

NoAW project



Innovative approaches to turn agricultural waste into ecological and economic assets

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1. Document Info

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Revision history

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5	18/01/2021	Patrice Buche	Final version sent

Time table for update

Version	Date	Modified by	Comments
1	31/3/2018	Patrice Buche	DMP V1
2	18/01/2021	Patrice Buche	DMP V2 (final)

Dissemination level

<p>This deliverable is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 676876.</p> <p>1.</p>
Dissemination Level

PU Public	
CI Classified, as referred to Commission Decision 2001/844/EC	
CO Confidential, only for members of the consortium (including the Commission Services)	CO

ABBREVIATIONS AND ACRONYMS

DMP Data Management Plan

DoA Description of Action

EC European Commission

FAIR Findable, Accessible, Interoperable, Reusable

IPR Intellectual Property Right

KESP Knowledge Exchange Stakeholder Platform

WP Work Package

Summary

<p>Background</p>	<p>This document D1.4 is an update of D9.1 “POPD-Requirement No. 1” associated with Data Management Plan (DMP) deliverable of the NOAW project, which is funded by the European Union’s H2020 Programme under Grant Agreement #676876.</p>
<p>Objectives</p>	<p>The purpose of the Data Management Plan (DMP) is to provide a global view of data collected/produced in the project and an analysis of the main elements of the data management policy that have been used by the Consortium with regard to the project research data.</p> <p>Detailed information is provided on the procedures that have been implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation.</p>
<p>Methods</p>	<p>A web survey has been designed by INRA following guidelines provided by the commission [1, 2]. It has been fulfilled by NOAW partners to collect the required information at the beginning of the project. A synthesis of information is provided in this document. This synthesis has been updated by the partners at the end of the project.</p>
<p>Results & implications</p>	<p>The DMP provides a global picture of types of data which have been collected/produced in all the WPs. The list of partners who are concerned by ethic aspects (mainly about personal data management) has also been achieved. Partners have provided information about their personal data management policy. Furthermore, a list of partners who are concerned by personal data transfer to non EU partners has been elaborated. They have signed data transfer agreement with non EU partners. INRAE has implemented a route to manage data collected/produced during the project based on INRAE dataverse which implements FAIR principles. Current content represents 29 datasets annotated with metadata, including 176 data files. Even if the majority of those datasets have been recently published, more than 250 downloads have already been done.</p>

2. Introduction

The NOAW project participates in the Pilot on Open Research Data launched by the European Commission (EC) along with the H2020 program. This pilot is part of the Open Access to Scientific Publications and Research Data program in H2020. The goal of the program is to foster access to research data generated in H2020 projects. The use of a Data Management Plan (DMP) is required for all projects participating in the Open Research Data Pilot.

Research data refers to information, in particular facts or numbers, collected to be examined and considered as a basis for reasoning, discussion, or calculation. In a research context, examples of data include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.

The DMP covers the complete research data life cycle. It describes the types of research data that will be generated or collected during the project, the standards that will be used to produce and register them, how the research data will be preserved and what parts of the datasets will be shared for verification or reuse. It also reflects the current state of the Consortium agreements on data management and must be consistent with exploitation and IPR requirements.

Research data linked to exploitable results have not been put into the open domain if they compromise its commercialization prospects or have inadequate protection, which is a H2020 obligation. The rest of research data should be deposited in an open access repository. Detailed information is provided on the procedures that have been implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation.

The DMP is not a fixed document; on the contrary, it has evolved during the lifespan of the project. A first version of the DMP including an overview of the datasets intended to be produced during the project and the current point of view of partners on their life cycle has been delivered at the beginning of the project. This document is the final version of the DMP at the end of the project. It includes feedback provided by partners at the end of the project. It also describes the practical data management procedures implemented by the NOAW project.

The types of research data that collected or generated along the project lie in the WPs listed in the following table:

WP Number	WP Title
WP1	Multi-stakeholders platform and perspectives on opportunities and challenges for a sustainable agro-waste management
WP2	Assessment and strategic management of agro-waste in circular, territorial and seasonal perspectives through hybridized approaches and innovative decision support
WP3	Upgrading agro-waste management strategies on a regional basis around an existing technology: the anaerobic digestion and connected emerging technologies
WP4	Eco-design of innovative cascading agro-waste conversion into molecules and materials
WP5	New business & marketing concepts for cross-sector valorisation of agro-waste
WP6	Demonstration in close to real conditions
WP7	Dissemination and training

In section 3, the data which have been collected/produced in each of these WPs by partner, WP and task are described. Section 4 provides information on the partners who have been involved in personal data management and who must conform H2020 Ethics requirements specified in [2]. Section 5 is dedicated to FAIR¹ data management aspects. Section 6 presents the implementation of FAIR data management proposed by INRAE to the NOAW partners to help them to make their data durable following an Open Science type schema. It also includes the current list of datasets created on INRAE dataverse by partners for each WP. Section 7 concludes the report and provides perspectives.

¹ findable, accessible, interoperable and reusable

3. Data collected or produced by WP

WP 1

AAU (AALBORG UNIVERSITET)

Task and deliverable associated the collected/produced data

Task 1.1 Operating a knowledge exchange multi-stakeholders' platform in interaction with EIP; Task 1.2 Agro-waste data Management; Task 1.3 – Investigating and mapping economic, environmental and social challenges and opportunities of agro-waste chains; Task 1.4 GIS application for spatial/territorial analysis

D1.1 - Key indicators and methodologies for assessing the impacts on soil, water, air quality and human safety of agro-waste management

D1.2 - Open online multi-stakeholders' platform

worth exploiting and making durable and how will we handle them after the project.

D1.5 - Toward a near zero-waste society: a report on a multi-stakeholders perspectives of sustainable agrowaste management

D1.6 - Spatial/territorial analysis as support to WMP and SEA for selected case study area(s)

Type of data

Data collection of relevant agro-waste resources in Denmark with focus on lignocellulosic biomass.

CBHU (Campden BRI Magyarország Nonprofit Korlatolt Felelossegu Tarsasag)

Type of data

Task 1.1. Collecting contact data of KESP members

Task 1.1. Collecting answers for specific questions from KESP members through surveys and round table discussions

Task 1.3 Performing web and paper based surveys and interviews with selected stakeholders

Task 1.5 Collecting literature data about waste management regarding human safety issues

Procedures for data collection, storage, protection, retention, transfer, destruction or re-use

Campden BRI Hungary meets its legal obligations and requirements under the General Data Protection Regulation; (EU) 2016/679 (GDPR).

Stakeholders' data. CBHU collected on the one hand stakeholders' information via questionnaires (web -and paper based and face-to-face interviews.), and the other hand contact details of companies/participants participating in different dissemination activities.

All stakeholders who volunteer to participate in any survey were provided with adequate information concerning the aims in order to take an informed decision whether or not to participate and have been asked to provide written consent. Records are kept on the conduct of, and results from surveys and includes the names, contact details. All of the personal data are treated confidentially, and stored in a dedicated database. All information was anonymized before preparing evaluations, reports etc. to prevent any identification of the source.

Type of data transferred and country to which it is transferred.

There was an option for young farmers to insert their applications and CVs (name, email, address, field of interest). A database generated by this data is available in the Level 2 for the project partners. This level is available for all project members and KESP members, including project participants from China and Taiwan.

ECOZ (ECOZEPT GBR)

Task and deliverable associated the collected/produced data

Tasks 1.1, 1.2, 1.3

Type of data

ECOZEPT has collected expert opinions, views on the agri-waste sector and company profiles (short description of the company's history, activities, number of employees and turnover). All this information is mainly qualitative data. Online survey software that has been used could (as an option) track IP addresses of interviewees in order to avoid that one person answers twice or to allow that one person can continue a questionnaire that has been interrupted.

Type of data transferred and country to which it is transferred.

All data collected within NoAW has been transferred to partners from China and Taiwan.

Data sharing infrastructure has been dropbox. Data Preservation will be ensured on ECOZEPT server.

GCIA (CONFEDERAZIONE GENERALE DELL'AGRICOLTURA ITALIANA)

Task and deliverable associated the collected/produced data

1.1, 1.2, 1.3, 1.4, 2.3, 7.1, 7.2, 7.3, 7.4, 7.6.

D. M4; D. M6; D. M8; D.M12; D. M 15; D.M18; D.M30; D.M42; D.M 45; D.M48.

Confagricoltura collected these types of data:

- Operating knowledge exchange EIP
- Agro and waste from agriculture data management
- Mapping eco and envi challenges
- Multi criteria evaluation
- Tools for dissemination
- Dissemination know and tech transfer
- Increasing awareness
- Training course
- Final seminar

INOSUD (GRAP'SUD SOCIETE COOPERATIVE AGRICOLE)

Task and deliverable associated the collected/produced data

Task1; Task 3.2; Task 4.1, Task 7

Task 1: provided data on valorization of waste and by-products from winemaking

Task 3.2: provided different by-products coming from the treatment of wine-making co-products

Task 4.1: provided Wine wastes

Type of data

We provided data on the current valorization of winemaking byproducts

IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)

Type of data

- Data about vine and wine by-products and their valorization ways
- Data about vine and wine by-products valorization actors
- All the data will refer to the Languedoc-Roussillon area

The personal data collected have been name, organization, role, e-mail address and website.

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Enquired people have been informed of the use of these data in the framework of the project.

IAUS (INSTITUT ZA ARHITEKTURU I URBANIZAM SRBIJE)

Task and deliverable associated the collected/produced data

Task 1.4 GIS application for spatial/territorial analysis

Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries;

Task 2.3 - Multi-criteria evaluation in strategic environmental assessment of agro-waste;

Task 2.4 - Evaluation of case studies and guidance for decisions within the project management plans

D1.6-Spatial/territorial analysis as support to WMP and SEA for selected case study area(s), Report (month 36)

D2.3-Multi-criteria evaluation tool, Report (month 30)

Type of data

To fulfill spatial data requirements necessary for T1.4 within Wp1 two question have been addressed:

1. Geographical definition of the case study area. These data are:
 - border of case study area, administrative borders,
 - position of the production facilities
 - terrain data (digital elevation model)
 - land-use/coverage (vegetation coverage, settlements and build up areas, water and wetlands, industry and commercial, tourism - location and routes),
 - nature and cultural heritage protected areas,
 - infrastructure (roads, energy, communication, water supply, sewerage, etc.),
 - (agro)waste and other landfill location,
 - population (distribution, statistical data, employment),
 - spatial/urban plan maps and other relevant documentation.
2. Definition of the problem which has been addressed by GIS. Based on the declared issue that has been solved/improved/researched within the case study area(s), additional spatial data have been provided in later phases. Spatial data have been provided in vector and or raster format. Vector format have been standard *.shp GIS and/or GoogleEarth *.kmz/*.kml files. Raster data have been registered in *.tiff, *.ecw, *.jpg or ESRI GRID files.

IBBK (IBBK FACHGRUPPE BIOGAS GMBH)

Task and deliverable associated the collected/produced data

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Task 1.1, Task 1.2, Task 1.3, Task 1.4, Task 5.1, Task 5.3, Task 6.3, Task 7.1, Task 7.2
D1.1, D1.2, D1.3, D1.4, D1.5, D1.6, D1.7, D5.1, D5.3, D6.3, D7.1, D7.2, D7.3, D7.4, D7.5,
D7.6

Type of data

Data from stakeholders and from German business models. Surveys, tables, lists based on interviews and research from public resources (websites, newspapers, journals, articles, etc.).

INRAE (Institut National de la Recherche Agronomique)

Task and deliverable associated the collected/produced data

T1.5 and deliverables D1.3 Computational Social Choice software programming and data analysis and D1.5 Toward a near zero-waste society: a report on multi-stakeholders perspectives of sustainable agro-waste management

Type of data

Result of stakeholders' preferences survey about new technology acceptance and potential development for waste management in wine production in Languedoc Roussillon, France.

Following data have been collected:

- Technical data (yield, biomass composition, quantities) related to French winery sector
- Economic data regarding French winery sector
- Flow chart regarding the French winery sector (Languedoc Roussillon area)

Personal data collected correspond to name, phone and email of the main contact of surveyed companies. These data have been anonymized before being analyzed and transmitted to the consortium. Consent form have been obtained before all survey.

NTUA (NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA)

Type of data

In the WP1 a comprehensive description of agricultural waste management methods and of the produced agricultural waste volume in Greece has been implemented. GIS applications and tools for spatial/territorial analysis within Greece have been used in order to further support SEA.

VA (PREDUZECE ZA PROIZVODNJU PROMET I USLUGE VINARIJA ALEKSANDROVIC DOO, VINCA)

Task and deliverable associated the collected/produced data

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Agro-waste data Management

Type of data

The data of types and amounts of waste from vineyard and winemaking processes in collaboration with IAUS.

APESA (ASSOCIATION POUR L'ENVIRONNEMENT ET LA SECURITE EN AQUITAINE)

Type of data

Task 1.5

APESA have collected from technical reports and bibliographic data, indicators and methodologies to assess the impact of the by-products from wastes treatment chain on soil, water, air quality and human safety. APESA has also taken in charge the work of the Chinese partner that did not participate.

Data collection will be valorized through scientific paper (under writing, should be revised by partners).

D1.1 Key indicators and methodologies for assessing the impacts on soil, water, air quality and human safety of agro-waste management

WP 2

DTU (DANMARKS TEKNISKE UNIVERSITET)

Task and deliverable associated the collected/produced data

Task 2.1, Task 2.2 and Task 2.4

Deliverable 2.1, 2.2, 2.3 and 2.5

Type of data

The data relate to geographical regions we have assessed in NoAW. We were primarily interested in the territorial boundaries (i.e. geographical scope) and what mass and energy flows crosses through these regions, origin of these flows and how these flows are handled once they leave the territory.

INRAE (Institut National de la Recherche Agronomique)

Task and deliverable associated the collected/produced data

Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries and Task 2.4 - Evaluation of case studies and guidance for decisions within the project

Type of data

Preferences and justifications of NoAW stakeholders about the importance on LCA (Life Cycle Analysis) impact categories.

WP3

AAU (AALBORG UNIVERSITET)

Task and deliverable associated the collected/produced data

Task 3.4 - Valorize recalcitrant fractions and streams (e.g. lignocellulosic materials);

Type of data

Producing data from the full-scale experiments on wet explosion pretreatment of lignocellulosic biomass for increasing biogas production (together with partner Bio Vantage).

APESA (ASSOCIATION POUR L'ENVIRONNEMENT ET LA SECURITE EN AQUITAINE)

Type of data

Task 3.1 and 3.2

APESA have collected digestate from the agricultural biogas plants from Peter and also from the two stage H₂/CH₄ developed by the INRAE LBE.

APESA has characterized the physico-chemical properties and also the sanitary parameters of the digestate from this two processes.

We have also asses N and C mineralization tests and growth plants tests on wheat and tomatoes on different soil origin.

FRAUNHOFER (FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.)

Task and deliverable associated the collected/produced data

3.3, 4.1, 4.3, 6.2

Type of data

Processing conditions regarding extraction of polyphenols and production of biopolymers

INNOVEN (INNOVEN SRL)

Task and deliverable associated the collected/produced data

Task 3.2 Upgrade biogas into biomethane and biohythane (D3.2 Biogas upgrade into biomethane or biohythane)

Type of data

The activity carried out in task 3.2 were related to a pilot scale study of a 2-stage AD process where the following activities were considered:

- two stage AD process for the production of H₂ and CH₄
- VFA production in the first reactor
- upgrade of biogas or biohythane via bio-electrochemical processes

Innoven and La Sapienza monitored the process and produced data which were the basis for deliverable 3.2

INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)

Task and deliverable associated the collected/produced data

Task 3.2 - Upgrade biogas into biomethane or biohythane in advanced AD-based technologies
D3.2 - Biogas upgrade into biomethane and biohythane at pilot scale (M33) Design, operation and performance

Type of data

Biogas upgrade into biomethane and biohythane at pilot scale (M33) Design, operation and performance of both pilot-scale platforms focusing on either biomethane or biohythane production. Check of performance in terms of mass and energy balances against benchmark (biogas from conventional AD).

Data from bioprocess operation at pilot scale.

Primary data from the process were generated / collected online (constant monitoring of gas production, pH, alkalinity, effluent flow rate, temperature [every min.] and periodic measurements of gas composition [every hour]), and stored in a MySQL-based database (accessible via a secured website - SileX LBE). Metadata from process operation (comments, failure, ...) were manually collected within the same database.

Secondary data were also collected offline after manual sampling (microbial community sequencing, metabolites composition, etc) and stored locally and/or in the database.

Interpretation of the data has been performed and stored locally (eg. statistical analysis, optimal law for automation and control).

NTUA (NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA)

Type of data

In the WP3 enzymatic saccharification and detoxification of straw prior to AD have been investigated. The effect of pretreatment and process operating parameters have been investigated in a pilot scale AD reactor. Moreover, bioethanol production from the anaerobically digested straw through the enzymatic utilization of the remaining fibre has been also investigated.

SCHIESSL (SCHIESSL PETER)

Task and deliverable associated the collected/produced data

3.1 Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate

D3.1 - Relevant parameters and optimized tools for evaluation of safe and sound digestate use

Type of data

Data collected or produced have been:

- Parameter for optimization of nutrient use
- On farm data about options for optimized nutrient use

TIA (NINGBO TIANAN BIOLOGIC MATERIAL CO. LTD)

Task and deliverable associated the collected/produced data

Study properties of produced PHA and compare with presently available on the market

Type of data

Dre cell weight of fermentation broth;
content of PHA in DCW
sample of PHA

UNIROMA (UNIVERSITÀ DEGLI STUDI DI ROMA LA SAPIENZA)

Task and deliverable associated the collected/produced data

- Task 3.1 – Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate
 - Task 3.2 Upgrade biogas into biomethane
 - Task 3.3 - Obtain higher added-value products by converting VFAs residue streams into bio-plastics
-
- D3.1 - Relevant parameters and optimized tools for evaluation of safe and sound digestate use
 - D3.2 - Biogas upgrade into biomethane and biohythane at pilot scale
 - D3.3 - Bio-polymer production on 2nd period of operation and performance check under best conditions

Type of data

WP3 is a part of the technical core of the project dedicated to the experimental verification of existing conventional technique (anaerobic digestion) and new techniques. WP3, in particular, aims to provide in-depth knowledge on both existing uses of “conventional AD” at full scale and advanced AD-based technologies at pilot and demonstrative scale for efficient agricultural waste/by-products management.

In task 3.1 (in collaboration with task 1.5) the flow and fate of selected contaminants, such as pharmaceuticals and heavy metals, potentially contained into digestate and their possible release to groundwater have been investigated.

In task3.2 the use of microbial electrolysis cells (MEC) as an energy-efficient tool to refine biogas into biomethane by extracting/converting CO₂ has been investigated. The liquid fraction of anaerobic digestate or acidogenic effluent has been used as carbon source to minimize energy request for biogas refining.

In task 3.3 An anaerobic digestion-based (existing) platforms with an ad-hoc designed section has been adopted to valorise agricultural waste towards the production of (biodegradable and recyclable) bioplastics, e.g. polyhydroxyalkanoate.

For each task, experimental results have been produced for relevant parameters such as yield and rates of investigated transformation.

WP4

APESA (ASSOCIATION POUR L'ENVIRONNEMENT ET LA SECURITE EN AQUITAINE)

Type of data

In Task 4.2, APESA have work on the pyrolysis of solid digestate, the energetical assessment of coupling AD and pyrolysis process.

Agronomic trials have been done on biochar and several fungi strains have been tested for the P solubilization from biochar.

Two papers published and one in preparation.

IAPPST (INSTITUTE OF AGRO-PRODUCTS PROCESSING SCIENCE AND TECHNOLOGY, CHINESE ACADEMY OF AGRICULTURAL SCIENCES)

Task and deliverable associated the collected/produced data

IAPPST carried out extraction of biomolecules from waste of starch potato industry. IAPPST can work from lab scale to industry scale. Starch fibers and proteins have been extracted (D at M24). Starch fibers from potato has been used by UNIBO to produce composites.

Type of data

The information about dietary fiber and protein from potatoes: content, composition, extraction parameters, etc.

IBET (INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLÓGICA)

Task and deliverable associated the collected/produced data

Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers (D4.3 : Strategies for the production of performant 100% agro-wastes sourced polymers-based materials: polycarbonates, polyesters, PHAs and fibres-based biocomposites)

Type of data

IBET determined the best strategies to produce PHAs through an innovative photo fermentation-based route. PHA was produced from VFAs with light as the sole energy source, eliminating the need for aeration, one of the main PHA operational costs, hence increasing process sustainability. Key operational parameters affecting photo fermentation were addressed, including the impact of different VFA profiles on the polymer composition and yield. A metabolic model was developed and used as a tool for process design and optimization.

INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)

Task and deliverable associated the collected/produced data

T4.1 and T4.3 Phenolic building blocks production and exploitation for polymers; Succinic acid production
D4.1 and D4.3

Type of data

The data produced in these tasks are experimental protocols enabling the production of building blocks starting from phenolic polymers and/or succinic acid as well as production of new polymers and materials.

ITRI (INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE INCORPORATED)

Task and deliverable associated the collected/produced data

T4.1 Innovative agro-wastes conversion processes towards added value products, upstream of AD

Type of data

Polymer formulation

- Physical and chemical properties of agro waste extracts and/or derivatives
- Thermal, morphological, mechanical properties of modified bioplastics
- Processing parameters and conditions for the modified bioplastics
- Application properties and performance of food packaging materials based on bioplastics

UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)

Task and deliverable associated the collected/produced data

Task 4.1 D4.1 and D4.3

Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers (M1-M48)

D4.4 - Protocols for extracting VFAs issued from 2 steps AD and their eco-efficient transformation into bi-functional monomers and biopolymers (UNIBO, Report, CO, M48)

Type of data

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 688338

Task 4.1 and D4.1

This data set includes data collected in Task 4.1 by UNIBO in particular regarding the extraction of bioactive molecules (polyphenols, vanillic acid and other compounds) from white and red pomace by means of enzymatic and solvent-based optimized protocols.

The data are experimental data, produced mainly in the UNIBO laboratories.

The extraction protocols were optimized by selecting the best operational conditions: temperature, time of incubation, pH, solid matter/solvent ratio also based on the target applications of the molecules.

The data were mainly used by other researchers needing to develop similar type of extraction protocols

Task 4.1 and D4.3

This data set includes the data that were produced by partner UNIBO in the Task 4.1 relatively to three activities: starting from molecules extracted from pomaces i) production of polymers and ii) additivation of polymers; starting from the solid residues of the extraction procedures iii) preparation of polymeric composites. The data are experimental data, produced mainly in the UNIBO laboratories.

The first research topic consisted in the development of a protocol of polymer synthesis starting from phenolic acids extracted from pomaces. Based on the supposition that the phenolic acids extracted have the characteristics (for example, high purity, at least two functional groups) suitable for polycondensation reaction, the data produced by UNIBO are related to the reaction conditions (times, temperatures, pressure and yield). Then, the prepared polymers were chemically, thermally and mechanically characterized and, correspondingly, UNIBO collected the experimental data deriving from such analyses, such as chemical structure, molecular weight and molecular weight distribution, degradation temperature, melting and crystallization temperatures.

The second research topic is related to the preparation of formulations of a commercial biopolymer by using polyphenols extracted from pomaces. The formulation performed in Brabender mixer. The data produced were conditions of mixing (temperature, time, amount of additive) and characterization of the final polymers, in terms of thermal properties and antioxidant properties. The third topic, related to the preparation of composites, consisted in mixing a fibrous residue with a commercial polymer in Brabender mixer. The data produced were conditions of mixing (temperature, time, amount of second component) and characterization of the final polymers, in terms of thermal and mechanical properties.

Task 4.3 and D4.4

Production of data on the bioconversion of volatile fatty acids (VFAs) into bi-functional molecules using bio-electrochemical systems (BES). These included experimental data, produced in the UNIBO laboratories, and process performance indicators, calculated on the basis of the experimental data.

The first type of data (raw experimental data) has been generated by means of (i) analysis of culture media and reactor headspace and (ii) recording of electrochemical parameters, before,

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during and after the bioelectrochemical process. The following types of analysis were performed: concentration of substrates (VFAs), products (e.g., hydroxylated VFAs, dicarboxylic acids, etc.) and by-products (e.g., overoxidized products), biomass concentration, headspace gas composition (O₂, CO₂). The following electrochemical parameters were recorded: current, voltage.

The second type of data (process performance indicators) was obtained by aggregating and elaborating the raw experimental data. Examples of such performance indicators are: selectivity, conversion yield, productivity, coulombic efficiency.

The quality of the experimental data has been carefully validated through the use of suitable analytical standards and control charts.

SEE (CITY UNIVERSITY OF HONG KONG)

Task and deliverable associated the collected/produced data

ECO-DESIGN OF BIO-MOLEC & BIO-MATERIALS through innovative cascading agro-waste conversion

D4.1 - Biotechnological and physical-chemical optimized strategies to extract and convert biomolecules from agro-wastes

Type of data

- Succinic acid has been obtained from mixed vegetables and fruit waste from Honk Kong
- Protein-rich potato residue from Institute of Food Science and Technology, Chinese Academy of Agricultural Sciences, Beijing, China (Project partner in WP IV) has been obtained, and it will be used as nitrogen source in this project.

SP (SP SVERIGES TEKNISKA FORSKNING SINSTITUT AB)

Task and deliverable associated the collected/produced data

Task 4.1 (D4.1)

Type of data

The use of supercritical and pressurized fluid extraction on winery waste, in order to extract polyphenols and non-polar compounds to be used for building of bio-materials

UM (UNIVERSITE DE MONTPELLIER)

Task and deliverable associated the collected/produced data

Task 4.1.c) biocomposite

Type of data

Bio-composites - Final fibrous residues and lignocellulosic components from winery wastes have been exploited to produce fillers by combining dry grinding, sorting (electrostatic separation and air classification) and surface functionalization using solvent-free hydrophobisation technologies (plasma or chromatogeny) (UM). Biocomposites have been produced using polymers prepared in Tasks 3.3, 4.1, 4.3 (UM, UNIBO).

Process to made biocomposites

- Study of pre-treatment of fibres (plasma or chromatogeny)
- Comparison between cellulose, wheat straws and vine shoots as fillers in composites
- Mechanical performance of biocomposites
- Mass transfer performance of biocomposites
- Environmental impact of biocomposites

WP5

Agriport (AGRIPORT A7 B.V.)

Task and deliverable associated the collected/produced data

Task 5.1 Review and analysis of existing business concepts designed for efficient use of resources

Type of data

To provide practical business examples of re-using agro waste products. Also to provide a business/economic view on the suggested plans and ideas.

DLO-FBR (STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK)

Task and deliverable associated the collected/produced data

Tasks 5.1, 5.2, 5.3 and 5.4
D5.1, D5.2, D5.3 and D5.4

Type of data

Business and cluster concepts (based on literature scan)

SOFIES (SOFIES SA)

Task and deliverable associated the collected/produced data

Task 5.1 Review paper on existing initiatives world wide, with valorisation of agri-agro co-products.

Type of data

Collection of qualitative and quantitative data in relation with existing co-products valorisation initiatives world wide.

Production of case-studies and summary factsheets for dissemination via the KESP and among members of the consortium.

Informed consent obtained via direct communication with key stakeholders interviewed. Sharing of the documents for approval before disclosure on the KESP and the NoAW Collaborative work space.

Data safety procedures: nothing that is not publicly disclosable has been kept.

Summary factsheets have been shared with our Chinese partners and key stakeholders identified in China, via the NoAW Asian platform.

WP6

UNIROMA (UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA)

Task and deliverable associated the collected/produced data

Task 6.2 Demonstration in close-to-real conditions of one agro-waste cascading conversion technology issued from WP3 and WP4

D6.2 - Demonstration trial of integrated technology chain

Type of data

In task 6.2 the possibility and the feasibility to upgrade the conventional and “existing” anaerobic digestion plants towards obtaining more valuable products have been investigated,

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particularly, additional products with respect to typical anaerobic digestion products, i.e. biogas and anaerobic digestate. The target has been to obtain one bio-based advanced material plus bioenergy and biofertilizers.

WP7

AAU (AALBORG UNIVERSITET)

Task and deliverable associated the collected/produced data

7.1 - Tools for dissemination and exploitation of NoAW's results - Dissemination strategy, communication plan, exploitation plan; Task 7.2 – Dissemination, knowledge and technology transfer to farms, businesses and other end-users; Task 7.3 - Increasing awareness and disseminating project results to students and the scientific community

Type of data

Data collection of stakeholders from Denmark, who could be relevant for the NoAW project.

CBHU (Campden BRI Magyarország Nonprofit Korlatolt Felelossegu Tarsasag)

Task and deliverable associated the collected/produced data

D7.1 - Project website (M4) Two levels structure, a segregated part for career development and online tools for KSP.

D7.2 - Detailed dissemination plan for the project (M6) Initial communication/dissemination plan - defining key messages, results and target audiences, and selecting appropriate tools and channels (including relevant conferences/events) to meet the information needs of target audiences.

Type of data

Task 7.1 - Collecting contact data logos of project partners for the NoAW web, Collecting contact data of young farmers for career development opportunities

Task 7.2 Collecting data on dissemination (who, what, where)

Task 7.2 Collecting contact details of participants / attendees of different training and dissemination events (workshop, webinars, final seminars)

4. Personal data management in NOAW

Participating individuals have been informed about the data collection, its processing prior to their participation in the NOAW activities.

- NOAW ensured that where personal data is processed on the basis of the participants' consent, that consent is unambiguous, freely given and can be withdrawn at any time during the project. Relevant consent forms as well as information sheets have been provided.
- The amount of personal data collected have been anyway kept at the minimum needed to achieve the project's objectives and as far as possible working with anonymized data.

List of partners involved in personal data management

Institution	Task	Details of procedures used for data collection, storage, protection, retention, transfer, destruction or re-use, methods of storage and exchange
ECOZ (ECOZEPT GBR)	WP1: tasks 1.1, 1.2, 1.3 and WP5 task 5.3	Informed consent has been obtained. ECOZEPT collected expert opinions, views on the agri-waste sector and company profiles (short description of the company's history, activities, number of employees and turnover). All this information is mainly qualitative data. Online survey software used could (as an option) track IP addresses of interviewees in order to avoid that one person answers twice or to allow that one person can continue a questionnaire that has been interrupted.
CBHU (Campden BRI Magyarorszag Nonprofit Korlatolt Felelossegu Tarsasag)	Task 1.1 Stakeholder Platform, 1.3 Investigating and mapping economic, environmental, social challenges and opportunities of agro waste chains, Task 1.5 Key indicators - huan safety, Task 7.2 Dissemination and knowledge transfer	Stakeholders' data. CBHU collected stakeholders' information via questionnaires (web -and paper based and face-to-face interviews.), contact details of companies /participants participating of different dissemination activities. All stakeholders who volunteer to participate in any survey were provided with adequate information concerning the aims in order to take an informed decision whether or not to participate and were asked to provide written consent. Records are kept on the conduct of, and results from test and includes the names, contact details. All of the personal data are treated confidentially, they are stored in a dedicated database. All information was anonymized before preparing evaluations, reports etc. to prevent any identification of the source.

UM (UNIVERSITE DE MONTPELLIER)	Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries and Task 2.4 - Evaluation of case studies and guidance for decisions within the project	Personal data collected correspond to name, phone and email of the main contact of surveyed companies. These data have been anonymized before being analysed and transmitted to the consortium. Consent form has been obtained before all survey.
SOFIES (SOFIES SA)	Task 5.1	Informed consent obtained via direct communication with key stakeholders interviewed. Sharing of the documents for approval before disclosure on the KESP and the NoAW Collaborative workspace. Data safety procedures: nothing that is not publicly disclosable has been kept.
IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2	The personal data collected have been name, organization, role, e-mail address and website. They have been informed of the use of these data in the framework of the project.
IBBK (IBBK FACHGRUPPE BIOGAS GMBH)	Task 1.1, Task 1.2, Task 1.3, Task 1.4, Task 5.1, Task 5.3, Task 6.3, Task 7.1, Task 7.2	Informed consent has been obtained. The data have only been used internally and stored in the secure database.
GCIA (CONFEDERAZIONE GENERALE DELL'AGRICOLTURA ITALIANA)	1.1, 1.2, 1.3, 1.4, 2.3, 7.1, 7.2, 7.3, 7.4, 7.6.	Name, organization, emails, website are treated confidentially using informed consensus.

List of partners involved in personal data transfer to non EU partners

A list of partners who are concerned by personal data transfer to non EU partners has been elaborated (see table below). They have signed data transfer agreement with non EU partners.

Institution	Task	Personal data description collected/produce in NOAW	Details of procedures used for data collection, storage, protection, retention, transfer, destruction or re-use, methods of storage and exchange	Type of data transferred and country to which it is transferred.
ECOZ (ECOZEPT GBR)	WP1: tasks 1.1, 1.2, 1.3 and WP5 task 5.3	Expert opinions / views on the agri-waste sector. Company profiles. Mainly qualitative data.	Informed consent have been obtained. ECOZEPT collected expert opinions, views on the agri-waste sector and company profiles (short description of the company's history, activities, number of employees and turnover). All this information is mainly qualitative data. Online survey software used could	All data collected within NoAW. China and Taiwan.

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			(as an option) track IP addresses of interviewees in order to avoid that one person answers twice or to allow that one person can continue a questionnaire that has been interrupted.	
CBHU (Campden BRI Magyarország Nonprofit Korlatolt Felelossegu Tarsasag)	Task 1.1 Stakeholder Platform, 1.3 Investigating and mapping economic, environmental, social challenges and opportunities of agrowaste chains, Task 1.5 Key indicators - human safety, Task 7.2 Dissemination and knowledge transfer	Task 1.1. - Collecting contact data of KESP members Task 1.1. Collecting answers for specific questions from KESP members through surveys and round table discussions Task 1.3 Performing web and paper based surveys and interviews with selected stakeholders Task 1.5 Collecting literature data about waste management regarding human safety issues Task 7.1 - Collecting contact data logos of project partners for the NoAW web, Collecting contact data of young farmers for career development opportunities Task 7.2 Collecting data on dissemination (who, what, where) Task 7.2 Collecting contact details of participants / attendees of	Stakeholders' data. CBHU collected stakeholders' information via questionnaires (web -and paper based and face-to-face interviews.), contact details of companies /participants participating of different dissemination activities. All stakeholders who volunteer to participate in any survey were provided with adequate information concerning the aims in order to take an informed decision whether or not to participate and were asked to provide written consent. Records are kept on the conduct of, and results from survey and includes the names, contact details. All of the personal data are treated confidentially, they are stored in a dedicated database. All information was anonymized before preparing evaluations, reports etc. to prevent any identification of the source.	There was an option for young farmers to insert their applications and CVs (name, email, address, field of interest). A database generated by these data is available in the Level 2. This level is available for all project members and KESP members, including project participants from China and Taiwan.

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		different training and dissemination events (workshop, webinars, final seminars) was collected		
SOFIES (SOFIES SA)	Task 5.1	Collection of qualitative and quantitative data in relation with existing co-products valorisation initiatives world wide. Production of case-studies and summary factsheets for dissemination via the KESP and among members of the consortium.	Informed consent obtained via direct communication with key stakeholders interviewed. Sharing of the documents for approval before disclosure on the KESP and the NoAW Collaborative work space. Data safety procedures: nothing that is not publicly disclosable has been kept.	Summary factsheets have been shared with our Chinese partners and key stakeholders identified in China, via the NoAW Asian platform.

List of contracts established by partners involved in personal data transfer to non EU partners

The contract template STANDARD CONTRACTUAL CLAUSES FOR TRANSFERS BETWEEN TWO DATA CONTROLLERS adopted by the European commission in 2001 has been sent the 5th of May 2017 to the three partners ECOZ, CBHU and SOFIES who declared to be involved in personal data management in the NOAW project (see table above). This template has been fulfilled with six partners listed in the following table:

CHINESE MIRROR PLATFORM			
	Company	KESP	Email
	MINISTRY OF ECONOMIC AFFAIRS TAIWAN	Eugene Lin	yilin2@moea.gov.tw
	FAR EASTERN NEW CENTURY GROUP	Dr Fanny Liao	fannyliao@metro.feg.com.tw
	WIN TIME TECHNOLOGY CORP.	Mr Yu Ching Hsu	wilson@yongxinnef.com
	CENTRE FOR INCUBATION, INNOVATION, RESEARCH AND CONSULTANCY	Dr Narendra Reddy	nreddy3@outlook.com
	SINGTEX INDUSTRIAL CO. LTD	Mr Lio Chang	jason@singtex.com

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	CHIAO FU MATERIAL TECHNOLOGY CO., LTD.	Mr Allen Lai	allen-lai@chiaofu.com
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5. Metadata management and infrastructure used to make data durable in NoAW

List of partners who declared using OpenAIRE+ metadata to make data durable

The list of partners (see table below) who are ready to reference their data on OpenAIRE+ platform at the end of the project has been completed. A route has been implemented with interested partners to provide these data on OpenAIRE+ using INRAE dataverse repository. The software implementation of this route is presented in section 6.

Firstname	Lastname	Email address	Institution	Task
Patrice	Buche	patrice.buche@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	T1.2, T1.3, T2.1
David	Bolzone lla	david.bolzonella@innov en.it	INNOVEN (INNOVEN SRL)	Task 3.2 Upgrade biogas into biomethane and biohythane
Valérie	GUILLA RD	valerie.guillard@umont pellier.fr	UM (UNIVERSITE DE MONTPELLIER)	Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries and Task 2.4 - Evaluation of case studies and guidance for decisions within the project
Maria	Loizido u	mloiz@chemeng.ntua.g r	NTUA (NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA)	Task 1.1 Operating a knowledge exchange multi-stakeholders platform in interaction with EIP, Task 1.2 Agro-waste data Management, Task 1.3 – Investigating and mapping economic, environmental and social challenges and opportunities of agro-waste chains, Task 1.4 GIS application for spatial/territorial analysis, Task 3.4 - Valorise recalcitrant fractions and streams (e.g. lignocellulosic materials), Task 7.1 - Tools for dissemination and exploitation of NoAW's results - Dissemination strategy,

				communication plan, exploitation plan
Peter	Schiessl	peter.schiessl@tum.de	SCHIESSL (SCHIESSL PETER)	3.1 Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate
Giulio	Zanaroli	giulio.zanaroli@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers (M1-M48)
Annamaria	Celli	annamaria.celli@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	4.1, D4.3
Annalisa	Tassoni	annalisa.tassoni2@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.1, D4.1
Marco	Zeppilli	marco.zeppilli@uniroma1.it	UNIROMA (UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA)	Task 3.1 – Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate Task 3.2 Upgrade biogas into biomethane Task 3.3 - Obtain higher added-value products by converting VFAs residue streams into bioplastics Task 6.2 Demonstration in close-to-real conditions of one agro-waste cascading conversion technology issued from WP3 and WP4
Sophie	Penavayre	sophie.penavayre@vignevin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2
Xuejun	Chen	chenxj@tianan-enmat.com, clacxj@hotmail.com	TIA (NINGBO TIANAN BIOLOGIC MATERIAL CO. LTD)	study properties of produced PHA and compare with presently available on the market
Taihua	Mu	mutaihua@126.com	IAPPST (INSTITUTE OF AGRO-PRODUCTS PROCESSING SCIENCE AND TECHNOLOGY, CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	IAPPST will carry out extraction of biomolecules from waste of starch potato industry. IAPPST can work from lab scale to industry scale. Starch fibers and proteins will be extracted (D at M24). Starch fibers from potato can be used by UNIBO to produce composites.
Boško	Josimović	bosko@iaus.ac.rs	IAUS (INSTITUT ZA ARHITEKTURU I URBANIZAM SRBIJE)	Task 1.4 GIS application for spatial/territorial analysis; Task 2.1 - Identification of relevant attributes and definition of

				NoAW agro-wastes systems boundaries; Task 2.3 - Multi-criteria evaluation in strategic environmental assessment of agro-waste; Task 2.4 - Evaluation of case studies and guidance for decisions within the project management plans
Darko	Bogdanovic	darko.bogdanovic@podrumaleksandrovic.rs	VA (PREDUZECE ZA PROIZVODNJU PROMET I USLUGE VINARIJA ALEKSANDROVIC DOO, VINCA)	Agro-waste data Management
nelly	urban	nurban@grapsud.com	GRAPSUD (GRAP'SUD SOCIETE COOPERATIVE AGRICOLE)	task1 ; Task 3.2; Task 4.1, Task 7

List of partners who declared using other open repositories and metadata to make data durable

Firstname	Lastname	Email address	Institution	Task	Metadata and open repositories
Sophie	Penavayre	sophie.penavayre@vignevin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2	http://www.api-agro.fr/
Annalisa	Tassoni	annalisa.tassoni2@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.1, D4.1	AMS Acta (https://amsacta.unibo.it/)

List of partners who declared using a data sharing infrastructure to share data during the project

All partners who have answered to the survey intend to use the NoAW collaborative workspace to share data during the project. Additionally, some partners who intend to use a dedicated data sharing infrastructure are listed below.

Firstname	Lastname	Email address	Institution	Task	Data sharing infrastructure
Burkhard	Schaer	schaer@ecozept.com	ECOZ (ECOZEPT GBR)	WP1: tasks 1.1, 1.2, 1.3 and WP5 task 5.3	email, dropbox
Tristan	Gruszkos	t.gruszkos@biogaszentrum.de	IBBK (IBBK FACHGRUPPE BIOGAS GMBH)	Task 1.1, Task 1.2, Task 1.3, Task 1.4, Task 5.1, Task 5.3,	dropbox

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				Task 6.3, Task 7.1, Task 7.2 D1.1, D1.2, D1.3, D1.4, D1.5, D1.6, D1.7, D5.1, D5.3, D6.3, D7.1, D7.2, D7.3, D7.4, D7.5, D7.6	
Tünde	Kuti	t.kuti@campdenkht.com	CBHU (Campden BRI Magyarorszag Nonprofit Korlatolt Felelossegu Tarsasag)	Task 1.1 Stakeholder Platform, 1.3 Investigating and mapping economic, environmental, social challenges and opportunities of agrowaste chains, Task 1.5 Key indicators - huan safety, Task 7.2 Dissemination and knowledge transfer	Website Level 2
Anne	Verniquet	anne.verniquet@sofiesgroup.com	SOFIES (SOFIES SA)	Task 5.1	NoAW Website
Eric	TRABLY	eric.trably@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	Task 3.2 - Upgrade biogas into biomethane or biohythane in advanced AD-based technologies	SiIEX LBE

Partners who declared using INRAE dataverse platform to archive and preserve their data

Firstname	Lastname	Email address	Institution	Task
Patrice	Buche	patrice.buche@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	T1.2, T1.3, T2.1
David	Bolzone lla	david.bolzonella@innov en.it	INNOVEN (INNOVEN SRL)	Task 3.2 Upgrade biogas into biomethane and biohythane
Grégoire	DAVID	gregoire.david@supagro .fr	UM (UNIVERSITE DE MONTPELLIER)	4.1.c) biocomposite
Guang- Way	Jang	billjang@itri.org.tw	ITRI (INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE INCORPORATED)	Innovative agro-wastes conversion processes towards added value products, upstream of AD
Valérie	GUILLA RD	valerie.guillard@umontp ellier.fr	UM (UNIVERSITE DE MONTPELLIER)	Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries and Task 2.4 - Evaluation of case studies and guidance for decisions within the project
Maria	Loizido u	mloiz@chemeng.ntua.gr	NTUA (NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA)	Task 1.1 Operating a knowledge exchange multi-stakeholders platform in interaction with EIP, Task 1.2 Agro-waste data Management, Task 1.3 – Investigating and mapping economic, environmental and social challenges and opportunities of agro-waste chains, Task 1.4 GIS application for spatial/territorial analysis, Task 3.4 - Valorise recalcitrant fractions and streams (e.g. lignocellulosic materials), Task 7.1 - Tools for dissemination and exploitation of NoAW's results - Dissemination strategy, communication plan, exploitation plan
Carol Sze Ki	Lin	carollin@cityu.edu.hk	SEE (CITY UNIVERSITY OF HONG KONG)	ECO-DESIGN OF BIO-MOLEC & BIO-MATERIALS through innovative cascading agro-waste conversion D4.1 - Biotechnological and physical-chemical optimized strategies to extract and convert biomolecules from agro-wastes

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 688338

Sophie	Penava yre	sophie.penavayre@vign evin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2
Annalis a	Tassoni	annalisa.tassoni2@unib o.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.1, D4.1
Marco	Zeppilli	marco.zeppilli@uniroma 1.it	UNIROMA (UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA)	Task 3.1 – Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate Task 3.2 Upgrade biogas into biomethane Task 3.3 - Obtain higher added- value products by converting VFAs residue streams into bio- plastics Task 6.2 Demonstration in close-to-real conditions of one agro-waste cascading conversion technology issued from WP3 and WP4
Taiyua n	Mu	mutaihua@126.com	IAPPST (INSTITUTE OF AGRO-PRODUCTS PROCESSING SCIENCE AND TECHNOLOGY, CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	IAPPST will carry out extraction of biomolecules from waste of starch potato industry. IAPPST can work from lab scale to industry scale. Starch fibers and proteins will be extracted (D at M24). Starch fibers from potato can be used by UNIBO to produce composites.
Boško	Josimov ić	bosko@iaus.ac.rs	IAUS (INSTITUT ZA ARHITEKTURU I URBANIZAM SRBIJE)	Task 1.4 GIS application for spatial/territorial analysis; Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries; Task 2.3 - Multi-criteria evaluation in strategic environmental assessment of agro-waste; Task 2.4 - Evaluation of case studies and guidance for decisions within the project management plans
Darko	Bogdan ovic	darko.bogdanovic@podr umaleksandrovic.rs	VA (PREDUZECE ZA PROIZVODNJU PROMET I USLUGE VINARIJA ALEKSANDROVIC DOO, VINCA)	Agro-waste data Management
Nelly	Urban	nurban@grapsud.com	GRAPSUD (GRAP'SUD SOCIETE COOPERATIVE AGRICOLE)	task1 ; Task 3.2; Task 4.1, Task 7

Partners who declared using another platform to archive and preserve their data

Firstname	Lastname	Email address	Institution	Task	Infrastructure used to archive and preserve data
Florian	Monlau	florian.monlau@apesa.fr	APESA (ASSOCIATION POUR L'ENVIRONNEMENT ET LA SECURITE EN AQUITAINE)	Task 1.5; 3.1; 3.2; 4.2	Private Intranet
Eric	Mooij	emooij@hiemstra.nl	Agriport (AGRIPORT A7 B.V.)	Task 5.1 Review and analysis of existing business concepts designed for efficient use of resources	not specified
Evelina	Höglund	evelina.hoglund@sp.se	SP (SP SVERIGES TEKNISKA FORSKNINGSPSTITUT AB)	Task 4.1	not specified
Joana	Fradinho	j.fradinho@campus.fct.unl.pt	IBET (INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA)	Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers	not specified
Tristan	Gruszko	t.gruzkos@biogaszentrum.de	IBBK (IBBK FACHGRUPPE BIOGAS GMBH)	Task 1.1, Task 1.2, Task 1.3, Task 1.4, Task 5.1, Task 5.3, Task 6.3, Task 7.1, Task 7.2 D1.1, D1.2, D1.3, D1.4, D1.5, D1.6, D1.7, D5.1, D5.3, D6.3, D7.1, D7.2, D7.3, D7.4, D7.5, D7.6	not specified
Burkhard	Schaer	schaer@ecozept.com	ECOZ (ECOZEPT GBR)	WP1: tasks 1.1, 1.2, 1.3 and WP5 task 5.3	ecozept server
Tünde	Kuti	t.kuti@campdenkht.com	CBHU (Campden BRI)	Task 1.1 Stakeholder	automatic back -up once a day,

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			Magyarország Nonprofit Korlatolt Felelőségi Társaság)	Platform, 1.3 Investigating and mapping economic, environmental, social challenges and opportunities of agrowaste chains, Task 1.5 Key indicators - human safety, Task 7.2 Dissemination and knowledge transfer	authentication (login name and password)
Morten	Birkved	bir@dtu.dk	DTU (DANMARKS TEKNISKE UNIVERSITET)	Task 2.1, Task 2.2 and Task 2.4 Deliverable 2.1, 2.2, 2.3 and 2.5	Local storage at DTU
Anne	Verniquet	anne.verniquet@sofiesgroup.com	SOFIES (SOFIES SA)	Task 5.1	not specified
Eric	TRABLY	eric.trably@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	Task 3.2 - Upgrade biogas into biomethane or biohythane in advanced AD-based technologies	not specified
Peter	Schiessl	peter.schiessl@tum.de	SCHIESSL (SCHIESSL PETER)	3.1 Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate	private data storage
Annalisa	Tassoni	annalisa.tassoni2@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.1, D4.1	AMS Acta (https://amsacta.unibo.it/)
Annamaria	Celli	annamaria.celli@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	4.1, D4.3	AMS Acta (https://amsacta.unibo.it/)
Giulio	Zanaroli	giulio.zanaroli@unibo.it	UNIBO (ALMA MATER STUDIORUM -	Task 4.3 – Converting VFAs rich residue stream	AMS Acta - UNIBO institutional repository compliant with OpenAir and Open

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			UNIVERSITA DI BOLOGNA)	from the two steps AD into bio-polymers (M1-M48)	Research Data Pilot requirements (https://amsacta.unibo.it/)
Sophie	Penavayre	sophie.penavayre@vignevin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2	not defined
Sophie	Penavayre	sophie.penavayre@vignevin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2	www.api-agro.fr
Xuejun	Chen	chenxj@tianan-enmat.com, clacxj@hotmail.com	TIA (NINGBO TIANAN BIOLOGIC MATERIAL CO. LTD)	study properties of produced PHA and compare with presently available on the market	not specified
Thomas	Herfellner	thomas.herfellner@ivv.fraunhofer.de	FRAUNHOFER (FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.)	3.3, 4.1, 4.3, 6.2, 7.1, 7.2, 7.3, 8.1, 8.2	not specified
Helene	Fulcrand	helene.fulcrand@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	T4.1 and T4.3 Phenolic building blocks production and exploitation for polymers; Succinic acid production	my computer hardware
Marco	Zeppilli	marco.zeppilli@uniroma1.it	UNIROMA (UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA)	Task 3.2: Upgrade biogas into biomethane	not specified
Daniel	Rossi	d.rossi@confagricoltura.it	GCIA (CONFEDERAZIONE GENERALE DELL'AGRICOLTURA ITALIANA)	1.1, 1.2, 1.3, 1.4, 2.3, 7.1, 7.2, 7.3, 7.4, 7.6.	not specified

6. FAIR data management implementation in the framework of NOAW project to make data durable

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INRAE partner has proposed a FAIR data management implementation to help NOAW project partners to make their data durable following the Open Science schema presented in Figure 1. The solution is based on the notion of Digital Object Identifier. In computing, a Digital Object Identifier or DOI is a persistent identifier or handle used to uniquely identify objects, standardized by the International Organization for Standardization (ISO). DOIs are in wide use mainly to identify academic, professional, and government information, such as journal articles, research reports and data sets, and official. The Open Science schema presented in Figure 1 has ambition to increase the visibility of researcher's work. He/she has the possibility to publish his/her data sets in an open datawarehouse and to publish a data paper in addition to classical primary scientific publications. As each data set is associated with a DOI, those three types of production may cite each other as shown in Figure 1.

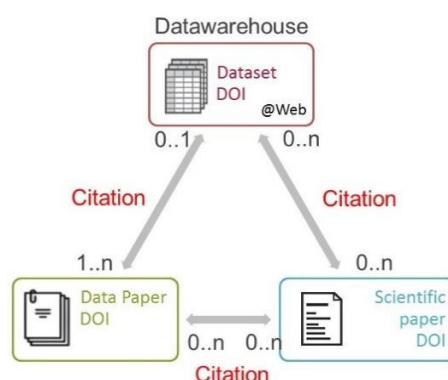


Figure 1 Citations between the three types of researcher's production

In NOAW, INRAE has proposed to all partners the possibility to upload in INRAE dataverse a set of data file stored in a dataset which is automatically associated with a DOI. Datasets stored in NOAW dataverse are automatically harvested in order to replicate their metadata to OpenAIR+. Direct link to NoAW dataverse is <https://data.inrae.fr/dataverse/noaw>.

FAIR principles implementation in INRAE NOAW dataverse are the following:

- Findable: Digital Object Identifier (DOI) including an unique identifier and metadata is associated with a given dataset. DOI creation allows metadata indexation by search engines (DataCite, Dataverse INRAE, ...);
- Accessible: INRAE guarantees at least 10 years persistent storage for datasets;
- Interoperable: data files should be registered in open formats like CSV or common formats (Excel, Open Office, ...);
- Reusable: License terms are associated with datasets (by example CC-BY 4.0).

In the following, the lists of datasets created by NOAW partners on INRAE dataverse are provided by WPs.

List of datasets created on INRAE dataverse for WP1

Dataset title	Creator	DOI	Downloads
Stakeholders' preferences survey about new technology acceptance and potential development for waste management in wine production in Languedoc Roussillon, France	INRAE	https://doi.org/10.15454/IZJIT7	27
Questionnaire structure of stakeholder survey about biomaterials and biogas facilities	CBHU	https://doi.org/10.15454/2ZM3XE	4
Spatial/territorial analysis as support to WMP and SEA for selected case study area	IAUS	https://doi.org/10.15454/HOTPJB	67

List of datasets created on INRAE dataverse for WP2

Dataset title	Creator	DOI	Downloads
Background data associated with maximization of environmental impact savings potential through innovative biorefinery alternatives	DTU	https://doi.org/10.15454/ABCM1W	4
Preferences and justifications of NoAW stakeholders about the importance on LCA (Life Cycle Analysis) impact categories	INRAE	https://doi.org/10.15454/XVL4BA	28
Datasets associated with innovative approaches to turn agricultural waste into eco-logical and economic assets	IAUS	https://doi.org/10.15454/XRXSHL	38

List of datasets created on INRAE dataverse for WP3

Dataset title	Creator	DOI	Downloads
Pre- and post-treatment of lignocellulosic material	NTUA	https://doi.org/10.15454/IZVIJX	0
Experimental data to investigate the impact of inoculum addition and substrate concentration (20, 40, 80 and 130 gCOD/L) to reach	INRAE	https://doi.org/10.15454/GH9PAP	0

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a maximal organic matter degradation and hydrogen production by dark fermentation			
PHA pilot plant pictures deliverable 3.3	UNIROMA	https://doi.org/10.15454/AOH1YC	0
Experimental activity of the pilot plant platform reported in the deliverable 3.3	UNIROMA	https://doi.org/10.15454/WBQX7Z	0
L. Cristiani, M. Zeppilli, C. Porcu, M. Majone, Ammonium Recovery and Biogas Upgrading in a Tubular Micro-Pilot Microbial Electrolysis Cell (MEC), Molecules 25 (2020) 2723", datasets from the journal article Molecules 25 (2020) 2723	UNIROMA	https://doi.org/10.15454/ZPGCPK	1
Bioelectromethanogenesis reaction in a tubular Microbial Electrolysis Cell (MEC) for biogas upgrading, dataset from the journal article Renewable Energy 158 (2020) 23-31	UNIROMA	https://doi.org/10.15454/Y7STKK	1

List of datasets created on INRAE dataverse for WP4

Dataset title	Creator	DOI	Downloads
Experimental data associated with itineraries to produce composites from vineshoot fibers and PHBV	UM	https://doi.org/10.15454/UQ4MOB	3
Raw data for the article "Exploring the potential of gas-phase esterification to hydrophobize the surface of micrometric cellulose particles"	UM	https://doi.org/10.15454/6VQ9JA	43
Production d'acide succinique par fermentation et dépolymérisation chimique des tanins condensés pour le développement de molécules plateformes et de matériaux biosourcés	INRAE	https://doi.org/10.15454/BX4JFE	0
New Copolyesters Based On Vanillic Acid	UNIBO	https://doi.org/10.15454/HSONVG	0
Preparation Of Composites Based On	UNIBO	https://doi.org/10.15454/ONSGCG	0

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Polyhydroxycanoates (PHBV) And Agro-Waste			
Membrane processes for the concentration of VFAs occurring in effluents of biotechnological acidogenic processes	UNIBO	https://doi.org/10.15454/CXGQWC	2
VFA functionalization through the addition of hydroxylic group by a bioelectrochemical approach	UNIBO	https://doi.org/10.15454/H5C9ZS	0

List of datasets created on INRAE dataverse for WP5

Dataset title	Creator	DOI	Downloads
Business Model Canvas examples	CBHU	https://doi.org/10.15454/AHKBTQ	6
Results of analysing success and failure factors based on triggers	CBHU	https://doi.org/10.15454/48IFBQ	3
SWOT analysis of case studies	CBHU	https://doi.org/10.15454/Y3RPE3	3
SWOT Method for NoAW_WP5_Task5.4	CBHU	https://doi.org/10.15454/5789RH	0

List of datasets created on INRAE dataverse for WP6

Dataset title	Creator	DOI	Downloads
Background data for a techno-economic assessment and a life cycle assessment of two polyphenol extraction methods, solvent extraction (SE) and pressurized liquid extraction (PLE)	DTU	https://doi.org/10.15454/LZCMKQ	17
Background data for the identification of an ideal biorefinery technology for a given region	DTU	https://doi.org/10.15454/IXFDKI	0
Background data for an LCA study of vine shoots as fillers in biocomposite packaging materials	DTU	https://doi.org/10.15454/RLO20C	1
Demonstration trial of integrated technology chain, dataset from Deliverable 6.2	UNIROMA	https://doi.org/10.15454/Y9VT76	0

Regional Business Concepts - Data for mapping of the potential in Europe	SOFIES	https://doi.org/10.15454/TFP78U	4
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7. Conclusions

This deliverable is the final version of the NoAW Data Management Plan (DMP). The purpose of the DMP is to provide a global picture of data collected/produced in the project. Consequently, detailed information is provided on the procedures that have been implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation. The DMP provides a relevant global picture of the types of data which have been collected/produced in all the WPs.

The list of partners who are ready to reference their data on OpenAIRE+ platform at the end of the project has been completed. A route has been implemented by INRAE and has been used by interested partners to reference their data on OpenAIRE+ (metadata replication after publication in INRAE dataverse repository).

A list of partners who are concerned by ethic aspects, which are mainly associated with personal data management, has been completed. Partners have provided information about their personal data management policy. Furthermore, a list of partners who are concerned by personal data transfer to non EU partners has also been completed. They have signed data transfer agreement with non EU partners.

Current content represents 29 datasets annotated with metadata, including 176 data files.

Even if the majority of those datasets have been recently published, more than 250 downloads have already been done.

8. Partners involved in the work

Firstname	Lastname	Email address	Institution	Task
Hinrich	Uellendahl	hu@bio.aau.dk	AAU (AALBORG UNIVERSITET)	Task 1.1 Operating a knowledge exchange multi-stakeholders platform in interaction with EIP; Task 1.2 Agro-waste data Management; Task 1.3 – Investigating and mapping economic, environmental and social challenges and opportunities of agro-waste chains; Task 1.4 GIS application for spatial/territorial analysis; Task 3.4 - Valorise recalcitrant fractions and streams (e.g. lignocellulosic materials); Task 7.1 - Tools for dissemination and exploitation of NoAW's results - Dissemination strategy, communication plan, exploitation plan; Task 7.2 – Dissemination, knowledge and technology transfer to farms, businesses and other end-users; Task 7.3 - Increasing awareness and disseminating project results to students and the scientific community
Eric	Mooij	emooij@hiemstra.nl	Agriport (AGRIPORT A7 B.V.)	Task 5.1 Review and analysis of existing business concepts designed for efficient use of resources
Florian	Monlau	florian.monlau@apesa.fr	APESA (ASSOCIATION POUR L'ENVIRONNEMENT ET LA SECURITE EN AQUITAINE)	Task 1.5; 3.1; 3.2; 4.2
Tünde	Kuti	t.kuti@campdenkht.com	CBHU (Campden BRI Magyarorszag Nonprofit Korlatolt Felelossegu Tarsasag)	Task 1.1 Stakeholder Platform, 1.3 Investigating and mapping economic, environmental, social challenges and opportunities of agrowaste chains, Task 1.5 Key indicators - human safety, Task 7.2 Dissemination and knowledge transfer
Jan	Broeze	jan.broeze@wur.nl	DLO-FBR (STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK)	Tasks 5.1, 5.2, 5.3 and 5.4 D5.1, D5.2, D5.3 and D5.4

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Morten	Birkved	bir@dtu.dk	DTU (DANMARKS TEKNISKE UNIVERSITET)	Task 2.1, Task 2.2 and Task 2.4 Deliverable 2.1, 2.2, 2.3 and 2.5
Burkhard	Schaer	schaer@ecozept.com	ECOZ (ECOZEPT GBR)	WP1: tasks 1.1, 1.2, 1.3 and WP5 task 5.3
Thomas	Herfellner	thomas.herfellner@ivv.fraunhofer.de	FRAUNHOFER (FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.)	3.3, 4.1, 4.3, 6.2, 7.1, 7.2, 7.3, 8.1, 8.2
Daniel	Rossi	d.rossi@confagricoltura.it	GCIA (CONFEDERAZIONE GENERALE DELL'AGRICOLTURA ITALIANA)	1.1, 1.2, 1.3, 1.4, 2.3, 7.1, 7.2, 7.3, 7.4, 7.6.
nelly	urban	nurban@grapsud.com	GRAPSUD (GRAP'SUD SOCIETE COOPERATIVE AGRICOLE)	task1 ; Task 3.2; Task 4.1, Task 7
Taihua	Mu	mutaihua@126.com	IAPPST (INSTITUTE OF AGRO-PRODUCTS PROCESSING SCIENCE AND TECHNOLOGY, CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	IAPPST will carry out extraction of biomolecules from waste of starch potato industry. IAPPST can work from lab scale to industry scale. Starch fibers and proteins will be extracted (D at M24). Starch fibers from potato can be used by UNIBO to produce composites.
Boško	Josimović	bosko@iaus.ac.rs	IAUS (INSTITUT ZA ARHITEKTURU I URBANIZAM SRBIJE)	Task 1.4 GIS application for spatial/territorial analysis; Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries; Task 2.3 - Multi- criteria evaluation in strategic environmental assessment of agro-waste; Task 2.4 - Evaluation of case studies and guidance for decisions within the project management plans
Tristan	Gruszko	t.gruszkos@biogas-zentrum.de	IBBK (IBBK FACHGRUPPE BIOGAS GMBH)	Task 1.1, Task 1.2, Task 1.3, Task 1.4, Task 5.1, Task 5.3, Task 6.3, Task 7.1, Task 7.2 D1.1, D1.2, D1.3, D1.4, D1.5, D1.6, D1.7, D5.1, D5.3, D6.3, D7.1, D7.2, D7.3, D7.4, D7.5, D7.6
Joana	Fradinho	j.fradinho@campus.fct.unl.pt	IBET (INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA)	Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers

Sophie	Penava yre	sophie.penavayre@vign evin.com	IFV (INSTITUT FRANCAIS DE LA VIGNE ET DU VIN)	1.1, 1.2, 1.4, 2.1, 2.2, 2.3, 2.4, 7.1, 7.2
David	Bolzone lla	david.bolzonella@innov en.it	INNOVEN (INNOVEN SRL)	Task 3.2 Upgrade biogas into biomethane and biohythane
Patrice	Buche	patrice.buche@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	T1.2, T1.3, T2.1
Eric	Trably	eric.trably@INRAE.fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	Task 3.2 - Upgrade biogas into biomethane or biohythane in advanced AD-based technologies
Helene	Fulcran d	helene.fulcrand@INRAE .fr	INRAE (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE)	T4.1 and T4.3 Phenolic building blocks production and exploitation for polymers; Succinic acid production
Guang- Way	Jang	billjang@itri.org.tw	ITRI (INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE INCORPORATED)	Innovative agro-wastes conversion processes towards added value products, upstream of AD
Maria	Loizidou	mloiz@chemeng.ntua.gr	NTUA (NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA)	Task 1.1 Operating a knowledge exchange multi- stakeholders platform in interaction with EIP, Task 1.2 Agro-waste data Management, Task 1.3 – Investigating and mapping economic, environmental and social challenges and opportunities of agro-waste chains, Task 1.4 GIS application for spatial/territorial analysis, Task 3.4 - Valorise recalcitrant fractions and streams (e.g. lignocellulosic materials), Task 7.1 - Tools for dissemination and exploitation of NoAW's results - Dissemination strategy, communication plan, exploitation plan
Peter	Schiessl	peter.schiessl@tum.de	SCHIESSL (SCHIESSL PETER)	3.1 Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate
Carol Sze Ki	Lin	carollin@cityu.edu.hk	SEE (CITY UNIVERSITY OF HONG KONG)	ECO-DESIGN OF BIO-MOLEC & BIO-MATERIALS through innovative cascading agro- waste conversion D4.1 - Biotechnological and physical-chemical optimized strategies to extract and convert biomolecules from agro-wastes

Anne	Verniquet	anne.verniquet@sofiesgroup.com	SOFIES (SOFIES SA)	Task 5.1
Evelina	Höglund	evelina.hoglund@sp.se	SP (SP SVERIGES TEKNISKA FORSKNINGSPENNINGSTAB)	Task 4.1
Xuejun	Chen	chenxj@tianan-enmat.com, clacxj@hotmail.com	TIA (NINGBO TIANAN BIOLOGIC MATERIAL CO. LTD)	study properties of produced PHA and compare with presently available on the market
Grégoire	DAVID	gregoire.david@supagro.fr	UM (UNIVERSITE DE MONTPELLIER)	4.1.c) biocomposite
Valérie	GUILLARD	valerie.guillard@umontpellier.fr	UM (UNIVERSITE DE MONTPELLIER)	Task 2.1 - Identification of relevant attributes and definition of NoAW agro-wastes systems boundaries and Task 2.4 - Evaluation of case studies and guidance for decisions within the project
Giulio	Zanaroli	giulio.zanaroli@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.3 – Converting VFAs rich residue stream from the two steps AD into bio-polymers (M1-M48)
Annamaria	Celli	annamaria.celli@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	4.1, D4.3
Annalisa	Tassoni	annalisa.tassoni2@unibo.it	UNIBO (ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA)	Task 4.1, D4.1
Marco	Zeppilli	marco.zeppilli@uniroma1.it	UNIROMA (UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA)	Task 3.1 – Optimize the use of nutrients recovered from conventional and advanced anaerobic digestate Task 3.2 Upgrade biogas into biomethane Task 3.3 - Obtain higher added-value products by converting VFAs residue streams into bio-plastics Task 6.2 Demonstration in close-to-real conditions of one agro-waste cascading conversion technology issued from WP3 and WP4
Darko	Bogdanovic	darko.bogdanovic@podrumaleksandrovic.rs	VA (PREDUZECE ZA PROIZVODNJU PROMET I USLUGE VINARIJA ALEKSANDROVIC DOO, VINCA)	Agro-waste data Management

9. References

- [1] H2020 Programme Guidelines on FAIR Data Management in Horizon 2020, Version 3.0, 26 July 2016, EUROPEAN COMMISSION Directorate-General for Research & Innovation
- [2] H2020 Programme Guidance How to complete your ethics self-assessment, Version 5.2 12 July 2016, EUROPEAN COMMISSION Directorate-General for Research & Innovation

10. Annexes

ANNEX I KEY PRINCIPLES FOR OPEN ACCESS TO RESEARCH DATA

These principles can be applied to any project that produces, collects or processes research data. As indicated in Guidelines on Data Management in H2020 [1], scientific research data should be easily:

1. Discoverable

The data and associated software produced and/or used in the project should be discoverable (and readily located), identifiable by means of a standard identification mechanism (e.g. Digital Object Identifier)

2. Accessible

Information about the modalities, scope and licenses (e.g. licencing framework for research and education, embargo periods, commercial exploitation, etc.) in which the data and associated software produced and/or used in the project is accessible should be provided.

3. Assessable and intelligible

The data and associated software produced and/or used in the project should be assessable for and intelligible to third parties in contexts such as scientific scrutiny and peer review (e.g. the minimal datasets are handled together with scientific papers for the purpose of peer review, data are provided in a way that judgments can be made about their reliability and the competence of those who created them).

4. Useable beyond the original purpose for which it was collected

The data and associated software produced and/or used in the project should be useable by third parties even long time after the collection of the data (e.g. data are safely stored in certified repositories for long term preservation and curation; they are stored together with the minimum software, metadata and documentation to make it useful; the data are useful for the wider public needs and usable for the likely purposes of non-specialists).

5. Interoperable to specific quality standards



NoAW project - Deliverable



The data and associated software produced and/or used in the project should be interoperable allowing data exchange between researchers, institutions, organisations, countries, etc. (e.g. adhering to standards for data annotation, data exchange, compliant with available software applications, and allowing re-combinations with different datasets from different origins).