



THE ADOPTION OF TIER 2 METHODOLOGY FOR ENTERIC FERMENTATION: SURVEY RESULTS (MARCH 2021)

Globally, livestock systems emit about 97 Tg of methane (CH₄) due to enteric fermentation per year (GLEAM, 2020), corresponding to approximately a quarter of the global anthropogenic methane emissions (Jackson et al. 2020).

As emissions from enteric fermentation are often a key category within the national greenhouse gas inventories (GHGI), the use of the Tier 2 method for estimating methane from this category should be adopted and prioritized for future improvement. This will help improve the accuracy of these estimates and track livestock-oriented mitigation actions.

The Food and Agriculture Organization (FAO) of the United Nations is currently developing an e-learning course to help countries boost their capacity on estimating enteric methane using Tier 2 methodology as provided in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines, Volume 4, Chapter 10.

To best tailor the course to countries' needs, a survey was launched to explore the main challenges and solutions on the adoption of the Tier 2 method for estimating CH₄ emissions from enteric fermentation among the participants of the Transparency agriculture and land use network. The main results are presented here and will be reflected in the e-learning course.

SURVEY DATE : MARCH 2021

RESPONDENTS: 60 PARTICIPANTS FROM 34 COUNTRIES, MOSTLY FROM SUB-SAHARAN AFRICA.

75% OF PARTICIPANTS ARE DIRECTLY INVOLVED IN THEIR NATIONAL GHGI TEAMS INVENTORY

62% USING TIER 1 METHOD AND 38% USING TIER 2 METHOD

MAIN FINDINGS

Tier 1 respondents:

Availability of data: Livestock population data disaggregated by species (89%) can be found in most countries; however, sex & age disaggregation (50%) is scattered and the availability of specific data on herd structure, feeding practices and animal performance are limited.

Constraints in adopting Tier 2 methodology: Constraints include the lack of resources (72%), difficulty in using greenhouse gas (GHG) estimation tools (33%), difficulty in understanding and applying the IPCC methodology (33%), and the lack of data (30%).

Actions to improve the accuracy of methane emission estimates: The main actions include conducting surveys, consultations and research to fill data gaps (75%); and collaborating with statistical offices to ensure collection of data that suit GHGI needs (69%).

Advantages of adopting Tier 2 methodology: The main advantages include being able to comply with the ETF requirements and IPCC good practices (86%) and develop and track mitigation actions in the livestock sector (66%).

FAO support: Countries suggested that FAO could provide support by guiding national statistical offices on data needs (75%), providing technical training on the 2006 IPCC Guidelines and IPCC inventory software (67%) and raising the awareness of policy makers on the importance of Tier 2 (64%).

Tier 2&3 respondents:

Livestock species: All countries that have adopted Tier 2 methodology are applying it to estimate emissions from cattle (100%) followed by sheep (52%).

Challenges in using Tier 2 methodology: The main challenges were the lack of specific livestock data (82%), limited resources (56%) and difficulty in using tools for GHG estimation (39%).

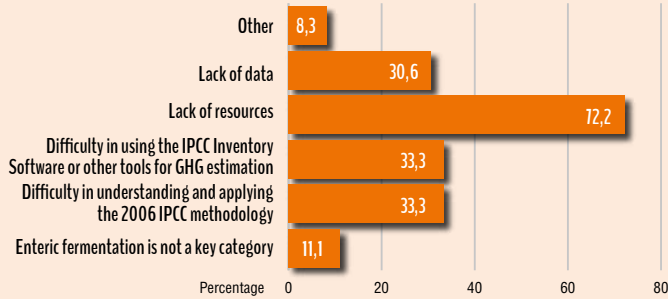
Overcoming these challenges: The main ways to overcome challenges included conducting surveys, consultations and research to fill data gaps (65%); collaborating with national statistics offices to ensure collection of data that suits GHGI needs (52%); and collaborating with international organizations and institutions (52%).

External support: Fifty percent of the respondents said their countries received external technical support (from FAO, the United Nations Environment Programme (UNEP), UNIQUE forestry and land use GmbH, the Global Research Alliance on Agricultural Greenhouse Gases (GRA), the United States Agency for International Development (USAID) and Welthungerhilfe).

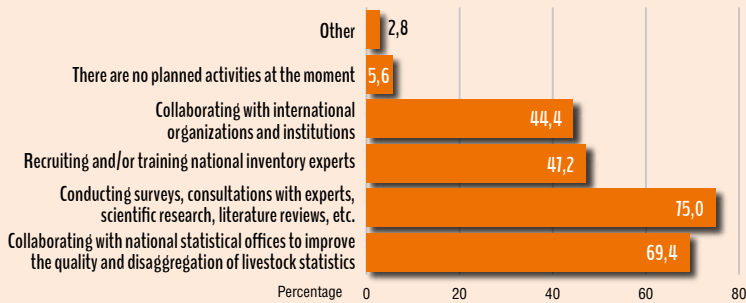
Advantages of adopting Tier 2 methodology: The key advantage of adopting Tier 2 methodology is to reflect national conditions (78%), to be able to comply with the ETF requirements and IPCC good practices (70%) and to develop and track mitigation actions in the livestock sector (65%).

TIER 1 RESPONDENTS

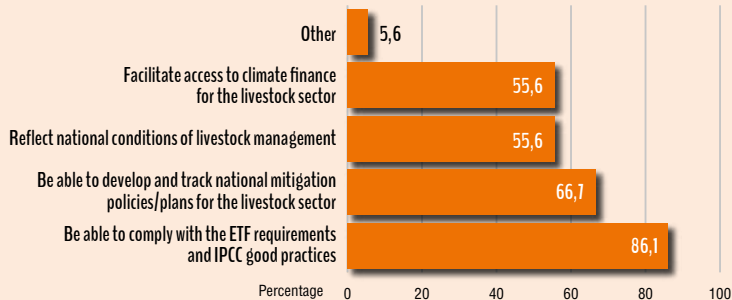
WHAT ARE THE REASONS WHY YOUR COUNTRY HAS NOT YET ADOPTED THE TIER 2 METHODOLOGY FOR ESTIMATING METHANE EMISSIONS FROM ENTERIC FERMENTATION?



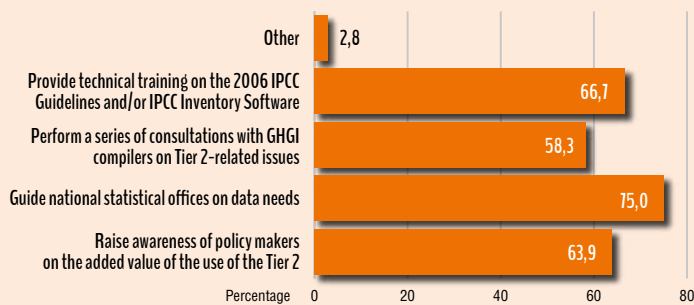
WHICH ACTIVITIES ARE FORESEEN TO IMPROVE THE ACCURACY OF METHANE EMISSION ESTIMATES FROM ENTERIC FERMENTATION IN THE NEXT GHG INVENTORY?



WHAT WOULD BE THE KEY ADVANTAGES OF ADOPTING THE TIER 2 METHODOLOGY TO ESTIMATE METHANE EMISSIONS FROM ENTERIC FERMENTATION IN YOUR COUNTRY?

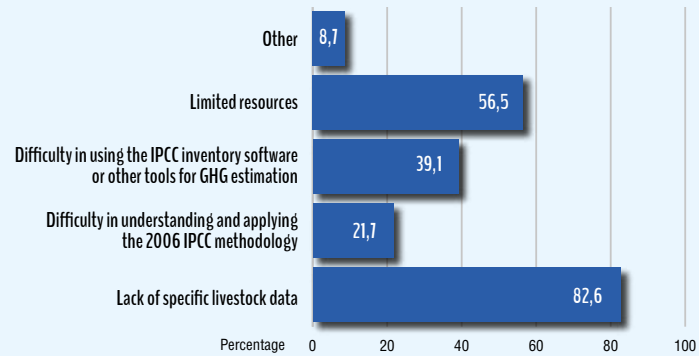


HOW CAN FAO SUPPORT YOUR COUNTRY TO ADOPT THE TIER 2 METHODOLOGY FOR ESTIMATING LIVESTOCK RELATED EMISSIONS?



TIER 2&3 RESPONDENTS

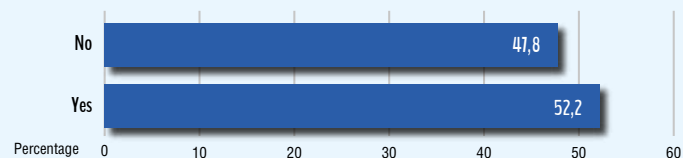
WHAT WERE THE MAJOR CHALLENGES FACED BY YOUR NGHGI TEAM WHEN ESTIMATING ENTERIC FERMENTATION EMISSIONS WITH TIER 2 METHODOLOGY?



HOW DID YOUR NATIONAL INVENTORY TEAM OVERCOME THESE CHALLENGES?



HAS YOUR COUNTRY RECEIVED EXTERNAL TECHNICAL SUPPORT?



WHAT WERE THE KEY ADVANTAGES OF ADOPTING THE TIER 2 METHODOLOGY TO ESTIMATE METHANE EMISSIONS FROM ENTERIC FERMENTATION FOR YOUR COUNTRY?

