

Assessing health impacts of agrobusiness for energy - Eni's case



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INTRODUCTION

Eni is committed to achieve carbon neutrality by 2050

Producing vegetable oil to be converted into biofuels is one of the keys to the energy transition in the transport sector

Biofuels are generated from raw materials (agri-feedstock) produced from degraded, polluted or abandoned land, waste (i.e. used Cooking Oil-UCO and agro-industrial waste)

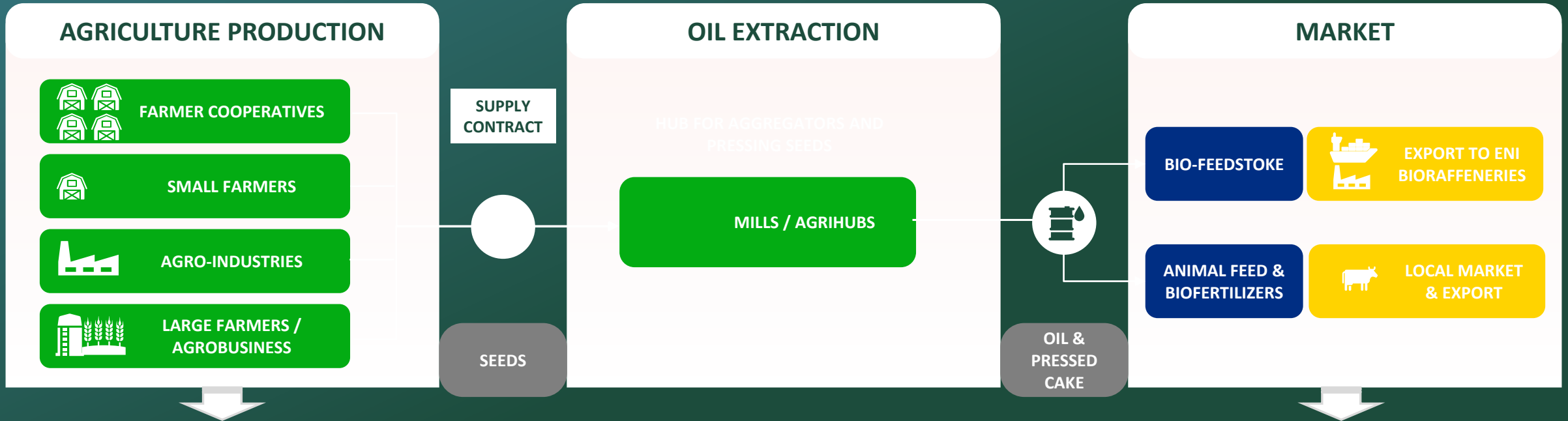
Production ensures that there is no impact on the food supply chain and forest ecosystems, and products are certified according to the criteria of the relevant European regulations



ENI AGRIBUSINESS MODEL



SUSTAINABILITY CERTIFICATION THROUGHOUT THE SUPPLY CHAIN



 Great employment impact and creation of socio-economic development opportunities

 Promotion of agriculture development and market access for farmers through a model driven by Eni

 Respect for human right and protection of food security and environment

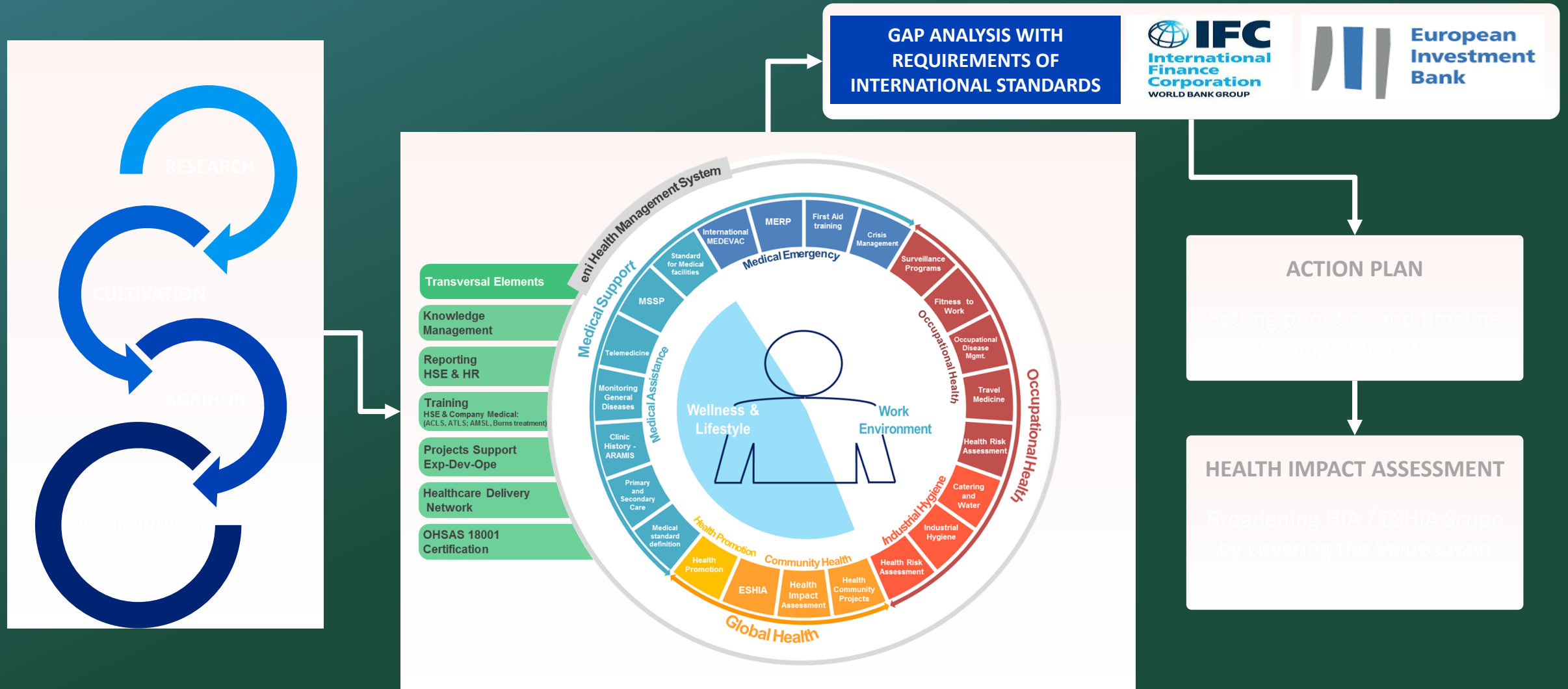
 Great security and continuity in the supply of sustainable independent products

 Biofeedstock price de-risking compared to market



Synergy with Company Upstream, Forestry Program and other initiatives

ADAPTATION OF ENI HEALTH MANAGEMENT MODEL



AREAS OF IMPROVEMENT ACTIONS

OCCUPATIONAL - WORKFORCE

- Health risks evaluation and control
- Health surveillance

COMMUNITY- HEALTH & ENVIRONMENT

- Permitting and gaps with local regulation
- Health impacts evaluation and control :
 - Primary and secondary data collection
 - Biodiversity and natural resources - including water
 - Proliferation of parasites, wild/poisonous insects and animals –vector borne diseases
 - Waste management - local regulation/local facilities, risks and opportunities
 - Air Quality - pollution (e.g. emissions from facility & trucks , dust generation, etc)
 - Health and Environmental-health monitoring
- One health concept
 - Community health needs

STAKEHOLDER

The definition of 2 stakeholder levels is necessary:

- First level: International and strategic, e.g., research phase, experience sharing, etc.
- Second level : Specific for the project, e.g., when defining training or when doing community needs assessments

ACTION PLAN TO ADAPT HEALTH MODEL FOR AGRIBUSINESS



SEED SELECTION

Seeds and by-products toxicological study
Nutrition competitiveness risk factor analysis
Valorization of seed production waste

SEED AGREEMENT

Health requirements embedded in the agreement including responsibility boundaries
Communities' nutrition through fertilized soil and the supply of food for

FARMERS AGREEMENT

Health requirements for the agreement including responsibility boundaries, health related human rights
Company health support to big and small farmers including awareness and

SEED TRANSPORTATION

Medical Emergency Response Plan
Company support in terms of training and awareness programs

BY-PRODUCTS

Material Safety Data Sheet (MSDS)
Management of by-product : Valorization (e.g. for animal feeding) and re-use, neutralization, final treatment (e.g. research and testing)

BIO-OIL

Material Safety Data Sheet (MSDS)
Medical Emergency Response Plan (including provisions and training)

AGRIHUB OPERATIONS

Operational Health Management System including continuous occupational risk assessment and health surveillance
Medical response and provision

AGRIHUB DEVELOPMENT

Health requirements for ITT Packages
OPD Documents including Health Risk and Impact Management, Industrial Hygiene, Medical Facility and

IMPLEMENTATION OF TRANSVERSAL AND GLOBAL

TOXICOLOGY

Build a toxicology knowledge by conducting toxicology studies for potential crops/seeds – it can be done in HQ or in field

ANTIVENOMS AND ANTIDOTS

Build a knowledge on anti-venoms and antidots based on the poisoning risks
Set contracts for provision and emergency response (it should be done in HQ)

BY-PRODUCTS

Evaluate the potential health effects of the by products
Valorization of seed production waste to support health initiatives and

EPIDEMIOLOGY

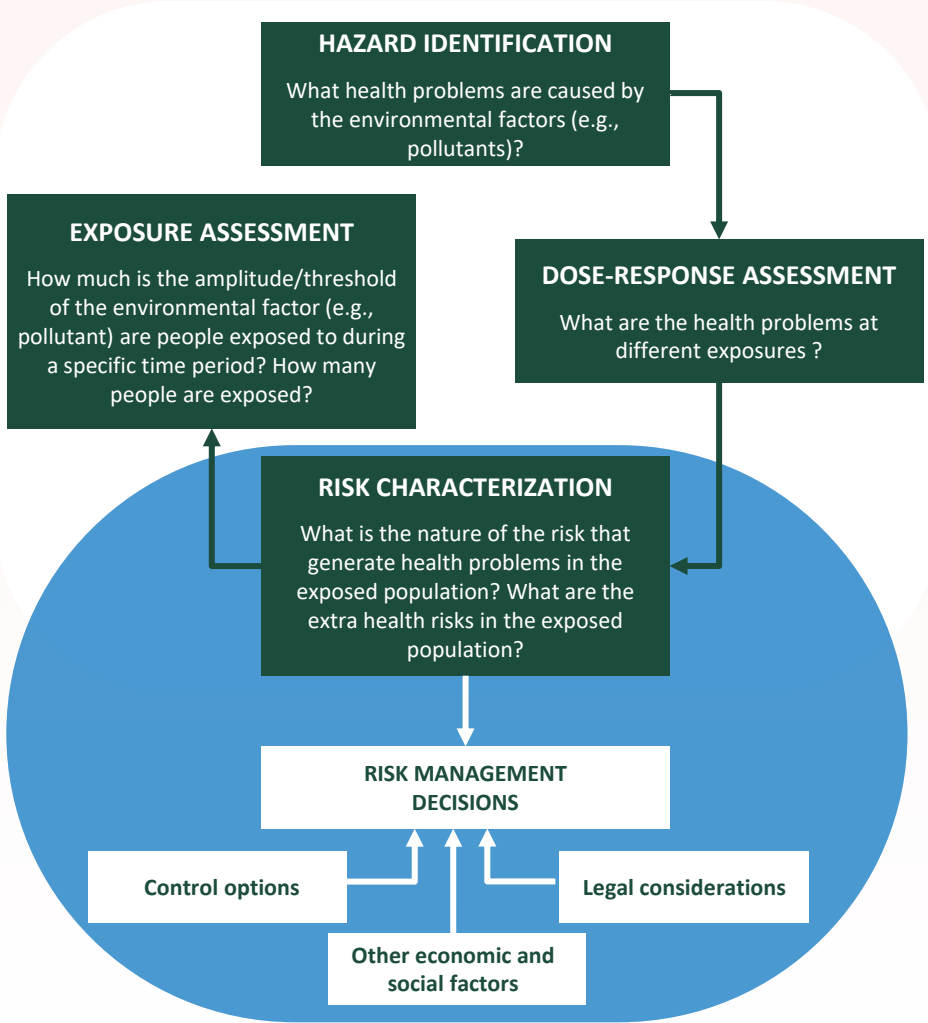
Build an epidemiology knowledge by conducting epidemiological studies at regular times from the project start-up
Study links with "The Health" app (20)

STAKEHOLDERS ENGAGEMENT

Involving international stakeholders in the definition and implementation of the health mitigation actions, including training and awareness and provision

HEALTH IMPACT ASSESSMENT

HEALTH RISK-BASED HIA



UPDATE HIA PROCEDURE

OBJECTIVES

- Impact assessment among the industrial activities and the supply chain (Value Chain)
- Assessing health risks simultaneously with impacts
- Set control and monitoring measures to area not fully within the project responsibility boundaries

HEALTH IMPACT ASSESSMENT PROCEDURE



Identify the Value Chain

- Identify the Value Chain components and boundaries
- Identify interfaces and responsibilities



Assess Health Risk and Impacts

- Assess occupational health hazards and risks
- Assess health impacts starting from the context analysis



Identify Control Measures

- Identify the control measures through contract/agreement between Company and Farmers/transporters and/or Company and aggregators
- Identify sustainable programs for the Value Chain and the communities based on the context and needs assessment



Review and Adaptive Management

- Set monitoring and KPIs for review via audit, inspections program and stakeholders' engagement
- Review and adapt the control measures based on outcomes

HEALTH IMPACT ASSESSMENT TO HELP BUSINESS DECISION

HEALTH IMPACT ASSESSEMENT

- Use the result of the HIA to inform the business and to adapt the model
- For the various project:
 - 05 combined HIA-HRA have been launched



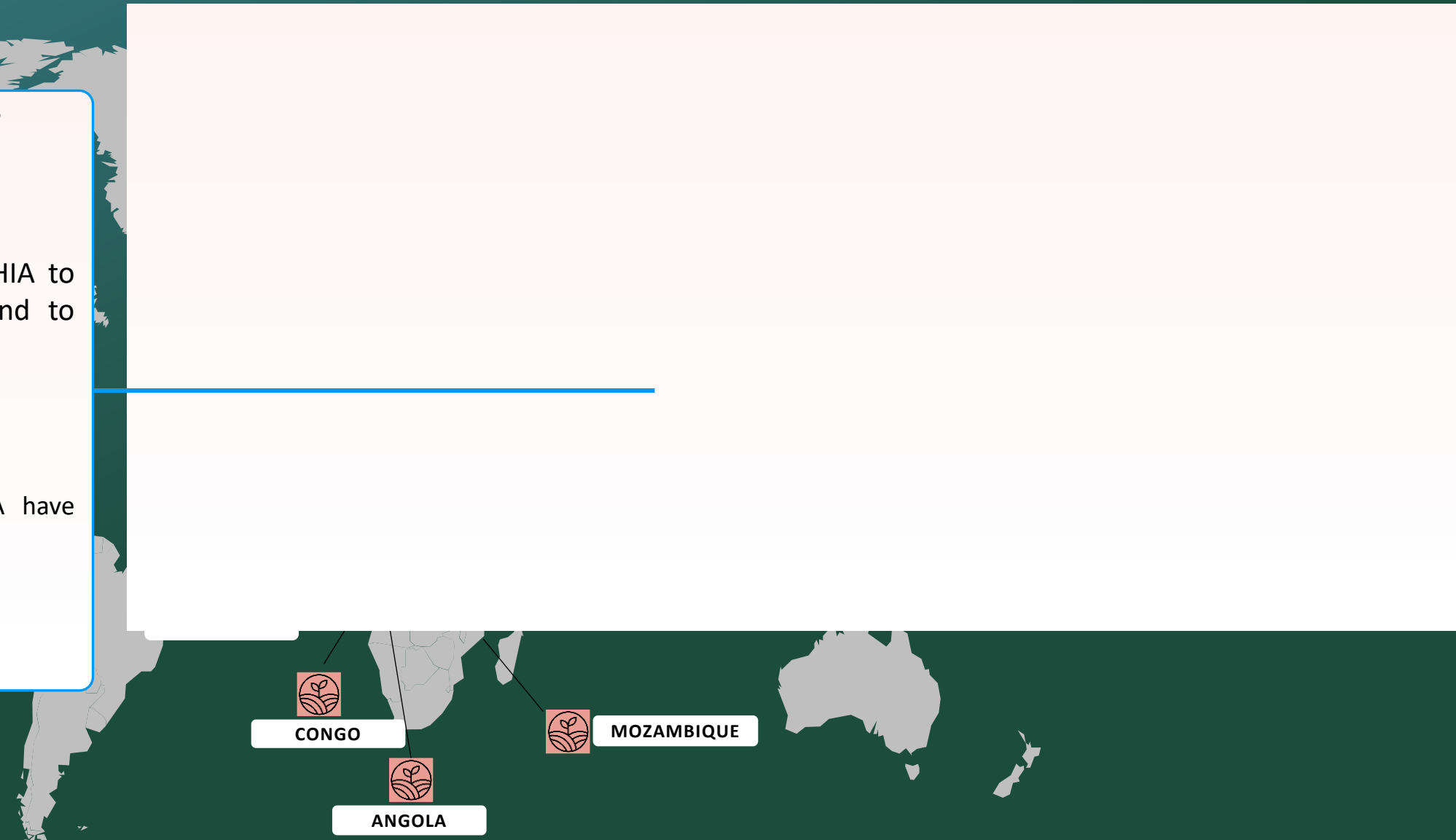
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ANGOLA



MOZAMBIQUE



Let's continue the conversation!

Post questions and comments in the IAIA23 app.



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