

2009/SOM2/MTF/CON/007 Section: II (8)

#### **Sustainable Mine Development**

Submitted by: Korea Mine Reclamation Corporation (MIRECO)



APEC Conference on Sustainable Development of Mining Sector in APEC Singapore 23-24 July 2009

### Sustainable mine development



# Korea Mine Reclamation Corporation **MIRECO**



### What is the mine hazards?

Mining hazards occurred in the course of mine development can cause physical and chemical damages that are harmful to the environment and human beings



<Case 1> Waste rocks and tailings



<Case 3> Acid mine drainage



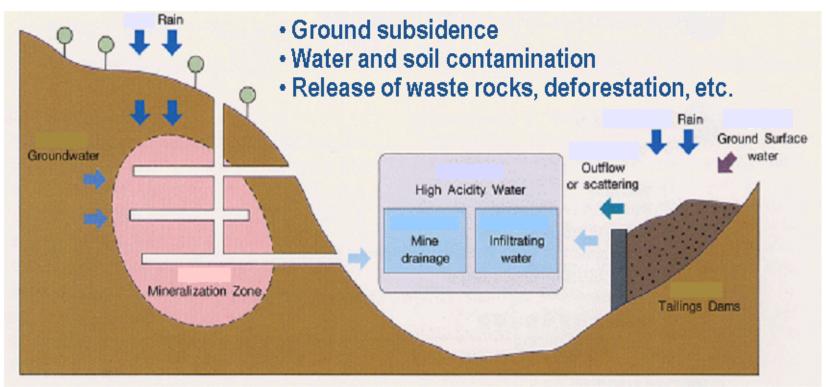
<Case 2> Ground Subsidence



<Case 4> Deforestation



### Mechanism of mine hazards occurrence



- Even after mine closure, mine hazards occur widely and continuously causes for large casualties, resulting in social problems
- thus, the initial plan of mine reclamation in the initial step of mine development is very important to have a sustainable mine development

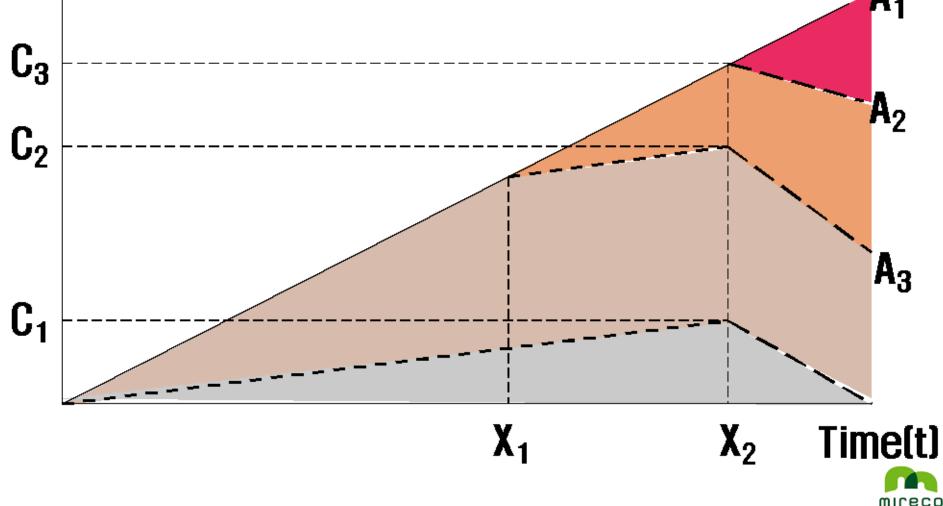
#### **Cases of mine hazards**





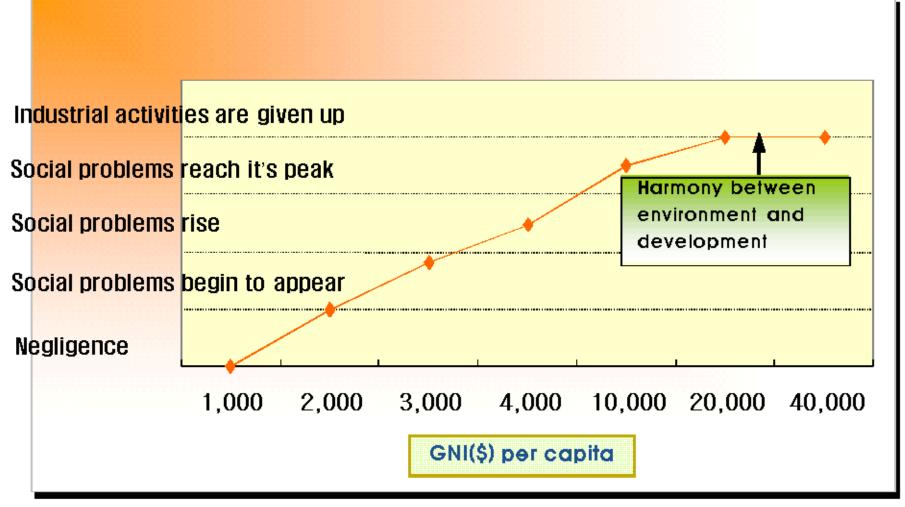
#### Change of cost for environmental pollution with the conductance of mine reclamation

Cost for environmental pollution occurred by mine development





## Change in governmental policies for mine hazards according to the change of GNI per capita





### Acts of government for mine hazards

- Nation has a responsibility to improve the environment in order to keep the people on living in safe and clean environments
- Nation has a responsibility to improve the product activity of company and individual in order to keep the people on living in a good quality
- Therefore, while making the mine development in a free way, we should make and operate a system to prevent mine hazards and quickly treat the occurred

- <upbringing system for mine industry> : the mining act, coal industry act
- <system of mine reclamation> : the mining safety act, Act on the prevention and restoration of mining damages



#### Mine reclamation business of MIRECO

#### (Unit : ea)

Class.	Coal mine	General mines			
		Metallic mine	Non-metallic mine	Sub-total	Total
Sub-total	349	988	669	1,657	2,006
Ongoing mines	9	52	669	721	730
Abandoned mines	340	936	0	936	1,276

MIRECO accomplishes mine reclamation businesses in an appropriate and systematic way



### **Cases of Mine Reclamation Business**

#### Water treatment





**Soil remediation** 





### **Cases of Mine Reclamation Business**

#### Reforestation

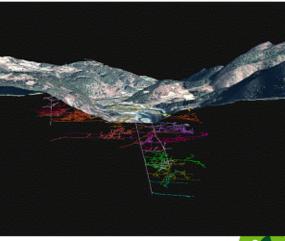




#### **Prevention of ground subsidence**

GIS

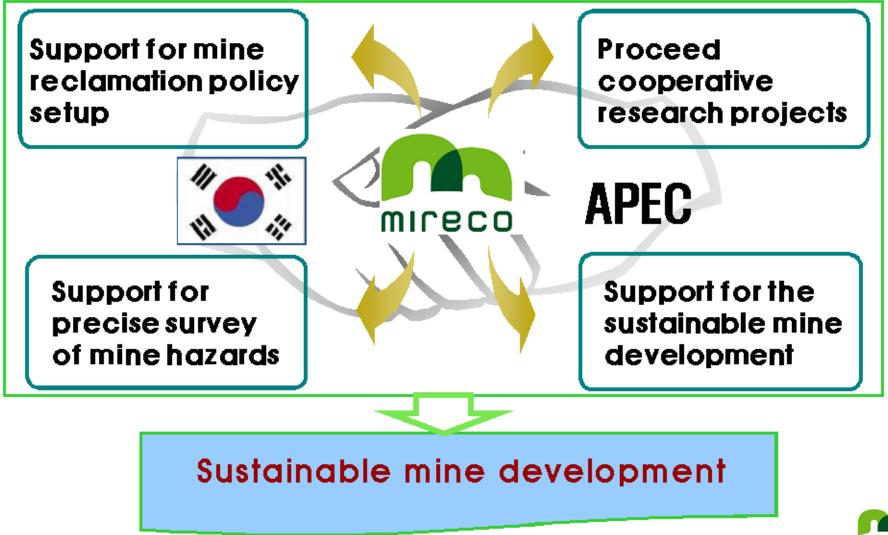








### **APEC-Korea Cooperation I**





### **Contents of APEC-Korea Cooperation I**

#### Survey of mine hazards



#### Survey, assessment, GIS



#### **Pilot-scale tests**



Slope stabilization



Reforestation







Soil remediation

Water treatment





### **APEC-Korea Cooperation II**

 enhancement of mine reclamation technology through training, education and symposium











# Thank you!!

### 감사합니다

