



## Deliverable 6.1

### IIASA-GAINS model database on scenarios for anthropogenic methane emissions 1990-2100

**Authors:** Lena HÖGLUND ISAKSSON (IIASA)  
**Date:** 08/12/2025  
**Dissemination:** Public  
**Work package:** 6  
**Version:** final



Funded by  
the European Union

*This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101183460*

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# Investigating Methane for Climate Action (IM<sup>4</sup>CA)

**Call:** HORIZON-CL5-2024-D1-01

**Topic:** HORIZON-CL5-2022-D1-01-01

**Type of action:** HORIZON Research and Innovation Actions

**Granting authority:** European Climate, Infrastructure and Environment Executive Agency

**Project starting date:** 01/01/2025

**Project end date:** 31/12/2028

**Project duration:** 48 months

**Contact:** Prof. dr. ir. Sander Houweling, Coordinator  
Vrije Universiteit Amsterdam, The Netherlands

## Document history:

Version	Author(s)	Date	Changes
1	Lena Hoglund Isaksson (IIASA)	08/12/2025	Final version

**Internal review:** S. Houweling (VUA)

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# 1 IIASA-GAINS model database on scenarios for anthropogenic methane emissions 1990-2100

## 1.1 Dataset description

This file presents GAINS model estimates of future anthropogenic methane emissions under six alternative future emission scenarios. SSP2 Medium scenarios use drivers from IIASA's MESSAGE model and represent 'Middle-of-the-road' future developments of global energy systems, and demand for agricultural products. SSP1 Very Low scenarios use drivers from IIASA's MESSAGE model and represent deep and rapid decarbonization of global energy systems and reduced demand for animal-based agricultural products in world regions with current high consumption.

### Scenarios:

SSP2_Medium_CLE	Current legislation emissions -CLE (Baseline) with SSP2 Medium drivers. SSP2 Medium v4.0 for 2020-2050, trend from SSP2 Medium v6.4 for 2055-2100.
SSP2_Medium_NDC	CLE with SSP2 Medium drivers and full uptake of methane measures mentioned in National Determined Contributions (NDCs) and National Methane Roadmaps and Action Plants (MAPs) submitted to UNFCCC and CCAC as of June 2025.
SSP2_Medium_MTFR	Max technically feasible reduction (MTFR) of methane (or co-emitted pollutant) with SSP2 Medium drivers.
SSP1_Very_Low_CLE	Current legislation emissions -CLE (Baseline) with SSP1 Very Low drivers. SSP1 Very Low v4.0 for 2020-2050, trend from SSP1 Very Low v6.4 for 2055-2100.
SSP1_Very_Low_NDC	CLE with SSP1 Very Low drivers and full uptake of methane measures mentioned in National Determined Contributions (NDCs) and National Methane Roadmaps and Action Plants (MAPs) submitted to UNFCCC and CCAC as of June 2025.
SSP1_Very_Low_MTFR	Max technically feasible reduction (MTFR) of methane (or co-emitted pollutant) with SSP1 Very Low drivers.

The dataset is found at the followig link:

<https://vu.data.surf.nl/s/5Y7npzd39LiHo23>