

«Pilot action - Implementing Voluntary Approaches for
Urban Environmental Management in China »

Introduction to the target companies of Xian

7-8 March Nanjing

Humanistic Xian、 Liferful Xian、 Harmonious Xian



Xian, capital city of Shaanxi Province, is a world-famous historical city and a centre of academic research, high-education, national defense sci.&tec., and high-tech. in the Western China. It is a opening inland city approved by State Council and it is the biggest city in China Nonghai & Lanxin railway of the EU-Asia Intercontinental Railway.

Xian is consisting of 9 districts and 4 counties, with area of 9983 Km² and population of 7.4 million. In 2006, GDP: 145 billion CNY; fiscal income: 23.7 billion CNY; governable Income per capita: 10.9 thousand CNY and income per farmer: 3809 CNY

Humanistic Xian, Liful Xian, Harmonious Xian



Xian, as the cradle of human being's civilization and Chinese excellent culture and tradition, is rich in cultural and historical heritages. It has unique tourism sources and it is the world-famous historical city.

Xian, given to its strong science and technology and advanced high education, is the national important base of research, education and high-tech. Xian's comprehensive capacity is ranking in national top levels.

Xian has the geographic advantages of the linkage of the Eastern and the Western and it is playing the strategic role in the Great Development of the Western China.

Humanistic Xian, Liful Xian, Harmonious Xian



Xian EPB is one of the department of Municipality of Xian, and it is the executive organization of the Xian Municipal Environmental Protection Commission.

There are 818 staff working in Xian EPB. It is consisting of Administration of Xian EPB, 4 institutions directly under responsibility of Xian EPB and 13 sub-EPBs (including county-level EPB). The 4 institutions are Municipal Environmental Monitoring Station (including research institute, supervision and monitoring centre for pollution of motor vehicles), Municipal Environmental Inspection Station, Municipal Hei River Source Water Environmental Management Station and Municipal Environmental Education and Communication Centre.

Humanistic Xian、 Liful Xian、 Harmonious Xian



Recently Xian has achieved great progress in economic development and social progress, simultaneously Xian is also increasingly paying attentions to environmental protection and ecological construction and is trying to achieve win-win situations of economic and environmental benefits. Xian is applying the Scientific Development Views and has established the development ideas of internationalization, marketing, humanized and ecologically. It has the development strategies of Humanistic Xian、 Liful Xian、 Harmonious Xian. For moving towards the National Health City and National Environmental Protection Model City, Xian is now implementing the Five Programmes: “Blue Sky Programme”, “Clean Water Programme”, “Tranquility Programme”, “Ecological Programme”, and “Reassurance Programme”. Its environmental quality is being improved year by year.

Humanistic Xian, Liful Xian, Harmonious Xian



In 2006, Industrial COD has been reduced by 16 thousand tons, and 91 million tons water has been saved. Although Xian has got 16 times sand storms, its days of air quality in class II or better have reached 289 in 2006.

Humanistic Xian, Liferful Xian, Harmonious Xian



Xian EPB is actively participating in implementing international environmental agreements and it has been the pilot city of phasing out ODS. It has passed the national evaluation conducted by SEPA in August 2006. In September 2006, Xian has been awarded the Pilot City of Protecting Ozonosphere by UNDP, UNEP and SEPA.

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Target Companies in Xian

1. **Tsingdao Beer Xian Hans Group (Hansbeer);**
2. **Shaanxi Fan Manufacture Group Co. Ltd.
(Shaangu)**
3. **Xian Xijiao Power Plant (Xijiao Power)**
4. **Xian Lintong Hanxin Co. Ltd. (Hanxin Shiye)**

Introduction to target companies' environmental management



Hansbeer

Total capital: 755 million CNY, staff: 595. Annual production: 0.35 billion litres. Tax in 2006: more than 200 million CNY

In 2000, Hansbeer has been one of the first batch companies in Shaan Province that have been awarded Quality Control System Certificate (ISO9000). It is one of the first batch companies in the Chinese beer sector that has passed the cleaner production auditing and have been awarded the ISO14000 certificates

Introduction to target companies' environmental management



Hansbeer (emissions in 2003 -2005)

2003 年至 2005 年锅炉废气排放指标对比表

项目 \ 年度	排放标准	2003 年	2004 年	2005 年	备注
烟尘排放浓度 (mg/m ³)	250	109.3	123.6	49.6	达标
SO ₂ 排放浓度 (mg/m ³)	1200	236	74.3	253.7	达标

By using the lower-sulfur, lower-ash coal and sulfur- stabilized additives, and also adopting dust catcher, emissions have been substantially reduced.

Introduction to target companies' environmental management



Hansbeer (emissions in 2004 -2006)

2004 年至 2006 年废水排放指标对比表

项目 \ 年度	排放标准	2004 年	2005 年	2006 年	备注
COD 排放浓度 (mg/l)	135	30	28	30	达标
氨氮排放浓度 (mg/l)	20	0.415	0.410	0.521	达标
PH	6~9	8.22	/	/	达标
BOD ₅ (mg/l)	50	10	9	9	达标
SS (mg/l)	100	58	20	8	达标

Introduction to target companies' environmental management



Hansbeer (water reuse in 2004 -2005)

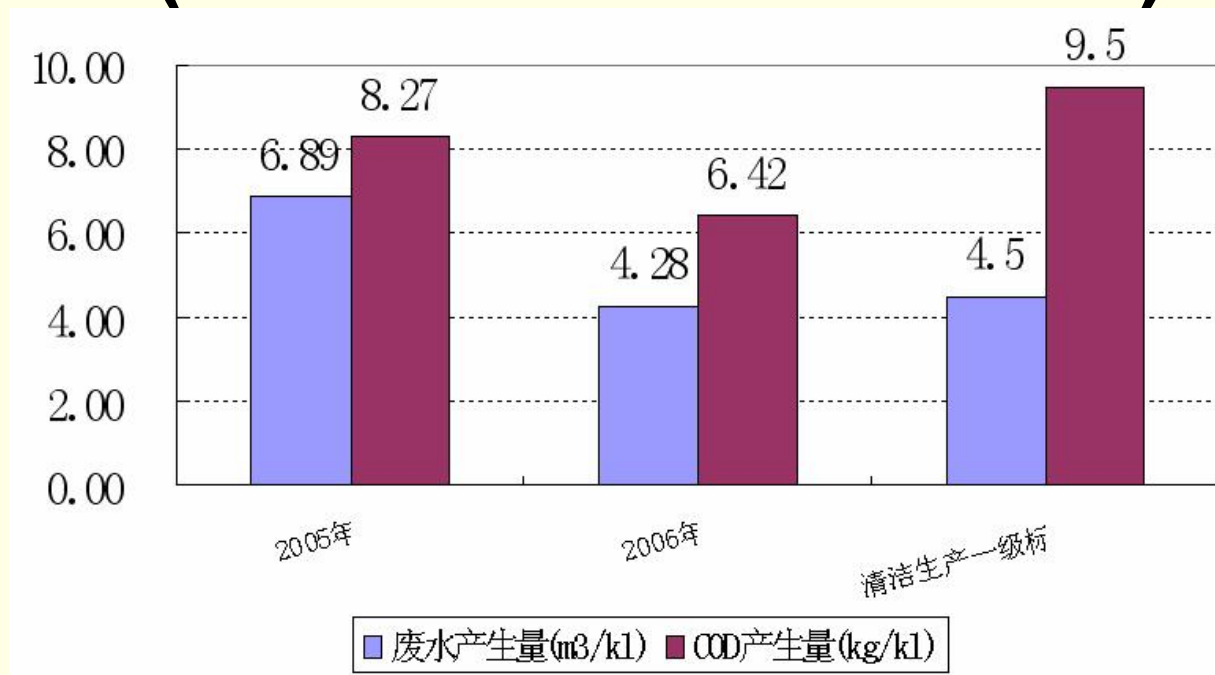
2004 年至 2006 年水重复利用情况表

年度 \ 项目	2004 年	2005 年	2006 年
总用水量 (m ³)	13219964	13998934	12859044
重复利用水量 (m ³)	10906470	11627296	11060674
重复利用率 (%)	82.5	83.1	86.0

Introduction to target companies' environmental management



Hansbeer (wastewater and COD)



Introduction to target companies' environmental management



Hansbeer

Hansbeer has collected, reused and treated various wastes generating from the production process, e.g. waste leaven, lees, slag, waste glass, wastepaper and waste plastic. Rate of recycling has achieved 100%.

All emissions are complying emission standard, and citizens' & staff's satisfactions with the environmental protection have been 100%

Rate of greening has been 37.2% in 2006, which has exceeded requirement (35%) of the standard of national environmentally friendly enterprises.

Introduction to target companies' environmental management



Hansbeer

In November 2000, Hansbeer passed the auditing of Environmental Management System conducted by SEPA's Huaxia EMS Auditing Centre. In 2004, Hansbeer passed the re-auditing.

In 2005, Hansbeer started the auditing ISO14001:2004, and, in 2006, Hansbeer passed the EMS auditing.

Introduction to target companies' environmental management



Hansbeer (main resource consumption indicators and their compared to the Cleaner Production Standard of Class I)

主要经济消耗指标与清洁生产一级标准对比表

指标名称	2004 年	2005 年	2006 年	清洁生产一级标准
啤酒耗粮 (kg/k1)	163.14	168.84	154.02	≤158
啤酒耗煤 (kg/k1)	96.04	82.96	73.14	≤80
啤酒耗水 (m ³ /k1)	9.09	8.81	6.18	≤6.0
啤酒耗电 (kwh/k1)	94.55	84.83	82.49	≤85
综合能耗 (kg/k1)	131.95	91.50	81.21	≤115

Introduction to target companies' environmental management



Hansbeer (reduction plan of COD)

废水 COD 削减计划

	目前的水平	阶段目标（三年后）
绝对值（kg）	53726	49500
单位产品排放量（kg/k1）	0.171	0.165
措 施	1、改进生产工艺，节约用水。 2、实施中水深度处理后用于预洗瓶。 3、持续推行清洁生产和环境管理工作。	

Introduction to target companies' environmental management



Hansbeer (reduction plan of dust)

锅炉烟尘削减计划

	目前的水平	阶段目标（三年后）
绝对值（kg）	98656	79500
单位产品排放量（kg/k1）	0.315	0.265
措 施	1、采购和使用省市环保部门指定的煤矿企业生产的优质原煤。 2、加强维护保养，保证环保设施（麻石水膜除尘器）正常运行。	

Introduction to target companies' environmental management



Shaanxi Fan Manufacture Group Co. Ltd. (Shaangu)

Shaangu was founded in 1968, it was designed by China. Shaangu has the area of 570 thousand m² and total capital of 3.5 billion CNY. Annual product: 3 billion; Staff: 2606.

Main products: Axes-flow compressor, TRT. It produces 2000 kinds of specification products of 80 categories.

In 2006, water consumption: 260 thousand tons, Electricity: 12.67 million KWH, annual natural gas consumption: 1.21 million m³.

Introduction to target companies' environmental management



(Shaangu)

In December 2001, Shaangu passed the auditing of EMS conducted by SEPA's Huaxia EMS Auditing Centre.

In December 2004, Shaangu passed the re-auditing.

In April 2005, Shaangu has been awarded the certificate of ISO14001:2004

In August 2006, Shaangu passed the auditing of cleaner production

Introduction to target companies' environmental management



Shaangu

It has invested 5 million CNY for reconstructing the industrial furnace. By adopting the cleaner natural gas, the coal consumption in the production process has been zero.

It has invested 3 million CNY for constructing the paint packaging workshop. Within the workshop the advanced integrated spray-dry facility is adopted, and this has reduced the pollution to minimum level.

It has invested 24 million CNY for implementing the large-scale comprehensive environmental control, and more than 500 ecological projects have been finalized. The overall distribution of the company is getting more reasonable.

Introduction to target companies' environmental management



Shaangu

According the long-term development trends and needs, Shaangu is planning to build its own wastewater treatment system, and the treated water could comply with the middle-water standard and can be reused.

Shaangu is exploring the way of innovative development, expanding economic development modules and looking for new business that is fitting with Shaangu. Shaangu is also improving efficiency of resources consumption, saving resources from the source of production and reducing pollution.

Introduction to target companies' environmental management



Xian Xijiao Power Plant (Xijiao Power)

Xijiao Power is an energy-saving and environmentally friendly enterprises constructed by municipality of Xian for improving environment, combination of heat and electricity and implementing centralized heating system. Total capital of Xijiao Power: 743 million CNY, Staff: 1102

In 2006, generation of electricity: 675.6 million KWH, Heat supply: 2055 thousand million KJ, Water use: drinking water: 2.12 million tons, middle-water: 1 million tons.

Introduction to target companies' environmental management



Xijiao Power

Technical Innovations: burning technology in the boilers, electric dust catcher, dust-removal system, installing silencer, and using sulfur-stabilized additives

Has implemented the project of integrated reuse of coal-ash and thus solved the 10-years secondary pollution problem caused by coal-ash, and therefore the environment has been significantly improved.

Introduction to target companies' environmental management



Xijiao Power

Objective: Energy consumption reduced by 25% in the 11th five-year.

Energy-saving measures:

Technical innovations of frequency conversion of water pump and blower. Electricity-saving can reach 30-60%; Technical innovation of blow-ash system of boiler, reducing smoke emission temperature, improving efficiency of boilers and reducing coal consumption. Increasing the reuse of cooling water.

Environmental measures

Technical innovations of electric dust catcher, feasibility study of the second-phase sulfur removal, improving collection of industrial cooling water and implementing integrated reuses of acid- and buck-water, residue-washing water

Introduction to target companies' environmental management



Xian Lintong Hanxin Co. Ltd. (Hanxin Shiye)

Hanxin Shiye, founded in 1985, is a private company including power generation, recovery of alkali and wastewater treatment. Fixed asset: 0.25 billion CNY, Staff: 3500 and total product value: 0.35 billion CNY.

In 2006, total product: 50 thousand tons; total water consumption: 18 million tons; Wastewater emission: 14.5 million tons; COD emission: 6500 tons; coal consumption: 0.11 million tons; electricity consumption: 65 million KWH. Annual comprehensive energy consumption: 110.075 tons of coal equivalent.

Introduction to target companies' environmental management



Hanxin Shiye

Hanxin Shiye has established the Steering Committee for environmental protection. General manager is the chairman of the committee, and a specific office is dealing with daily issues, under the responsibility of the Committee. There are well-functioning environmental management systems in the company and well-functioning of environmental facilities of the 1st and 2nd wastewater treatment plants and a alkali recovery plant.

In 2006, Hanxin Shiye has invested 20 million CNY for technical innovation of production line of toilet paper. It has resulted in annual water saving of 1.4 million tons, and Reducing wastewater of 1.4 million tons, reducing COD of 630 tons.

Introduction to target companies' environmental management



Hanxin Shiye

Given to the currently slurry-making process that is inefficient, intensive water consumption and intensive energy consumption, Hanxin Shiye is planning to implement technical innovation of the 50000 ton process for whitening grass slurry.

This technical innovation will be based on principles of cleaner production, saving water, improving quality of paper slurry and reducing pollution load. This innovation will substantially improve the efficiency of water-saving, energy-saving and reducing of pollution.

XIAN EPB



Wish success of the meeting!

Wish you good health!

THANKS