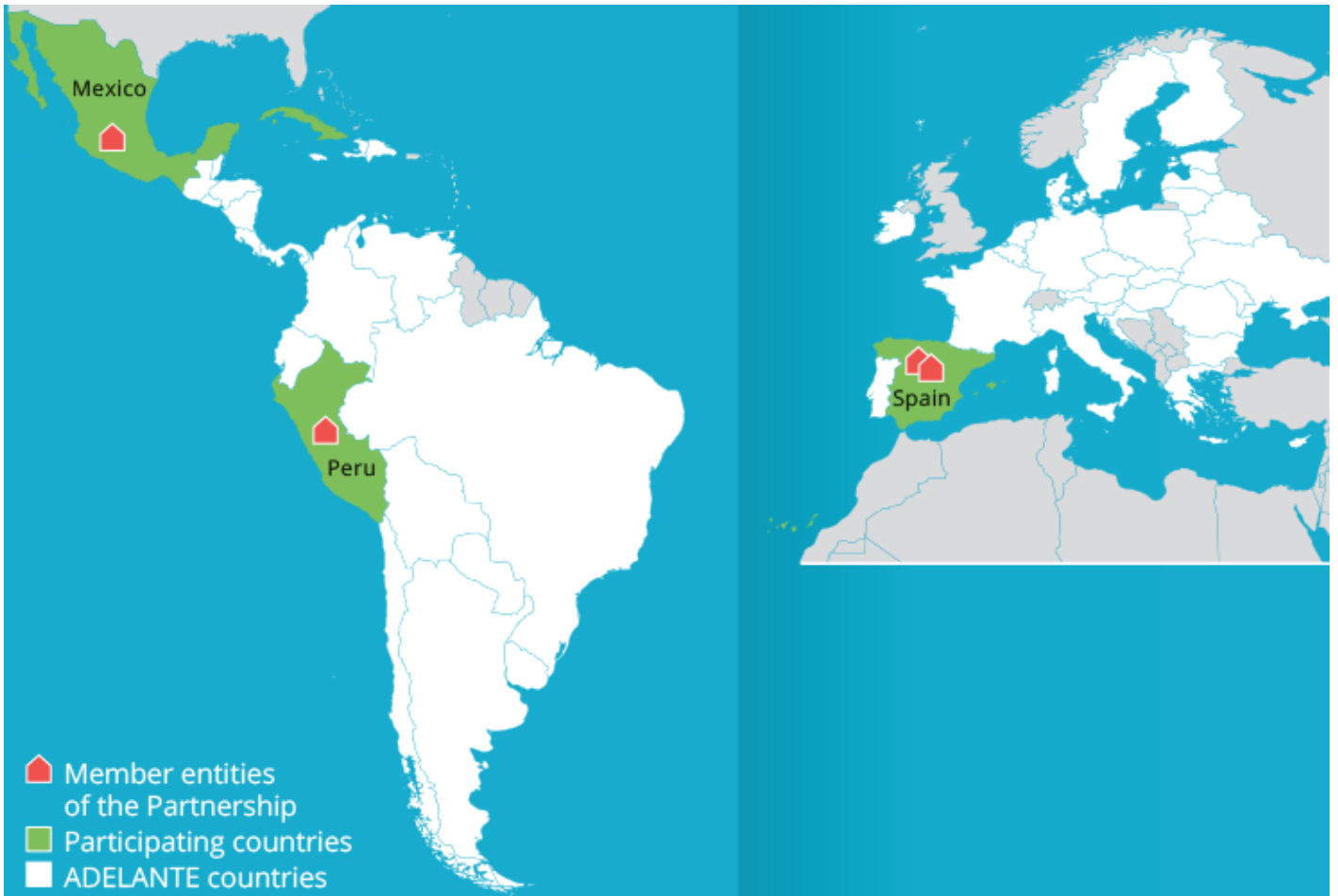


## Biomass recovery model in the forestry sector

### PARTNERSHIP

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### Background

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The Spanish Biomass Association, *Asociación Española de Valorización de la Biomasa* - AVEBIOM, in Spain, aims to promote the bioenergy sector in Spain by engaging all actors in the biomass value chain. It has established itself as a major player at the national level and within the region, as well as actively participating in the key processes in this field at the European level. The association also promotes and organises EXPOBIOMASA, the sector's foremost professional trade fair and a key forum for the sector in southern Europe and Latin America.

In close collaboration with **CONGENIA**, in Spain, an entity with extensive experience in strengthening industrial clusters, AVEBIOM has identified several strategic partners in Latin America for the promotion of bioenergy in the region. Among these is the **Centro Articulador del Sector Productivo Forestal de Jalisco - Clúster Forestal** (Coordination Centre for the Forestry Production Sector of Jalisco - FORESTRY CLUSTER), in Mexico, with whom both institutions have been working for several years, providing mutual support. This collaborative framework between the three entities has allowed the FORESTRY CLUSTER to take several steps towards biomass recovery within the forestry sector in the State of Jalisco, making it a key national player in this field.

The FORESTRY CLUSTER is currently in the process of defining its strategic plan, the main objective of which is to reinforce its commitment to promoting bioenergy and biomass recovery in the forestry sector, in response to both the strategic and institutional challenges and to the challenges of the companies involved, who see biomass production and distribution as an excellent opportunity in the medium term and long term.

Within the scope of the strategic plan, technological adaptation has been identified as the main challenge for the companies and, in turn, technology transfer is considered the main area in which the FORESTRY CLUSTER needs to improve. In response, CONGENIA has identified the **Centro de Innovación Productiva y Transferencia Tecnológica - Forestal Maderable Pucallpa** - Centre for Productive Innovation and Technology Transfer - CITE, In Peru, as an entity that will add significant value to the Partnership. CITE is centred on research, development and productive innovation through the adoption of new technologies, with the aim of improving the transformation of resources and providing added value through product quality and sustainability. The Centre recently launched a system of technological services (research, transfer and training) for biomass production in the forestry sector, which will be especially useful for the FORESTRY CLUSTER.

## Entities and roles

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### BENEFICIARY ENTITIES



[Centro Articulador Del Sector Productivo Forestal De Jalisco](#)

Mexico

## FIRST PROVIDER ENTITIES



CITE Forestal Maderable Pucallpa

Peru

## SECOND PROVIDER ENTITIES



Congenía

Spain



Asociación Española de Valorización de la Biomasa

Spain

## Development challenges

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Through this Triangular Cooperation Initiative, the Centro Articulador del Sector Productivo Forestal de Jalisco (FORESTRY CLUSTER) was able to maximise all of the knowledge, experience and relational capital in the field of bioenergy, biomass recovery and technology transfer of the *Asociación Española de Valorización de la Biomasa* (AVEBIOM) and the Centro de Innovación Productiva y Transferencia Tecnológica - Forestal Maderable Pucallpa (CITE); supporting their goal of developing a strategic plan and unique model that will make the Cluster a key player in biomass recovery in the forestry sector at the local, national and regional level.

In addition, CITE has established a forestry cluster within the region and has also benefited from the extensive experience of AVEBIOM, CONGENIA and the FORESTRY CLUSTER in the planning and

management of these types of organisations.

This exchange of knowledge and experiences has been enriching for all of the Partnership entities, which have benefited from a number of insights that can be used in other collaboration processes, both in Latin America and the Caribbean and in Europe, such as the 'Intelligent Energy Europe Programme' in which AVEBIOM is participating, which will facilitate the exchange of this acquired knowledge beyond the Initiative. This transfer of knowledge to their European counterparts will be possible, thanks to the recent certification of the FORESTRY CLUSTER by the European Cluster Excellence Initiative (ECEI).

At the same time, this Partnership was designed to be a long-term project, which is why it has sought to maintain collaboration in the medium term and has been open to the incorporation of new first and second tier entities from different areas, such as national associations, forestry clusters and innovation centres, among others.

## INITIATIVE

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*This Triangular Cooperation Initiative strengthened the capacities of the Partnership member entities in defining and implementing a biomass recovery model in the forestry sector, based on harnessing the potential of forestry clusters and other industries in the area, resulting in a major impact on job creation in this sector and aiming to replicate this experience in both Latin America and Europe.*

## Triangular approach

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There is strong consensus on the importance of transforming energy systems to mitigate the human impact on climate change. In this process, bioenergy, which is renewable and has a carbon-neutral footprint, plays a strategic role, since the transition from the use of fossil fuels to the use of biomass from sustainably managed forest ecosystems leads to a significant reduction in carbon emissions. Bioenergy is also valued for its strong economic and social impact in rural or forest areas, which often suffer from population decline and environmental neglect. In this sense, biomass production is seen as a potential productive alternative, with a significant bearing on employment, economic growth and the fight to end rural depopulation.

Thanks to this initiative, the knowledge of bioenergy and biomass production, commercialisation and consumption available to Spanish and Peruvian entities was used to create a model for biomass recovery in the forestry sector; harnessing the potential of the forestry companies involved through clusters for production and commercialisation, in addition to maximising the potential of all the industries in the territory for biomass use.

Although this model is designed for biomass recovery within a specific territory, it was designed to be transferred to other territories in the participating countries in Latin America and Europe.

The creation of biomass recovery models leads to greater use of bioenergy, as a major contribution to 'ensuring access to affordable, safe, sustainable and modern energy' for all, as established in SDG 7 of the 2030 Agenda for Sustainable Development.

## Sectoral approach - Contribution to the 2030 Agenda

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PRIMARY SDG



**Goal 7.A** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

## SECONDARY SDG



**Goal 13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

## ADELANTE SDG



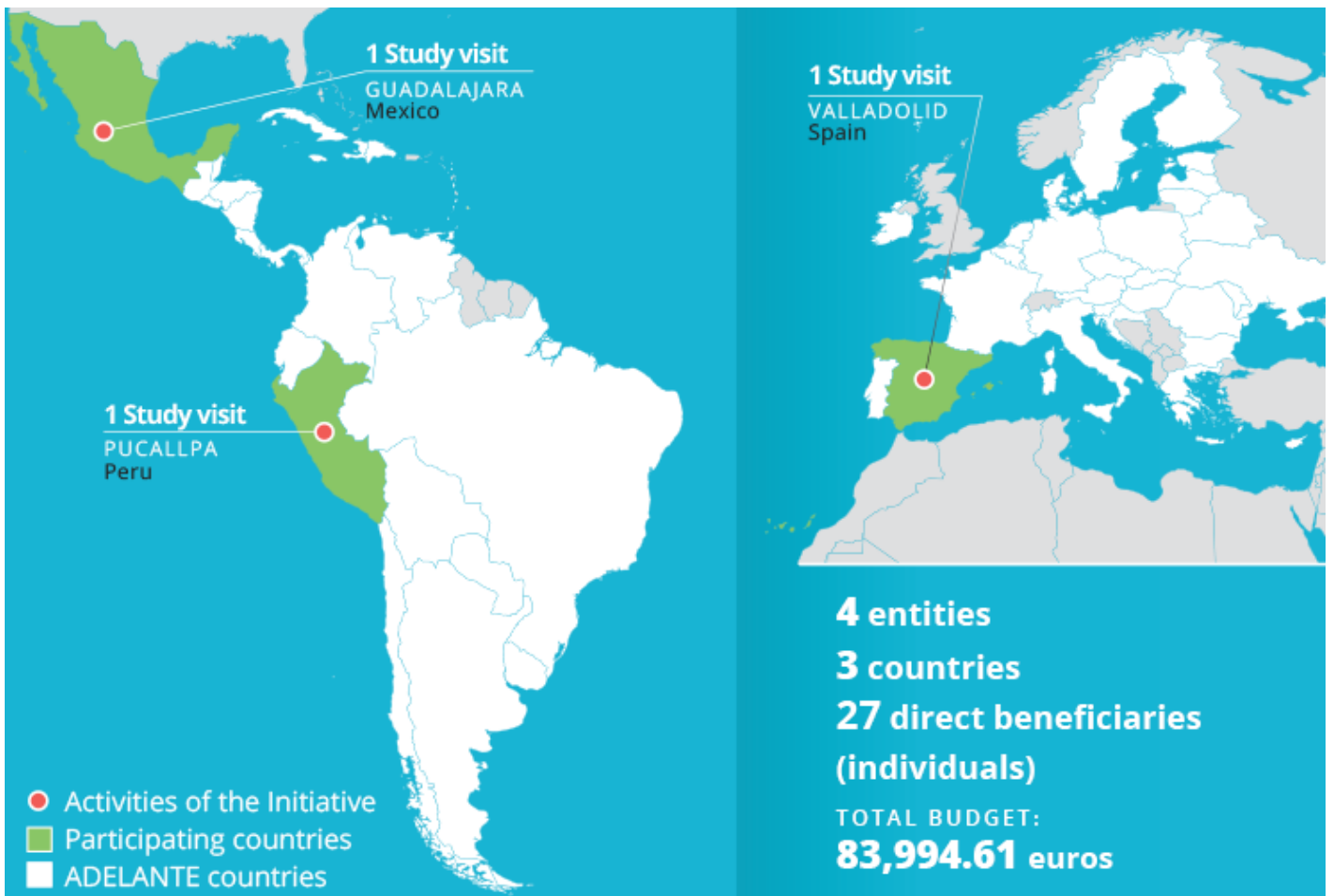
**Goal 10.2** By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status



**Goal 17.7** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

## Territorial approach

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## Intervention methodology

The intervention methodology of this Initiative was centred on promoting collaboration among the representatives of the Partnership entities in order to tap into the knowledge and develop a biomass recovery model, focusing on a number of study visits and on enabling the practical application of the model through a specialised training exercise for the cluster entities, and the dissemination of knowledge among the other local industries.

Two study visits were carried out in order to foster collaboration.

First, **a study visit was made to Spain** in order to participate in the EXPOBIOMASA event and the Ibero-American Congress on Biorefineries, which took place in parallel to the expo; both organised by AVEBIOM. Over the course of several days, representatives from the Partnership's member organisations worked together and had the opportunity to meet the world's leading professionals and organisations in the field. This exercise was carried out alongside a visit to the Agencia de Innovación y Desarrollo Económico del Ayuntamiento de Valladolid (Agency for Innovation and Economic Development of Valladolid City Council), as well as visits to several municipalities in the autonomous region of Castilla y León, with promising initiatives underway in the field of bioenergy and biomass recovery in the forestry sector.

In addition, **a study visit was made to Peru**, in order to learn first-hand about CITE's model of technological services for biomass production in the forestry sector. Work was carried out together with the network's public, private and academic entities, identifying the benefits of a multi-stakeholder approach to

the challenges of biomass production, commercialisation and consumption. CITE was also able to harness the experience of the other Partnership entities in order to strengthen its sectoral cluster.

A study was conducted during the implementation of the Initiative, in which AVEBIOM's experience in biomass recovery in Spain was analysed (along with a number of experiences in Europe) in terms of the current scenario and main challenges of the FORESTRY CLUSTER. The study systematised these experiences and developed a roadmap for the transfer of the most significant cases.

At the same time, a **consultancy** was carried out to support the FORESTRY CLUSTER in the final definition of the strategic plan and to incorporate all of the insights gained from the visits and the study in the form of an intervention model.

Thanks to **the study visit to Mexico** by AVEBIOM and a **second consultancy**, training was held for the members of the FORESTRY CLUSTER on the application of appropriate technology to generate and commercialise biomass. Simultaneously, an awareness-raising exercise was carried out for local industries on the use of quality biomass produced by the Cluster's member companies.

To this end, specialised training was provided for the companies participating in the FORESTRY CLUSTER, so that they could learn first-hand about the potential of the most advanced technologies for biomass production. Starting with an introduction to renewable energies, work was carried out on advanced processes and technologies for the production and transformation of biomass, systems for the use of forest biomass and the associated cross-cutting sectors, among other aspects.

On the other hand, a number of promotional awareness-raising events on bioenergy were held, specially designed for the representatives of the 24 industrial sectors of the State of Jalisco, with the aim of highlighting the possibilities that biomass can offer, depending on the activity and the specific needs of each sector. This line of action was accompanied by a media campaign aimed at the general public, as an initial step towards promoting the broader use of biomass among the entire population.

## Direct beneficiaries (individuals)

*According to Rule 9 of the Guidelines for Applicants: all persons participating in the activities of the Initiative.*

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The Initiative had **27 direct beneficiaries**, the vast majority of whom were professionals from the Partnership entities especially involved in the planned activities, who benefited from the specialised training and the various virtual and face-to-face exchanges, which enabled them to generate new knowledge on the technological adaptation to produce quality and sustainable biomass.

The Initiative also included specific opportunities for awareness-raising and the dissemination of information on bioenergy and the use of biomass for the representatives of the 24 industrial sectors of the State of Jalisco, making them direct beneficiaries.

## Budget

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EU contribution: 62,982.09 €

Co-financing - Triangular Cooperation Partnership: 21,012.52 €



Total budget: 83,994.61 €

## IMPACT

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The information gathered in this IMPACT section is the result of the first **'joint ex post analysis exercise'** of the Initiative which, as foreseen in the policy framework of the ADELANTE Window, took place **one year after the end of the implementation period**.

For more information on these exercises, please consult the [ADELANTE Window 2021 Impact Report](#).

## Continuity of the Partnership

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STARTING POINT: Existing North-South relationship that has been strengthened by the incorporation of Latin American and Caribbean partners as First providers.

The Partnership, as such, has not been consolidated and has not been maintained over time.

However, the Partnership member entities have continued their bilateral collaboration on high-impact projects in the core areas of the Initiative.

## Application of generated knowledge

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The knowledge generated has been applied by the Beneficiary entity.

It is also worth noting the use and application of such knowledge by the First provider.

This has led them to gain greater prominence in their scope of action, creating spaces for collaboration with more actors.

During its implementation, the Initiative involved final beneficiaries (industries and other actors in the forestry sector).

The Beneficiary entity has maintained close ties and collaboration with these groups, even extending the scope, who have benefited and have applied the knowledge generated during the Initiative as well as from related actions.

## Impact

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Applying this knowledge has enabled the Beneficiary entity to successfully tackle the development challenge that gave rise to the Initiative with the necessary quality and guarantees.

#### FACTORS THAT HAVE ENABLED THE IMPACT:

The relevance of the intervention methodology designed for the Initiative.

#### FACTORS THAT HAVE HINDERED IMPACT:

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## Future perspectives

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Maintain bilateral relations between the different Partnership member entities, as well as bring in new entities from each of the territories.

Continue to make progress in applying knowledge by the Beneficiary entity.

Continue to make progress in the transfer of knowledge to the beneficiary groups, monitoring and evaluating the impact in their respective areas of intervention.

Harness the working dynamics and the corresponding lessons learnt to encourage action on a broader scale.

### First steps towards an Ibero-American biomass platform.

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#### NEW EX POST EXERCISE:

Yes (2024)