



# Mainstreaming into the sector of Mining



GANGWON  
PROVINCE

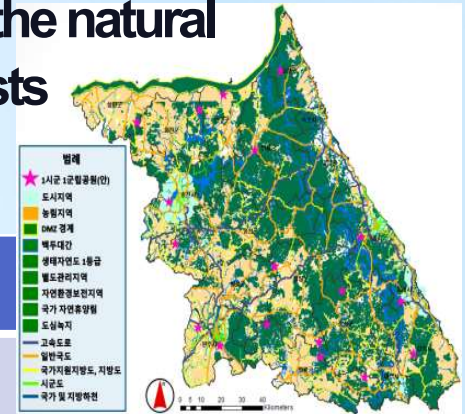
Korea





# Management of development projects by ordinance

- Ordinance of **Environment Impact Assessment**(2003~ )
- Managing 9 major developments, taking into account the natural environment characteristics of rivers , lakes and 82% of forests
- Target areas



	Scale
Extraction of Sands, stones, gravels	(1) 10,000m <sup>2</sup> ~ 20,000m <sup>2</sup> in the water source protected area (2) 25,000m <sup>2</sup> ~ 50,000m <sup>2</sup> within 5km from the water source protected area (3) 50,000m <sup>2</sup> ~100,000m <sup>2</sup> in the forests (4) 130,000m <sup>2</sup> ~250,000m <sup>2</sup> of extraction around the coastal area (5) 250,000m <sup>3</sup> ~500,000m <sup>3</sup> of extraction volume around the coastal area
Development of forests	(1) 130,000m <sup>2</sup> ~250,000m <sup>2</sup> of development of cemetery (2) 150,000m <sup>2</sup> ~300,000m <sup>2</sup> of development of meadows
Reclamation sea, river and lake and Cultivation	(1) 150,000m <sup>2</sup> ~300,000m <sup>2</sup> of reclamation (2) 500,000m <sup>2</sup> ~1,000,000m <sup>2</sup> of cultivation



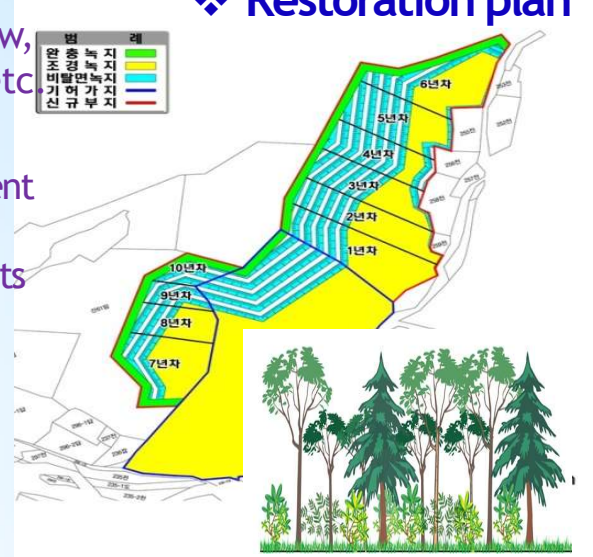
✘ Projects exceeding scale prescribed by the ordinance are managed by central government.

# Environment Impact Assessment (1 year prior to constructions)



- ✓ Explanation of purpose, overview, location, survey items, means, etc
- ✓ About 10 persons of government officers, experts, residents
- ✓ Decision of survey items and comments of means, prediction, etc.
- ✓ Survey of natural and living environment
- ✓ Impact predictions
- ✓ Means to minimize the environmental damages (including restoration plan)

## Restoration plan



## Survey of fish species

Scientific name/Korean name	현지조사	By hearing	문헌조사	Discovery area
Cyprinidae 잉어과				
+ × <i>Acheilognathus signifer</i> 폭납자루	●		○	연당천
+ <i>Pseudorasbora yamatsutae</i> 줄납자루			○	평장강 연당천
<i>Pungtungia herzi</i> 돌고기	●	○	○	연당천
+ <i>Pungtungia tenuicorpus</i> 가는돌고기	●		○	평장강 연당천
+ <i>Corkoleuciscus splendidus</i> 쉬리	●	○	○	평장강
+ <i>Sarcocheilichthys variegatus wakoyae</i> 참중고기	●		○	평장강
+ <i>Squalidus gracilis majimae</i> 긴물개			○	
<i>Hemibarbus labeo</i> 누치			○	
<i>Hemibarbus longirostris</i> 참마자		○	○	
+ * <i>Hemibarbus mylodon</i> 어름치			○	
<i>Pseudogobio esocinus</i> 모래무지	●	○	○	평장강
+ <i>Gobiobotia brevibarba</i> 돌상어			○	
+ <i>Microphysogobio yaluensis</i> 돌마자			○	
+ <i>Microphysogobio longidorsalis</i> 배가사리			○	
<i>Rhynchocypris oxycephalus</i> 버들치		○	○	

- ✓ Including resident comments
- ✓ Supplementation of the draft plan

If the means are not established properly, developer cannot drive the project.

# Post-auditing EIA(Construction~up to 5 years after development)

## Survey, impact predictions

Developer

Survey around  
developing area  
(4 times/year)



Impact predictions  
(beginning ~ present)



Submission of annual report  
(every January)

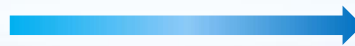


Complementary measures

## Reviewing the report, check-up on-site

Gangwon provincial  
government

- ✓ Flora and Fauna, topography and geology, water quality, greenhouse gas, air quality, soil, waste, noise and vibration, etc.
- ✓ contents(Flora and Fauna)
  - status and change of vegetation
  - status of restoration (including growth status)
  - protected species, monitoring status
  - Number of animals and plants, diversity, etc



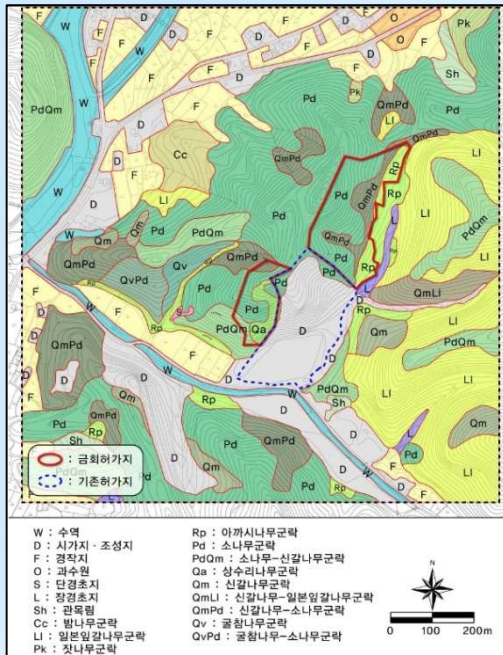
Giving opinions on the  
insufficient parts

Check-up on-site  
(once a year)



# Post-auditing EIA(sample)

## Monitoring vegetation



2014



2016

## Monitoring landscape changes



After restoration (prediction)



2016 (+3year)



2014 (+1year)



2013 (before)

## Monitoring Flora and fauna

birds(number of species)

