



Innovative value chains from tree & shrub species
grown in marginal lands as a source of biomass for
bio-based industries

Project number: 887917

D9.1. Project Website

Due date of deliverable: 28/02/2021

Actual submission date: 06/02/2021

TABLE OF CONTENTS

TABLE OF CONTENTS	1
PROJECT INFORMATION	2
DELIVERABLE DETAILS	3
1 INTRODUCTION	4
2 BeonNAT WEBSITE	4
2.1 Project's website link	4
2.2 Parts of the website	4
2.2.1 Home	4
2.2.2 The Project	5
2.2.3 Documents	8
2.2.4 Resources	8
2.2.5 News	9
2.2.6 Website foot-page	9

PROJECT INFORMATION

Project full title: Innovative value chains from tree & shrub species grown in marginal lands as a source of biomass for bio-based industries

Acronym: BeonNAT

Call: H2020-BBI-JTI-2019

Topic: BBI-2019-SO1-R1

Start date: July 1st 2020

Duration: 60 months

List of participants:

Nº	Acronym	Participant organisation name
1 (Coordinator)	CIEMAT	Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas
2	CESEFOR	CESEFOR
3	REC	Renewal Energy Consortium for Research and Demonstration
4	AIM	Instituto Tecnológico del Plástico
5	ATB	Leibniz Institute for Agricultural Engineering and Bioeconomy
6	BTU	Brandenburg University of Technology Cottbus-Senftenberg
7	USV	Universitatea Stefan el Mare, Suceava
8	IPB-CIMO	Centro de Investigação de Montanha / Instituto Politécnico de Bragança
9	CTA	Contáctica
10	IDS	IDOASIS 2002 S.L.
11	EJAR	El Jarpil
12	ENV	Envirohemp
13	NNFCC	The Bioeconomy Consultants NNFCC
14	TOLSA	TOLSA
15	MAVERICK	Laboratorios Maverick
16	PEFC	Asociación para la Certificación Española Forestal

DELIVERABLE DETAILS

Document Number:	D9.1
Document Title:	Project Website
Dissemination level	PU – Public
Period:	PR1
WP:	WP9. Communication, Dissemination & Exploitation
Task:	Task 9.1. Project website
Author:	<p>CONTACTICA S.L.</p> 
Abstract:	<p>Development of the project website. The project web contains general information of the project, the members of the consortium and the most relevant events, news and articles related to the involved sectors.</p>

1 INTRODUCTION

BeonNAT website has been developed as a platform to publish the project and their results as well as to share information among the consortium members.

BeonNAT website is open and accessible from November 2020.

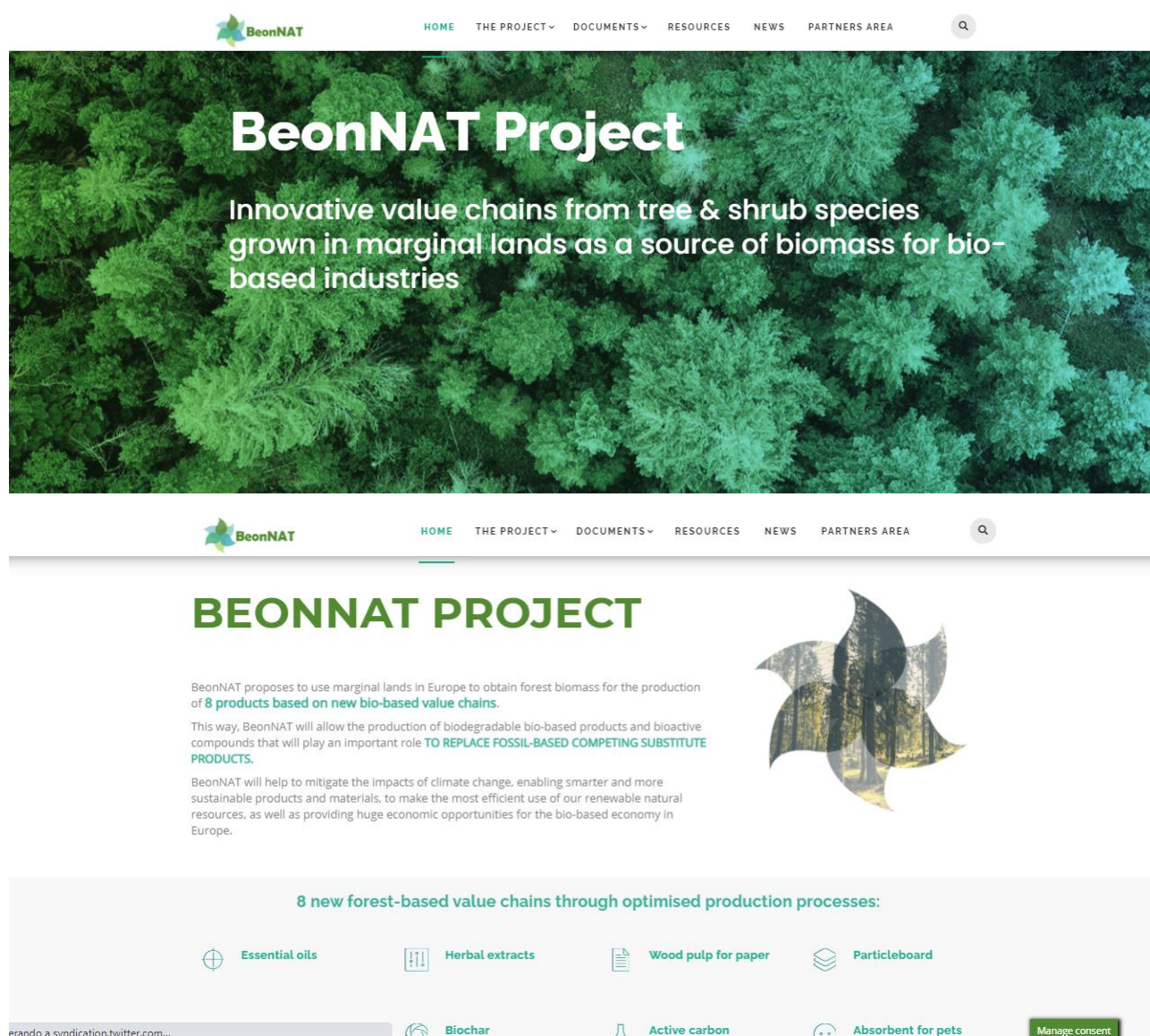
2 BeonNAT WEBSITE

2.1 Project's website link

<https://beonnat.eu/>

2.2 Parts of the website

2.2.1 Home



The screenshot displays the BeonNAT Project website. The top navigation bar includes links for HOME, THE PROJECT, DOCUMENTS, RESOURCES, NEWS, and PARTNERS AREA, along with a search icon. The main header features the BeonNAT logo and the project title "BeonNAT Project" in large white text, followed by the subtitle "Innovative value chains from tree & shrub species grown in marginal lands as a source of biomass for bio-based industries". Below this, a detailed description of the project is provided, highlighting the production of 8 products based on new bio-based value chains and the goal to replace fossil-based competing substitute products. A large graphic of a stylized flower made of forest images is positioned to the right. The bottom section, titled "8 new forest-based value chains through optimised production processes:", lists various products: Essential oils, Herbal extracts, Wood pulp for paper, Particleboard, Biochar, Active carbon, and Absorbent for pets, each accompanied by a small icon. A "Manage consent" button is located in the bottom right corner.

BeonNAT Project
Innovative value chains from tree & shrub species grown in marginal lands as a source of biomass for bio-based industries

BeonNAT proposes to use marginal lands in Europe to obtain forest biomass for the production of **8 products based on new bio-based value chains**.
This way, BeonNAT will allow the production of biodegradable bio-based products and bioactive compounds that will play an important role **TO REPLACE FOSSIL-BASED COMPETING SUBSTITUTE PRODUCTS**.
BeonNAT will help to mitigate the impacts of climate change, enabling smarter and more sustainable products and materials, to make the most efficient use of our renewable natural resources, as well as providing huge economic opportunities for the bio-based economy in Europe.

8 new forest-based value chains through optimised production processes:

- Essential oils
- Herbal extracts
- Wood pulp for paper
- Particleboard
- Biochar
- Active carbon
- Absorbent for pets

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8 new forest-based value chains through optimised production processes:



Essential oils



Herbal extracts



Wood pulp for paper



Particleboard



Bioplastics for packaging



Biochar



Active carbon



Absorbent for pets

16

PARTICIPANTS

6

EUROPEAN COUNTRIES

4.980.476

MILLION € FUNDED

5

YEARS' DURATION



The project leading to this application has received funding from the Bio Based Industries Joint Undertaking (JU) under grant agreement No 887917. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio Based Industries Consortium.



2.2.2 The Project

a) Objectives

The aim of the BeonNAT project is to select underused tree and shrub species in Europe with potential to grow in marginal lands in Romania, Spain and Germany, and create added-value bio-based products following a cascade exploitation in biorefineries.

Specific Objective

01 WP1 / WP8

To select the most promising underutilised tree and shrub species based on their ecological requisites and chemical profile for delivering new bio-based products to be considered in the 3 case studies proposed (Spain, Germany and Romania) based on the Biorefinery concept.



Specific Objective

02 WP2

To guarantee the forest-based biomass supply chain to feed BeonNAT biorefineries while using sustainable harvesting and logistic techniques.



Specific Objective

03 WP2 / WP8

To assess the benefits of intercropping/mixed-plantations in marginal forest or agricultural land versus the monospecific growing in 3 European countries (Spain, Germany and Romania).



Specific Objective

04^{WP1} / WP8

To define agricultural and forest marginal land in Spain, Germany and Romania to grow BeonNAT feedstock and identify potential marginal lands in the three countries to ensure future supply.

Specific Objective

05^{WP3/4/5/6/7}

To validate 8 new forest-based value chains through optimised production processes.

Specific Objective

06^{WP8}

To demonstrate environmental, social & economic feasibility of the BeonNAT cascade biorefinery by conducting a Life Cycle Sustainability Assessment (LCSA) including Land Use Change Assessment.

Specific Objective

07^{WP1}

To maximize the impact of the BeonNAT project through a tailored Business Plan and Dissemination and Communication Plan.

b) Work packages

Work Package 1

Underutilised tree & shrub species screening

- O.1.1. To select the most promising underutilized species according to their ecological requisites and their chemical composition for the bio-based industries;
- O.1.2. To evaluate tree and shrub species as feedstock for the new BeonNAT bio-based value chain;
- O.1.3. To assess marginal lands selection according to the legal framework.

Work Package 2

Biomass cultivation, harvesting, logistics and supply plan

- O.2.1 To test the benefit of intercropping/mixed-forest in marginal forest or agricultural land versus the natural growing in three different European countries (Spain, Germany, Romania); O.2.2 To provide final industry partners the feedstock(Biomass) supply for the BeonNat refinery;
- O.2.3 To establish final species for every final product/application;
- O.2.4 To test different harvesting and logistics systems in order to evaluate the whole value chain of the studied products;
- O.2.5 To characterise biomass waste to BeonNat biorefinery self-supply.

Work Package 3


Essential oils and vegetal extracts

- O.3.1 To develop and test an innovative concept of harvesting baling and on-site distillation; O.3.2 To characterize best methodology to obtain high added-value compounds with functional properties;
- O.3.3 To establish the best final species for essential oil and biochemical production;
- O.3.4 To describe final product specifications;
- O.3.5 To identify and isolate added-value by products for bioplastics (WP4) and absorbent for pets (WP6) production.

Work Package 4

PLA bioplastics for packaging

- O.4.1. To produce fermentable sugars from the fibrous residue remaining after extracting herbal extracts;
- O.4.2. To test and characterise lactic acid production from this new feedstock;
- O.4.3. To test and characterise poly-lactic acid production;
- O.4.4. To produce a new added-value bioplastic with bioactive properties due to the by-product (WP3) incorporation;
- O.4.5. To produce the packaging required for cosmetic applications.



[HOME](#)
[THE PROJECT](#)
[DOCUMENTS](#)
[RESOURCES](#)
[NEWS](#)
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Work Package 5

Biochar and active carbons production

O.5.1. To test and characterise Biochar and Active Carbon production from new feedstock; O.5.2. To establish the requirements for Biochar and Active carbon as final products.

Work Package 6

Development of new absorbents for pet industry

O.6.1 To define the best species and additive formulation for pet industry absorbents;

O.6.2. Selection of optimum process parameters for pellet production;

O.6.3 To prepare a basic design for commercial scale production of pellet absorbents;

O.6.4 To evaluate the techno-economic viability of new bio-based added-value absorbent pellets production.

Work Package 7

Wood pulp and particleboard preparation

O.7.1 To test and characterise the production of wood pulp from biomass;

O.7.2 To test and characterise the paper production from wood pulp;

O.7.3 To test and characterise the production of particleboards from biomass;

O.7.4 To establish the requirements for final products.

Work Package 8

Market, biodiversity and value chain sustainability assessments


O.8.1 Selection of the final underutilized species for BeonNat refinery;

O.8.2 To identify main areas of marginal land suitable for growing BeonNat species in three different European countries;

O.8.3 To perform and intermediate environmental, social and economic life cycle assessment of BeonNat value chains focused on critical issues to steer the development process in the right direction;


O.8.4 To evaluate all final BeonNat bio-products environmental, social and economic impacts from a life cycle perspective and compare their environmental impacts with respect to products aimed to be substituted;

O.8.5 To demonstrate the economic and environmental feasibility of the BeonNat



[HOME](#)
[THE PROJECT](#)
[DOCUMENTS](#)
[RESOURCES](#)
[NEWS](#)
[PARTNERS AREA](#)

c) Partners





[HOME](#)
[THE PROJECT](#)
[DOCUMENTS](#)
[RESOURCES](#)
[NEWS](#)
[PARTNERS AREA](#)


Members of the Consortium


The BeonNAT project Consortium is constituted by 15 partners: 8 RTO, 5 SME, 2 LE and 1 association.

All partners have been chosen in order to provide the suitable multidisciplinary knowledge, skills and expertise to obtain the expected output of scientific and technological results.





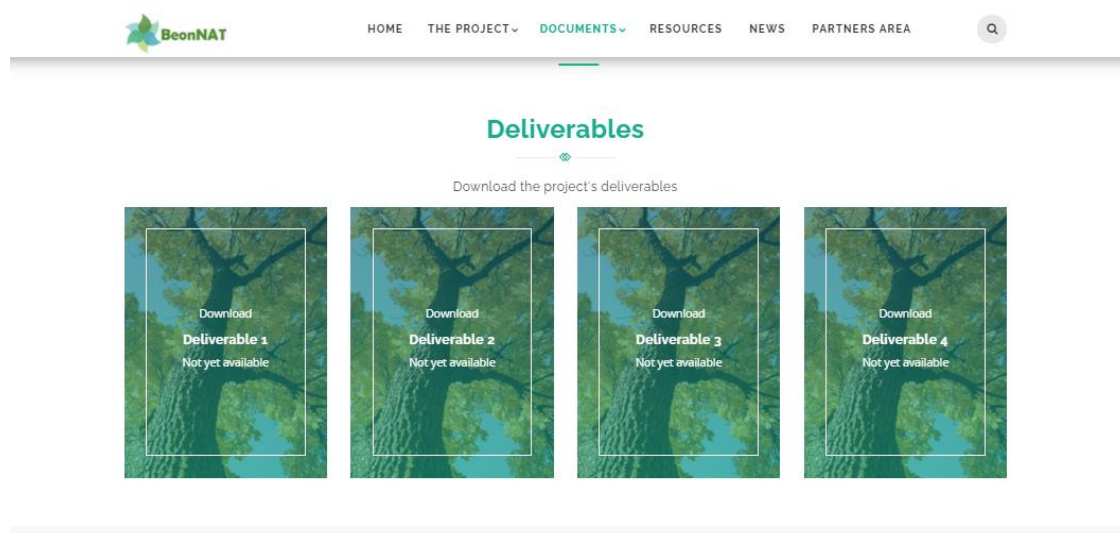




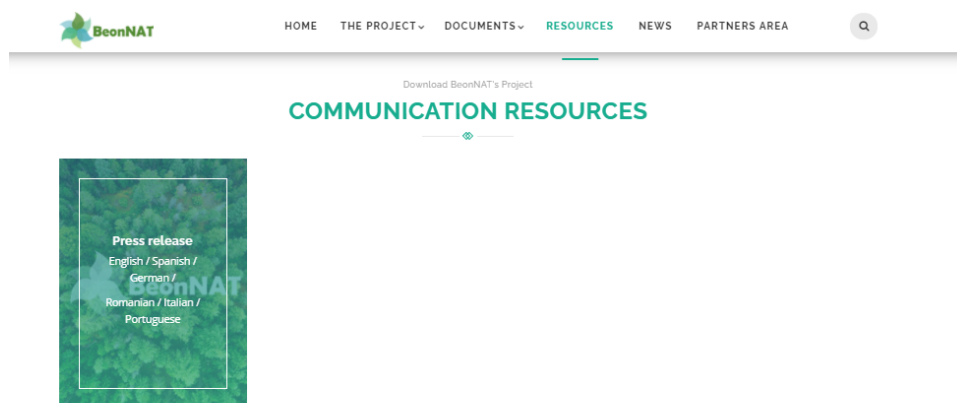


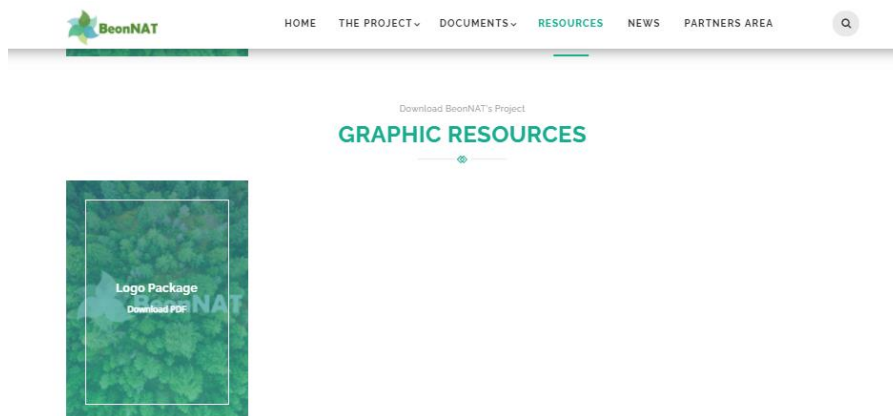
2.2.3 Documents

In the Documents, deliverables and newsletters will be uploaded. Regarding deliverables, only the public ones will be uploaded.

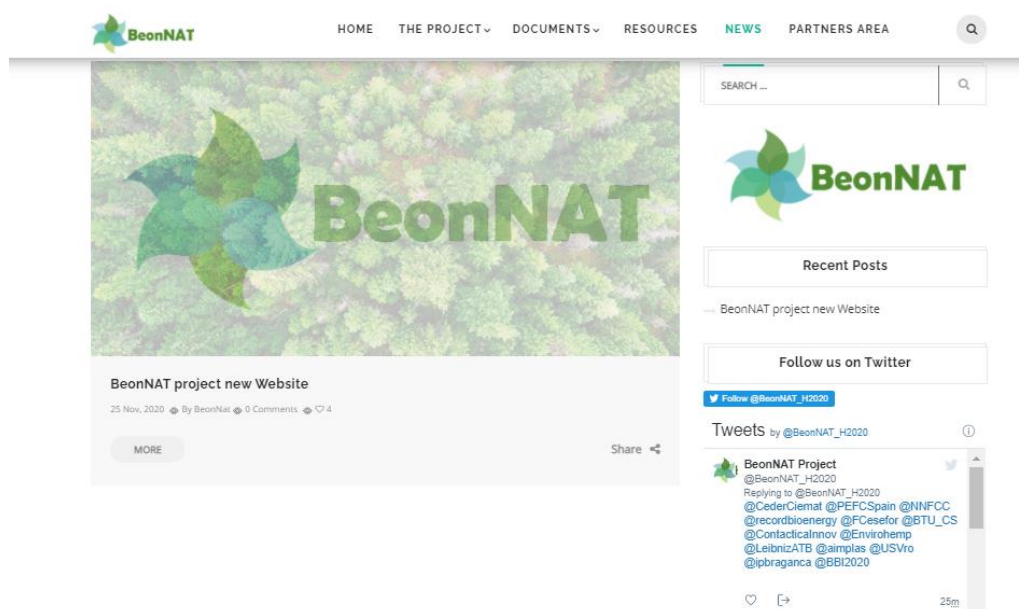


2.2.4 Resources





2.2.5 News



2.2.6 Website foot-page

