# IMAI

Timber identification
mobile app project


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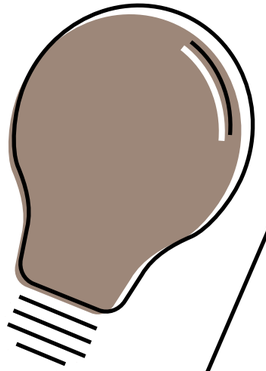
Unión Europea
Fondo Europeo Agrícola de Desarrollo Rural
Europa invierte en las zonas rurales

GOBIERNO DE ESPAÑA
MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN

PNDR
Programa Nacional de Desarrollo Rural 2014-2020

Con la financiación de FEADER (80%) y Administración General del Estado (20%).
Importe máximo subvencionable de 331.548,65 euros



# The idea

We are developing a **mobile app** that combines knowledge of **wood** anatomy **and artificial intelligence (AI)**.

By adding magnification lenses to this technology, we will create an affordable resource to **monitor compliance** with international trade regulations: the European Timber Regulation (EUTR) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora **(CITES)**.

The project is co-funded by the **Spanish Ministry of Agriculture, Fisheries and Food** and the **European Agricultural Fund for Rural Development (FEADER)**, in the framework of the call for Innovation Projects 2020, where it was the highest rated proposal submitted.

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# Social impact

The environmental **effects** of **illegal logging** include deforestation and diversity loss.

According to estimates by the Intergovernmental Panel on Climate Change (IPCC), **global deforestation** has a negative impact on **climate change** and accounts for 15 to 20% of global greenhouse gas emissions.

This situation is driving to the need to stop illegal timber trading, at both **origin and destination**.

It is important to **monitor the legal origin** of timber, to **enhace and protect the timber industry**, which can verify the legal and sustainable origin of raw material

(Source: EU. FLEGT Facility)

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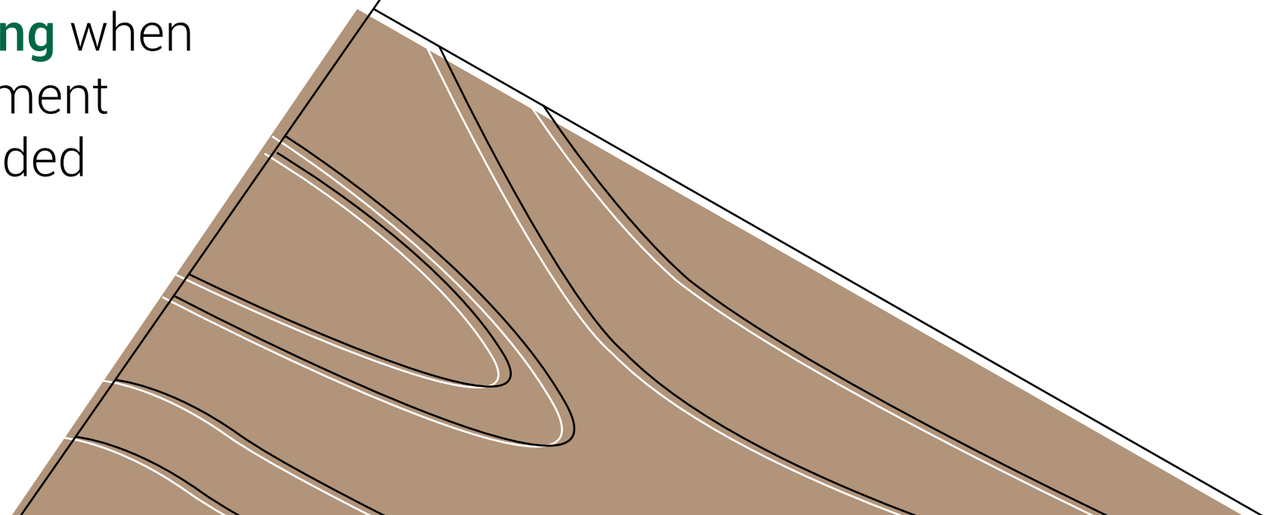
# Need

The project aims to provide a tool for professionals in the sector, customs officers and law enforcement agencies, especially Spain's Nature Protection Service (SEPRONA), that will aid Due Diligence, EUTR and CITES compliance,  and allow them to raise an **early warning** when they suspect a shipment contains illegally traded timber.

# Opportunity

By combinning knowledge of macroscopic wood anatomy and Artificial Intelligence, we can design a tool that will help to **preserve forests** and their **biodiversity,** mitigating **the effects of climate change**.



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# Challenges

Create a database of around **400 species** of comercial timbers.

Execute **deep learning algorithms at device level** to classify images of wood samples without the assistance of cloud computing.

Develop a **smartphone app** to run the AI algorithm and make it available free of charge on the main markets (Apple Store, Google Play).


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# Go Members

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The participation of Everyware Technologies, S.L., Fundación Descubre, Donosti Frame, S.L. and José Luis Fermosel Álvarez is through outsourcing.
Together we make up the IMAI Timber Identification and Artificial Intelligence Operational Group, a multiregional association engaged in solving a problem and leveraging an opportunity through innovation in the forestry sector.

The management authority responsible for allocating FEADER aid and the corresponding Spanish aid is the Directorate General of Rural Development, Innovation and Agri-Food Education (DGDRIFA).

The Timber Identification and Artificial Intelligence Operational Group (IMAI) is responsible for the content published in this document.

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