

# TPM11 - Session 2

Environmental Research Projects and  
Recent Achievements of NIER since  
TPM10





**The 11<sup>th</sup> Tripartite Presidents Meeting Among NIER, CRAES & NIES**

# **Environmental Research Projects and Recent Achievements of NIER since TPM 10**

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# Overview of Presentation

1. Infrastructure of NIER
2. Research in 2014
3. Main Projects in 2015
4. International Cooperation



# 1

- 1. Infrastructure of NIER**
2. Research in 2014
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# 1-1. Infrastructure of NIER : History

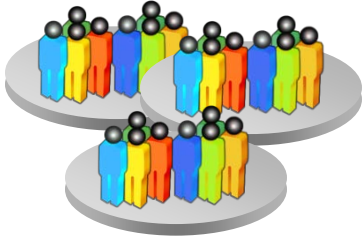


# 1-2. Infrastructure of NIER : Organization

- 5 Departments, 17 Divisions,
- 5 Research Centers, and 3 Centers



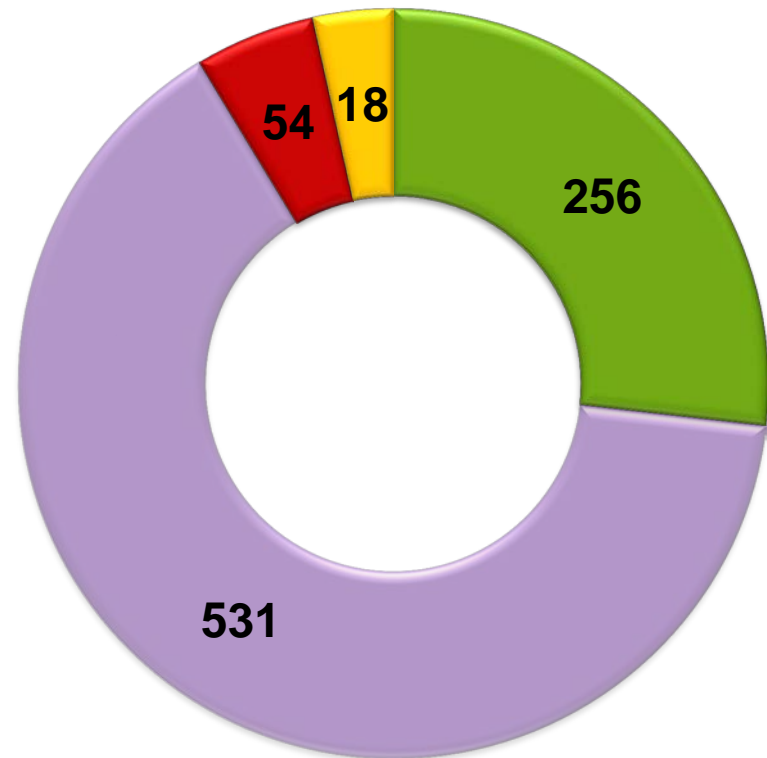
# 1-3. Infrastructure of NIER : Human Resources



**As of November 2014, 859 people are working for NIER**

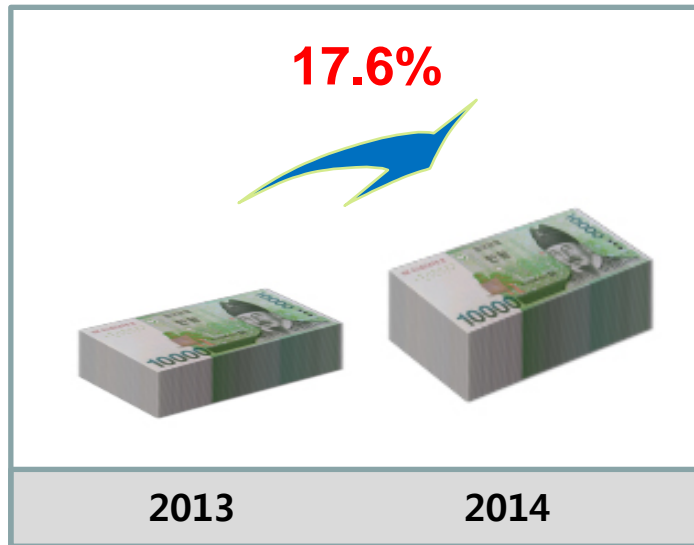
**Total 859**

■ Researchers	256
■ Contract researchers	531
■ Technical staff	54
■ Administrative staff	18

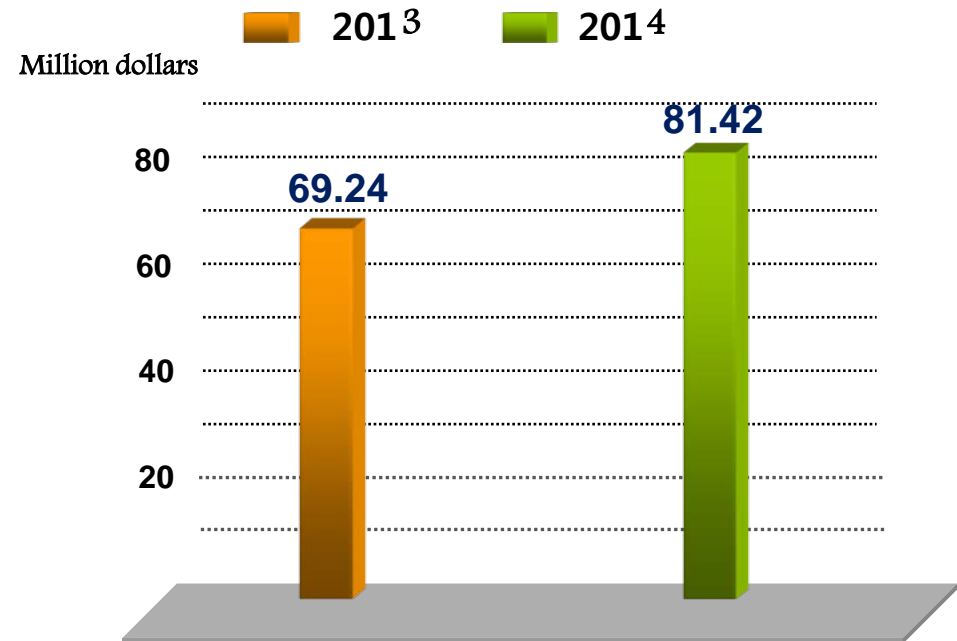


# 1-4. Infrastructure of NIER : Budget

## Total Budget



## Budget for Research & Study





# 2

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## 2-1. Research in 2014 : No. of Projects

### No. of projects in each research field

	2013	2014
Environmental Health Research	85	81
Climate and Air Quality Research	65	59
Water Environment Research	53	70
Environmental Resources Research	53	32
Environmental Infrastructure Research	54	63
Transportation Pollution Research	15	15
Four Major River Research	60	40
National Wetlands Research	5	8
<b>Total</b>	<b>390</b>	<b>368</b>

## 2-2. Research in 2014 : Research Activities

**Vision**

● **World-class environmental research institute**

**Goal**

- To develop advanced environmental policy based on enhanced research capabilities
- To provide all people with high-quality environmental services

Research Framework

### Priority Programs

- **Project** Based Researches

**Problem Oriented**

### Fundamental Researches

- Environmental Health Research
  - Climate and Air Quality Research
  - Water Environment Research
  - Environmental Resources Research
  - Environmental Infrastructure Research
  - Transportation Pollution Research
  - Four Major River Research
- Discipline Oriented Researches**

## 2-3. Research in 2014

### **Project 1** Research for a healthy, pleasant living environment

- 1-1. Safe water supply and sewerage in response to environmental Changes
- 1.2. Creating a healthy living environment(radon, asbestos, light pollution etc)
- 1-3. Establishment of a sustainable soil and groundwater environment
- 1.4. Reinforcing research about zoonosis including avian influenza  
(establishment of laboratory with facilities of biosafety level 3 in 2015)

### **Project 2** Research for a pure, clean natural environment

- 2-1. Establishment of scientific water management systems  
according to water environment damages
- 2.2. Research on management and impact of air pollution and climate change  
: developing of a satellite in geostationary orbit to monitor air pollutants & GHG  
basic research about establishment of national environmental satellite center

### **Project 3** Research for low-carbon, resource-recycling society

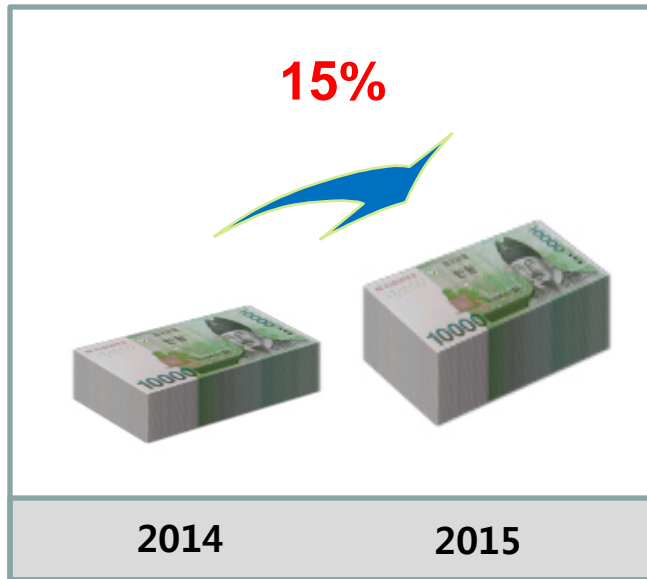
- 1-1. Adaptation to climate change and GHG emissions reduction
- 1.2. Safe and effective waste-to-energy recycling
- 1-3. Eco-friendly vehicles and green transportation system
- 1.4. Support GHG ETS in terms of verification of GHG emission in industry

# 3

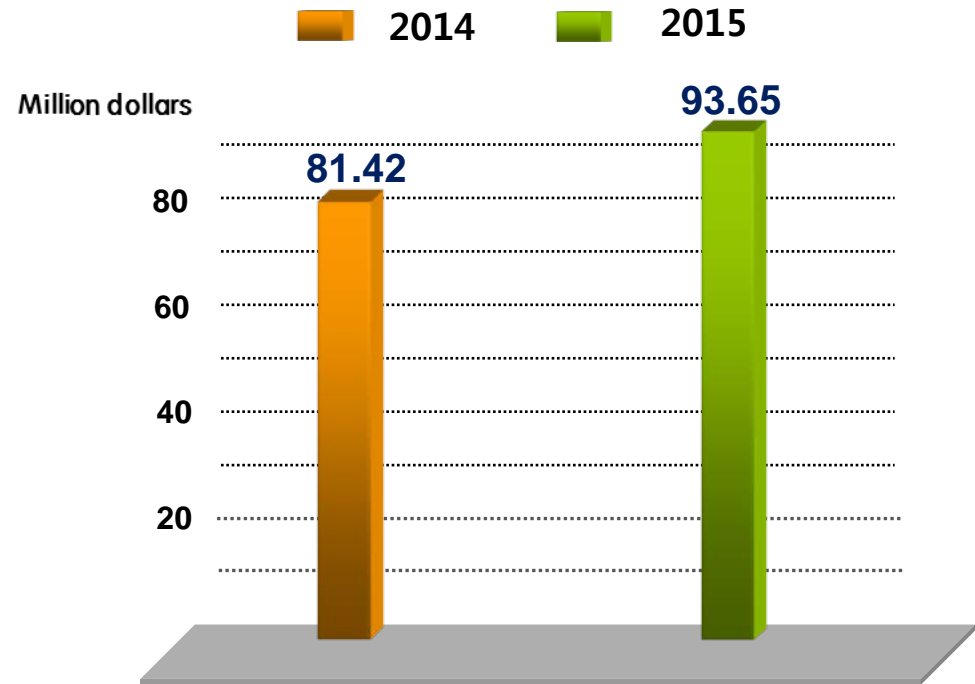
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# 3-1. Main projects in 2015 : Budget

## Total Budget



## Budget for Research & Study



(In millions of KRW)

## 3-2. Main projects in 2015 : Research field

Category	Project
Research on Environmental Health	<ul style="list-style-type: none"><li>• Research on health risk of pollution sources</li></ul>
Research on Climate and Air Quality	<ul style="list-style-type: none"><li>• Measurement and analysis of air pollutants, air pollutant sources monitoring, air quality assessment, and development of and support for the comprehensive plan for air quality improvement</li></ul>
Development of GEMS	<ul style="list-style-type: none"><li>• GEMS for 3-D monitoring of air pollutants</li></ul>
Response to changing water environment and establishment of advanced water management system	<ul style="list-style-type: none"><li>• Management of watershed, stream water quality, industrial wastewater and environment of four major rivers</li></ul>

## 3-2. Main projects in 2015 : Research field

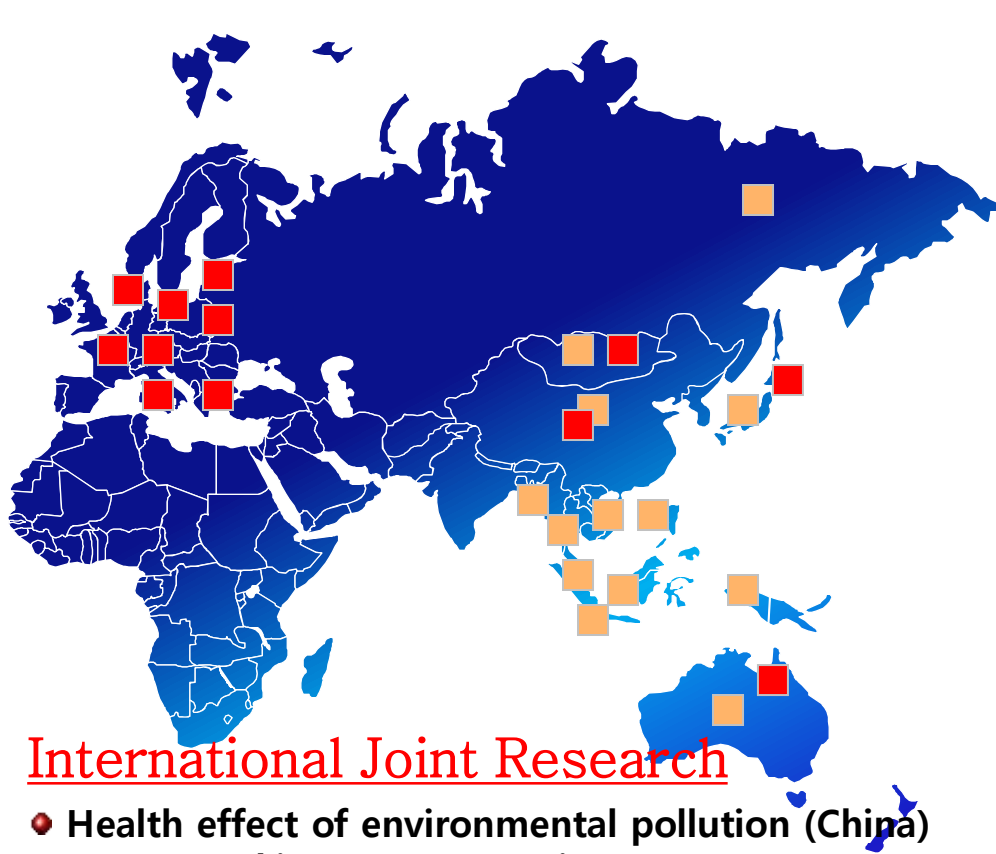
Category	Project
Research on Environmental Resources	<ul style="list-style-type: none"><li>• Support policies for waste-to-resource, safe disposal of waste, and waste-to-energy</li><li>• Research on spatial modeling environment</li><li>• Development of eco-friendly planning techniques</li><li>• Investigation of the status of zoonosis and respond to its outbreak (e.g., foot and mouth disease)</li><li>• Survey on and management of inland wetlands, estuaries, and wetland protected areas</li></ul>
Research on Environmental Infrastructure	<ul style="list-style-type: none"><li>• Research on the improvement of indoor environment</li><li>• Research on safe water supply and sewerage management</li><li>• Soil and groundwater research</li></ul>
Environmental Measurement and Analysis Research	<ul style="list-style-type: none"><li>• Quality control of environmental test and inspection institutes</li><li>• Establishment of official test standards for environmental pollution, and research on utilization of isotope research instruments</li></ul>



# 4

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## 4. International Cooperation



## International Joint Research

- Health effect of environmental pollution (China)
- OECD Working Group meeting
- Toxicity of PFNA in fish(Japan)
- LTP in Northeast Asia(China, Japan)
- Characteristics of air quality in forests (USA)
- Mercury Monitoring Network(Taiwan)
- Data Assimilation Module for real-time water quality forecasting (USA)
- Air pollution measurement in South Asia (Nepal)



## International Partnership

- Chinese/Japanese Environmental Ministries
- CRAES/NIES
- University of British Columbia
- National Institute of Minamata Disease
- US EPA
- US NASA



Thank you !!!

