

NS-343 - Costa Rica Rice NAMA

Costa Rica

NAMA Seeking Support for Implementation

A Overview		
A.1 Party	Costa Rica	
A.2 Title of Mitigation Action	Costa Rica Rice NAMA	
A.3 Description of mitigation action	Costa Rica Rice NAMA aims to achieve a transformational change in the value chain of rice cultivation, industrialization, marketing and profitable management focus. The rice sector contributes significantly to the country's GHG emissions. According to the most recent National Emissions Inventory, rice cultivation emitted CO₂eq in 2017, a value that corresponds to more than 7% of total CO₂eq emissions from the agricultural sector, and 1.5% of total CO₂eq emissions of the country (taking into account the forestry sector and other land uses). In this sense, the inclusion of the Rice NAMA in the national decarbonization goals is especially important. To achieve a transformation of the sector towards low-carbon production, three key measures with the greatest potential for reducing emissions were selected: (i) changes in water regimes; (ii) fertilization practices that reduce emissions; and (iii) use of adapted rice varieties.	
A.4 Sector	☐ Energy supply ☐ Residential and Commercial buildings ☒ Agriculture ☐ Waste management ☐ Other ☐ Transport and its Infrastructure ☐ Industry ☐ Forestry	
A.5 Technology	☐ Bioenergy ☐ Energy Efficiency ☐ Hydropower ☐ Wind energy ☐ Carbon Capture and Storage ☐ Land fill gas collection ☒ Other ☐ Cleaner Fuels ☐ Geothermal energy ☐ Solar energy ☐ Ocean energy ☐ Low till / No till	
A.6 Type of action	☒ National/ Sectoral goal ☒ Strategy ☒ National/Sectoral policy or program ☐ Other ☐ Project: Investment in machinery ☐ Project: Investment in infrastructure ☐ Project: Other	
A.7 Greenhouse gases covered by the action	☒ CO₂ ☒ N₂O ☐ PFCs ☐ Other ☒ CH₄ ☐ HFCs ☐ SF₆	
B National Implementing Entity		
B.1.0	Name	Ministerio de Agricultura y Ganadería (MAG) / Ministerio de Ambiente y Energía (Minae)
B.1.1	Contact Person 1	Mauricio Chacón Navarro - MAG
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B.1.5	Contact Person 2	Patricia Campos Mesén
B.1.6	Address	Barrio González Lahmann, San José
B.1.7	Phone	+506-2253-4298
B.1.8	Email	mchinchilla@minae.go.cr
B.1.9	Contact Person 3	
B.1.10	Address	
B.1.11	Phone	
B.1.12	Email	
B.1.13	Comments	

[Add Additional Entity](#)

C Expected timeframe for the implementation of the mitigation action

C.1	Number of years for completion	8
C.2	Expected start year of implementation	2022

D Currency

D.1	Used Currency	USD 
Conversion to USD: 1		

E Cost

E.1.1	Estimated full cost of implementation	39,660,000 Conversion to USD: 39,660,000
E.1.2	Comments on full cost of implementation	The total cost to implement the NAMA comes from the resources required to finance low-carbon production (USD 8.35M during the pilot plan and USD 2.4M during the scaling up). It also covers the resources necessary to implement the enabling actions of the NAMA (USD 0.82M during the pilot plan and USD5.43 during the scaling up). To encourage producers to apply low-carbon measures, soft financing must be enabled, which is not yet available given that banks only finance 0.5% of national rice production. The rice NAMA proposes that 50% of the resources to finance low-carbon production come from producers, industry and commercial enterprises. It is suggested that 50% (USD 16.7M) be managed by CONARROZ as reimbursable funds through the Bank for Sustainable Development of Costa Rica, multilateral or competitive funds. Financing for low-carbon production is defined as the resources necessary to finance mitigation measures, inputs and services to achieve the desired production. The needs were calculated from an analysis of annual rice production cash flows and working capital. The financing of the enabling actions allows aligning the current situation of CONARROZ and the public-private sector towards mitigation actions in the rice sector. These NAMA enabling actions are summarized in the following: 1) Disclosure and communication to the producer/processor and consumer awareness campaigns; 2) Specific decarbonization actions in pilot farms; 3) Research and Development; 4) Technical services; 5) Strengthening of CONARROZ; 6) Marketing and certification actions; 7) Monitoring, Reporting and Verification.
E.2.1	Estimated incremental cost of implementation	 Conversion to USD: 0
E.2.2	Comments on estimated incremental cost of implementation	

F Support required for the implementation of the mitigation action

F.1.1	Amount of Financial support	 Conversion to USD: 0
F.1.2	Type of required Financial support	☐ Grant ☐ Guarantee ☐ Loan (sovereign) ☐ Equity ☐ Loan (Private) ☐ Carbon finance ☐ Concessional loan ☐ Other
F.1.3	Comments on Financial support	
F.2.1	Amount of Technological support	
F.2.2	Comments on Technological support	
F.3.1	Amount of capacity building support	 Conversion to USD: 0
F.3.2	Type of required capacity building support	☐ Individual level ☐ Institutional level ☐ Systemic level ☐ Other
F.3.3	Comments on Capacity Building support	

G Estimated emission reductions

G.1	Amount	0,0782
G.2	Unit	MtCO2e 
G.3	Additional information (e.g. if available, information on the methodological approach followed)	The value is estimated according to the following parameters: national intervened area, percentage of the national intervened area harvested area growth rate, participation of rice systems (irrigated and rainfed), rate of increase of national production yield, national production yield, emission intensity indicator versus production, water regime prior to planting and water regime after cultivation. This value (F.1) corresponds to the emissions scenario of the NAMA Rice conceptual pilot (scenario 1). In this scenario, the GHG emission reduction intervention is in 10 small, 7 medium and 3 large producers. The parameter values are:

- National intervened area: Annual average of 3,803 hectares.
- Intervened area within the national rice area: 8.7%.
- Growth rate of the harvested area: 4% per year compared to the official data for 2019.
- Participation of rice irrigation systems: 46%.
- Participation of rainfed rice systems: 54%.
- National production yield increase rate: 1% per year based on the year 2019.
- National yield: 4.5 tons per hectare. This is the performance achieved in 2030.
- Indicator of intensity of emissions versus production: 1.9 tCO₂-eq per-ton produced.
- Water regime prior to sowing: It is not flooded less than 180 days after sowing.
- Water regime during cultivation: For irrigated rice, multiple drainage periods are contemplated and regularly fed by rains for dry land.

The report also provides two other emission scenarios: E2 - Conservative rice annual growth with gradual transition to irrigated rice systems and E3 modernization of rice production systems. The values of the parameters and their emission reductions are detailed in said report. Scenario 1 is mentioned in it as it is the one determined to be the most plausible according to industry experts.

H Other indicators

H.1 Other indicators of implementation

- **Number of farms implementing NAMA Rice measures.**
- **Reduced emissions (Ton CO₂e) compared to BAU in NAMA farms, differentiating by**
 - o **Farm in Rainfed**
 - o **Farm under irrigation**
- Intensity of emissions (Kg CO₂e/Kg of paddy rice) for NAMA farms with irrigation and rainfed

I Other relevant information

I.1 Other relevant information

including co-benefits for local sustainable development

It is considered that in addition to the reduction of GHG emissions, co-benefits of productivity, profitability and climate res would be achieved.

These co-benefits are given thanks to the actions implemented by the rice NAMA such as: training for producers through agronomic management manuals in different areas of the sector (for example, the most efficient use of water and fertilizers) ; promote the optimized use of improved varieties, adaptability to local conditions; favoring the association of farmers, strengthening the local and national network of farmers; implementation of production record medium farmers; economic support to young farmers in entrepreneurship programs in the rice activity; promotion of alliances between institutions for a better support for farmers, strengthening the rice sector in general.

J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1 Relevant National Policies

Costa Rica has an important history of ambition and climate action, and it is a nation that has several international treaties related to environmental challenges of interest to both the world and the country. Costa Rica has been part of the Paris Agreement since 2016 and presented its first NDC in 2015, updating it in 2020.

In coordination with international commitments, the country has adopted a series of policy designs linked to the promotion of productive activities (including rice) that are sustainable and environment and, especially, that reduce GHG emissions, thereby allowing it to get closer to its climate ambitions.

- The National Development and Public Investment Plan (PNDIP) 2019 – 2022: The National Plan includes actions regarding the reduction of GHG emissions in the agricultural sector development of "sustainable production models in livestock and agricultural farms." ([1072_0.pdf \(unesco.org\)](#))
- The National Policy for Adaptation to Climate Change: The National Policy for Adaptation to Climate Change proposes that "agricultural production systems (...) adopt resilient and efficient production practices, designs and construction systems in the face of climate change." ([final-politica-adaptacion-24-abril.pdf \(cambioclimatico.go.cr\)](#))
- National Plan for Decarbonization by 2050: The Plan specifically seeks to guide the "modern, green and emission-free economy in order to have net zero emissions by the year 2050." ([F NACIONAL-DESCARBONIZACION.pdf \(cambioclimatico.go.cr\)](#))
- National Adaptation Plan 2018-2030 (in design process)
 - Sectoral Plan 2019 – 2022 of the Agricultural, Fishing and Rural Sector: Plan with strategic interventions, among which one linked to promoting climate actions that contribute to the comprehensive decarbonization of the agricultural sector through the design and implementation of NAMAS in rice, musaceae and cane of sugar, which would be added to the existing livestock and coffee. ([2019-010-Plan_Sectorial_2019-2022.pdf \(sepsa.go.cr\)](#))
- State Policy for the Costa Rican Agrifood Sector and Rural Development (2018): Action document for the technical modernization of the country's agricultural sector, including the rice sector ([sector-agro-2010-2021.pdf \(inder.go.cr\)](#))
 - Paris Agreement: The Paris Agreement corresponds to a supranational exercise which is materialized in the country through the Nationally Determined Contribution (NDC), in which contribution 7.2, it is desired that the productive chains migrate to a low in greenhouse gas emissions. ([parisagreement_publication.pdf \(unfccc.int\)](#))
 - Agro-environmental Agenda: Intersectoral effort of great importance for the productive activity of rice. Among its work axes are elements related to climate-smart agriculture. ([agencia agroambiental-final-aprobada.pdf \(mag.go.cr\)](#))
 - National Bioeconomy Strategy 2020-2030: Axis focused on bioeconomy for rural development through better environmental management of the agricultural sector ([policyespañol \(i\)](#))
- National REDD+ Strategy ([4863_1_fon_estrategia_red_cr_lr.pdf \(unfccc.int\)](#))
- National Climate Change Strategy ([Estrategia_Nacional_de_CC.pdf \(cac.int\)](#))

- National Policy for Sustainable Production and Consumption ([Política Nacional de Producción y Consumo Sostenibles \(digeca.go.cr\)](#))
- AgroAmbiente Agenda MAG – MINAE (2021). ([Agenda AgroAmbiente](#)).
- Law No. 8285, 2002: Creation of the National Rice Corporation, CONARROZ is responsible for making known the minimum amount of the grain price that agro-industrial companies produce. ([Ley8285.pdf](#))
- Law No. 7472, 1995: setting prices and marketing margins for rice. ([Ley7472](#))
- MAG-MINAE Agreement, 2018. Agreement between the Ministry of Environment and Energy and the Ministry of Agriculture and Livestock for the reduction of emissions in the agricultural sector. ([Acuerdo-sectorial-reduccion-emisiones-sector-agropecuario.pdf \(mag.go.cr\)](#))

J.2 Link to other NAMAs

(none)

K Attachments

K	Attachments	<u>Title</u>	<u>Description</u>
		Informe final NAMA Arroz version final 2022 04 11.pdf	Costa Rica Rice NAMA final
K.1	Attachment description		
K.2	File	Choose File	No file chosen

L Support received

L.1	Outside the Registry														
L.2	Within the Registry	<table><tr><td>Support provided</td><td>SupportType</td><td>Amount</td><td>Comment</td><td>Date</td></tr><tr><td colspan="5">No records to display.</td></tr></table>	Support provided	SupportType	Amount	Comment	Date	No records to display.							
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