

Yoshiaki Yamagata

National Institute for Environmental Studies

- From IPCC GPG guidance
- Products needed for KP compliance
- Potential needs from Beyond Kyoto

From IPCC GPG draft

- two levels of reporting are allowed
 - Statistical inventory approach
 - Spatially explicit carbon accounting approach
- ARD
 - Definition is clear and accounting is automatic
 - Drafted texts on using SAR for this -> appendix
- FM
 - Definition will be determined by each country looking at MA...
 - Ex. Additional thinning activities since 1990.
 - R/S can measure some thresholds for delineating the

Compliance

- Products suggested by TCO look good!
 - No doubt about the contributions to ARD monitoring
 - What would be the accuracy for 5 year's carbon stock change measurements?
 - FM monitoring methodology is greatly needed
 - Thinning monitoring is key for checking the additionality of the FM in some countries.
 - Thinning intensities can be really quantified?
 - Plantation, Seminatural Natural, Natural
 - What would be the accuracy of measurements in mountainous forest region
-

Potential needs from Beyond Kyoto

- Science for Factor out method
 - Indirect human impacts
 - CO2 fertilization effects
 - Natural disturbances
 - Baseline of additional human activities
 - Before 1990 effect
 - Commitment period Baseline
- National level

- Full carbon accounting system
 - Substitute for the current inventory based accounting approach
 - Linkage with the ecosystem modelling is needed
 - More direct measurement ecosystem functions will be needed
 - Photosynthesis etc.
-

Conclusion

- ALOS will be a very promising tool for monitoring the carbon sink activities under the KP in a transparent and verifiable manner
- It is important to measure the human impacts (biomass/carbon) on terrestrial ecosystems both from BAU activities and KP induced activities
- We need to look at ARD, FM and

- location/extent (m^2/yr)
 - Relative growth/regrowth **ARD and FM**
 - aboveground biomass accumulation ($\text{gC}/\text{m}^2/\text{yr}$)
 - Thinning - biomass removal **FM**
 - location/extent and quantity ($\text{gC}/\text{m}^2/\text{yr}$)
 - Biomass inventory (up to some limit) **ARD and FM**
 - quantity (gC/m^2)
 - Height (m)
 - **Human disturbance history** **Beyond Kyoto**
 - **Forest stand (age) structure** **Beyond Kyoto**
 - **Wetland conversion** **Beyond Kyoto**
-