



EX-Ante Carbon-balance Tool for value chains

Assessing environmental and socio-economic potential of agri-food value chains

By analyzing agri-food value chains, policy makers and researchers are able to better understand how economic, social and environmental dimensions are intertwined. This is an important step, which allows for identification of areas for potential improvement along an agri-food value chain.

EX-ACT Value Chain (EX-ACT VC) is derived from the Food and Agriculture Organization of the United Nations (FAO) EX-Ante Carbon-balance Tool (EX-ACT). The tool is based on the Intergovernmental Panel on Climate Change (IPCC) methodology, complemented with peer reviewed literature to cover the sectors and actors in the value chain. EX-ACT VC is Excel-based.

INDICATORS MONITORED ALONG THE VALUE CHAIN

Value added



Employment



Water use



Emissions
(CO₂-e)



Food loss



Gender
and youth



Objectives



Provide a holistic assessment of agri-food value chains by examining the environmental and socio-economic impact.



Support policy makers in identifying off-farm sources of greenhouse gas (GHG) emissions, and from farm-to-retail socio-economic benefits when designing projects and policies for low carbon value chains.



Highlight potential entry points for socio-economic improvements at each stage of the value chain to ensure sustainable development.

OVERVIEW OF THE EX-ACT VALUE CHAIN STAGES

Five categories of commodities



Up to seven unique categories of actors



Five possible activities for each category of actor



Production

Transport

Processing



Packaging and storage



Marketing

The tool provides quantitative results, in the following three categories:

Environmental assessment

- ▶ Total emissions (in tCO₂-e) of the entire value chain and of its different stages.
- ▶ The carbon footprint of the commodity, in tCO₂-e per unit (tonnes) of product.
- ▶ Water consumption (m³ per tonne of product).
- ▶ Food loss throughout the value chain.

Socio-economic analysis

- ▶ Prices and quantities of inputs and outputs reported at every stage of an agri-food value chain.
- ▶ A wide range of indicators including added value, changes in income and employment statistics.

Gender and youth, Sustainable Development Goals (SDGs) tracker

- ▶ Gender and youth assessment of the level of participation, including ownership, control and access.
- ▶ Progress towards SDG 2 (Zero Hunger); SDG 5 (Gender Equality); SDG 6 (Clean water and sanitation); SDG 9 (Industry, innovation and infrastructure); SDG 12 (Responsible consumption and production).

CONTACTS

Economic and Policy Analysis of Climate Change (EPIC)

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