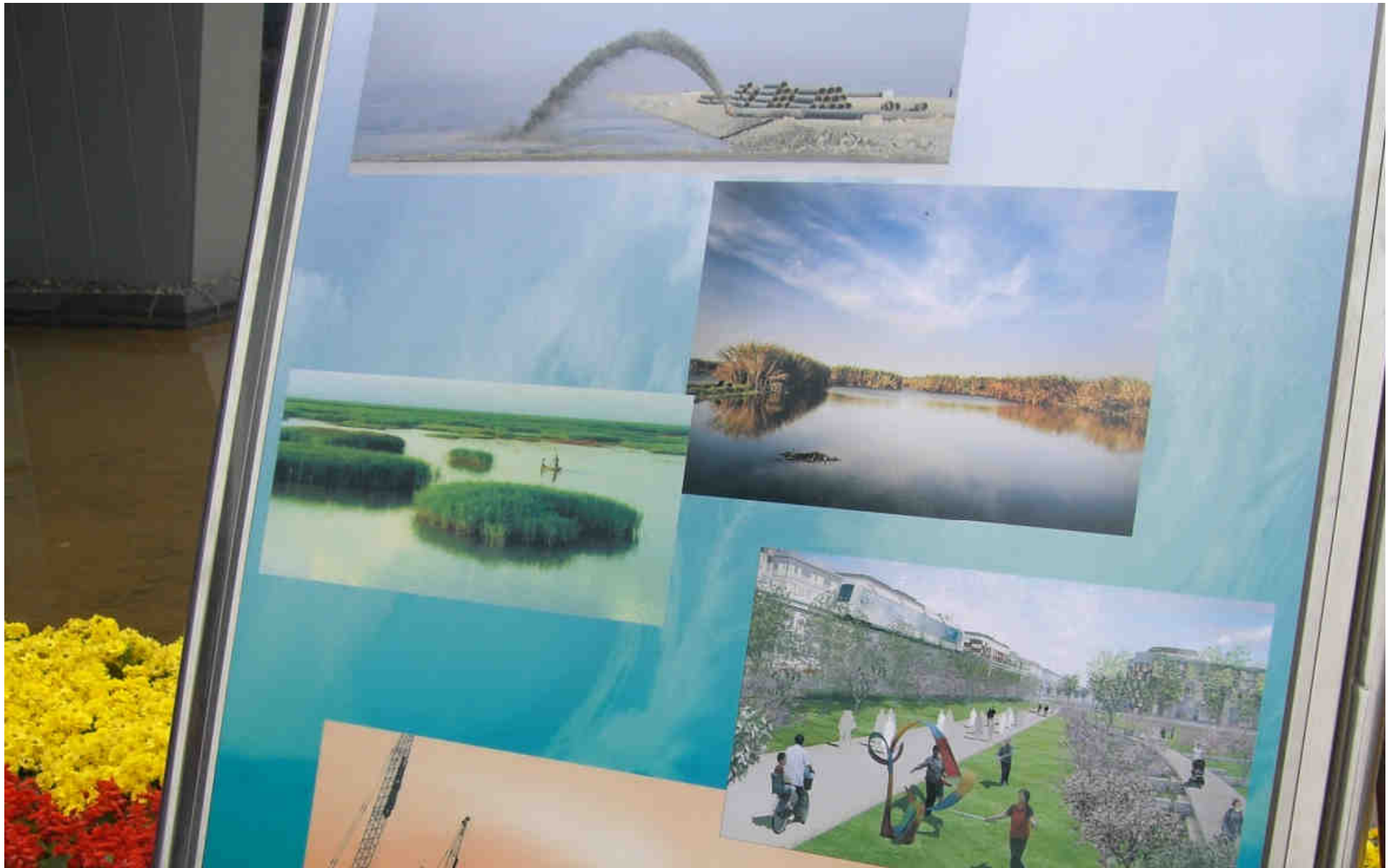
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# Lighthouse Projects of Circular Economy in China

## 中国循环经济亮点工程







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# Indicators of too slow implementation

进度实施缓慢的标志





## 'Pressure mounting' in anti-pollution drive

By Li Jing (China Daily)

Updated: 2010-06-04 07:23

BEIJING –

China's sulfur dioxide emission, a major air pollutant, saw a 1.2 percent year-on-year increase in the first quarter - the first time it rose since 2007, said Zhang Lijun, vice-minister of environmental protection.

The increase was the result of rapid growth in the industrial output of a number of resource-intensive sectors, the major drought in the country's southwest region and slackness in the environmental awareness of some local governments and enterprises, Zhang said.

China has set binding targets to cut emissions of the both pollutants (*sulfur dioxide and COD*) by 10 percent between 2006 and this year.



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环保部副部长张力军说，今年一季度，随着出口和国内需求增加，中国的电厂和工厂里烧的煤炭也增多了，二氧化硫排放量比去年同期上升了1.2%。这是 2007年以来的第一次季度性上涨。张力军在一次记者会上说，节能减排的工作不容乐观。

张力军承认了其中的一些问题。他说，污染加重的部分原因是能源密集型项目增加、思想上的松懈，以及地方环保当局监管不力。

这些挫折对中国的一种能力造成问题，这就是能否达到2010年与2006年相比，把包括二氧化硫在内的主要污染物排放量减少10%的目标。二氧化硫是被认为与许多健康问题相关的主要污染物之一。

<http://www.cankaoa.com/Article/cankaobao/13886.html>



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Vessels clean up floating waste and duckweed on the Yangtze River in Fengjie county, Chongqing municipality, in this file photo. [Zhou Hui / For China Daily]

船只在清理重庆市扬子河内漂浮的垃圾。[周慧/中国日报]







Yes we can!

But how?

是的，我們可以！

但是？？？



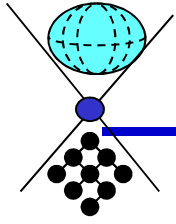
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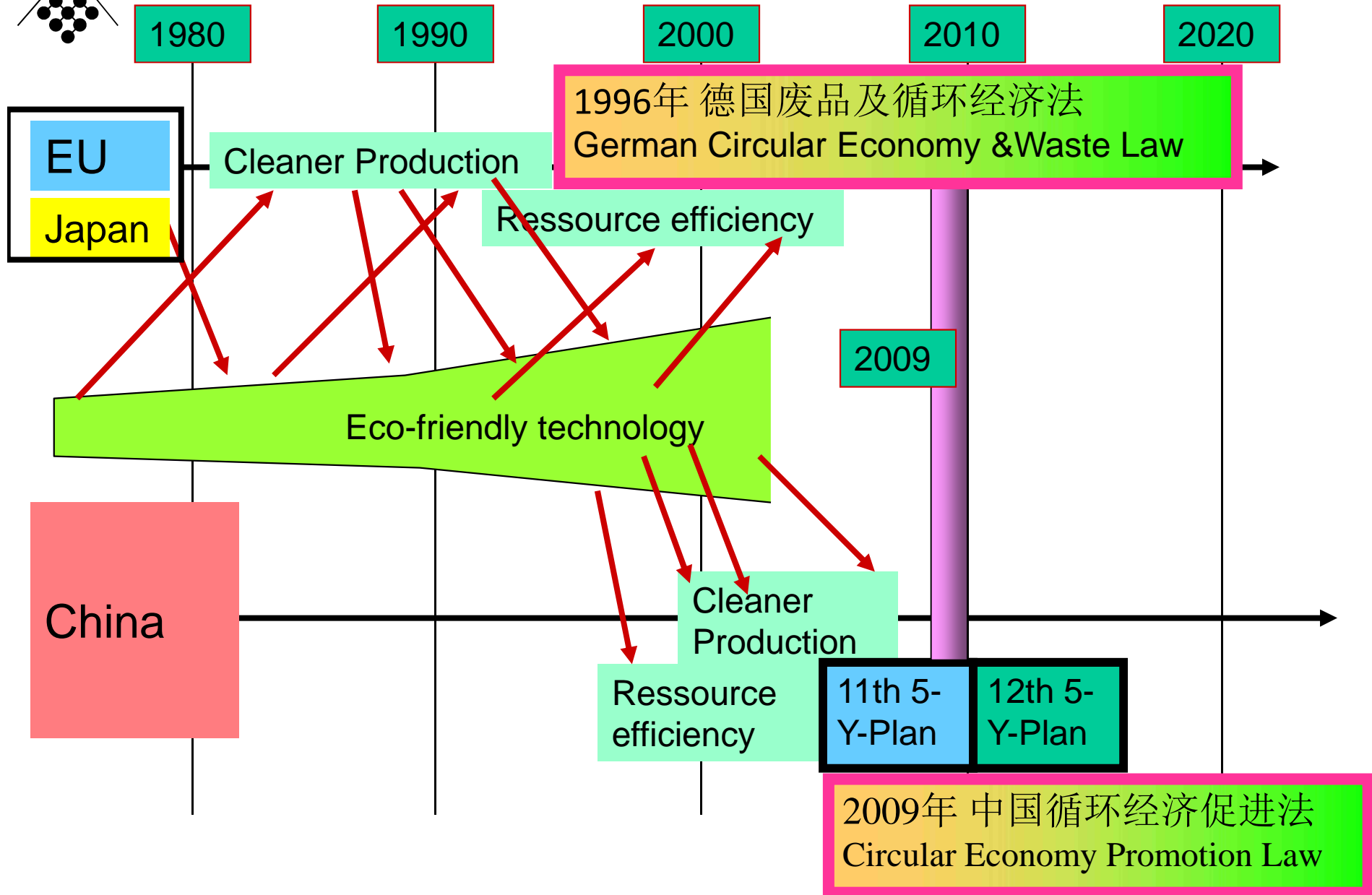
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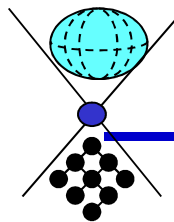
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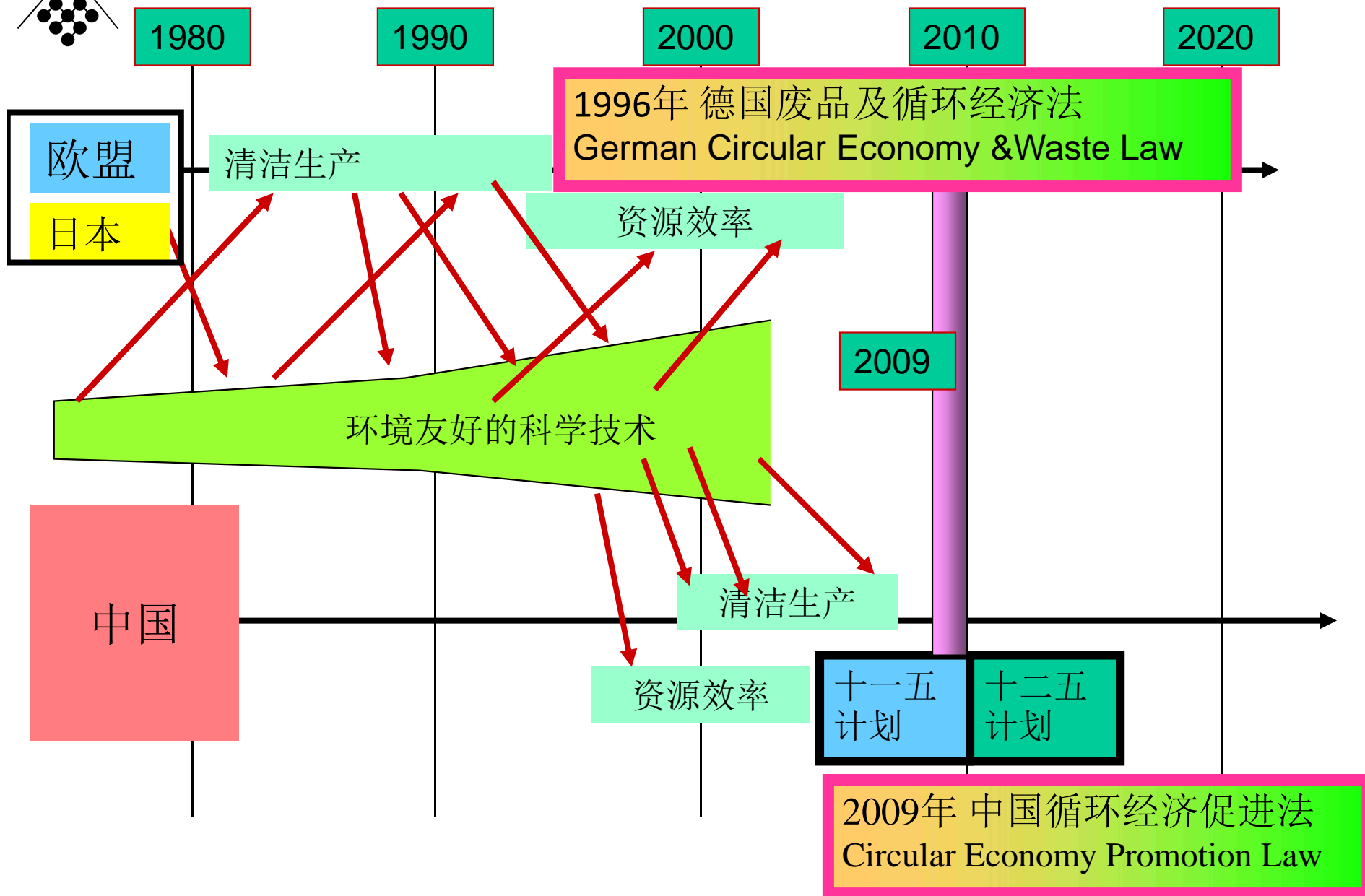
# Circular Economy Development- Global Learning Processes







# 循环经济发展——全球学习进程





## The River Basin of the Rhine

莱茵河流域

↔ Large Chemical Plant

↔ 大型化工厂

amounting to as much as 20 per cent of its total content.

The pollution of the Rhine has been largely the result of West Germany's postwar industrial renaissance, but the reckless use of agricultural pesticides has contributed too. Emergency procedures were instituted, new laws passed, and communities and industries along the Rhine were required to build new plants for the treatment of effluent. Whether the river can be cleaned up, at high cost and perhaps in opposition to what is traditionally called economic progress, remains to be seen.

**THE  
AMERICAN  
PEOPLES  
ENCYCLOPEDIA  
YEAR BOOK**

**1971**

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莱茵河深受西德战前工业复兴之害。除此之外，对农药的滥用也是导致河水污染的原因。对此人们采取了紧急措施，颁布了新的法令。莱茵沿岸社区和工业被呼吁制定治污的计划。河水净化需大量的资金投入，高成本的投入也许会被传统地看作为经济发展的倒退。是否河水在大投入下能得到净化，仍然拭目以待。

**THE  
AMERICAN  
PEOPLES  
ENCYCLOPEDIA  
YEAR BOOK**

**1971**

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# 德国循环经济的发展

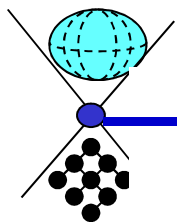
1970 濒临生态崩溃

废水治理



2005 100% 净水处理设备

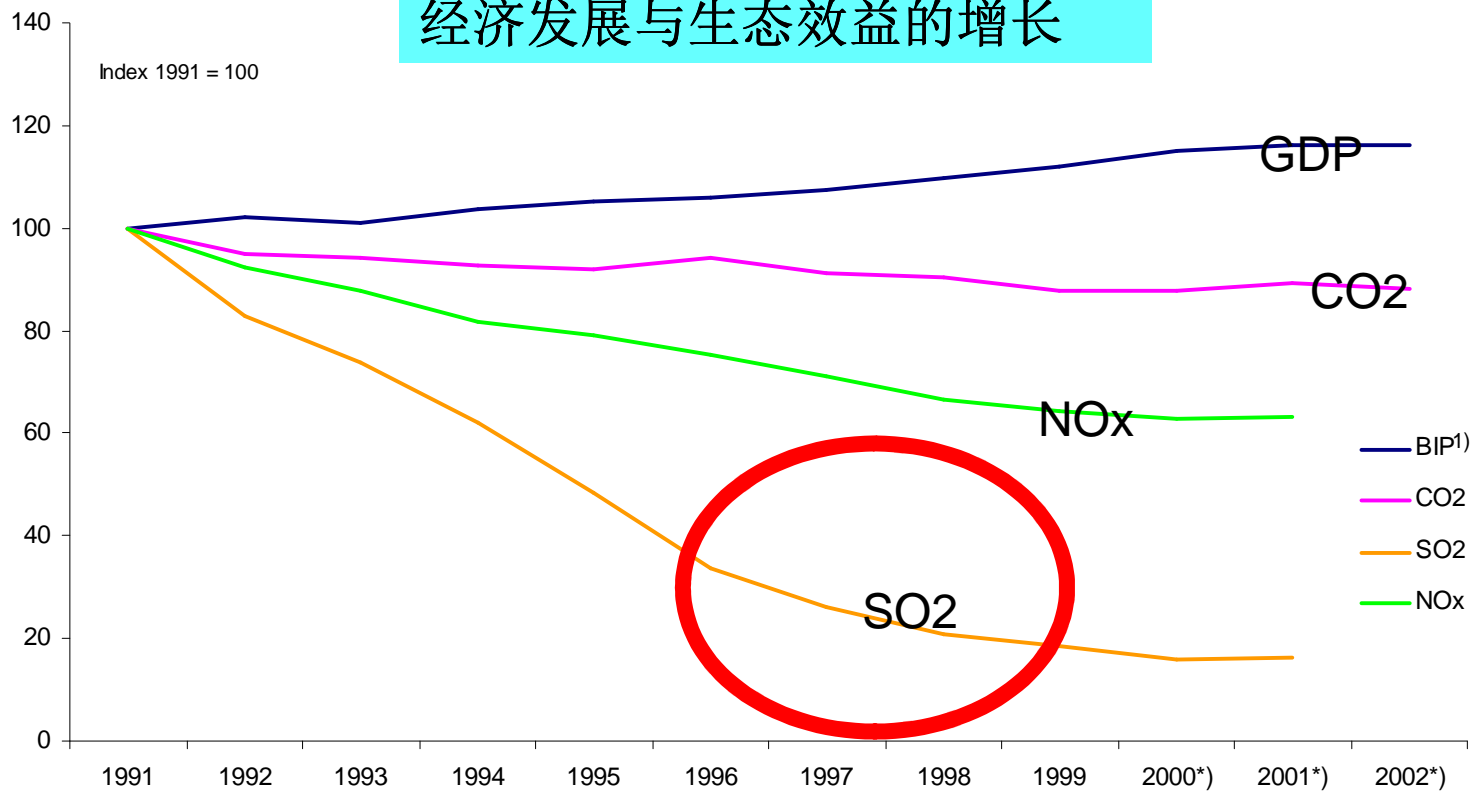




# 德国循环经济的发展进程

Wirtschaftliche Entwicklung und Schadstoffemissionen

## 经济发展与生态效益的增长



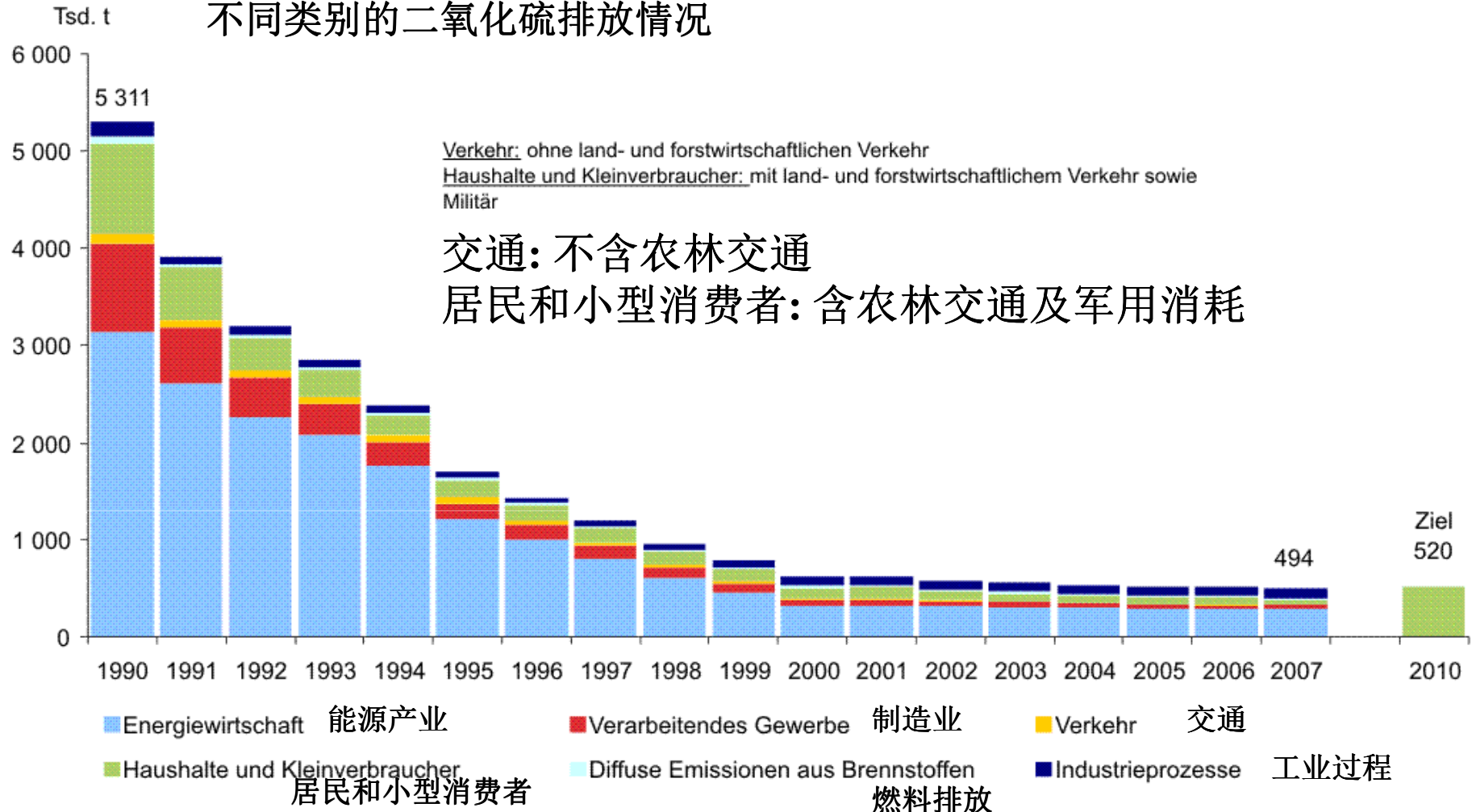
\*) vorläufiges Ergebnis <sup>1)</sup> in Preisen von 1995

Quelle: Statistisches Bundesamt

引自: 联邦统计局

# Schwefeldioxid (SO<sub>2</sub>)-Emissionen nach Quellkategorien

## 不同类别的二氧化硫排放情况



Quelle: Umweltbundesamt, Nationale Trendtabellen für die deutsche Berichterstattung atmosphärischer Emissionen, Emissionsentwicklung 1990-2007 (Endstand 20.02.2009), [www.umweltbundesamt.de/emissionen/publikationen.htm](http://www.umweltbundesamt.de/emissionen/publikationen.htm)



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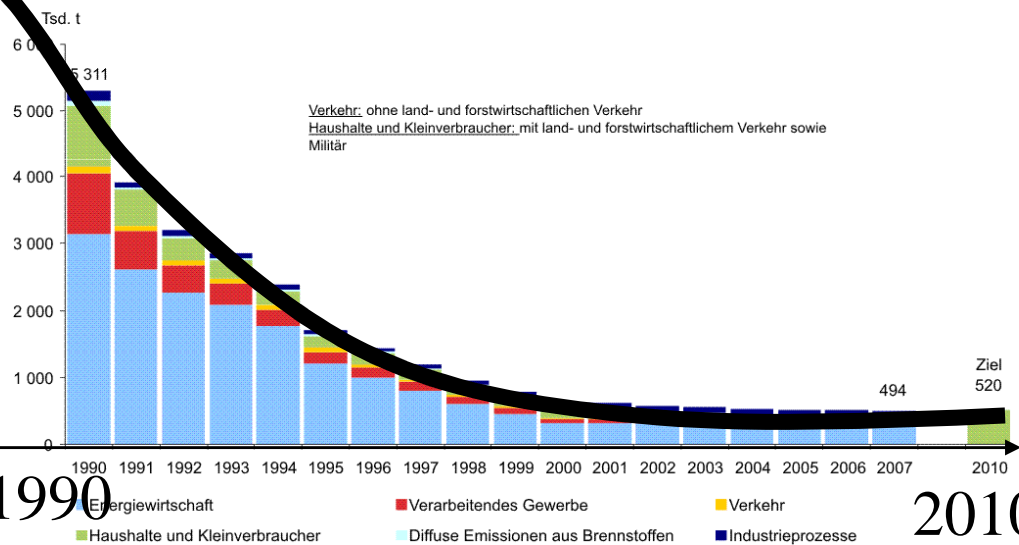
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Schwefeldioxid (SO<sub>2</sub>)-Emissionen nach Quellkategorien



1970

1990

2010

Quelle: Umweltbundesamt, Nationale Trendtabellen für die deutsche Berichterstattung atmosphärischer Emissionen, Emissionsentwicklung 1990-2007 (Endstand 20.02.2009), [www.umweltbundesamt.de/emissionen/publikationen.htm](http://www.umweltbundesamt.de/emissionen/publikationen.htm)



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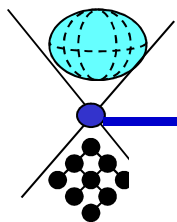
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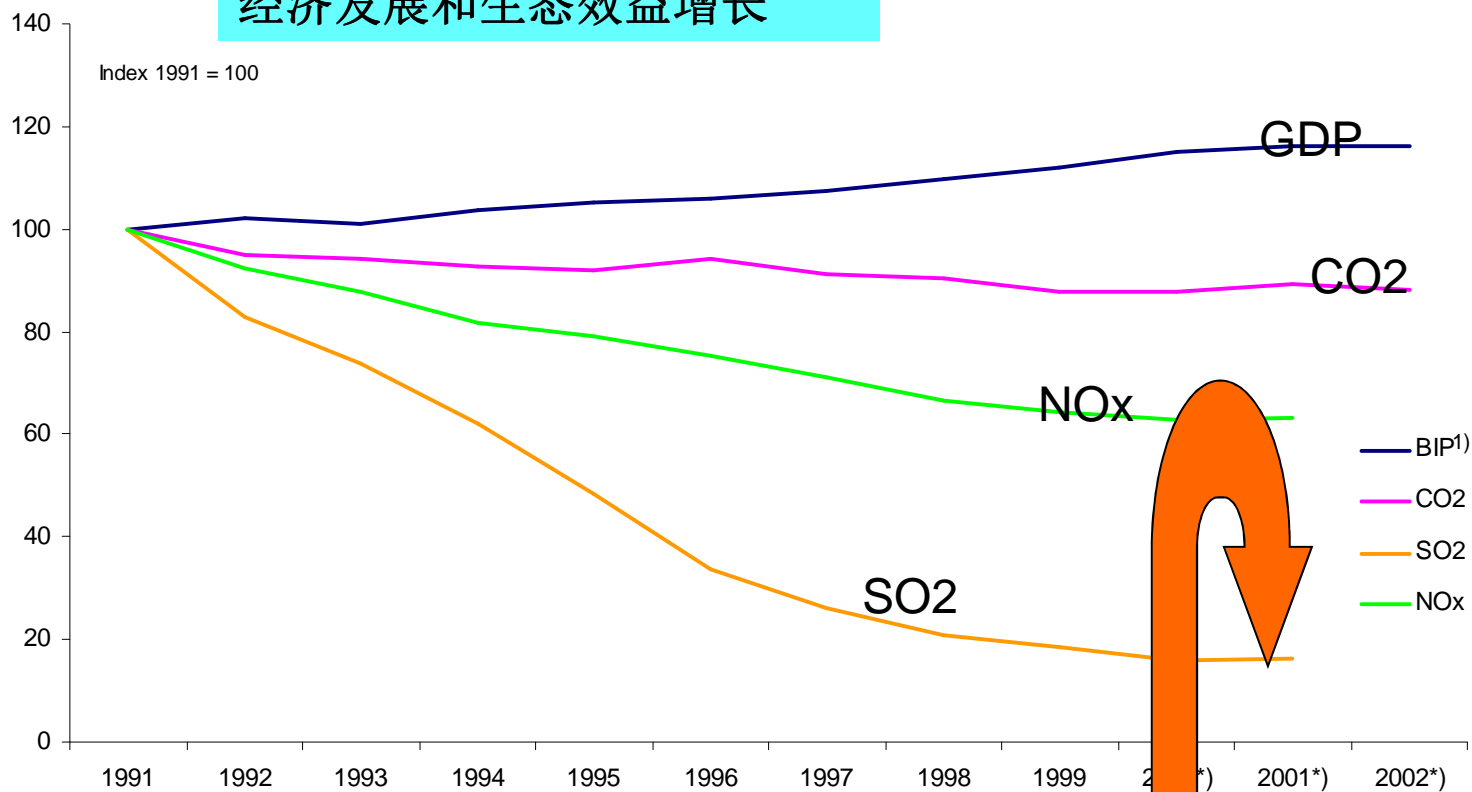




# 德国循环经济发展进程

Wirtschaftliche Entwicklung und Schadstoffemissionen

## 经济发展和生态效益增长



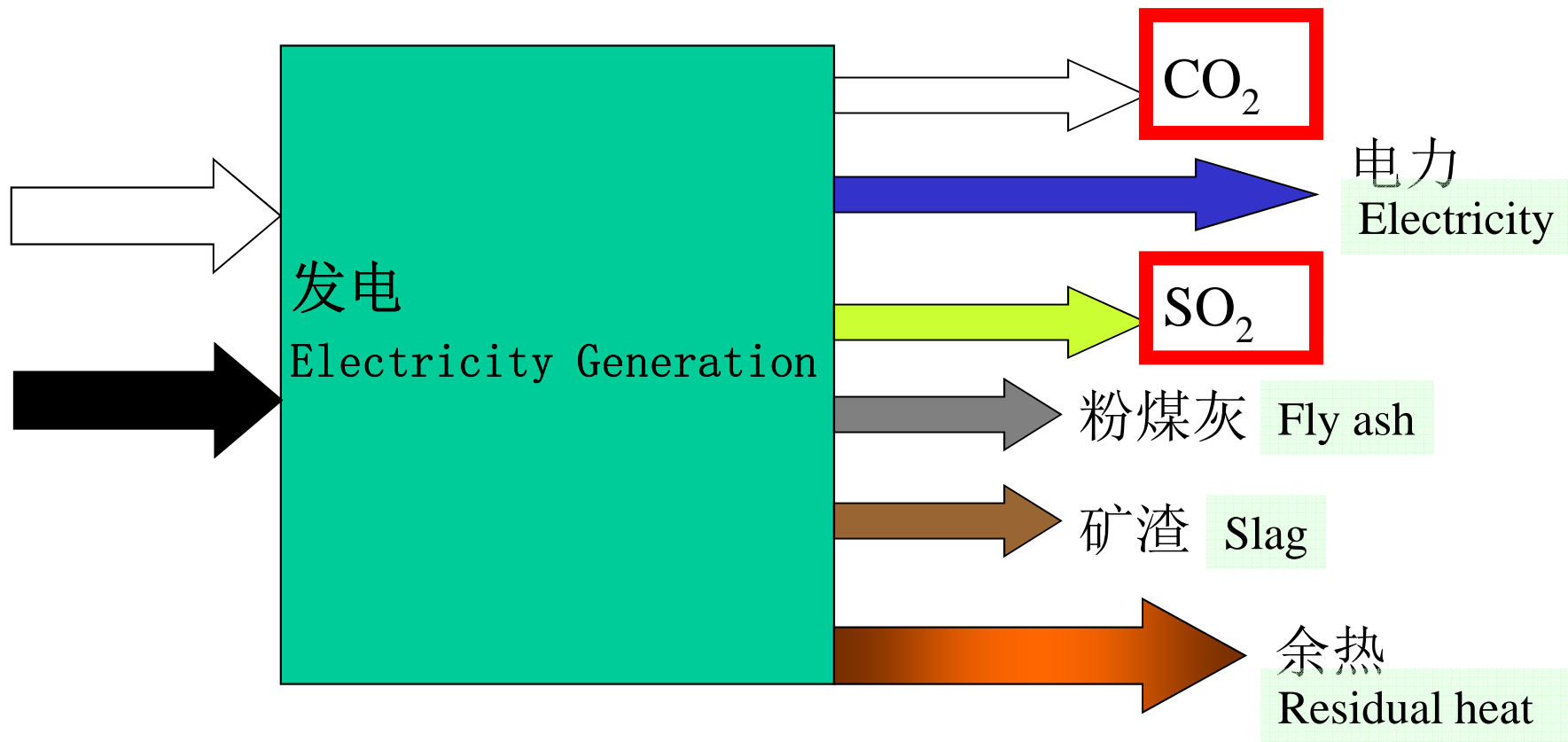
\*) vorläufiges Ergebnis <sup>1)</sup> in Preisen von 1995

Source: Federal Statistical Bureau

引自: 联邦统计局

石膏

石膏: + 700百万吨



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电厂副产品联邦协会



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Ressourcen-  
effizienz

Energie-  
effizienz

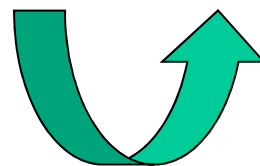
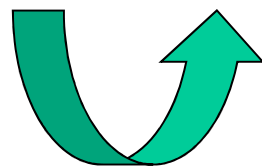
Umwelt-  
schutz

Beitrag zur Nachhaltigen Entwicklung und  
regionalen Wirtschaftsförderung

资源效率

能源效率

环境保护



为可持续发展和区域经济发展贡献力量

# Promoters for Circular Economy Development

循环经济发展的倡导者





# Promotors for Circular Economy Development

循环经济发展的促进剂

People

人

Culture/Values

文化/价值观

Funds

资金

Knowledge  
transfer

知识转移



## Der Verband

Der Bundesverband für Kraftwerksnebenprodukte e.V. vertritt die Interessen von Herstellern und Vermarktern von Baustoffen aus Kohlekraftwerken.

Jährlich werden über 9 Millionen Tonnen dieser *Baustoffe* aus Kohlekraftwerken in Form von Flugasche, REA-Gips und anderem in der Baustoffindustrie eingesetzt.



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## 协会

电厂副产品联邦协会代表利用发电场的副产品生产建材的生产商与销售商的利益。

每年，都会有超过900万吨来自发电场的建筑材料以煤烟灰、REA-石膏以及其它形式应用于建筑行业。



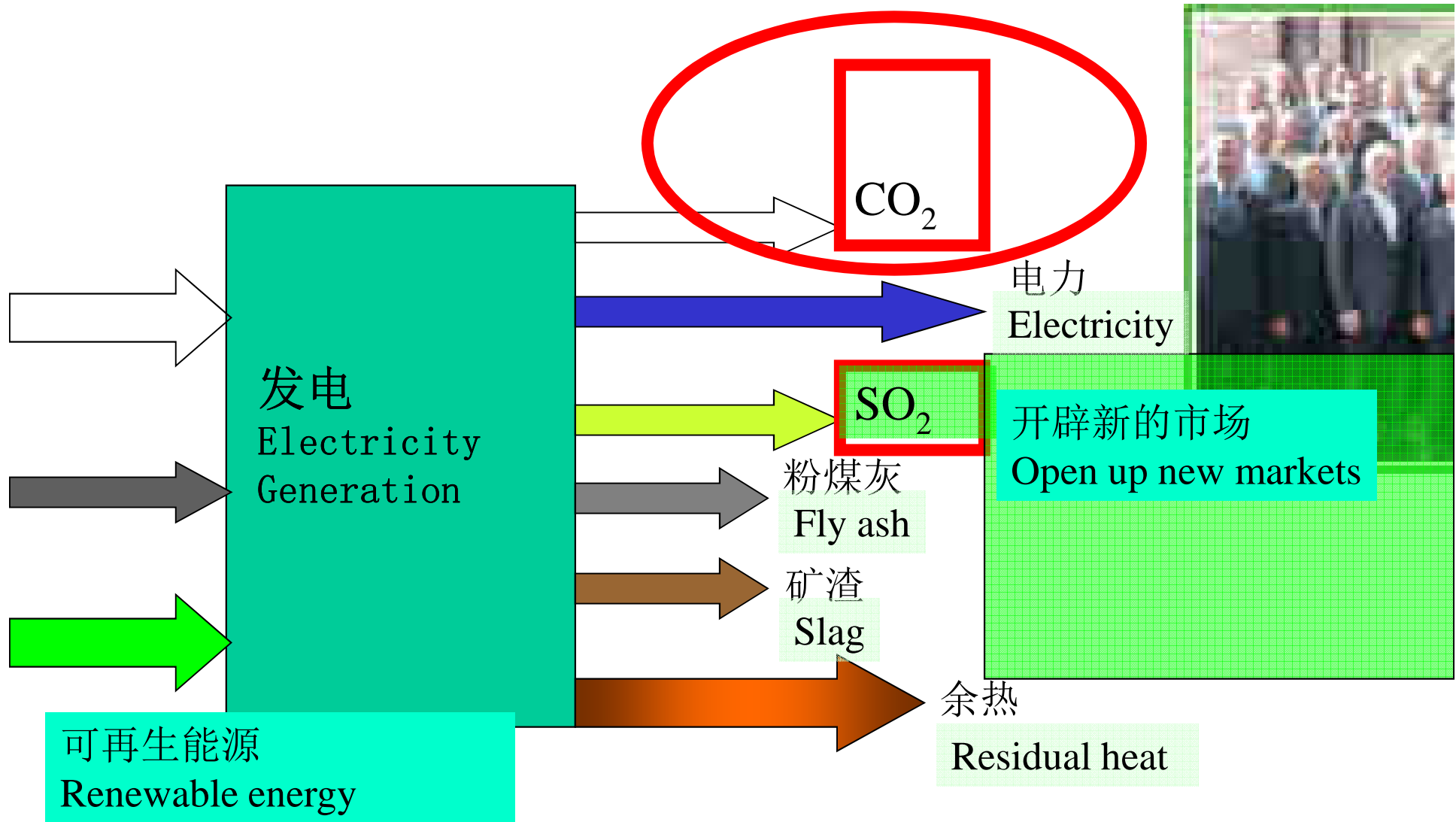
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“More favorable policies are necessary to boost economic and social development in the region, said Premier Wen Jiabao, who also attended the meeting.

Therefore, the central government has decided to start pilot reforms on resource tax in Xinjiang, in which the tax will be levied based on prices instead of quantity. The change is expected to significantly increase tax revenue for the regional government.”

From: **Xinjiang support package unveiled** By Cui Jia and Zhu Zhe (China Daily)

Updated: 2010-05-21 06:59

温家宝指出，为推动新形势下新疆经济社会加快发展，必须加大政策支持力度。

中央决定，在新疆率先进行资源税费改革，将原油、天然气资源税由从量计征改为从价计征。

<http://cpc.people.com.cn/GB/64093/67507/11654264.html>



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## Circular Economy Promotion Law of the People's Republic of China

**Article 7** The State encourages and supports the research, development and promotion of science and technology regarding circular economy, as well as the publicity, education and popularization of scientific knowledge of and international cooperation on circular economy.

**第七条** 国家鼓励和支持开展循环经济科学技术的研究、开发和推广，鼓励开展循环经济宣传、教育、科学知识普及和国际合作。



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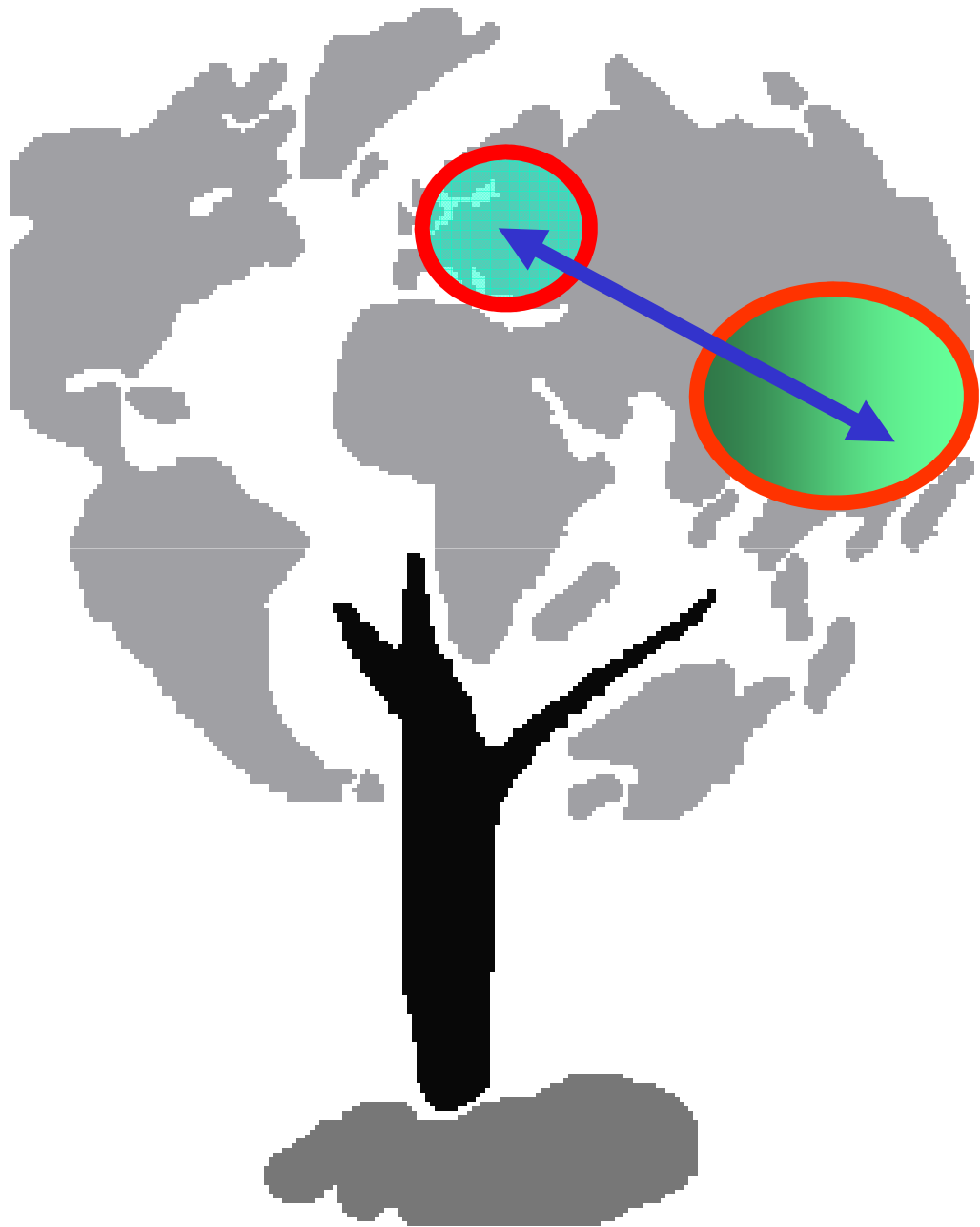
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