

Flooded land BOG 4

Q.1: Do the issues need to be addressed in a new Methodology Report to supplement the 2006 IPCC Guidelines? **Yes**

- 6 fold increase in peer reviewed research publications
- 3 fold increase in number of reservoirs studied
- Improved geographic coverage of studies, covering boreal, temperate, tropics
- Synthesis efforts have lead to improved understanding of drivers
- Estimated at 5% of global anthropogenic methane emissions
- Technological advances have improved emission estimates
- Flooded land definition
- Net emissions approach consideration (cross cutting issue)

Q.2: What kind of refinements are recommended and what are available sources of data/information?

- New guidance. Existing 2006 GL Appendices to be considered
- Refer excel spreadsheet for detail

	Types of flooded lands
Important to consider	Reservoir (including draw-down lands)
	Run-of-the-river dams
	Small dams/farm ponds
	Aquaculture ponds
Should be considered	Ditches/canal networks
	Flooded wetlands isolated from tidal flows (could be pasture)
	Ring tanks/pumped storage reservoir?/subset of reservoir?
Not to consider	"Natural" reservoirs (e.g. Lakes)

Pathways for Methane and CO₂ emissions

Diffusive emissions

Ebullition (bubbles)

Turbine degassing

Downstream degassing (after the dam)

Rooted emergent vegetation/macrophytes

Emissions from draw-down land

Modifiers

Eutrophication (characterization of runoff)

Age of reservoir

Latitude/temperature

Catchment size

Soil type (carbon characteristics)

Reservoir morphology

Phytoplankton growth

Sedimentation

C delivery from the catchment

Photomineralization

Vegetation/macrophytes

Emerging issues to be considered at scoping meeting or by authors

- Net emissions approach versus managed land proxy
- Definition of flooded land to include run of the river dams
- Several key emission pathways can be addressed at Tier 1 level
- Some emission pathways will require higher tier approach in countries where they are important

Cross cutting issues

- Consistency/overlap with some categories in the Wetland Supplement
- Avoidance of double counting/not accounting for carbon and nitrogen exported from terrestrial ecosystems and processed within flooded lands