- Why focus on NRUE?
- Overview of presentations

Closing the efficiency gap in natural resource use

2 to 4 April 2012
Rome
Why focus on NRUE?

- As many natural resources have historically been either underpriced or unpriced, they have been overutilized.

- NRUE is a concept that can accommodate both better environmental performance and growth.
NRUE - conceptually

1. More efficient production can simultaneously ↑ output & ↓ resource use

2. Proposition: gains moving from closing efficiency gap > gains from ↑ technology frontier
The concept of NRUE has been embraced in CC & related policies/programmes

- At national economy level:
  - China, India have mitigation targets based on emission intensity per unit of GDP (NAMA)
  - South Korea: Low Carbon and Green Growth Act (2009)

- C crediting programmes for agriculture:
  - Energy efficiency in agriculture - CDM
  - Performance benchmarks - VCS
1st presentation session: Definitions and findings on the natural resource use efficiency gap for livestock

- Range of methods for measuring NRUE introduced
  - Frontier efficiency analysis
  - Life cycle assessment
  - Nutrient use efficiency
1st presentation session

- Frontier efficiency analysis
  - Highly popular in the 1990’s (T. Coelli, R. Fare etc)
  - Originally for purpose of “conventional” efficiency, TFP assessment
  - Enjoying recent renaissance:
    - realization that efficiency gains in natural and other resources often ‘coupled’
    - Original approach modified/expanded to explicitly incorporate natural resources
1st presentation session

- **Life cycle assessment**
  - Increasingly popular: comprehensive accounting of NRU & environmental impacts through entire production cycle
  - Prevents pollution swapping

- **Nutrient use efficiency**
  - Indicators for detecting and quantifying inefficient nutrient use
2nd presentation session:
Findings on livestock productivity gaps and trends, and their implications for natural resource use efficiency

- Focuses on “conventional” productivity improvements & implications for NRUE
- Builds on notion that conventional productivity improvements, in some cases, can yield a “double dividend”: environmental & economic
2nd presentation session: Findings on livestock productivity gaps and trends, and their implications for natural resource use efficiency

- Global livestock TFP trends, by commodity and region: where is performance is improving fastest?
- Implications of productivity growth in livestock on land use requirements
- Yield gaps - can partial productivity indicators serve as useful proxies for NRUE?
- Efficiency gains from better use of agricultural by-products
3rd presentation session: 
Private sector perspectives

- Sector-specific examples of NRUE challenges
- Business programmes & initiatives (incl. R&D, extension, knowledge transfer)
- Operating within regulatory frameworks (e.g. cap & trade) that aim to enhance NRUE
Thank you