\_\_\_\_\_

2006

D.

\_

2007. 3.

( 2006 )	П	P
: 1. : 2007 3	· (20).() 9	
	<u>:</u>	
	: :	( )

"			"
			"
	i		
	•		
	•		
			,
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	)
	:	(	) )
	:	(	) )
	:	( (	) )
	:	( ( (	) ) )
	:	( ( (	) ) )
	:	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) )
	:	( ( ( (	) ) )
	:	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) )
	:	( ( ( (	) ) ) )
	:	( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	:	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	:	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) )
	: :		) ) ) )
	: :		) ) ) )
			) ) ) )
			) ) ) )
	: :		

•

가 ,

가 , 가

· ,

, , , , 3

. 가 , ( , ) 4 가

1. IMF 가 2002 2.3% 13 6,088 GDP 199 2003 27 5.819 가 (2001~2010) 」 5 <sup>г</sup>G-7 2. 가 22.4% 가

 DB
 ,

 ,
 力

 가
 .

,

가

3.

2002 85% ,

2010 5% 가 8,635 , 10 5,700 ~ 7,700 가

,

가 , , 3 · 가

3

,

'BAT' 가

ODA

4.

2002 . 1363.4 , GDP 1.33% . 1990 . 가

BOT . 70

가 , 가 . 2000 122 가 가 가 가 가 가 SWOT 5. 가 DB 6. DB 가 DB 가 가

가

- iv -

•

1. 가

2.

3. , 가가 가 ,

## **SUMMARY**

## I. Title

Strategies for Developing Environmental Industry in Gyeonggi Province

## II. Introduction

In parallel with Information Technology (IT) and Biotechnology (BT), Environmental Technology (ET) is now considered as one of the core industries for a strategic national development for the 21<sup>st</sup> century. The ability to achieve sustainable economic growth is directly linked to the opportunity for its businesses to integrate environmental and productivity decisions. The industrial revolution and the technology explosion of the 21<sup>st</sup> century led to great improvements in quality of life. However, the long-term negative effect of these developments on our environment and natural resources has not yet been calculated. This tension between our material progress and its environmental consequences must be rationally addressed if we are to structure environmental and economic policies in the increasingly global, free-market economy.

Gyeonggi Province has high potential of being a center of environmental industry, However, the ongoing and sometimes dramatic consequences of environmental degradation from technological, economic, and population growth pushed limits to such an extent that public outcry led to the institution of environmental regulatory policy.

Therefore, the objectives are to gather more complete information on the Gyeonggi Province environmental industry and to resolve existing environmental problems for the development and promotion of the strong and technologically competitive environmental industry.

## . Results

## 1. THE ENVIRONMENTAL MARKET IN KOREA

Korea unveiled a gradual development of the environmental industry in accordance with growth in public awareness and governmental efforts toward environmental protection. As a result of constant improvement of environmental industry, a growth rate of the environmental protection expenditure was 13.6 billion (GDP of 2.3%) by 2002, generating \$0.58 million of revenue abroad by 2003.

Korea is implementing the Strategies for Environmental Technology Development, aimed at development of the cutting-edge environmental technology for the 21<sup>st</sup> century, expansion of investments in basic environmental facilities as well as in environmentally friendly production-consumption patterns and fostering of environmental businesses prospected to well serve the future environmental demands. The government of Korea has been developing major technologies to strengthen national competitiveness; G-7 project and Eco-Technopia 21. Nevertheless, The Korea environmental industry has still been hindered by regulatory relationships complex, small scale and scattered business, lack of environmental market infrastructure, lack of investment in R&D, and lack of assisting the national environmental technology's entry to the foreign market and so on

## 2. GYEONGGI PROVINCE ENVIRONMENTAL INDUSTRY

Gyeonggi Province has enormous latent potential for fostering the environmental industry because of its large market size, strong infrastructure of supply and demand for environmental industry. Besides, its geographical position, a further growth of business activities in the Chinese market is brightly forecasted. In order to promote the environmental technology and industry, there are, however, still many problems such as 1) lack of financing and access to hard capital for environmental projects, 2)lack of government support in terms of business development, 3) inconsistent and inaccurate DB, 4) hindering the competitiveness of the environmental industry in both domestic and international market, 5) lack of fostering environmental venture and 6) lack of attracting foreign fund for developing environmental industry.

## 3. THE GLOBAL ENVIRONMENTAL MARKET

In 2002, almost 87% of global environmental revenue generation is in the United States, Japan, and Western Europe, however, the growth in the industry has slowed substantially. On the contrary, Asia, particularly, the Southeast Asian nations but also most of the region outside Japan, has the highest environmental market growth rate, projected to average 5% annually, representing \$864 billion by 2010. The Southeast Asian nations including China are planning to invest about \$570-770 billion for the resource infrastructure of water/wastewater over the next 10 years.

#### 4. THE CHINA AND SOUTHEAST ASIAN NATIONS ENVIRONMENTAL MARKET

In 2002, The China has invested about \$136billion (GDP of 1.33%) for the protection of environmental pollutant. Owing to the public support for environmental protection and the government policy, legislation, regulation and enforcement mechanisms, the China environmental industry has grown rapidly. However, they are still under way to develop the high efficiency and clean technology. Many foreign companies, especially the US and Japan are competing effectively in the China markets with providing financial support and loan to the China government. The South Asian nations' environmental market has increased dramatically in accordance with the demand for environmental infrastructure for water/wastewater, solid waste etc. These regions represents the best opportunity for international environmental business of Gyeonggi Province since they are in the lack of government support and fostering or hindering the competitiveness of the environmental industry.

#### 5. SWOT analysis of Gyeonggi Province environmental industry

Although Gyeonggi province has advantages, such as large market size, strong infrastructure of supply and demand in promoting the environmental industry, the lack of DB and small scale business are major weakness, hindering the competitiveness of the environmental industry. The increase in demand for environmental industry due to the economic growth is a great opportunity. However, the Gyeonggi Procivnce environmental industry can be threatened by inadequate long-term strategy as well as the lack of financing and access to hard capital.

## 6. Suggestion for long-term strategy of Gyeonggi Province environmental industry

First and foremost, a fairly classification system of environmental industry and DB should be established by government in order to promote Gyeonggi Province environmental industry. Intensification of Gyeonggi province environmental center with strong support from a governmentis also required to build up comprehensive DB of local environmental industry state. Exclusive support department and institution for Gyeonggi Province environmental industry are also suggested as a long-term strategy. Besides, developing human resource capable of contributing to the promotion of Gyeonggi Province is important, which can be facilitated by integrating research efforts among industry, research institutes and academia

## .Conclusion

- 1. Promotion and development of Gyeonggi Province environment industry can contribute to the establishment of a bridgehead for effective competition in global environmental industry market.
- 2. The way to fundamentally solve the problems faced with small scale and scattered business is to create a unified, open, competitive and orderly system and foster a bridge between environmental industry in Gyeonggi-do and Asia's high-growth environmental markets.
- 3. Sustainable growth of the Gyeonggi Province environmental industry can contribute to the economic growth by creating job marketing and increasing export as well as the reduction of public health risk.

# CONTENTS

Summa	ary (Korean)
Summa	ary (English)
Conter	nts
	er 1. Introduction
1. \$	Significance and Objectives of Research2
Chapte	er 2. Importance and Market Scale of Environmental Industry5
1. [	Definition and Classification of Environmental Industry6
	1.1. Definition of Environmental Industry6
	1.2. Classification of Environmental Industry7
2. E	Environmental Industry Respective in 21Century11
2	2.1. Related Regulation11
2	2.2. The Technic-intensive Complex Industries12
2	2.3. Environmental Industry Demand Increases with Income
2	2.4. Capital Intensive Industry13
3. (	Global and Domestic Environmental Industry Market Analysis13
;	3.1. Market Scale of Global Environmental Industry13
;	3.2. Market Scale of Domestic Environmental Industry23
4. /	Advance of Foreign & Domestic Environmental Market33
4	4.1. Advance Scale into Foreign Market33
4	4.2. National(Regional) Market Status34
4	4.3. Advance Situation by Field34
5. <i>A</i>	Analysis of Environmental Industry Potential Growth Condition
i	in Gyeonggi Province35
	5.1. Demand Base for High Environmental Industry36
	5.2. Supply Base for High Environmental Industry36
;	5.3. Infrastructure for Good Environmental Industry
;	5.4. Market Scale for High Environmental Industry
ļ	5.5. Strict Environmental Regulation Region38

Chapter 3. Situation of Environmental Industry in the Country
and Gyeonggi Province40
1. Situation of Environmental Industry and Technology in the Country4
1.1 Situation of Environmental Industry in the Country4
1.2 Trend and Prospect of Environmental Technology43
2. Current Status of Environmental Industry in Gyeonggi Province45
2.1 Trend of Industry and Labor of Gyeonggi Province45
2.2 Number of Industry of Gyeonggi Province47
2.3 Conditions for Establishing Potential Manpower for Gyeonggi Province - 56
Chapter 4. Realities and Problem of Environmental Industrial Policy
in Gyeonggi Province58
1. Trend of Environmental Industrial Policy in the Government59
1.1 Development Policy Of Environmental Industry59
1.2 Support Policy of Environmental Investment Activation60
1.3 Forward Situation Research and development Business of
Environmental Technology62
1.4 Support policies of Overseas Market Expansion67
1.5 Problems and Limitation of National Environmental Industry68
2. Operational Realities of Environmental Industry in Gyeonggi Province72
2.1 Field of Environmental Equipment Business72
2.2 Environmental Impact Assessment, Design & Construction of Basic
Environmental Equipments73
3. The Realities and Problem of Environmental Industry Rearing policy
in Gyeonggi Province74
3.1 Current Major Policy74
3.2 Problem76
3.3 SWOT of Environmental Industry of Gyeonggi Province
Chapter 5. Situation of Environmental Industry and Trend of Rearing Policy
in Advanced Country84
1. America85
1.1 Trends of Environmental Market85

1.2 Situation and prospect of Regional Environmental Market87
1.3 Trends and prospects of Environmental Industry106
1.4 Rearing policy of Environmental Industry and Support policies of
Overseas Expansion106
2. Germany107
2.1 Development and Trend of Environmental Market107
2.2 Rearing policy of Environmental Industry - Research and development
of Environmental Technology108
3. Japan 109
3.1 Trends and prospects of Environmental Industry109
3.2 Classificational Market Trend and Prospect113
4. Southeast Asia121
4.1 Trends and prospects of Environmental Industry121
4.2 Trends and prospects of Regional Group135
5. China136
5.1 Trends and prospects of Environmental Industry136
5.2 Characteristics of Environmental Market in China137
5.3 Current Situation of Provincial Environmental Industrial Market138
Chapter 6. Rearing Policies of Environmental Industry of Gyeonggi Province 156
1. Rearing Policies of Environmental Industry by Government157
2. Rearing Policies of Environmental Industry of Gyeonggi Province159
3. Rearing Policies for Advance into Developing Country
Chapter 7. Conclusion171
1. Conclusion 172
2. Application173
Chapter 8. Reference

SUMMARY -	
CONTENTS	
1	1
1.	2
2	
1.	6
1.1.	6
1.2.	
2. 21	11
2.1.	11
2.2.	
2.3.	가12
2.4.	
3. ·	
3.1.	
3.2.	23
4.	
4.1.	
4.2.	가( )34
4.3.	
5.	
5.1.	
5.2.	
5.3.	
5.4.	
5.5.	38

3		40
1.		41
	1.1	41
	1.2	43
2.		45
	2.1	45
	2.2	47
	2.3	56
4		58
1.		59
	1.1	59
	1.2	60
	1.3	62
	1.4	67
	1.5	68
2.		72
	2.1	72
	2.2	가73
3.		74
	3.1	74
	3.2	76
	3.3	SWOT78
5		84
1.		85
	1.1	85
	1.2	87
	1.3	106
	1.4	106
2.		107
	2.1	107
	2.2	108

3.		
	3.1	109
	3.2	113
4.		
	4.1	121
	4.2	135
5.		
	5.1	136
	5.2	137
	5.3	138
6		156
1.		157
2.		159
3.		166
7		171
1.		
2.		
8		······ 175