

Case Study on Circular Economy

—State Demonstrated Eco-industry Estate (Sugar), Guigang, China

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Contents



- Background
- Project Introduction
- Target and Guideline
- Achievement
- Experience
- Suggestion

Background

- In the year 2000, accumulative total loss of sugar industry reached *10 billion Yuan* (RMB)
- Sugar industry is facing great challenge:
Configurable Pollution & Regional Pollution
- Productivity of sugar manufacture is low:
Poor Equipment & Technologies
- Sugar industry is the Pillar Industry in Guigang

Estate Introduction

- Being the largest sugar cane producing base in China, the sugar cane land in Guigang city is of *23,200* hectare with an output of *52.5~60 tons /hectare*.
- At present, there are five sugar manufacturing plants in Guigang City, among which **Guitang Group** is the largest sugar industry in China.

Composition of the Eco-industry Estate, Guigang



Introduction of **Guang Xi Guitang (Group) CO., LTD**

- It was put into production in 1956 with its stock system's reconstruction being finished in 1994.
- Group covers an area of 1.5 km² with about 3000 registered staff .
- Up to the end of the year 2000, the accumulated investment had reached 14.029 million Yuan (RMB).

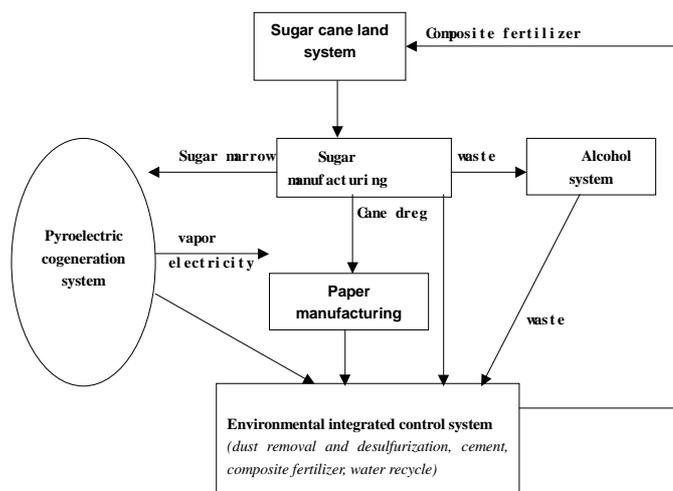


Income of Guitang CO., LTD

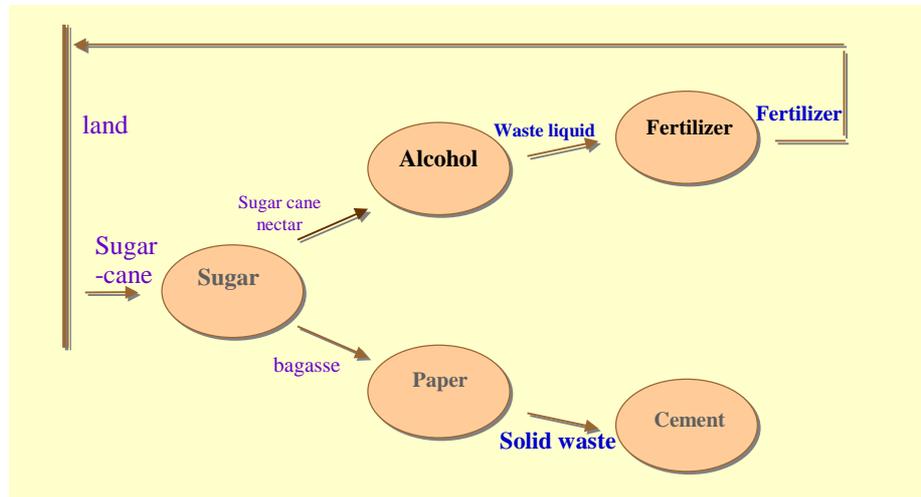
Income of different industries in 2003 (million Yuan)

Industry	Business income	Proportion	Profits	Profits proportion
		£ %£ ©		£ %£ ©
Refine sugar	375,97	49.73	2,799	2.88
Paper making	375,21	49.63	93,49	96.10
Chemical industry	4,81	0.64	0,993	1.02
Total	755,99	100.00	97,29	100.00

Constructing Frame of Guitang



Flow Chart



Target

- To *retrieve* traditional industry of China by developing a new production pattern;
- To *realize* harmonious development of both environment and economy by using ecological industry theory;
- To *build* a demonstrated eco-industry pattern for sugar manufacture.

Guideline

- Regional *eco-efficiency Principle*;
- Solving environmental problems by *keeping development*;
- Making *overall plans* to project's key-points;
- High technology and high benefit Principle;
- Equal attention to both *hardware* and *software* construction.



Project Achievement

● Economic Benefit

Up to the year 2005, the whole sales income may reach 7.2 billion Yuan (RMB).

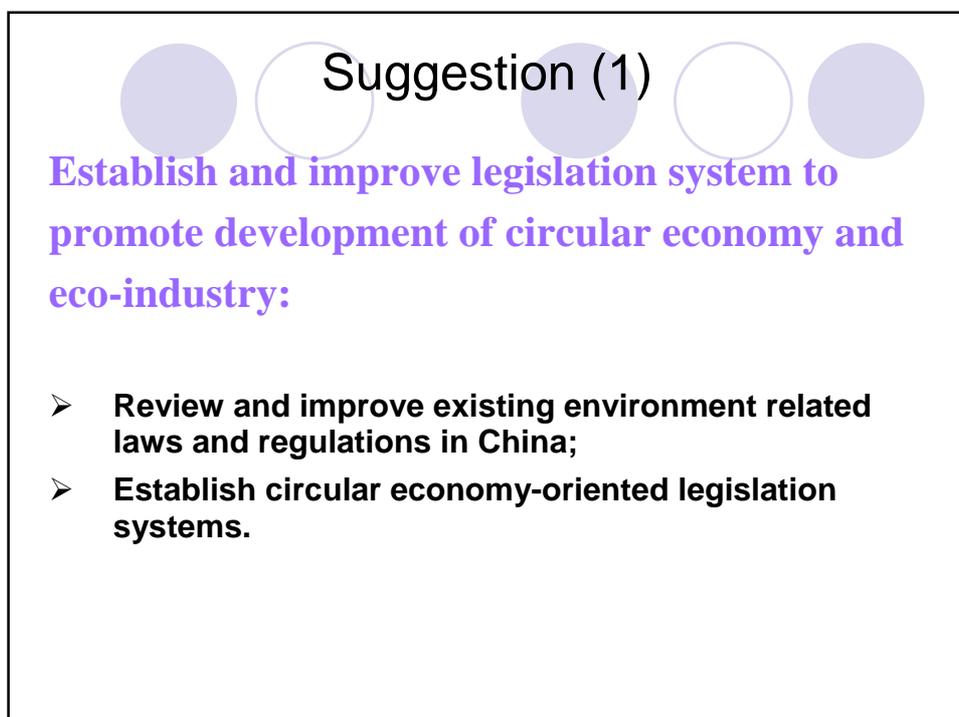
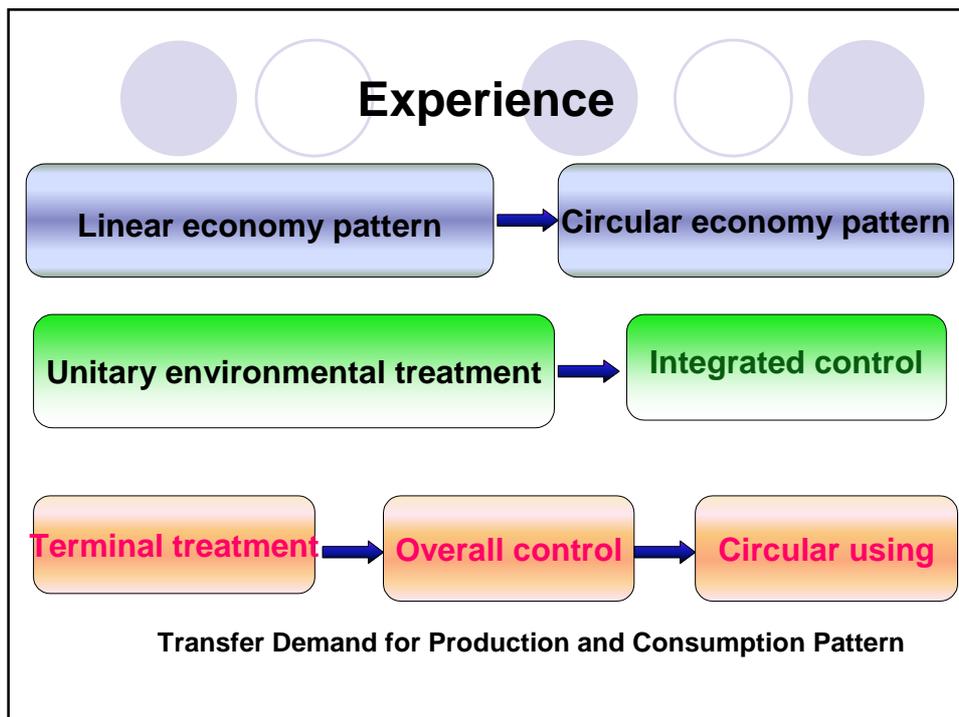
● Environmental Benefit

In the year 2000, COD was reduced by 35% and 134,000 tons organics was decreased.

● Social Benefit

A compacted network is built focusing on sugar industry, and people's living standard in Guigang City has been improved a lot.







Suggestion (2)

Highlight the R&D for the supporting systems of circular economy and eco-industry:

- **Environmental technologies**
- **Resource-reusing technologies**
- **CP technologies**
- **Evaluation technical systems**



Suggestion (3)

Strengthen the dissemination of the circular economy and eco-industry

- **The governments at all levels**
- **Enterprises**
- **Research institutes**
- **NGOs**

Suggestion (4)

Further demonstration projects of circular economy and eco-industry

➤ at the enterprise level

- representative enterprises and large-scale enterprises
- eco-design for the products, CP, etc.

➤ at the region level

- existing and to be built industrial estate
- the metabolic and symbiosis relationship among enterprises

➤ at the society level

- public participation
- the mechanism of reusing and recycling of used products and wastes

Thank you!

Merry Christmas!

