Global Methane Hub

ADDRESSING METHANE IN AFRICAN AGRICULTURAL SYSTEMS

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EFFECTS OF A CHANGING CLIMATE ON AFRICAN FOOD PRODUCTION

- Decrease in overall productivity growth by 34%(> any other region)
- Decreasing average yield of crops over the past 3 decades
- Decreased milk production, increased deaths and disease outbreaks resulting from erratic and reduced rainfall, prolonged and frequent droughts
- Decrease in fodder availability

WHY METHANE...

1.5 Degree report (2019)
35% reduction by 2050

Global Methane Pledge (2021)
30% reduction by 2030

AR6. WGIII (2022)
34% reduction by 2030, 44% by 2040.

AR WG II (2022)
Methane's role in preventing warming is crucial to avoid reaching tipping points for dangerous impacts on people and ecosystems.

WHY AGRICULTURE METHANE?

Agriculture sector largest emitter of methane and enteric fermentation is the largest single global source

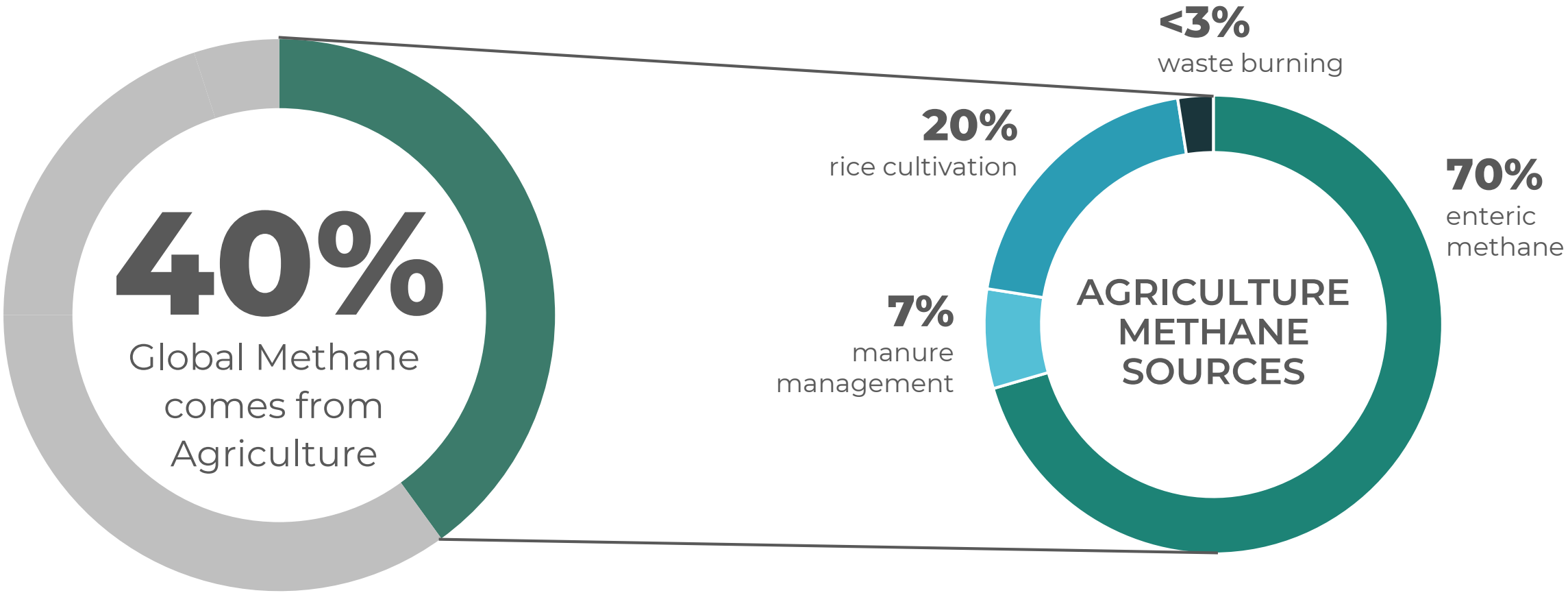
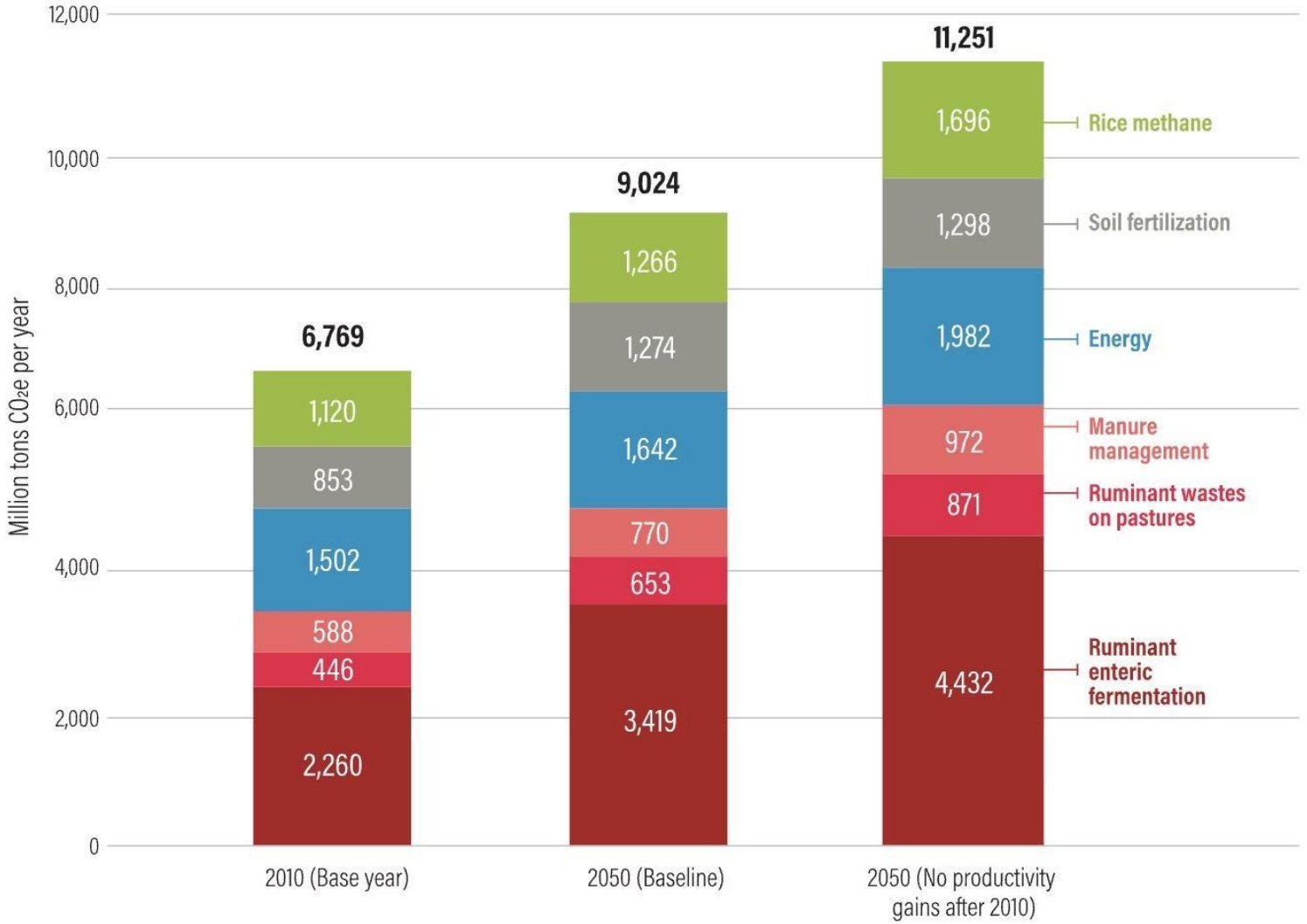


Figure 17 | | **Annual agricultural production emissions reach 9 gigatons in our 2050 baseline projection**

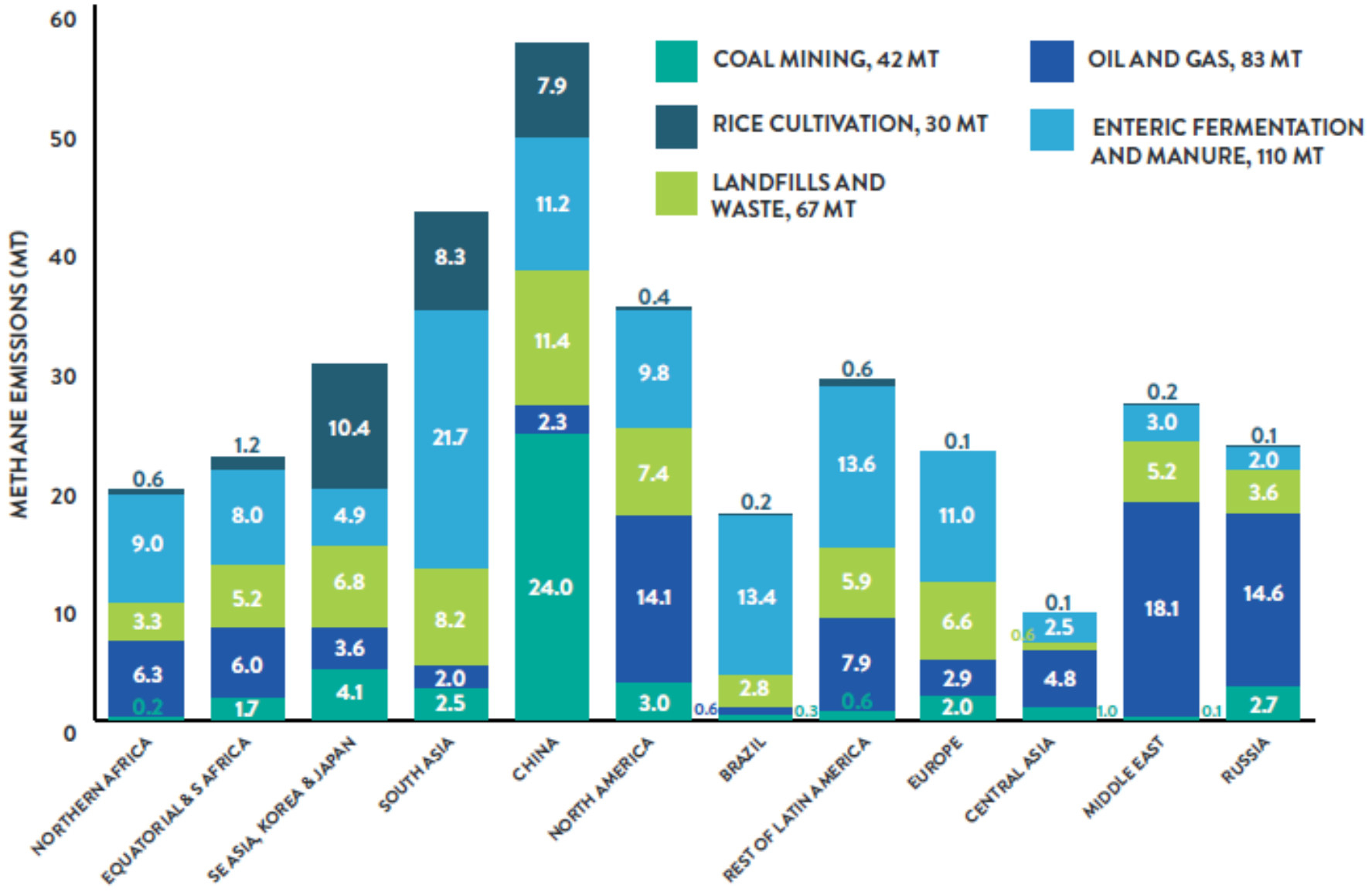


Source: GlobAgri-WRR model.

The IPCC in the Special Report on 1.5°C target makes it clear that agricultural methane emissions need to be 24–47% below 2010 emissions in 2050.

However, agricultural methane emissions projected rise by 38% between 2010 and 2050 (Searchinger et al. 2019).

REGIONAL DISTRIBUTION OF METHANE EMISSIONS

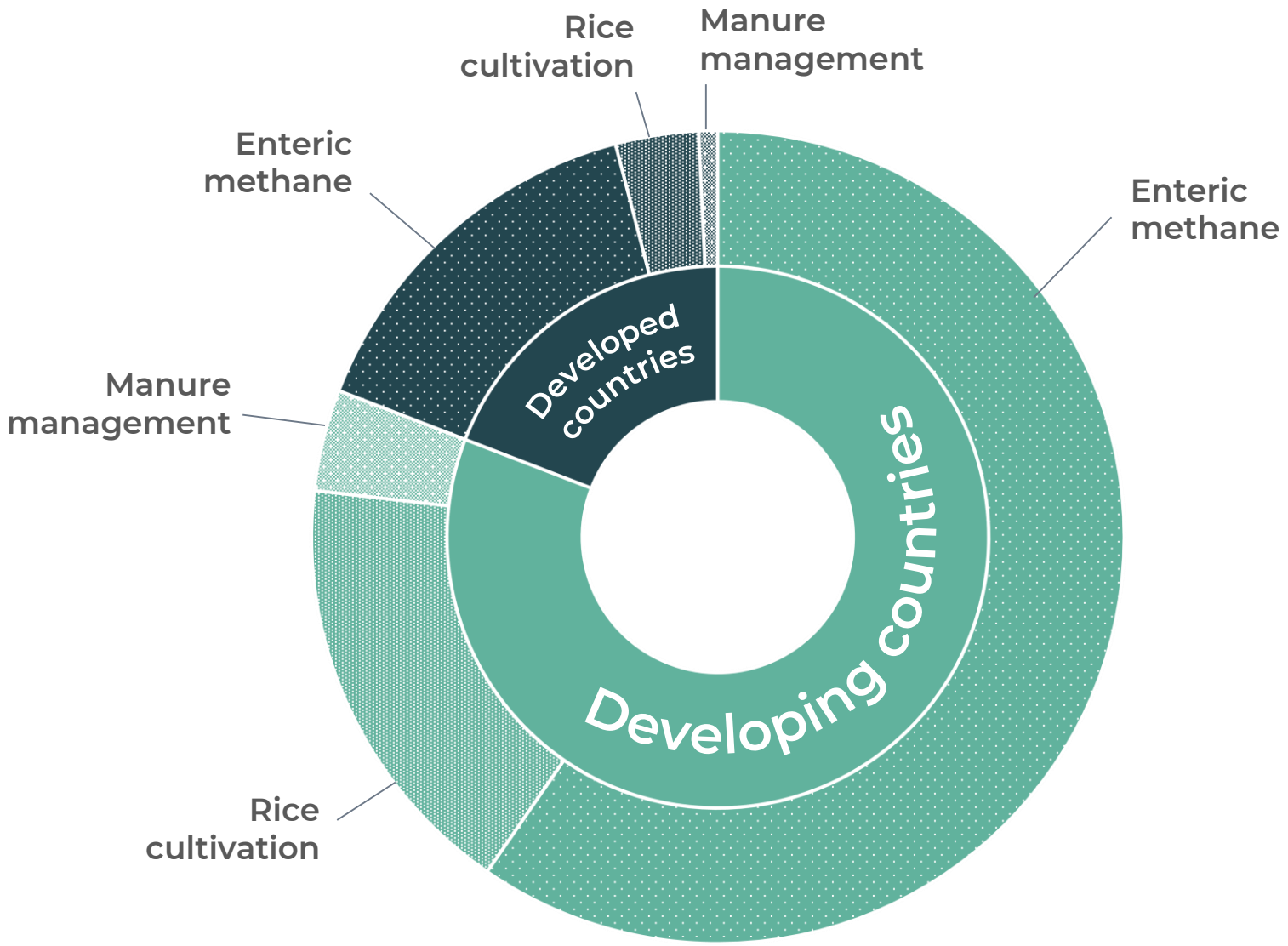


Source: Saunois et al. (2020).

DEVELOPING COUNTRIES EMIT

80%
of agricultural methane

95%
of rice methane



Source: FAO Stat 2020

CHALLENGES…

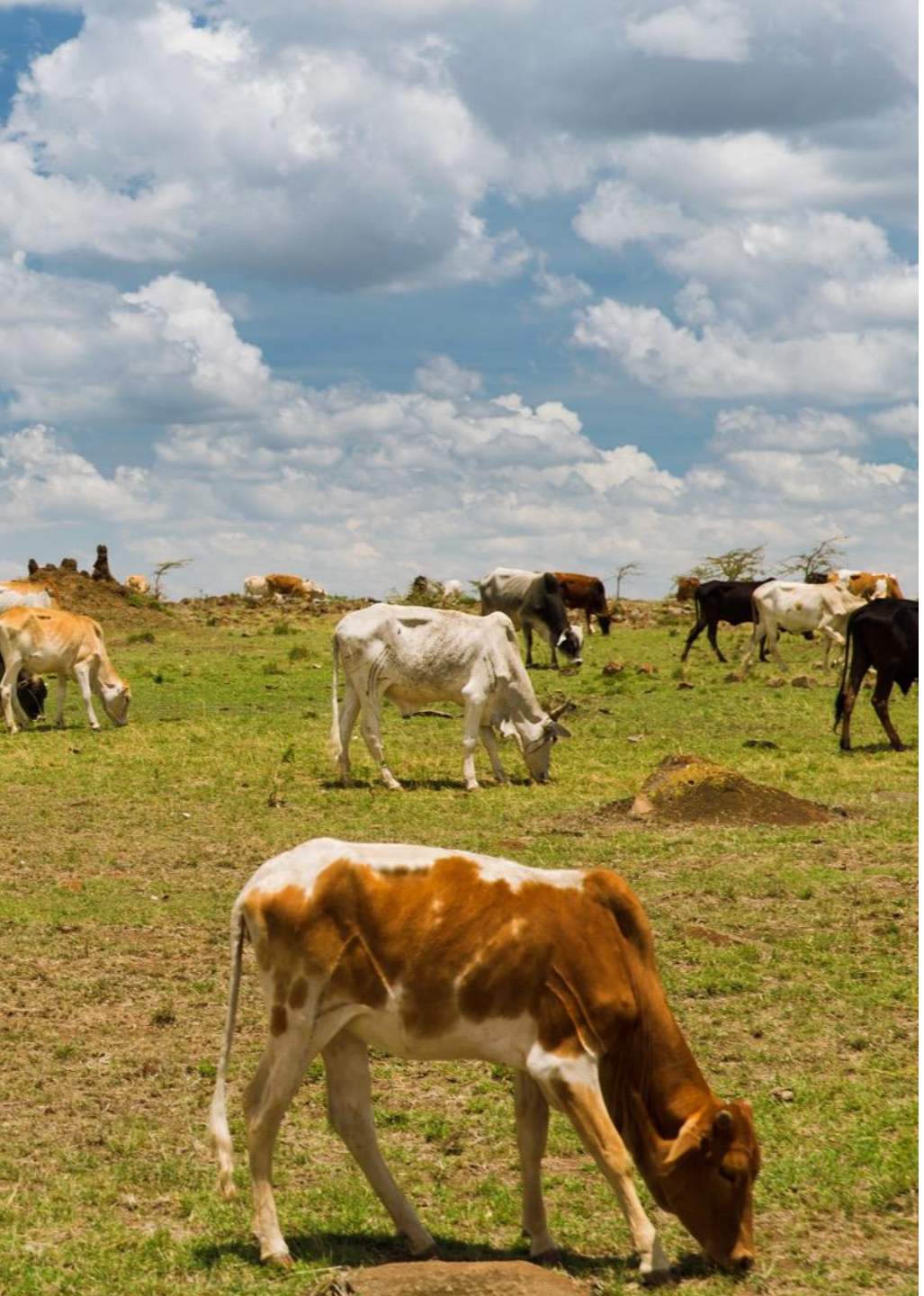
- Good animal husbandry and regenerative agricultural practices are necessary **but insufficient** to meet global methane mitigation goals
- Cost-effective and proven mitigation technologies for absolute reductions of agricultural methane are lacking.
- Lack of adoption incentives
- Intellectual property and NDAs pose data sharing challenges on effective mitigation strategies
- Difficult policy environment for strategies to thrive and deliver outcomes

METHANE MITIGATION OPPORTUNITIES

Africa is poised to increase food productivity. Why not make it sustainable?

Opportunities Exist to make impact:

- Most African countries identify agricultural systems to cut their emissions (NDC's)
- NDC commitments open doors to embed mitigation strategies in Agricultural development policy actions
- In adaptation, mitigation co-benefits exist
- Mitigation technologies with promising outcomes exist



WHAT IS REQUIRED…

- Globally coordinated and accelerated R&D efforts including MRV(Africa is key to effort)
- Publicly available data on mitigation strategies
- Stakeholder engagement in developing strategies
- Recognize diversity and complexities of agricultural systems
- Creation of enabling policy environment

APPROACHES FOR METHANE MITIGATION

- Alternate Wetting and Drying (AWD) system for rice cultivation
- Improved livestock ration formulation using local feed resources
- Improved husbandry practices
- Sustainable intensification
- Improved animal breeds and crop varieties (Low methane varietal development)

WHAT GMH IS DOING.....

- Investing in platforms for capacity building, knowledge generation and sharing(Rice Community of Practice)
- Investing in GHG MRV (Ghana currently with plans to expand to other countries)
- Investing in the development of tools to help boost production efficiency in smallholder livestock systems(FRFT)
- Mobilising finance for R&D (Enteric accelerator, Low methane rice breeding)


THANK YOU!