



# Mesoamerican origin cocoa

COSTA RICA, ESPAÑA, HONDURAS, NICARAGUA, PANAMÁ

**i** Webstory



## Technological solution

The technological solution is a Mesoamerican platform to promote cocoa geographical indications, protect biocultural heritage, strengthen regulatory councils, and foster innovation, training, and knowledge exchange among territories and producer organizations.











## Technological description

We propose the dynamization of territories and promotion of cocoa beans from regions of historical quality and prestige, through the articulation of multidisciplinary studies directed at protecting the biocultural heritage and the advancement of innovation. The development of techniques and determination of tangible aspects will be followed by actions towards the development of organizational capacities, imperative for GI implementation and sustainability. Efforts will be aimed at developing capacities for establishing the Control Boards (or Regulatory Council) of the intended protecting regions and to promote a Mesoamerican Control-Board network for the collaborative promotion of GIs, co-creation, innovation management, capacity building and experience exchange.



## Impacts and results

A territorial valorization strategy is being implemented aimed at developing studies as well as promoting the development of capacities for implementing Geographical Indications for the protection of differentiated fine cocoa beans of Mesoamerican origin. Studies will include analysis for determining the genomic diversity of cocoa plantations in the proposed territories. Next-generation sequencing (NGS) will be applied for the identification of microbiological differentiating factors with relevance to quality. Chemometric analysis (GC-MS, HPLC, NIR) for the generation of Geographical discriminating models will be developed by implementing a multivariate approach using algorithms based on Machine Learning principles. The results will facilitate technical analysis as the models will enable methods for validation, traceability, and authentication. Actions are established for the development of organizational capacities, imperative for the implementation and sustainability of GIs. Geograph

 <p><b>16</b> Geographical regions delimited by their prestige and specialization on cocoa production.</p>	 <p><b>1</b> Historical study on Mesoamerican cocoa.</p>
 <p><b>16</b> Strategic territorial networks.</p>	 <p><b>1</b> Regional network for the cooperation and the promotion of GIS for mesoamerican cocoa beans.</p>
 <p><b>50</b> Training of strategic territorial actors on GIS.</p>	 <p><b>1</b> Study on the legal framework of GIs in Central America.</p>
 <p><b>1</b> A model for the geographical classification of Mesoamerican cocoa beans based on chemometrics and machine learning algorithms.</p>	 <p><b>1</b> A model for the geographical classification of Mesoamerican cocoa beans based on chemometrics and machine learning algorithms.</p>

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