

Table 2 Overview of recommended minimum requirements for closed chamber sampling in rice paddy and for measurements of field GHG fluxes from upland arable fields

Feature	Minimum requirement/ recommendation	
	Rice paddy	Arable field
Chamber dimension	4 rice hills included, $\geq 0.16\text{m}^2$, $>1\text{m}$ height or extendable, chamber base $\sim 20\text{cm}$ high	Height 10-40 cm (flexible height if possible), insertion depth 5-20 cm, minimum area 0.04m^2 . Include plants as long as possible, consider row/ interrow effects
Chamber material	Reflective or white and/or insulated	Opaque, insulated (use transparent material only if NEE should be measured)
Chamber equipment	Thermometer, fan, sampling port, hole f. irrigation water, vent	Thermometer, fan, vent
Frequency	Once per week or elaborated flexible schedule.	Once per week, following the first 10 days after fertilization or re-wetting of dried soils if possible daily measurements
Length of measuring period	One year	One year
Spatial replicates	At least 3, possibly use gas pooling technique	At least 3, possibly use gas pooling technique
Time of day	At time of approx. average daily soil temperature (often mid morning). Record diurnal flux variation from time to time	record diurnal flux variation
Closure time	As short as possible, as long as necessary, In hot environments 20-30min, not more than 45min	As short as possible, as long as necessary, In hot environments 20-30min, not more than 45min
Number of gas samples for flux calculation	≥ 4 per deployment	≥ 4 per deployment

These recommendations have been synthesized from prior chamber measurement protocols (see Table 1) and amended or modified on basis of expert judgments. For further details see also Fig. 1.