
WEBINAR
ENHANCING NDCS
in the Agriculture Sector
THURSDAY, APRIL 16, 2020
7:30AM ET | 12:30PM BST | 1:30PM CEST
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WORLD RESOURCES INSTITUTE
CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS
OXFAM
with support from
Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

Agenda

Welcome and introduction, Katie Ross and Mary Levine, WRI

CCAC's work on agricultural climate action, Catalina Etcheverry, CCAC Secretariat

Enhancing NDCs: opportunities in agriculture, Katie Ross, WRI

Foundations for action, Laurel Pegorsch, Oxfam

Vietnam country case study, Le Hoang Anh, Ministry of Agriculture and Rural Development

Uruguay country case study, Walter Oyhantcabal, Ministry of Livestock, Agriculture and Fisheries

FAO's work on NDCs and agriculture, Martial Bernoux, FAO, and Cecilia Jones, Ministry of Livestock, Agriculture and Fisheries

Q&A


Access these resources at
wri.org/stepup2020

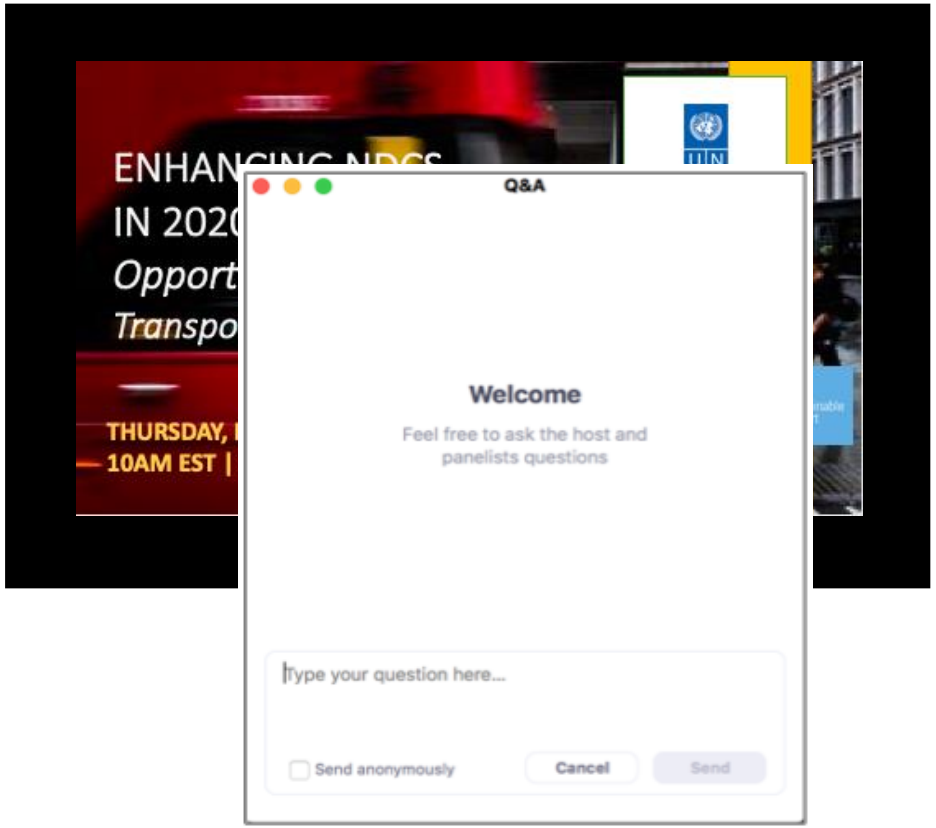
Attendee participation

- Join audio:
  - Preferred method: through Computer Audio
  - Back-up: choose Telephone and dial-in using the phone numbers listed in the webinar confirmation email

- Attendees remain in listen-only mode

- Please select “Q&A” at the bottom of your screen for any questions or comments during the webinar

- Today’s presentation will be recorded and made available within 24 hours



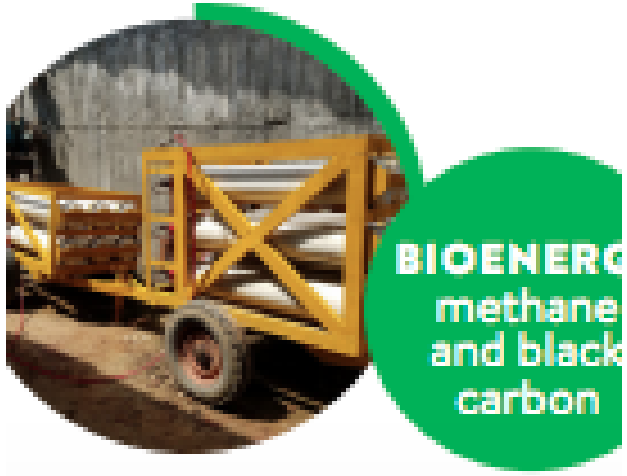
If you experience technical problems during the webinar, please submit questions in the Q&A section or to Mary.Levine@wri.org

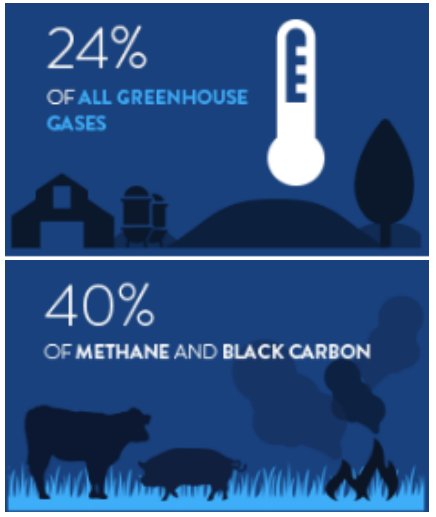
Catalina Etcheverry
Climate and Clean Air Coalition Secretariat

OUR WORK ON AGRICULTURAL CLIMATE ACTION

Webinar on Enhancing NDCs: Agriculture
16 April 2020

CCAC AGRICULTURE INITIATIVE





ccacoalition.org

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

CCAC AGRICULTURE INITIATIVE STRATEGY

AIM: To catalyze the practice and policy changes that are needed now, and then to pass the mantle onto organizations such as, FAO and WB, with the clear mandate to expand and scale up this work

We do this through:

- BUILDING POLITICAL WILL- via a group of leaders in the field and raising awareness about the actions that can be taken now
- ASSISTING COUNTRIES WITH TOOLS & CAPACITY BUILDING- to identify increasingly ambitious actions, policies and targets
- SUPPORTING STRENGTHENED COORDINATION at the national level
- MARSHALLING EVIDENCE THAT ENABLES LARGE-SCALE FINANCING -To unlock the potential for scale-up

PROMOTING COST-EFFECTIVE SOLUTIONS & MARSHALLING EVIDENCE

EXAMPLE OF OUR WORK ON LIVESTOCK

We have funded work to show how low-cost strategies to reduce enteric methane emissions can contribute to short- and long-term social and economic development, as well as climate action.

MITIGATION OPTIONS FOR THE LIVESTOCK SECTOR

Methane mitigation potential from implementation of key livestock management measures in specific regions

MIXED DAIRY OECD — -11% OECD countries
Fat supplementation 2.1- 2.3%
Manure management 8.9%

BEEF CATTLE — -47.5% South America
Improved feed quality 25.7%
Improved fertility and reduced mortality 21.8%

SMALL RUMINANTS — -4.5% West Africa
Improved fertility and reduced mortality 2.65%
Improved feed quality 1.85%

MIXED DAIRY — -2.8-10.9% East Africa
Improved feed quality 2.2 - 9%
Improved fertility and reduced mortality 0.6 - 1.9%

DAIRY CATTLE — -38% South Asia
Improved feed quality 23.4%
Improved fertility and reduced mortality 3.3%

COMMERCIAL PIGS — -20-28% South East Asia
Improved fertility and reduced mortality 17.1%
Manure management 15.4%

Our work with the FAO has shown the potential to implement strategies

PRACTICAL APPROACH-EXPERT ASSISTANCE SUPPORT

CCAC Solution Centre funding was provided to Vietnam to increase the potential for emissions reductions through their planned livestock emissions law, which relates to implementation of the country's INDC commitments.

The Solution Centre provides small-scale funding to help developing countries achieve a real outcome, such as a policy or other action that can lead to emissions reductions.

Overall ranking of different mitigation options at Farm level

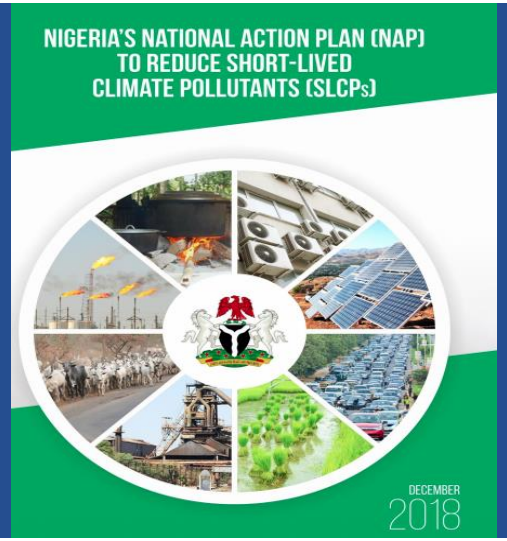
No	Mitigation option	Ranked by experts	Ranked by MACC	Ranked by total mitigation potential	Total ranked	Overall priority*
		(1)	(2)	(3)	(4=1+2+4)	(5)
1	Manure composting	3	1	1	5	1
2	Biogas system	1	2	2	5	1
3	Using biomat	3	4	3	10	4
4	Using bio-agents	5	-	-	-	-
5	Feed mix	2	3	4	9	3
6	Other	6	-	-	-	-

Overall ranking of different mitigation options at HH level

No	Mitigation option	Ranked by experts	Ranked by MACC	Ranked by total mitigation potential	Total ranked	Overall priority*
		(1)	(2)	(3)	(4=1+2+4)	(5)
1	Manure composting	3	1	1	5	1
2	Biogas system	1	3	2	6	2
3	Using biomat	4	4	3	11	4
4	Using bio-agents	6	-	-	-	-
5	Feed mix	2	2	4	8	3
6	Other	5	-	-	-	-

SUPPORTING STRENGTHENED COORDINATION AT THE NATIONAL LEVEL

Agriculture Institutional Strengthening Coordination is being supported in Nigeria and in Vietnam to sustainably increase the level of action to reduce SLCPs from the sector by further promoting coordination and scaling-up of activities at the national level



Blueprint for outscaling low-emissions rice farming in Vietnam

Thank you!

Catalina Etcheverry
CCAC Agriculture Initiative Coordinator
Catalina.Etcheverry@un.org

For more information and resources:

ccoalition.org/en/initiatives/agriculture

LEARN MORE:

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

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Katie Ross
World Resources Institute

WORLD RESOURCES INSTITUTE

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RAISING AGRICULATURAL CLIMATE AMBITION:

NDCs 2.0

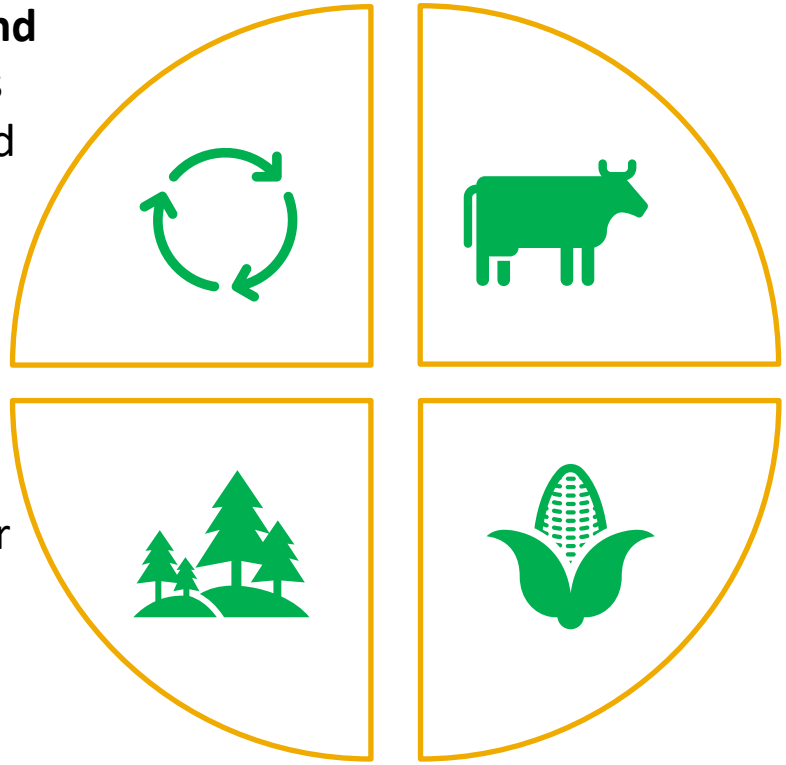
SEIZING OPPORTUNITIES FROM NDCs

- Foster increased action on adaptation
- Support small-scale and vulnerable farms and farmers
- Align the Ag sector with low-emissions transformation
- Bring together climate action with the SDGs
- Attract investment and support

WIN-WIN SOLUTIONS

More sustainable production and consumption measures, such as reduced food loss and waste and shifts to healthier and more sustainable diets

Broader land management, such as improved pastures for grazing; improved soil and water management, including through agro-ecological approaches; reduced use of fire as a management strategy; and improved soil fertility



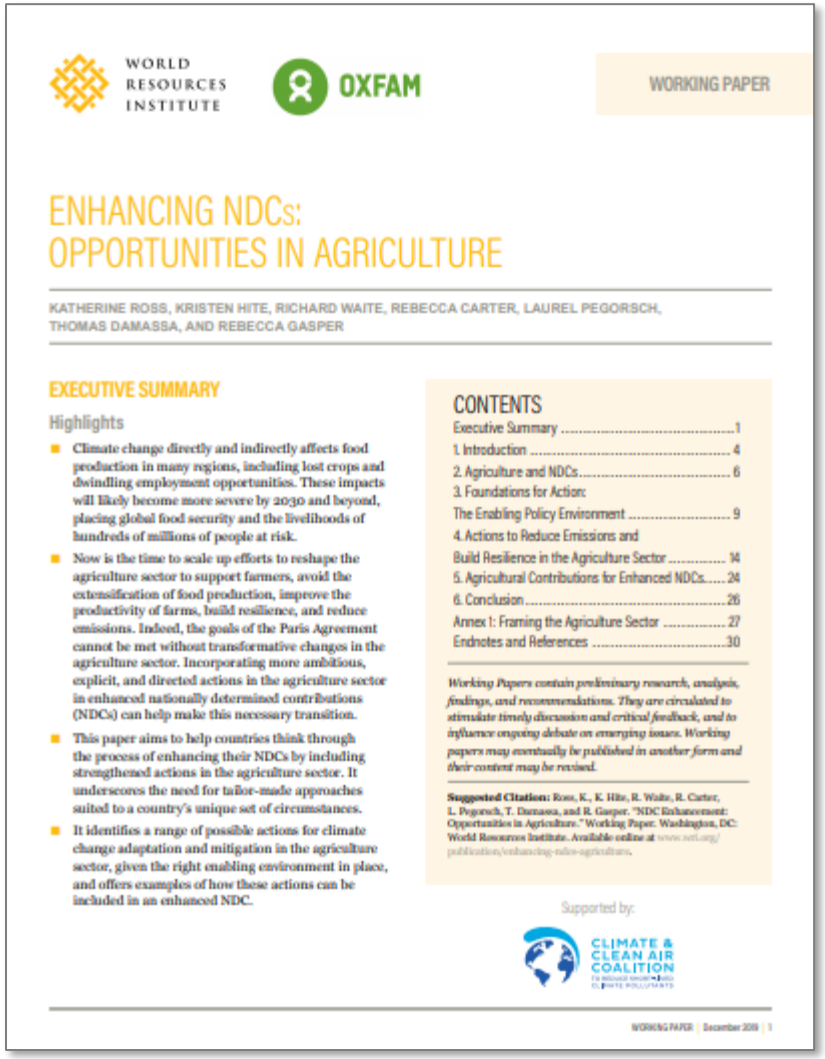
Better livestock management (i.e., better feed, animal health care and breeding) can support higher ruminant productivity and hence the livelihoods and resilience of livestock producers

Better crop management can increase the potential yield of crops and help farmers achieve better yields by better coping with environmental constraints, including a changing climate

AGRICULTURAL CONTRIBUTIONS FOR ENHANCED NDCs

Strengthen Implementation	Add Specific Policies and Actions	Incorporate Additional Agriculture-Sector Action into an Emissions Target	Facilitate Clarity, Transparency and Understanding
• Strengthened governance arrangements; • More inclusive processes; • Introduction of mechanisms to mobilize finance for NDC implementation; • Greater alignment with development plans.	E.g.: • Improve soil and water management; • Improve manure management; • Reduce food loss and waste; • Shifts to healthier and more sustainable diets.	• Strengthen/ create a new economywide reduction target • Strengthen/ create a new sector reduction target	Description of, e.g.: • Assumptions; • Processes; • How actions will benefit small-scale farmers and the most vulnerable.

FIND OUT MORE



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WORKING PAPER

ENHANCING NDCs: OPPORTUNITIES IN AGRICULTURE

KATHERINE ROSS, KRISTEN HITE, RICHARD WAITE, REBECCA CARTER, LAUREL PEGORSCH, THOMAS DAMASSA, AND REBECCA GASPER

EXECUTIVE SUMMARY

Highlights

- Climate change directly and indirectly affects food production in many regions, including lost crops and dwindling employment opportunities. These impacts will likely become more severe by 2030 and beyond, placing global food security and the livelihoods of hundreds of millions of people at risk.
- Now is the time to scale up efforts to reshape the agriculture sector to support farmers, avoid the extensification of food production, improve the productivity of farms, build resilience, and reduce emissions. Indeed, the goals of the Paris Agreement cannot be met without transformative changes in the agriculture sector. Incorporating more ambitious, explicit, and directed actions in the agriculture sector in enhanced nationally determined contributions (NDCs) can help make this necessary transition.
- This paper aims to help countries think through the process of enhancing their NDCs by including strengthened actions in the agriculture sector. It underscores the need for tailor-made approaches suited to a country's unique set of circumstances.
- It identifies a range of possible actions for climate change adaptation and mitigation in the agriculture sector, given the right enabling environment in place, and offers examples of how these actions can be included in an enhanced NDC.

CONTENTS

Working Papers contain preliminary research, analysis, findings, and recommendations. They are circulated to stimulate timely discussion and critical feedback, and to influence ongoing debate on emerging issues. Working papers may eventually be published in another form and their content may be revised.

Suggested Citation: Ross, K., K. Hite, R. Waite, R. Carter, L. Pegorsch, T. Damassa, and R. Gasper. "NDC Enhancement: Opportunities in Agriculture." Working Paper. Washington, DC: World Resources Institute. Available online at www.wri.org/publication/enhancing-ndcs-agriculture.

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CLIMATE & CLEAN AIR COALITION

WORKING PAPER | December 2019 | 1

Find the paper at:

https://www.wri.org/publication/enhancing-ndcs-agriculture

Laurel Pegorsch
Oxfam America

Enhancing NDCs: Opportunities in Agriculture

Laurel Pegorsch, Climate Change and Energy Policy
Oxfam America
April 16th, 2020

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Foundations for Action

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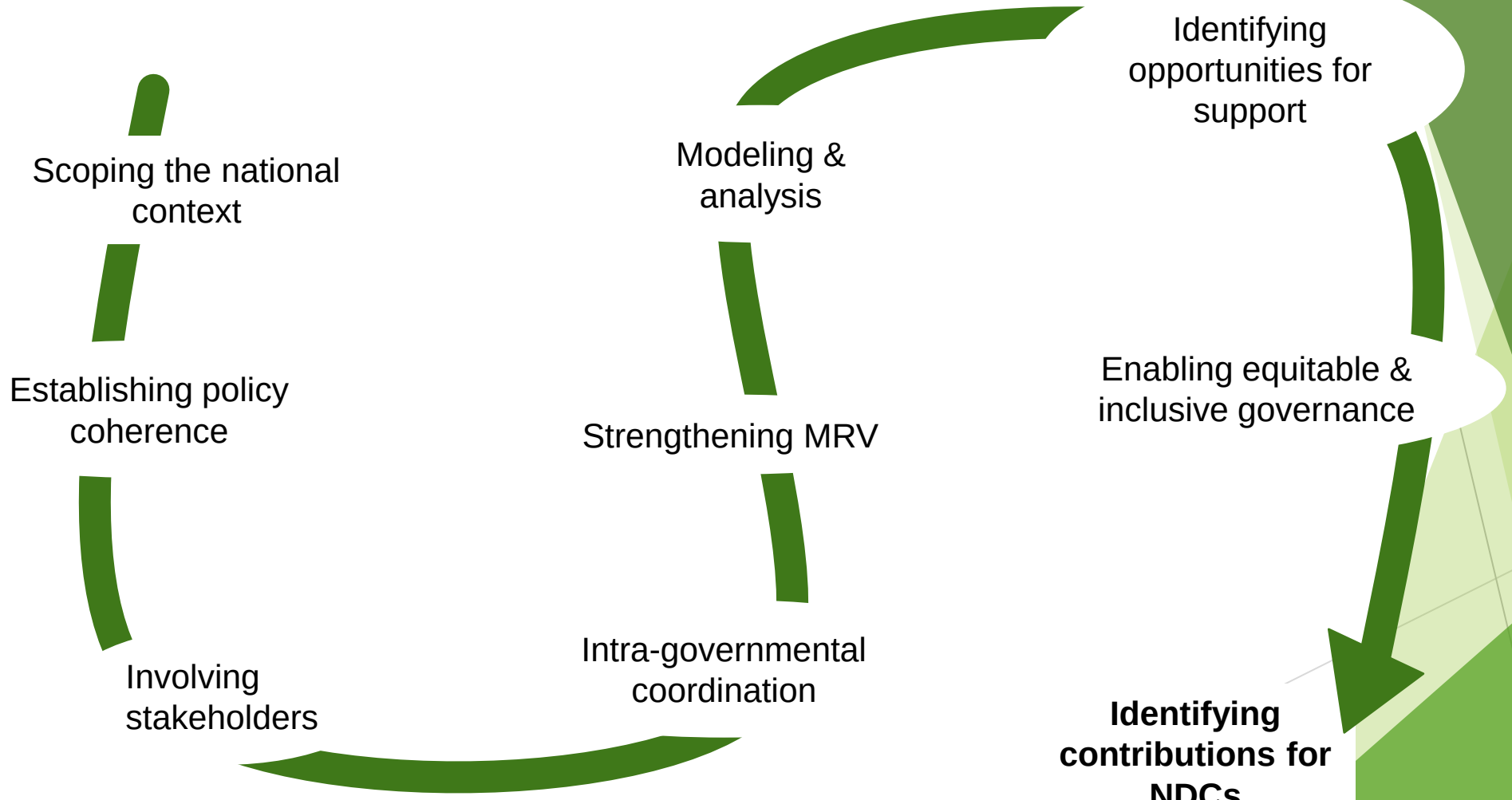
FOUNDATIONS FOR ACTION



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Case Studies:
Leading with Development

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Agroforestry and Empowerment in Mali

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Agroforestry and Empowerment in Mali

Saving for Change Program

- Improved soil quality
- Water management / security
- Diversified incomes
  - Food security
  - Nutrition
- Ecological benefits & biodiversity
- Reduced pressure to convert land
- Strengthen community-to-community capacity building

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Community Consultation in Uganda

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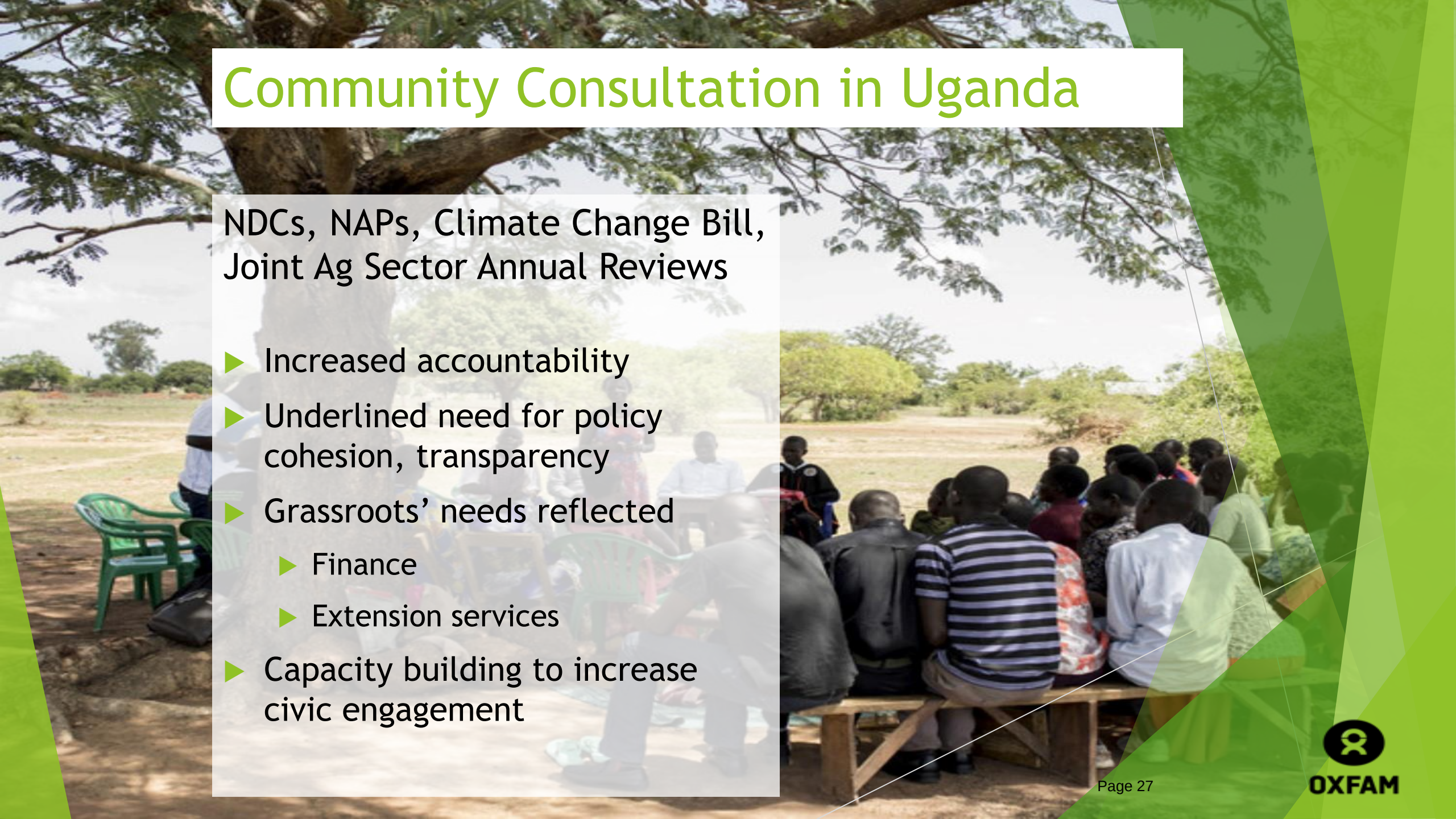
Community Consultation in Uganda

NDCs, NAPs, Climate Change Bill, Joint Ag Sector Annual Reviews

- Increased accountability
- Underlined need for policy cohesion, transparency
- Grassroots' needs reflected
  - Finance
  - Extension services
- Capacity building to increase civic engagement



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Thank you

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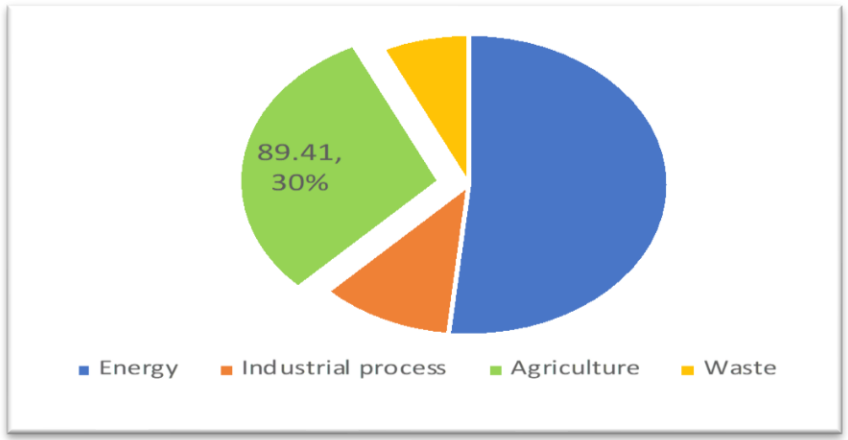
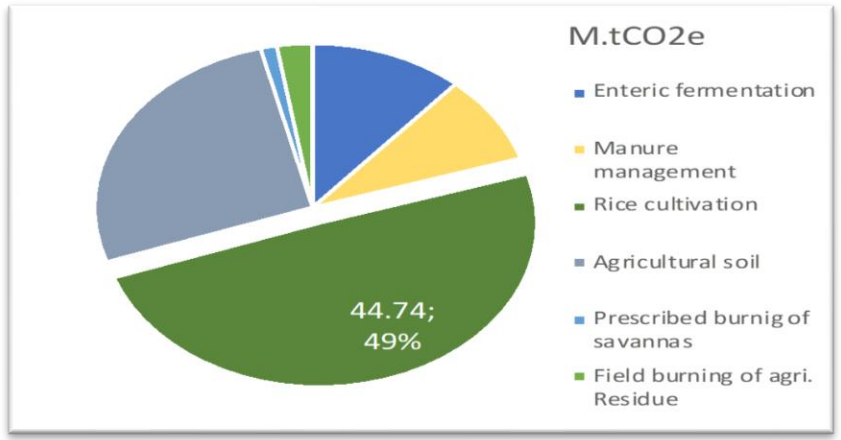
Le Hoang Anh
Ministry of Agriculture and Rural Development, Vietnam

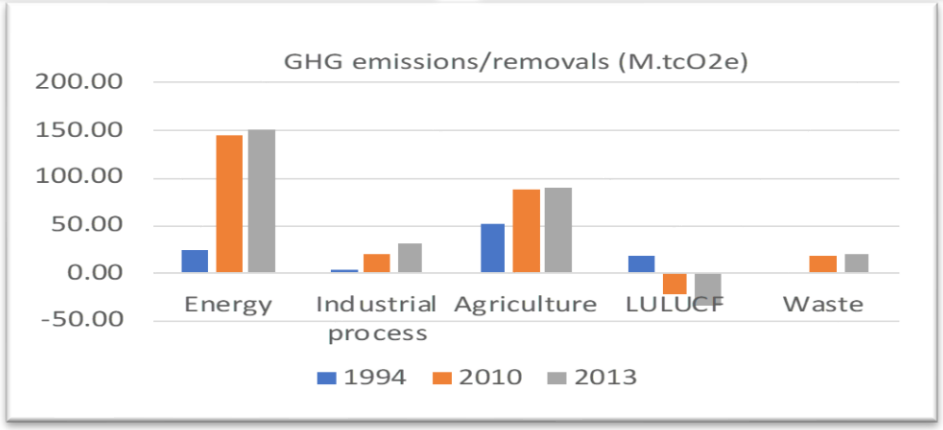
VIETNAM'S CASE STUDY IN EMBEDDING SLCP MITIGATION MEASURES IN TO AGRICULTURE SECTOR'S NDC

Le Hoang Anh
Department of Science Technology and Environment,
Ministry of Agriculture and Rural Development

GHG emissions share by sectors/ source in Vietnam

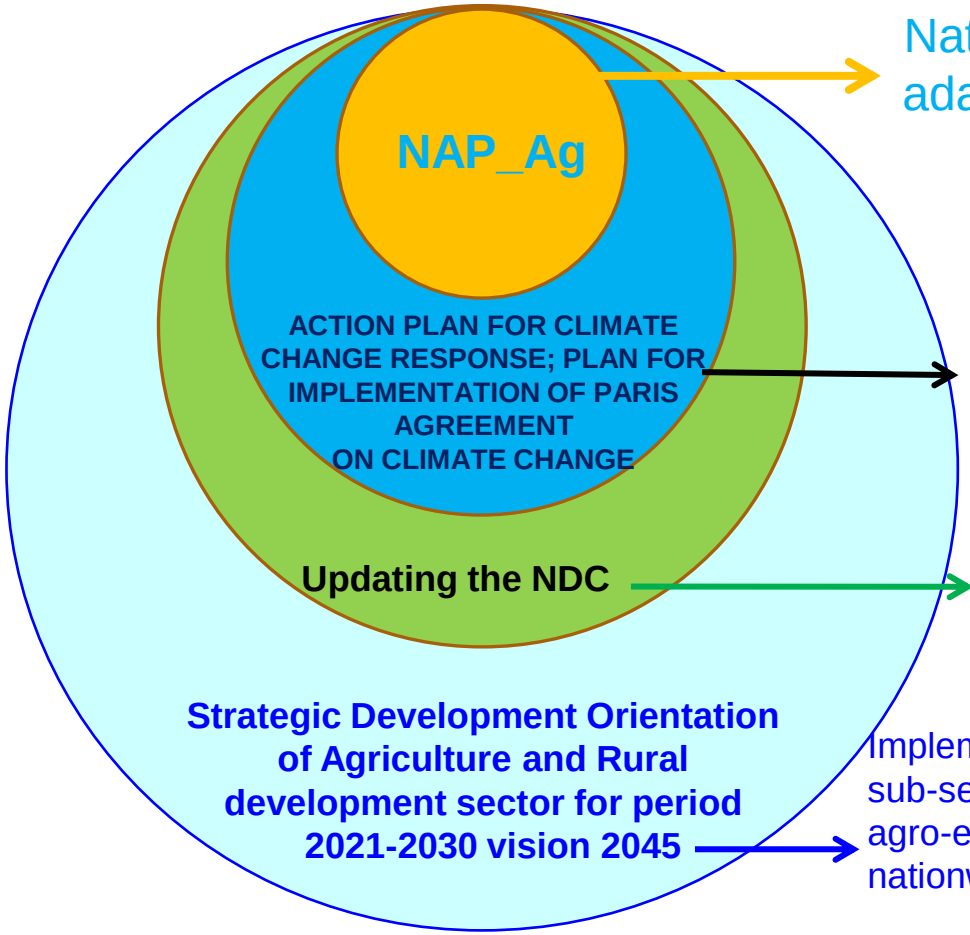






Source: MONRE (2017)

Agriculture's Climate Change Policy and NDC in the national context

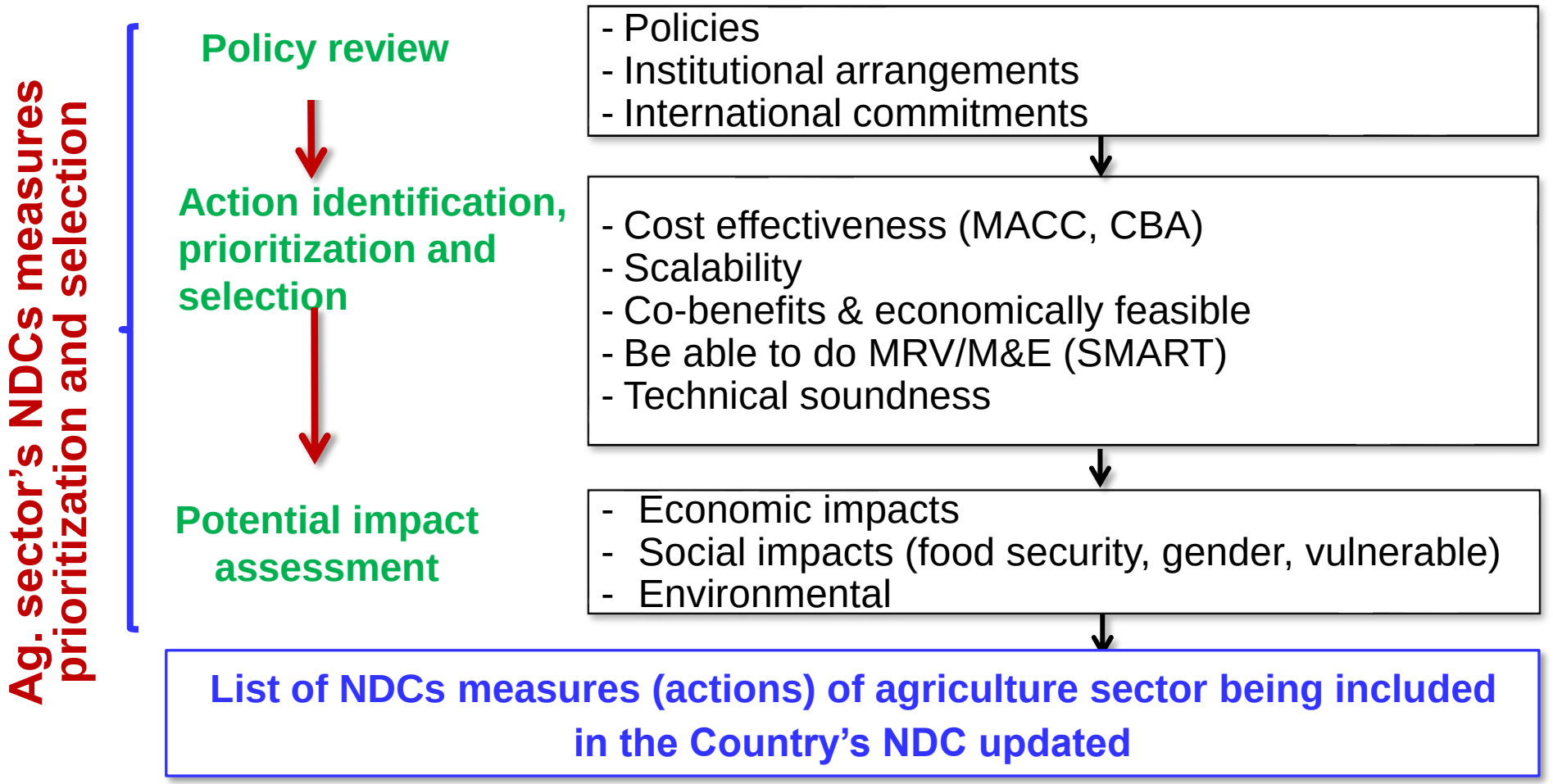


National climate change adaptation in Agriculture

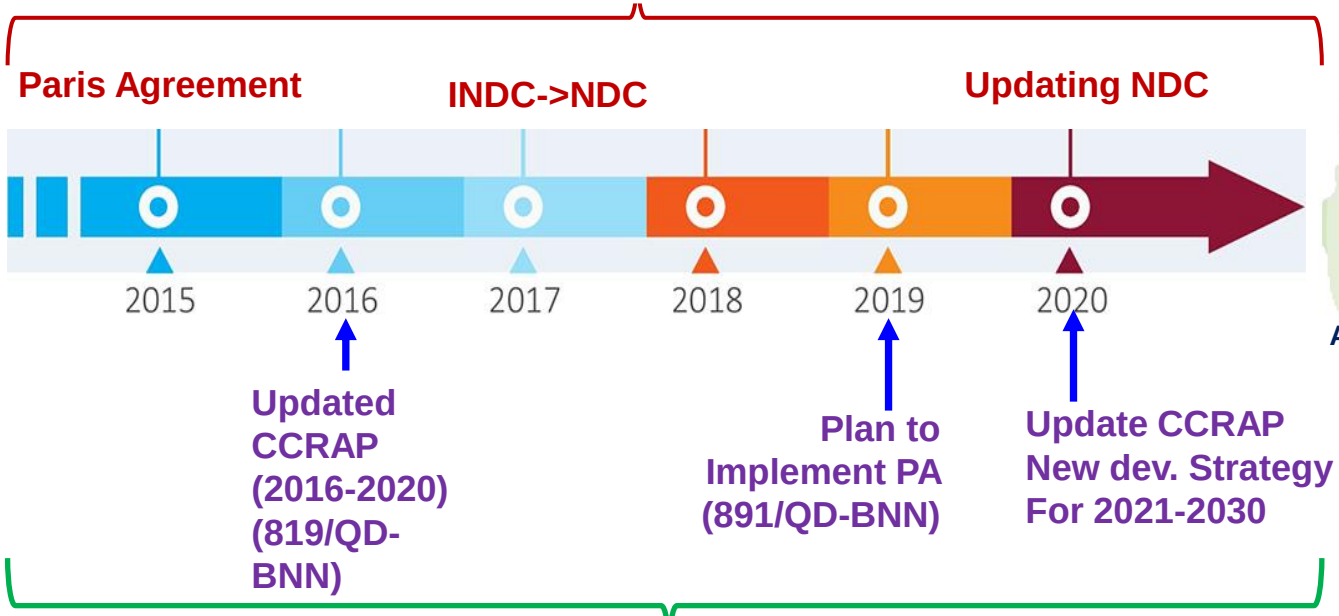
GHG emissions reduction;
Climate change adaptation;
Resources preparation;
Improvement of institutions and policies

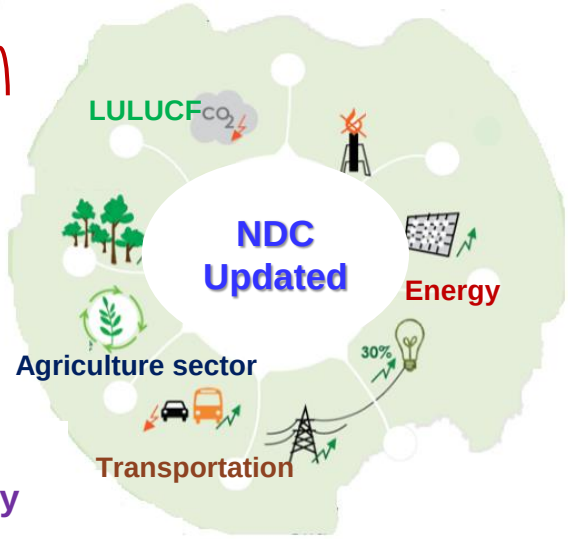
CC adaptation;
GHG emissions reduction;
Co-benefits;
Disaster risk reduction.

Implemented with 07 agricultural sub-sectors in the scope of 07 agro-ecological regions nationwide.


Ag. sector's NDCs measures prioritization and selection
Policy review
Action identification, prioritization and selection
Potential impact assessment
- Policies
- Institutional arrangements
- International commitments
- Cost effectiveness (MACC, CBA)
- Scalability
- Co-benefits & economically feasible
- Be able to do MRV/M&E (SMART)
- Technical soundness
- Economic impacts
- Social impacts (food security, gender, vulnerable)
- Environmental
List of NDCs measures (actions) of agriculture sector being included in the Country's NDC updated

Global/National Process





Agriculture planning & integration

MARD's INTEGRATION INTO NATIONAL PLANNING FRAMEWORK

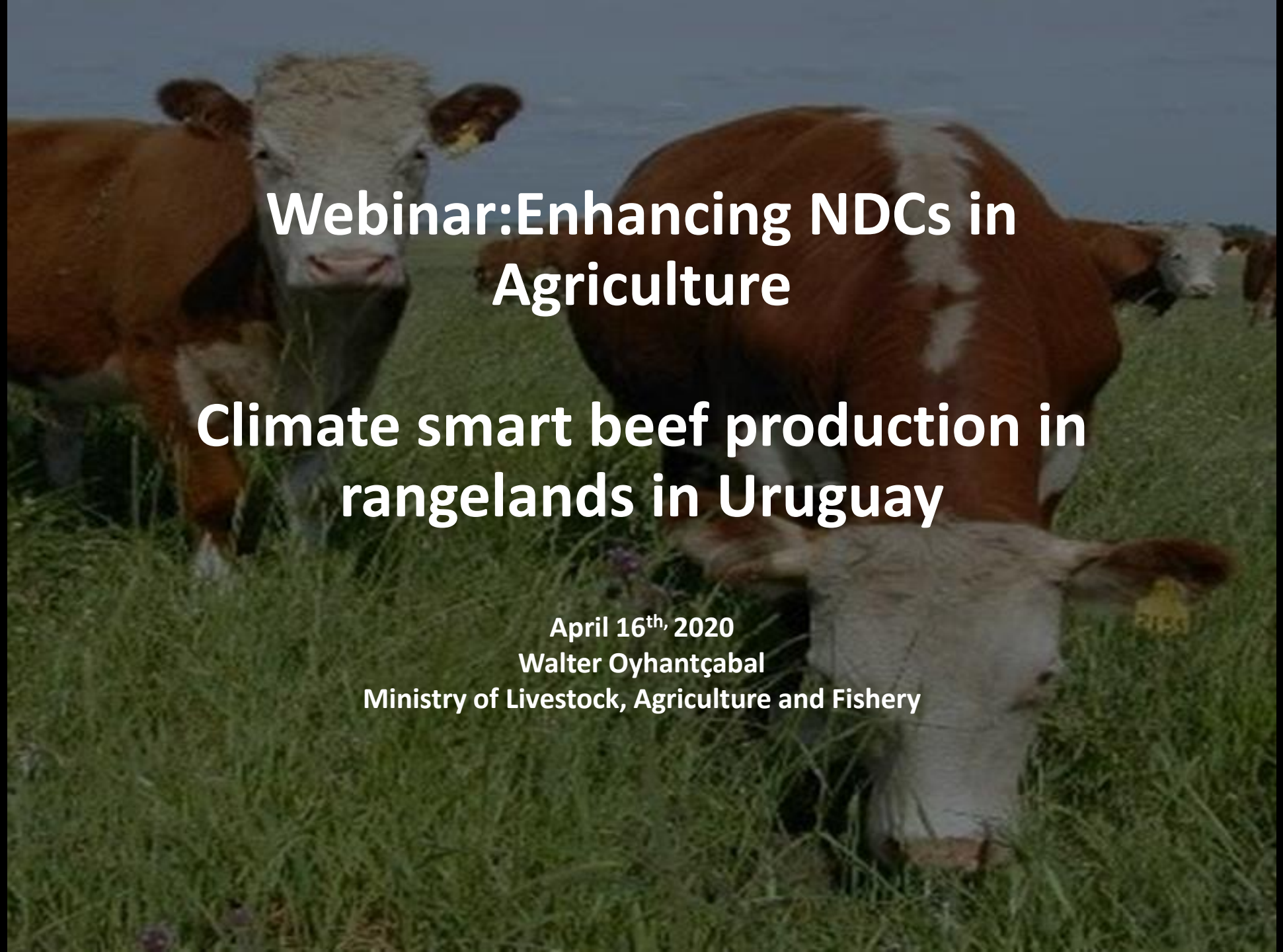
PROPOSED MITIGATION MEASURES FROM AGRICULTURE SECTOR IN COUNTRY's NDC BEING UPDATED

ID	Main GHG (SLCP) mitigation measure groups	Examples of specific measures
1	Water management and methods for paddy rice cultivation	AWD, SRI, 1M5Rs, changing rice-crop patterns, nitrogen fertilizer application etc.
2	Water management and crop management for the crops other than paddy rice	Water saving irrigation, intercropping,
3	Manage, recycle and reuse crop residues and by-products	Reuse rice/coffee husks, no burning savannas, straw recycling, bio-char production
4	Livestock manure management	Bio-gas, composting, producing organic fertilizers
5	Changing feed, controlling rumen fermentation, mixing animal feed	Increasing digestive process, balance N/C feed mix
6	LULUCF	REDD+, agroforestry, long rotation plantation

Conclusions

- The results provided from TAs supported projects like CCAC, FAO, UNDP, GIZ etc. projects are very helpful in terms of providing scientific bases for selecting feasible mitigation options of agriculture sector being included in the NDC of Vietnam.
- Consistency in selecting priorities across different planning frameworks and policy initiatives in order to make informed decisions to include the most cost effective, high co-benefit, economically feasible and technically sound mitigation measures in NDC
- Stakeholder involvements and coordination at all levels, especially farmers and private sector.
- Resource mobilization and cooperation domestically and internationally are crucial in implementing and achieving mitigation targets

Walter Oyhantcabal
Ministry of Livestock, Agriculture and Fisheries, Uruguay



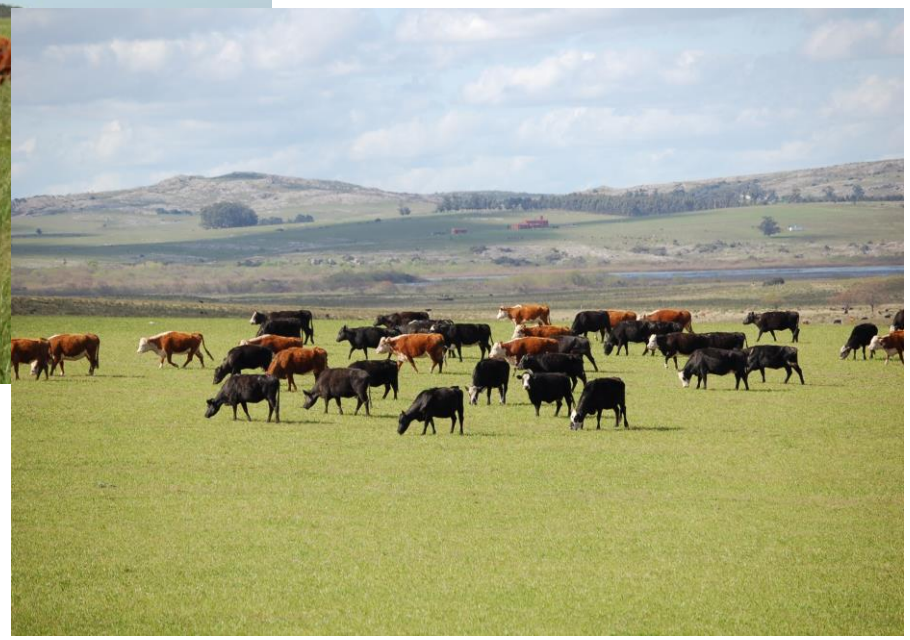
Webinar:Enhancing NDCs in Agriculture

Climate smart beef production in rangelands in Uruguay

April 16th, 2020

Walter Oyhantçabal
Ministry of Livestock, Agriculture and Fishery

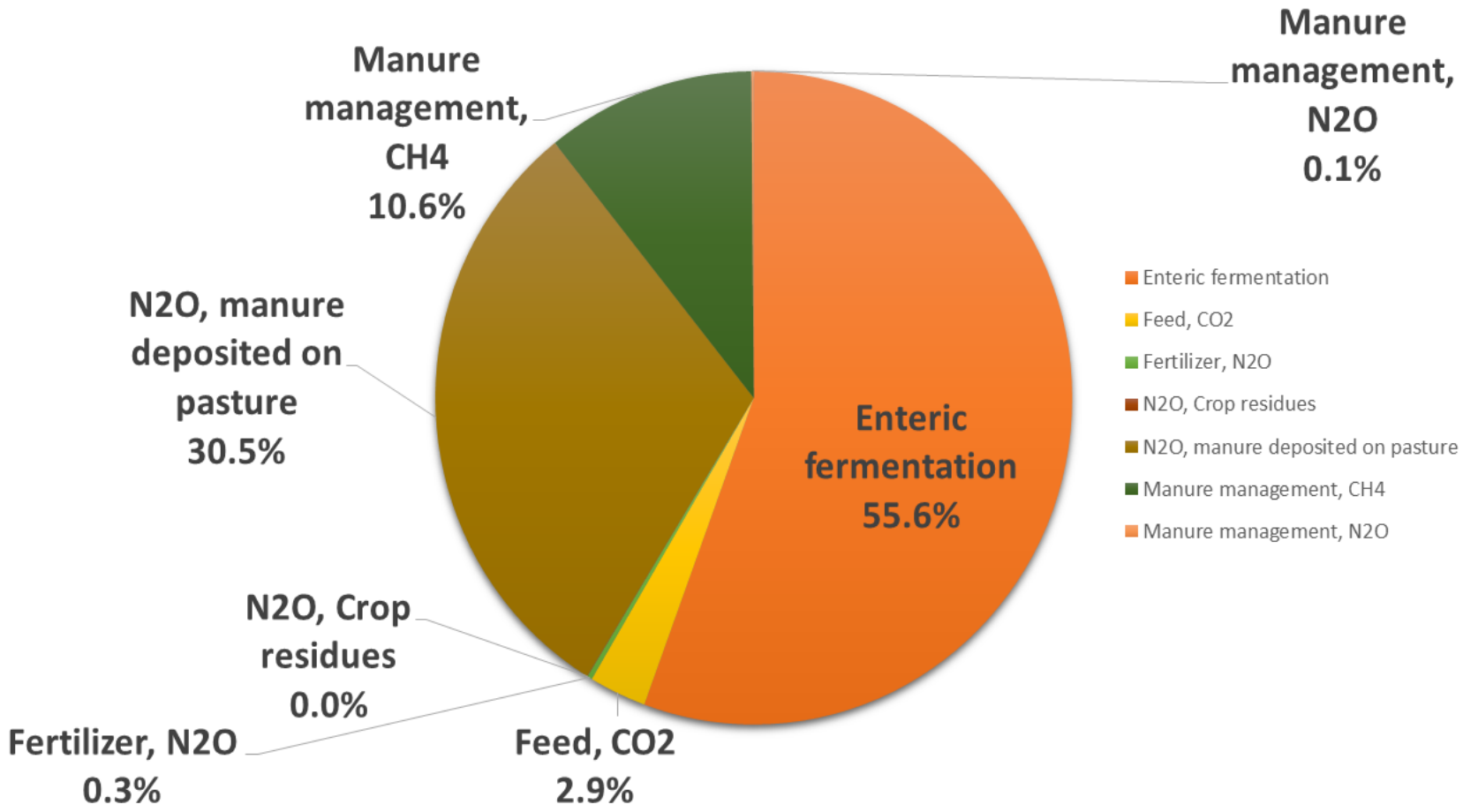
- Uruguay is a livestock country with an economy strongly based on the agricultural sector (70% of all exports).



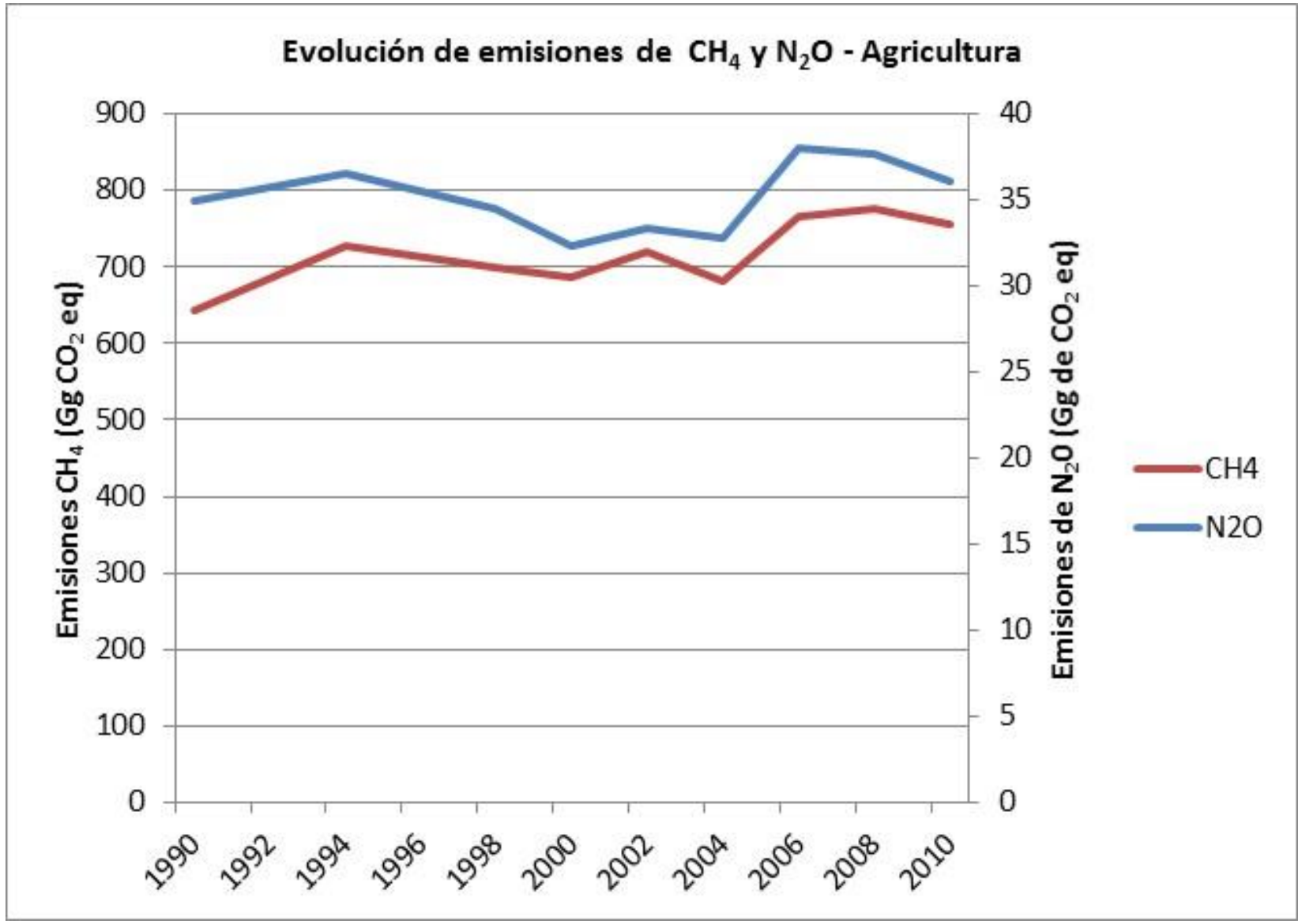
Uruguay´s NDC: explicit mitigation targets in terms of emissions intensity in the beef sector (per kg beef)

	2025 vs. 1990 own effort	2025 vs 1990 with MOI
CH_4	32% less	37% less
N_2O	34% less	38% less

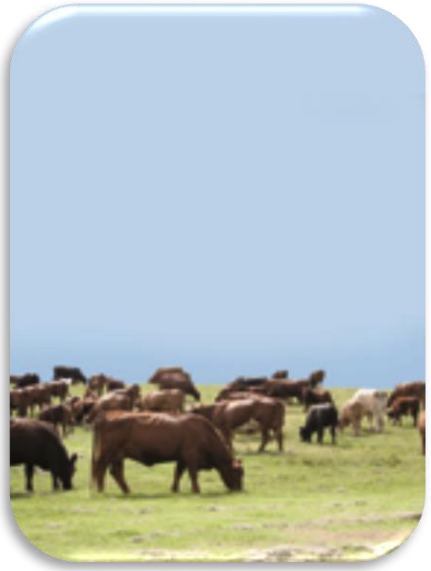
Sources of emissions in Agriculture



NGHGI as a key MRV tool



Uruguay: National Livestock Information System



High quality updated Activity Data

100% traceability of the cattle herd, with electronic and visual tags

Annual electronic sword declaration by all farmers

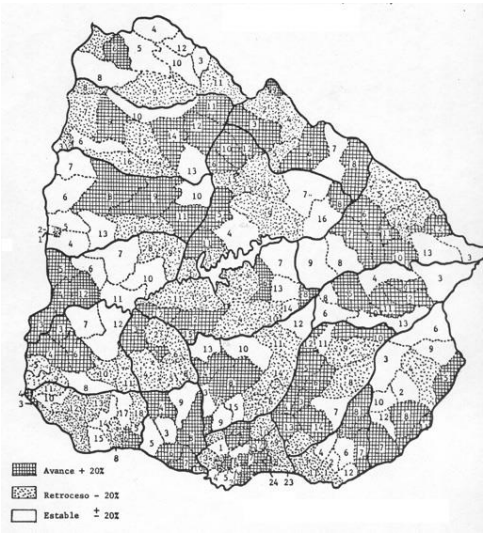
- Stock: number of heads by category = updated AD

  (very low uncertainty)

- Land use → Diet composition and quality, as basis for estimating sub-national dynamic Tier 2 **EF**

IPCC Dynamic Tier 2 methods for Enteric fermentation

- Using spatially disaggregated information on cattle herd by category and diet quality and composition.
- C-S EF for enteric fermentation, including Tier 2 MCF
- Tier 2 N_2O from manure on grasslands
- Use of FAOSTAT tools for QA/QC



Composition of our T2 so far…

- Digestibility: literatura + yearly land use statistics
- Pregnacy rate: early surveys
- Live weight: slaughterhouse statitics + expert judgement + farms registers
- Weight gain: expert judgement+farms registers
- Etc.
- Etc.

Our strategy

REDUCING EMISSIONS INTENSITY THROUGH IMPROVED PRODUCTION EFFICIENCY AND PRODUCTIVITY IN BEEF PRODUCTION SYSTEMS, SEQUESTERING C IN SOILS AND BIOMASS (WHERE POSSIBLE)

- **EI = E/Q**

Challenges related to MRV removals in grasslands

- There is a need of reliable methodologies and protocols for monitoring SOC stocks changes (recognizing that scaling up of SOC stocks from point sample to landscape units is problematic due to high spatial variability).

- Inclusion of woody biomass (silvopastoral systems, shade and shelter, etc.) can decrease the net emissions.

Climate-smart livestock production and land restoration in the Uruguayan rangelands

Platform for learning and validating for upscaling:
GEF and CCAC co- funded, assisted by FAO

Goals for the climate smart project with GEF-FAO in Uruguay

- To mitigate climate change and to restore degraded lands.

- To evaluate the economical, social and environmental impacts and barriers of the alternative management in order to scale up the proposal.

Project targets

- 60 farms (35,000 ha) of direct project intervention (and 400,000 ha of indirect project impact).

- A range of 100,000 to 300,000 tons CO_2eq tons of GHG directly mitigated, and ca. 1 to 3 million tons CO_2 equivalent indirectly mitigated .

Component	Output
1: Strengthening the institutional framework and national capacities to implement the climate smart livestock management (CSLM)	1. A national CSLM strategy, designed and validated with key stakeholders. 2. NAMA and the MRV system for the beef sector. 3. Detailed estimates of GHG emissions intensity reduction and soil C sequestration. (CCAC to support CH4 MRV) 4. Capacities to support implementation of CSLM, including gender perspective. 5. A training program to supporting the rolling out of improved CSLM approaches.

Component	Outputs
2: Development and deployment of CSLM technologies and practices at field level.	1. Short and medium-term farm level strategies implemented on 60 project farms with a gender perspective. 2 A capacity development program focused on the application of the CSLM technologies and practices. 3. On-farm monitoring system, in place (to monitor GHG emissions, adaptation strategies, financing, land degradation and biodiversity).

Component	Output
3: Monitoring, evaluation and knowledge-sharing	1. Set of manuals and media products for improved CSL measures and technologies, for use by extension workers and producers. 2. Project Monitoring & Evaluation Plan. 3. Knowledge-sharing with other countries and dissemination of verifiable data and tested methodologies. 4. Project Mid-term review and Final Evaluation. 5. Communication Strategy, implemented.

In summary: expected benefits of CSLM

- Productivity and income: higher and more stable.
- Reduced GHG emissions intensity
- C sequestration in soils and biomass.
- Positive effects on biodiversity
- More resilience
- Technologies successfully demonstrated, deployed, and transferred
- Enabling policy environment and mechanisms created for technology transfer

SELECTED INTERVENTIONS FOR URUGUAY

1. Increasing forage allowance: *90% herd is managed on natural pastures* → **better management of forage resources by matching available forage resources to animal requirements**

2. Inter-seeding pasture with grass legumes → **improving quantity and quality of the basal diet**
- native pastures over sown with legumes to increase pasture yield and quality

3. Sowing grass legume mixtures and annual fodder crops → **overcome winter and summer deficits**

4. Strategic feeding & supplementation → **address energy and protein constraints during periods of low availability and quality**

- winter and summer supplementation
- Dietary flushing

5. Controlled breeding: defined mating season → **timing of mating to match nutritional requirements of herd to the seasonal pasture supply pattern**

6. Genetics: → **genetic management to improve reproductive traits**

- Heterosis, new breeds, genetic improvement

Final messages

- Co-benefits (or win-win) approaches are a powerful approach to enhance Agriculture in NDCs.
- MRV of mitigation actions and M&E of adaptation is crucial and challenging.
- Stregthening research and extension is key.
- Stakekolders involved from the beginning.
- Means of implementation are required.
- We are all learning by doing: learning together is faster
- International and regional platforms are fundamental to share and collaborate among countries and institutions

Thank you!

Martial Bernoux
Food and Agriculture Organization

Cecilia Jones
Ministry of Livestock, Agriculture and Fisheries, Uruguay

Food and Agriculture Organization of the United Nations

FAO's work on NDCs and agriculture

Martial Bernoux
Climate and Environment division

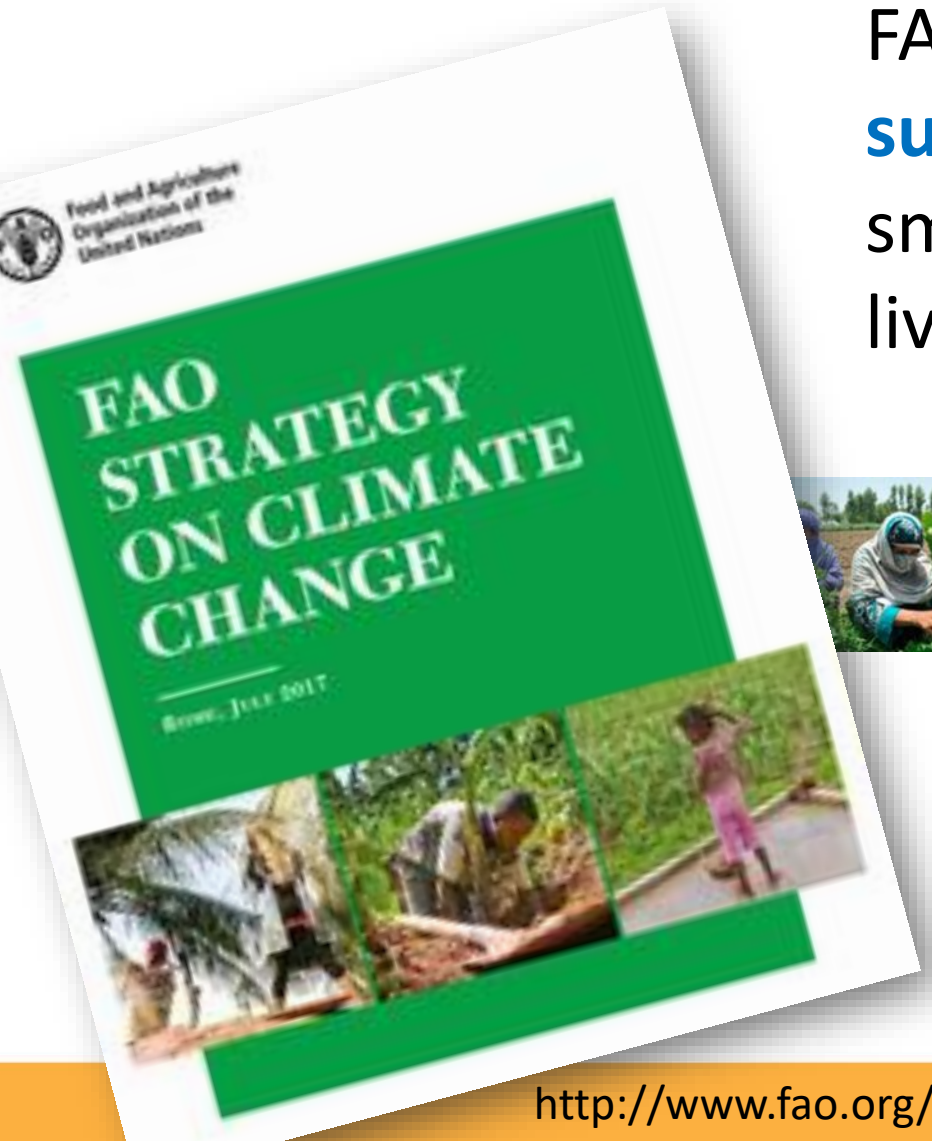
Cecilia Jones
Ministerio de Ganadería, Agricultura y Pesca, Uruguay

Food and Agriculture Organization of the United Nations

Ministerio de Ganadería, Agricultura y Pesca

16th April 2020

FAO is fully engaged on the Climate Change agenda



FAO Strategy on Climate Change focuses on **supporting countries** toward adapting smallholder production and making the livelihoods of rural populations more resilient.

As part of its Strategy on Climate Change, FAO actively engaged to support countries on the different aspects related to their NDCs

http://www.fao.org/3/a-i7175e.pdf

FAO’s support NDCs on Agriculture

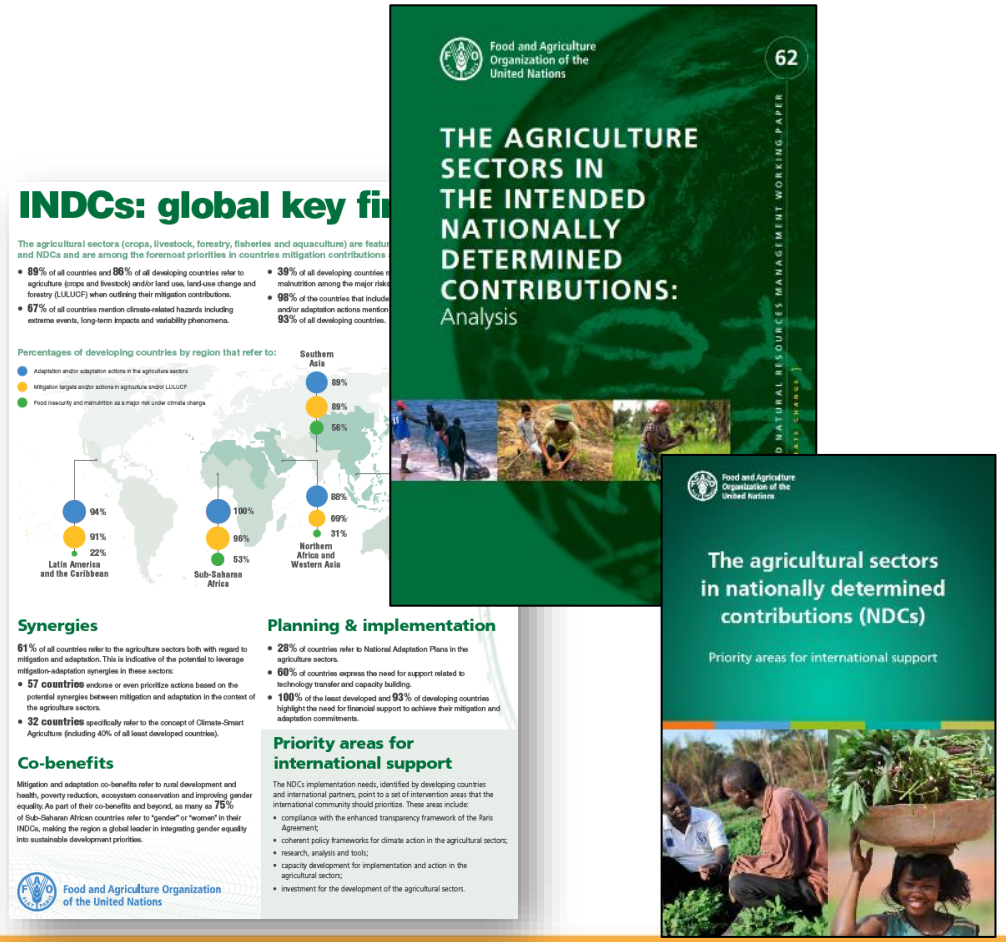
A snapshot on 4 examples

- Analysis: from Global to Regional analysis, identifying gaps and opportunities
- TWG: Country-to country exchanges and sharing experiences and knowledge
- Country supports (Uruguay example)

FAO engaged in providing its members countries with relevant background and knowledge

From global stocktake

To regional analysis of gaps and opportunities



http://www.fao.org/climate-change/our-work/what-we-do/ndcs/en/

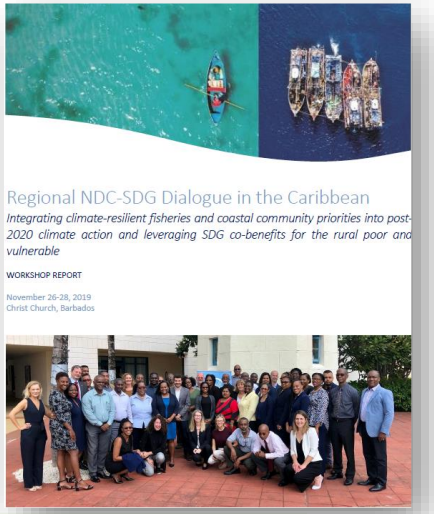
FAO engaged in providing its members countries with relevant background and knowledge

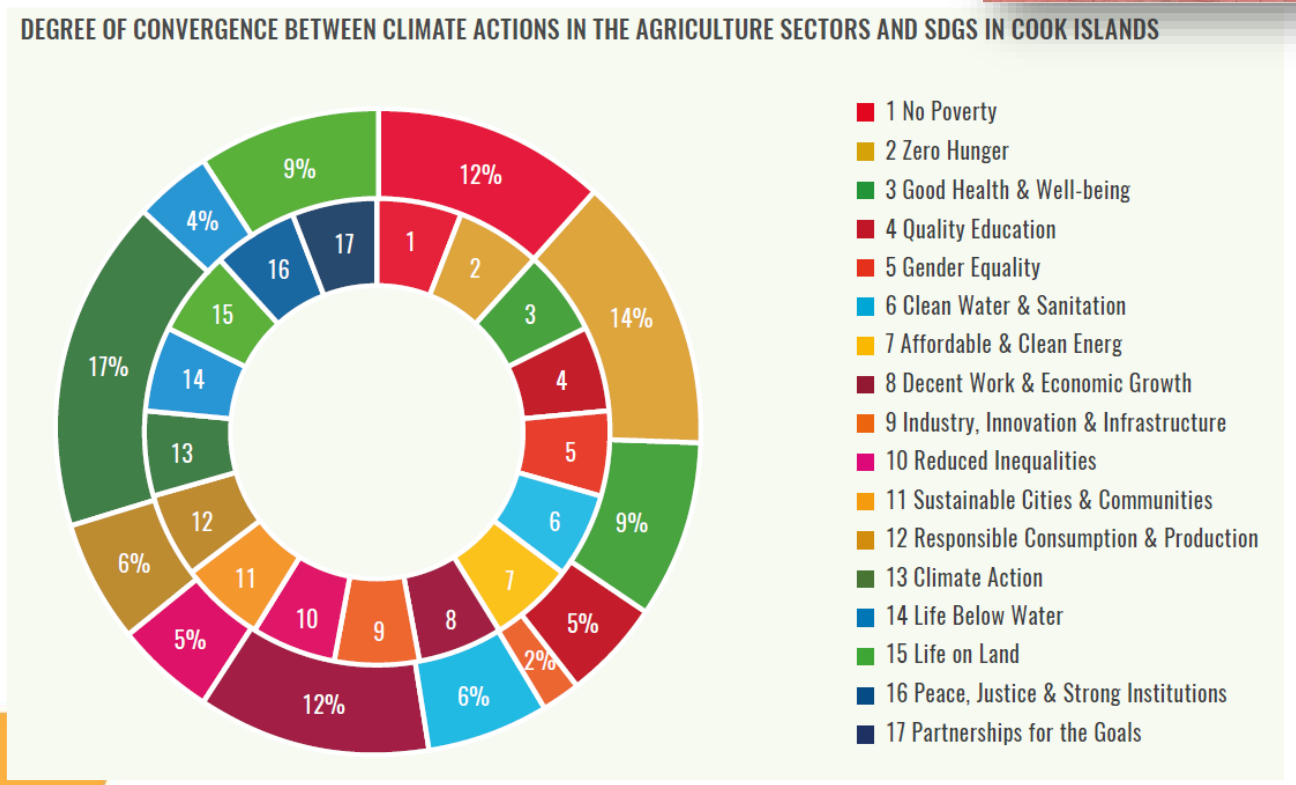
Developing a methodology to work on Agriculture sectors

http://www.fao.org/3/CA5543EN/CA5543EN.pdf

http://www.fao.org/3/ca5003en/ca5003en.pdf

Linking the NDCs with SDGs





The Thematic Working Group on Agriculture, Food Security and Land Use

- Since 2017, FAO has been facilitating the TWG on Agriculture, Food Security and Land Use under the umbrella of the NDC Partnership.
- Two co-chairs: Uruguay and Australia
- An annual meeting of TWG members defining the agenda
- Supported by the Federal Ministry of Economic Cooperation and Development (BMZ).
- Currently over 40 member countries and EU, and member institutions (UN systems, International Organizations, other institutions).

NDC PARTNERSHIP

Federal Ministry for Economic Cooperation and Development

http://www.fao.org/climate-change/our-work/what-we-do/ndcs/twg/en/

The Thematic Working Group on Agriculture, Food Security and Land Use

E-Discussions

Members share experiences and consult each other through the TWG Dgroup and FAO facilitates discussions on related topics and share updates through this forum.

Online learning events

Webinars with expert interventions and country experiences related to the e-discussion or other topics.

Peer-to-peer exchanges

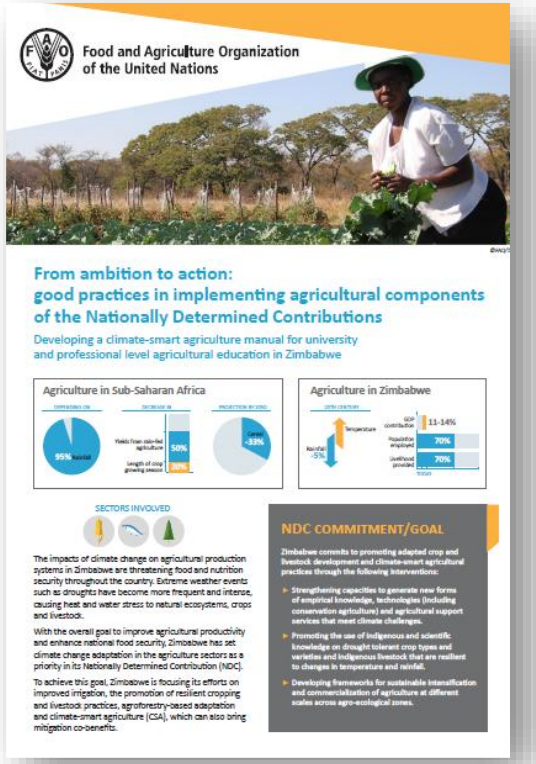
Informing and sharing updates on the international agenda such as the Koronivia Joint Work on Agriculture

Joint events

The Thematic Working Group on Agriculture, Food Security and Land Use

Country case studies

Zimbabwe



Food and Agriculture Organization of the United Nations

From ambition to action:
good practices in implementing agricultural components of the Nationally Determined Contributions

Developing a climate-smart agriculture manual for university and professional level agricultural education in Zimbabwe

Agriculture in Sub-Saharan Africa

Agriculture in Zimbabwe

SECTORS INVOLVED

NDC COMMITMENT/GOAL

The impacts of climate change on agricultural production systems in Zimbabwe are threatening food and nutrition security throughout the country. Extreme weather events such as droughts have become more frequent and intense, causing heat and water stress to natural ecosystems, crops and livestock.

With the overall goal to improve agricultural productivity and enhance national food security, Zimbabwe has set climate change adaptation in the agriculture sectors as a priority in its Nationally Determined Contribution (NDC).

To achieve this goal, Zimbabwe is focusing its efforts on improved irrigation, the promotion of resilient cropping and livestock practices, agroforestry-based adaptation and climate-smart agriculture (CSA), which can also bring mitigation co-benefits.

Zimbabwe commits to promoting adapted crop and livestock development and climate-smart agricultural practices through the following interventions:

- Strengthening capacities to generate new forms of empirical knowledge, technologies (including conservation agriculture) and agricultural support services that meet climate challenges.
- Promoting the use of indigenous and scientific knowledge on drought tolerant crop types and varieties and indigenous livestock that are resilient to changes in temperature and rainfall.
- Developing frameworks for sustainable intensification and commercialization of agriculture at different scales across agro-ecological zones.

Morocco

Food and Agriculture Organization of the United Nations

Tackling climate change while achieving sustainable development goals: arganiculture in Morocco

SECTORS INVOLVED

Background

In recent decades, Morocco has experienced substantial economic and social development. Such exposure is generating a particular pressure on natural resources, and is expected to accelerate the loss of yields in fragile areas, notably oasis ecosystems and argan trees forests. These ecosystems are vital to subsistence for economically vulnerable populations, and are essential allies in the protection of natural resources and the fight against desertification. Furthermore, Morocco is the universal depositary of the argan tree, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) labeled the argan tree's geographic range as the Argan Biosphere Reserve (RBA) in 1998. The density of argan trees has decreased significantly in the last century, and the intensifying pressure on the natural argan forest may further threaten the broader biodiversity of the Acacia-Argania eco-region, in which argan tree is the predominant species.

With the increasing international demand for argan oil products, the Government of Morocco identified an opportunity to both tackle the adverse effects of climate change and achieve sustainable development goals by promoting the conservation and enhancement of argan ecosystems.

This case study investigates Morocco's approach to preserve fragile argan ecosystems affected by climate change, while promoting economic growth. The study brings practical examples of this strategy from the project "Development of Argan orchards in Degraded Environment (DARED)", financed by the Green Climate Fund (GCF) through the GCF accredited entity Agency for Agricultural Development (ADA).

NDC COMMITMENT/GOAL

Arganiculture in Morocco's Nationally Determined Contribution (NDC)

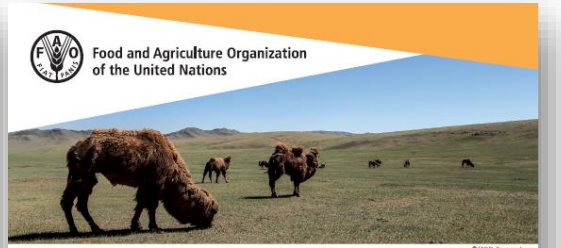
Argan Tree Planting Program 2020-2030: Morocco aims to plant argan trees over 38 000 hectares to enhance vulnerable communities' resilience to climate change, increase carbon storage in biomass and soils, and indirectly reduce the industrial and anthropogenic pressure on natural argan tree forests.

Arganiculture in Morocco's Nationally Appropriate Mitigation Action (NAMA)

The objective is to develop the culture of argan plants through the association of the Argania spinosa (L) Skeels plants with fodder crops (cereals, legumes) over an area of 43 000 hectares. It also seeks to increase carbon storage in biomass and soils and decrease the industrial and anthropic pressure on wild argan forests. The NAMA entails:

- New plantations of argan trees over 28 000 hectares before 2030, in association with 2 000 hectares of fodder plants per year with a density of 182 trees per hectare.
- Fodder plants over 28 000 hectares of new plantations and over the 35 000 hectares expected as part of the Green Morocco Plan.

Mongolia



Food and Agriculture Organization of the United Nations

Enhancing transparency in the agriculture, forestry and other land use sector for tracking Nationally Determined Contribution implementation in Mongolia

SECTORS INVOLVED

Background

Mongolia is a landlocked country with a climate characterized by high fluctuations in temperature and precipitation throughout the year. Cropland and grassland accounts for about 73 percent of the country's total surface area, and its economy is mainly based on pastoral animal husbandry, rain fed agriculture and forestry. Traditional livelihood is therefore directly dependent on natural resources and ecosystem services, making Mongolia highly vulnerable to climate change.

According to Mongolia's Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) published in 2018, the agriculture sector was responsible for 48 percent of total greenhouse gas emissions at the national level (excluding land use), and recent studies indicate that due to sharp increases in livestock production, emissions have since grown considerably. Altogether, the agriculture, forestry and other land use (AFOLU) sector plays a significant role in Mongolia's efforts to mitigate and adapt to climate change and this is reflected in the country's Nationally Determined Contribution (NDC). Nevertheless, Mongolia's measurement, reporting, and verification (MRV) capacities are currently under-developed for this sector, resulting in the usage of different definitions, methodologies for calculating greenhouse gas (GHG) emissions and sources of activity data at the same time, creating large uncertainties. This poses a challenge to the reliable reporting of progress made in implementing NDCs, but most importantly, it indicates substantial institutional and systems capacity needs that must be addressed if better-informed mitigation and adaptation commitments are to be taken in the next round of NDCs.

The case study hereby presented examines the importance of transparency in the implementation and monitoring of NDCs and how improved monitoring and reporting systems are key to better address climate change impacts on the AFOLU sector. Practical examples are presented from the CBIT-AFOLU project in Mongolia led by FAO, which started in early 2019 and is expected to run until 2022.

MONGOLIA'S NDC COMMITMENT/GOAL

Mitigation

- Maintain livestock population at appropriate levels according to the pasture carrying capacity.
- Develop a comprehensive plan for emission reductions in the livestock sub-sector for implementation between 2020 and 2030.
- Develop a detailed inventory along with the identification of mitigation options in the forestry sector.

Adaptation

- Implement sustainable pasture management.
- Increase irrigated cropland, reduce soil water loss and decrease soil carbon emissions.
- Maintain availability of water resources.
- Increase efficiency of reforestation actions; reduce forest degradation rate; improve effectiveness of forest management.

Uruguay

Food and Agriculture Organization of the United Nations

Reducing emissions intensity and improving natural resources management through livestock in *campo natural* in Uruguay

SECTORS INVOLVED

Background

Uruguay´s livestock sector is very vulnerable to climate change, as it depends on the productivity of the rainfed natural grassland. Extreme weather events, including droughts, are expected to become more frequent and intense in the future, resulting in increased losses and damages.

The agriculture sector accounts for 73 percent of national greenhouse gas (GHG) emissions in Uruguay. In particular, the livestock sector is responsible for 86 percent of total methane emissions and 93 percent of emissions in the agriculture sector. Unsustainable management of cattle production over large rangelands areas, in particular overgrazing, has led to ongoing land degradation.

Cattle ranching in Uruguay is characterised by low productivity,[1] particularly among small and medium sized family farms. The pastures and rangelands are overgrazed: high stocking rates combined with low grass height and low leaf area index lead to poor forage availability and quality. This triggers low productivity at animal and herd level, especially related to reproductive performance and daily weight gain. For example, poor feed availability causes low pregnancy and birth rates. The national average weaning rate per mated cow is only 63 percent, meaning that there is a large number of economically unproductive cattle on the pastures, so called 'breeding overhead'. Furthermore, the poor grazing and feeding conditions negatively affect animal

[1] Kg beef produced per ha per year.
[2] For the period 1999-2010 (DIEA-MGAP, 2014 Yearbook, 2014).

URUGUAY'S NDC COMMITMENT/GOAL IN THE AFOLU SECTOR

Mitigation

- Adoption of good practices of natural grassland management and management of breeding herds in livestock production, including the supply of forage, regenerative management and appropriate nitrogen.
- Use of zero discharge technologies for rivers and streams and/or application of good practices of effluent treatment and/or recovery of nutrients and minimization of methane emissions in at least 40 percent of dairy farms.
- Introduction of intermittent irrigation technology with alternate wetting and drying (AWD) of soils in at least 10 percent of the rice crop area (16 000 ha) by 2025.
- Maintenance of native forest area, and of shade and shelter plantation.
- Avoid emissions from soil organic carbon in grasslands, peatlands and croplands.

Adaptation

- Formulation, adoption and implementation of a National Adaptation Plan for Agriculture by 2020.
- Adoption, by 2025, of good practices of natural land management and management of breeding herds in livestock production.
- Adoption of water management models and instruments that promote the rational use of water through reservoirs and dams.

Country supports (examples)

CAEP – NDC Partnership Climate Action Enhancement Package

- FAO resources & additional **2.2 million USD** from a dedicated Technical Assistance Fund
- NDC enhancement and implementation, at least **19 countries** by Q1 2021

NDC-Country Support through FAO Technical Cooperation Programme (TCP)

Examples Regional TCP with African Union Commission

Capacity-building Initiative for Transparency (CBIT)

Examples: CBIT-Afolu and several national projects

SCALA - Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans

- €20 million
- 6 years (2020-2025)
- at least 12 countries
- Co-led by FAO and UNDP
- Funded by the German Ministry of Environment, Nature Conservation and Nuclear Safety (BMU)

Supported by:
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
based on a decision of the German Bundestag

Supporting the **Agriculture Initiative** of the CCAC

Uruguay - NDC Enhancement

- Uruguay's NDC sets ambitious mitigation and adaptation contributions
- Includes goals by sector – AFOLU commits to reduction in intensity of emissions in meat, reduction of emissions in dairy effluents and croplands and increase/maintain C sequestration in forests and soils.
- In 2019 the country developed a yearly public MRV system to help track progress and provide transparency.
- Uruguay is receiving support from FAO to strengthen the MRV system and make progress on the development of indicators and baselines.

Uruguay - National Adaptation Plan -Agriculture

- National planning for adaptation is one of the goals of the NDC. Uruguay participated on the NAP-Ag global program.
  - Launched its NAP-Ag in September 2019.
  - 2025 Action Plan – Actions that support adaptation and contribute to national mitigation efforts
  - M&E of the NAP-Ag and MRV of the NDC - overlapping indicators.

The NAP-Ag was developed with the support of the Integrating Agriculture in National Adaptation Plans Programme (NAP-Ag) implemented by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Development Programme (UNDP) which is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

DOWNLOAD

bit.ly/PNA-AgroUY

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Al servicio de las personas y las naciones

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Thanks for your attention

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Ministerio de Ganadería, Agricultura y Pesca

NDC PARTNERSHIP

Federal Ministry for Economic Cooperation and Development

CLIMATE & CLEAN AIR COALITION TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

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Fomentado por el: Ministerio Federal de Medio Ambiente, Protección de la Naturaleza, Obras Públicas y Seguridad Nuclear en virtud de una resolución del Parlamento de la República Federal de Alemania

PRESIDENCIA Oficina de Planeamiento y Presupuesto

MVOTMA Ministerio de Vivienda Ordenamiento Territorial y Medio Ambiente

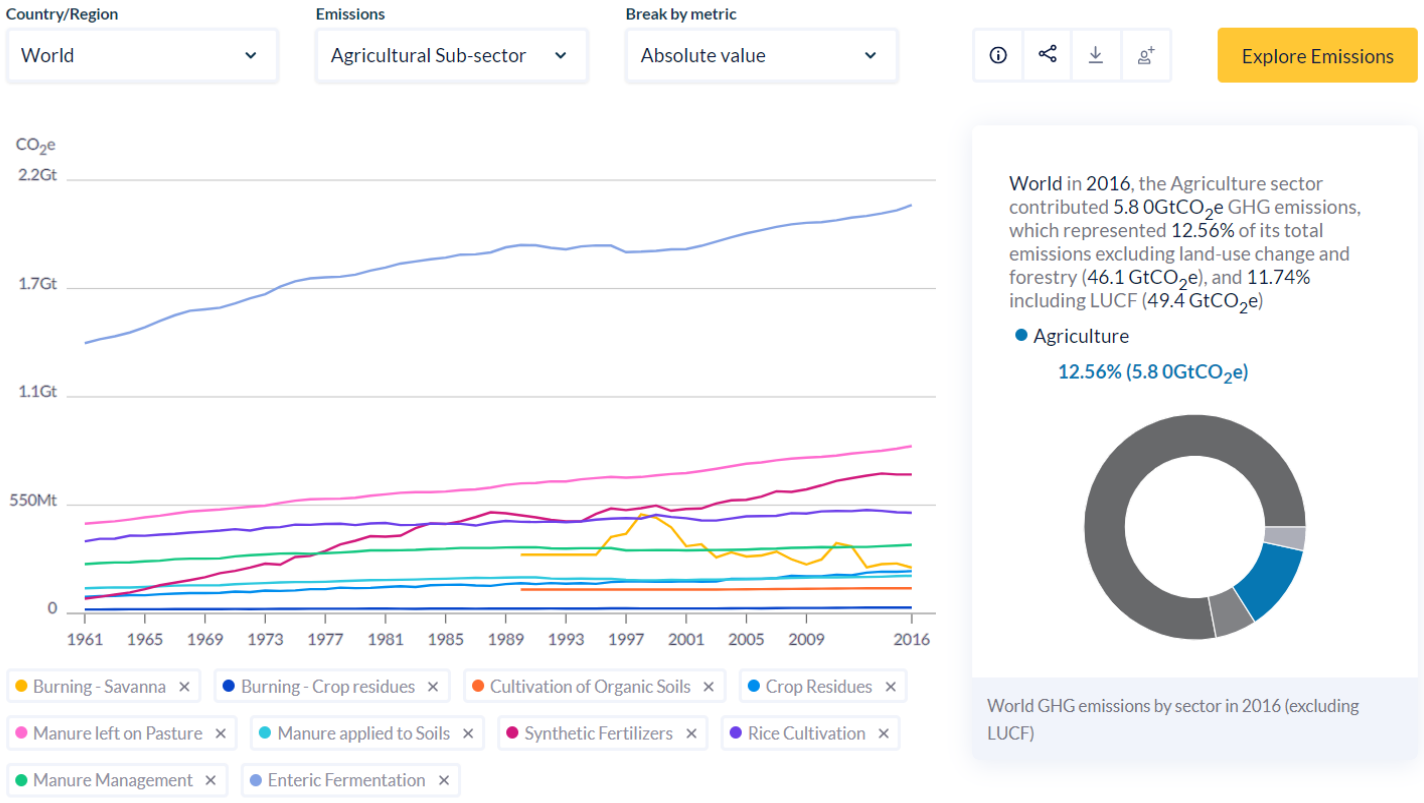
auci Agencia Uruguaya de Cooperación Internacional

ANY QUESTIONS?

CLIMATE WATCH: AGRICULTURE

Features

- Drivers of agriculture sector emissions
- Country and regional emissions data and context
- Sub-sector emissions data
- Countries' actions in Nationally Determined Contributions (NDCs)
- Resources and tools to help countries turn agriculture commitments into action



https://www.climatewatchdata.org/sectors/agriculture

UPCOMING WEBINARS

April 23: Forest and Land Sector

Learn more and Register >>>>
https://www.wri.org/stepping-2020-ndcs-webinars