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## 1. EXECUTIVE SUMMARY

D5.2 monitoring report aims to present an overview of the monitoring and impact assessment activities carried out during the project until M12 in comparison with the D5.1 Monitoring and Assessment Plan, evaluate the need for changes in the communication programme and propose possible recommendations for adaptions in the BIOWAYS communication programme.

The leader of WP5 (CE) is responsible for the coordination of monitoring and assessment activities in the project and for developing the tools and materials to be used in implementing the monitoring and assessment of the indicators and impacts during the second year of the project.

All the partners are involved in the monitoring and assessment activities. The expected contribution from partners is to:

- a) conduct short surveys at the beginning of events organised in WP3 and WP4, with the aim of studying participants' initial awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy.
- b) conduct the 2<sup>nd</sup> round of survey at the end of the project (T2.2) among participants of the BIOWAYS project and general public to study their change in awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy as a result of BIOWAYS activities.

#### The present document outlines:

- · objective of monitoring and assessment
- the communication programme and key message
- overview of monitoring and impact assessment activities carried out until M12
- assessment of indicators and targets
- possible recommendations for adapting BIOWAYS priorities



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#### 2. Introduction

This document represents the deliverable D5.2 Monitoring report at M12, which is comprised within WP5 Impact assessment and recommendations. The report will provide an overview of the monitoring and impact assessment activities carried out during the project until M12, assess the targets achieved so far and evaluate the need for changes in the communication programme and propose possible recommendations.

#### 3. OBJECTIVE OF MONITORING AND ASSESSMENT

The objective of the BIOWAYS monitoring and impact assessment activities has not changed. The objective is to evaluate how the project's communication programme has contributed to the increase of awareness/engagement/public acceptance/market uptake of bio-based products. The objective corresponds to the overall objectives of the BIOWAYS project.

To evaluate this, a set of evaluation questions together with specific indicators, detailed evaluation questions and expected targets were formulated in the D5.1 Monitoring and Assessment Plan. Achievement of those expected targets will be assessed in section 5.3.

#### 4. THE COMMUNICATION PROGRAMME AND KEY MESSAGES

The communication programme of the BIOWAYS project has not changed. As described in the section 3.2 of the D5.1 Monitoring and Assessment Plan, the communication programme of the BIOWAYS project comprises the activities to be implemented towards different stakeholders in WP2, 3, 4, 5 and 6 with the aim of achieving the following impacts:

- an increase of societal confidence in bio-based products and bio-based industries;
- increased engagement by end-consumers in the bioeconomy;
- increased awareness and acceptance of bio-based products amongst Europe's general public, students, scientists, media and policy makers, both in terms of what they deliver now and in terms of their potential in the future;
- increased visibility of the research and results of EC-supported bio-based projects;
- increased engagement between the wider public and scientists working in this sector.

The core message, domains of intervention, as well as key audiences and channels have been thoroughly described in D6.1 Dissemination & Communication Plan and updated in D6.2 Dissemination & Communication Plan V2.

#### 5. The description of the monitoring and assessment activities until m12

The main project activities during Year 1 have been dealing with setting up all the necessary systems in all WPs for the successful implementation of the communication programme of the BIOWAYS project and initiating the activities.



#### **5.1.** DESCRIPTION OF RELATED PROJECT ACTIVITIES

In WP2 activities T2.1 "Review and assessment of the bio-based products current market update and applications and their future potential" and T2.2 "Identification and analysis of public perception of bio-based products" were finalized. These activities are closely linked with WP5 giving an overview and understanding of the current market situation and the initial overall public opinion regarding bio-based products. The T2.2 survey gave 452 responses from various EU countries and the results have been analysed in D2.2 Public perception of bio-based products.

In WP3 the development of the BioWatch platform, e-Library, training contents and training tools are in the process, contributing to the communication programme. For now, the first version of an interactive training tool targeting (mainly) kids has been released on 15<sup>th</sup> of September 2017. The training tool is a BIOWAYS online game BioWhat? – the bioeconomy game, which has been designed in collaboration with the project <u>BioSTEP</u>. The game is designed to increase the awareness of children about the use of bio-based products in our everyday lives and is an important part of BIOWAYS communication programme towards children.

In WP4 all of the necessary systems and contacts, as well as the reference group have been set up for organising the events under T4.2, T4.3 and T4.4. Up to now the BIOWAYS project has organised 4 pilot training seminars/awareness raising activities for children and adults in the frames of Researchers Night in Rome, Bologna, Cesena Italy and Aveiro Portugal. The events at Researchers Night have been the only events so far where to study participants' initial awareness with short surveys as described in the detailed plan of impacts and indicators in the D5.1. The results of the event and surveys will be described in section 5.3 of the current document. The rest of the planned events of the BIOWAYS project will be carried out in next periods and reported in D5.3.

In WP6 all systems for successful implementation of dissemination and communication actions have been set up. These include the systems for monitoring the result indicators of the BIOWAYS project.

#### 5.2. DESCRIPTION OF ACTIVITIES IN WP5

According to the D5.1 Monitoring and Assessment Plan the monitoring will be carried out throughout the project by:

- Collecting statistics about BIOWAYS communication activities;
- Conducting short surveys at the beginning of all events organized in WP4 and WP3, with the aim of studying participants' initial awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy;
- Conducting a 2nd round of surveys at the end of the project (T2.2) among participants of the BIOWAYS project and general public to study their change in awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy as a result of BIOWAYS activities.



The activities so far have also been mostly connected to setting up appropriate systems and developing necessary tools and templates for monitoring the contribution of the project's communication programme to the increase of awareness/engagement/public acceptance/market uptake of bio-based products.

For using in the events in WP3 and WP4 several targeted short questionnaires for surveys were developed. The templates are included in Annex1. In addition to the templates a surveymonkey.com platform based online survey was developed that could be used at events with adult/researchers/institutions participants. The survey is reachable at: https://www.surveymonkey.com/r/J8WMBZ3.

The developed templates of short surveys have been used to study participants' initial awareness at the Researchers Night events in Rome, Bologna, Cesena Italy and Aveiro Portugal. The results of the event and surveys will be described in section 5.3.

# 5.3. EVALUATION CRITERIA – KEY PERFORMANCE INDICATORS (1<sup>ST</sup> YEAR)

For monitoring the change in indicators, a detailed plan with impacts, indicators, methodologies as well as expected targets was devised in D5.1 Monitoring and Assessment Plan. In this section, we will assess the targets reached so far.

#### 5.3.1. Result indicators

The following table provides an overview about the status of result indicators. As may be seen from the table below about result indicators, BIOWAYS has gained a lot of visibility via different channels during first 12 months. Visibility and contacts made during the first half of the project have made a good groundwork for the activities to be implemented in the 2<sup>nd</sup> half of the project and for achieving the impact desired - the increase in awareness, engagement, public acceptance and market uptake of bio-based products and bioeconomy.

Main impacts monitored/ broad evaluation questions	Specific objective	Indicators	Expected target	Target reached at M12	Comments
			RESULT INDIC	ATORS	
BIOWAYS results		Number of recipients of BIOWAYS communication material:  - Newsletters  - Brochures  - factsheets	5000	1 Newsletter sent out to ca 300 contacts. 7% of rejections; 26% openings; 4% shares Published and promoted in the website and social networks	Via the newsletter we have informed ca 75 persons about project BIOWAYS.
		Number of BioWatch users	1000	0	BioWatch platform is not online yet, because this action is to be implemented the following months under WP3.
	Number of website visitors	At least 500 visits per month	Jan-Sept  - 247 visits per month  - 43% of returning visitors  - 72 different countries	Altogether the BIOWAYS website has been visited 2223 times by people from 72 different countries.  Average time on page has been 1:33 and the website has 43% of returning visitors	
		Social media	150 members on LinkedIn 100 followers on twitter	<ul> <li>16 members on LinkedIn</li> <li>85 followers on twitter</li> <li>Facebook: 74 likes and 75 followers</li> </ul>	BIOWAYS has reached ca 175 people with our social media activities
		Number of users of training materials/ training tools	200 per game and material	440	Training tool for children: Interactive online game "BioWhat? – the bioeconomy game". 440 users during the Researchers Night in Italy and Portugal.



	Number of participants in:  - barcamps  - thematic charrettes  - training seminars	470 altogether	1120	4 pilot training seminars/awareness raising activities for children and adults in the frames of Researchers Night in Rome, Bologna, Cesena Italy and Aveiro Portugal  1000 visitors in Italy, 120 visitors in Portugal
	Number of dissemination events partners have participated at	At least 2 events participation per partner  15 potential contacts for follow up actions	14	The partners of BIOWAYS have made the project visible in 14 events, got 230 contacts and visibility among 1160 people. Please see Annex II for list of activities BIOWAYS partners have participated at.
	1 <sup>st</sup> round of survey participants	400	452	BIOWAYS got 452 results to our T2.2 survey, which was also a good way to distribute the knowledge about the BIOWAYS project and bioeconomy in general
Networking activities to support the activities in WP3 and WP4:	Invitation to cooperate during BIOWAYS events	Not planned	325	Invitation to potential collaborators (325) to contribute during the BIOWAYS events (Maker Faire, European Researchers' Night, etc) and to disseminate the <u>BIOWAYS CALL</u> for biobased products to be showcased in BIOWAYS events.
	One-to-one meetings with potential collaborations/partners for incoming events	Not planned	15	One-to-one meetings to organise the collaborations and the involvement of the researchers and industry to the BIOWAYS events.

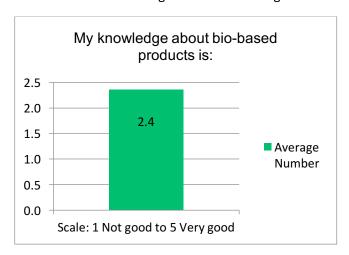
## 5.3.2. Impact Indicators

In this section we will analyse the impact achieved so far with the communication programme of the BIOWAYS project according to the impact indicators stated in the D5.1 Monitoring and Assessment plan. The possible impact is analysed based on the short surveys made among the participants of the Researchers Night.

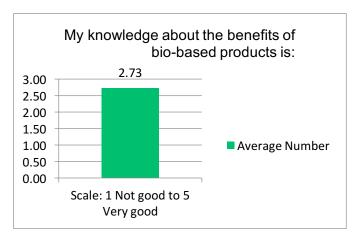
## 5.3.2.1. Overview of the short surveys conducted among adult participants

During the Researchers Night events in Rome, Bologna, Cesena Italy and Aveiro Portugal 113 answers to the Questionnaire No I in the Annex I were collected.

According to the answers given, the initial awareness about bio-based products among adults as perceived by themselves is low. The average level of knowledge on a scale from 1-5 was 2,4.

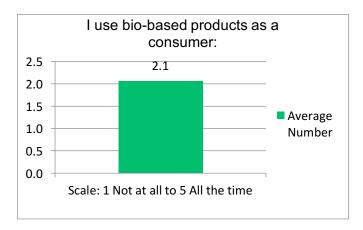


The knowledge about the benefits of bio-based products was valued a bit higher, but may still be considered low. The average level of knowledge on a scale from 1-5 was 2,7.

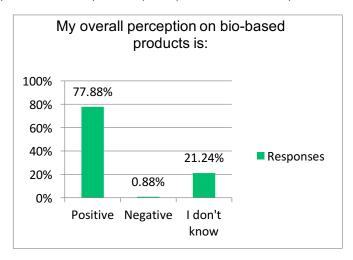


The market uptake of bio-based products as measured by regular usage is also low. The respondents estimated that they do not use bio-based products often.

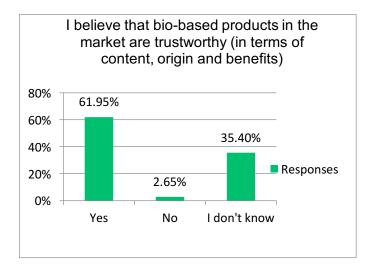




However, the overall perception and acceptance of the bio-based products is positive – 77,9 % of respondents reported to have positive perception of bio-based products.

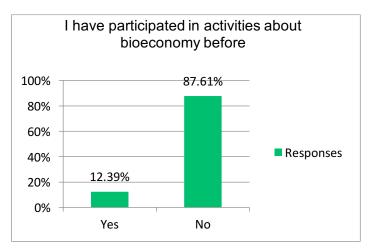


The societal confidence and trust related to bio-based products is also relatively high. 62% of respondents stated that they believe, that bio-based products in the market are trustworthy. Only 2,7% answered that they did not consider the bio-based products trustworthy. 35% answered "I don't know", which is correlated with the low knowledge and usage of bio-based products.

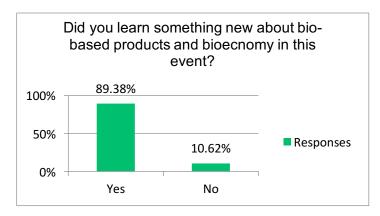




People's engagement in bio-economy as measured by their participation in activities about bio-economy is low. 87,6% of participants answered that they have not taken part in any activities regarding bio-economy.



Organising activities about bio-economy is beneficial for increasing the awareness, engagement and use of bio-based products as 89,4% of participants answered that they learned something new at Researchers Night BIOWAYS event and 54% said that they would like to learn more about bio-economy and bio-based products.



The respondents wanted to learn more about the following aspects of bio-based products and bio-economy:

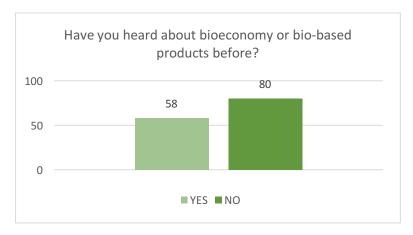
- Impact, benefits and sustainability of bio-based products (12)
- Market and where to buy bio-based products (8)
- ➤ Information about specific bio-products and their characteristics (7)

- Production process of bio-based products (6)
- ➤ How manage them at the end of their life (6)
- Certification and labelling (4)
- Costs compared to regular products (4)
- Safety issues (1)
- > Support from policy (1)
- Performance compared to regular products (1)

## 5.3.2.2. Overview of the short surveys conducted among children

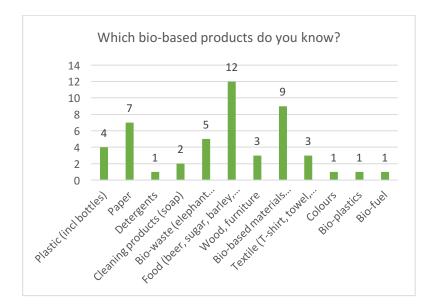
During the Researchers Night events in Rome, Bologna, Cesena Italy and Aveiro Portugal 138 answers to the Questionnaire No IV in the Annex I were collected.

To evaluate the initial awareness of children they were presented with the question" Have you heard about bioeconomy or bio-based products before?". Out of 138 children 59% answered, that they have not heard about bio-based products before, 42% answered that they have heard. This result may be influenced by the fact, that some children played the Bio... What?? game before answering the questionnaire and had gained some knowledge from the game already.

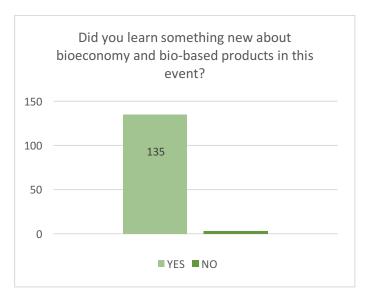


Second question was an open question to further test their knowledge — "Which bio-based products do you know?". Out of 49 responses the biggest number of children (12) name food products as bio-based products, which is not quite accurate. 9 children named different bio-based materials used for producing bio-based products, the knowledge which could be accredited to the fact that the children played the BioWhat game before filling out the questionnaire, where those bio-based materials are showcased. 7 children also named paper as a bio-based product, which is accurate.





Similarly to the results of adults, 98% of children that participated in the Researchers Night event about bio-economy confirmed, that they learned something about bio-economy and bio-based products.



## 6. RECOMMENDATIONS AND CONCLUSIONS

According to the methodology described in D5.1 Monitoring and Assessment Plan section 4.1 we are presently in the data collecting phase. To collect the data about the people's initial awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy we are conducting short surveys at the beginning of all events organized in WP4 and WP3. For now, we have conducted the short surveys among the participants of the Researchers Night.

To evaluate the change in awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy as a result of BIOWAYS activities we will conduct a 2nd round of survey at the end of the project under T2.2.



In order to satisfactorily accomplish the main objectives of D5.1 Monitoring and Assessment Plan it is important to carry out the activities set out in the Plan and:

- Collect from here onwards also the statistics about BIOWAYS communication activities, the BioWatch platform users, users of developed materials, participants in events, etc.
- Conduct short surveys at the beginning of all events organised in WP3 and WP4, with the aim of studying further participants' initial awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy.
   Civitta has prepared questionnaires for events.
- Conduct a 2nd round of surveys at the end of the project (T2.2) among participants of the BIOWAYS project and general public to study their change in awareness, acceptance, confidence, engagement and use of bio-based products and the bio-economy as a result of BIOWAYS activities. The 2nd round of surveys will include questions about BIOWAYS project's results and questions about changes in awareness, acceptance, confidence, engagement and market uptake.

The statistics collected in period M12-M20 and the results of short surveys and the second round of surveys will feed into the second monitoring report in M20. The second monitoring report will in turn feed into T5.3 Recommendations and examples of good practise on how to facilitate the up-take of bio-based products will follow. At this point the activities are progressing as planned and we have now recommendations for changes to be implemented in the BIOWAYS communication programme.



## 7. ANNEX I

## Questionnaire No I (adults)

#### Public awareness of bio-based products

The BIOWAYS project is conducting a **short survey** to find out **how much people know about bio-based products and bio-economy**.

BIOWAYS project (<a href="www.bioways.eu">www.bioways.eu</a>), funded by Bio-based Industries Joint Undertaking under the EU's Horizon 2020 Framework Programme (Grant Agreement No 760762), aims to raise public awareness of bio-based products and bio-economy. Your answers will help us to produce effective materials and tools for raising the awareness of bio-based products and explain the benefits they can have for us all.

Completing this questionnaire will take about 3 minutes and all the information will be confidential.

#### Thank you for your participation!

QUESTION	Please circ	le the	: app	ropria	te ans	wer	
My knowledge about bio-based products is:	Not good	1	2	3	4	5	Very good
I use bio-based products as a consumer	Not at all	1	2	3	4	5	All the time
I use the following bio-based products (please name some)							
My overall perception on bio-based products is:	Positive		Ne	gative			I don't know
My knowledge about the benefits of bio-based products is:	Not good	1	2	3	4	5	Very good
I believe that bio-based products in the market are trustworthy (in terms of content, origin and benefits)	Yes		١	10		Ιdα	on't know
I have participated in activities about bioeconomy before		Yes	i		No		
Did you learn something new about bio-based products and bioecnomy in this event?		Yes			No		
What aspects about bio-economy and bio-products you would like to learn more about?							



If You are interested in being informed about	
BIOWAYS project's activities - please leave	F-mail:
your e-mail	

## **Questionnaire No II (children)**

## How much do you know about bio-based products?

The BIOWAYS project is conducting a **short survey** to find out **how much people know about bio-based products and bio-economy**.

BIOWAYS project (<u>www.bioways.eu</u>), funded by EU's Horizon 2020 Framework Programme, aims to inform people about bio-based products and bio-economy. Your answers will help us to do that better.

## Thank you for participating!

QUESTION	Please circle or write the appropriate answer
Have you heard about bioeconomy or bio-based products before?	Yes No
Which bio-based products do you know? (please write some)	
Did you learn something new about bioeconomy and bio-based products in this event?	Yes No
After what you have learned today, express with your	own words or drawing what do you think bioeconomy is



## Questionnaire No III (children)

## Public awareness of bio-based products (children)

To be used and filled in by BIOWAYS partners at events with children

Have you heard about bioeconomy or bio-based products before?		Which bio-based products do you know?		Did you learn something new about bioeconomy and biobased products in this event?		
Yes	No				Yes	No
After what you have learned today, express with your own words or drawing what do you think bioeconomy is?						



## Questionnaire No IV (children)

Do you know what products are made of natural biological material (bio-based products)?

Have you ever heard of it before?		Do you know some?	Have you learned somethin today?	
	( <u>:</u> )		<u></u>	( <u>:</u> )

## 8. Annex II

Date	Place	Title	Type of Audience	Size of Audience	Partner	No of contacts made for BIOWAYS
01.10.201 6	Rome, Italy	International Innovation Exhibition Maker Faire 2016	110.000 participants (schools, large public, families) 300 exhibitors (researchers, innovators, policy makers)	ca 110.000	FVA	20 contacts



31.01 - 03.02.201 7	Cesena, Italy	International  Conference on "Food Innovation – FoodInnova 2017" www.foodinnova.com	Researchers, Food companies, consumers	250	UNIBO	5 contacts
7- 8.04.2017	Athens, Greece	Work, Research and Innovation for Tomorrow's Entrepreneurs Workshop	Students, NGOs and local entrepreneurs	20	PEDAL	20 contacts
20.04.201	Rome, Italy	Official presentation of the Italian Bioeconomy Strategy	Policy makers, public authorities, researchers, BBI-JU and EC representatives and industry.	100	FVA	15 contacts
23- 28.04.201 7	Vrsac, Serbia	Fifth International Conference on "Sustainable Postharvest and Food Technologies - INOPTEP 2017" http://ptep.org	Researchers, R&D and technicians from seed companies	150	UNIBO	5 contacts
10- 11.05.201 7	Bratislav a, Slovakia	TechSummit 2017 http://techsummit.sk/ 2017/	Mainly startups, SMEs and national authorities	200	PEDAL	70 contacts
16.05.201 7	Bologna , Italy	Territorial Circular Bioeconomy https://eventi.unibo.it /networking-life- 2017/programma-2	Researchers, policy makers, industries	75	UNIBO	3 contacts
18.05.201 7	Sibiu, Romani a	Workshop in "Lucian Blaga" University of Sibiu, Romania: Social	Local authorities, NGOs, researchers and students	35	PEDAL	35 contacts



		Innovation Workshop for Human Trafficking, Migration and Refugee Crisis				
28- 30.06.201 7	Kosice, Slovakia	WIRE 2017, http://wire2017.eu/	Mainly researchers and public authorities.	200	PEDAL, FVA, LOBA	20 contacts
11.08.201	Paide, Estonia	Barcamp "Unlocking the new economic development - the prospect of bioeconomy"	General public, policy makers, companies, researchers	30	Civitta	5 contacts
20.09.201	Rome, Italy	Enea Conference "From the tradition to the innovation: from the mexican and pre- ispanic art, a bioproduct for cultural goods"	Researchers, policy makers	50	FVA	8 contacts
21.09.201	Tartu, Estonia	Conference"New Economic Models for Smart Growth"	Policy makers, companies, researchers	50	Civitta	5 contacts
22.09.201	Chatha m, UK	Thrive final meeting	researchers and teachers		FVA	9 contacts
20- 22.09.201 7	Bozen, Italy	PhD Workshop on the "Developments in the Italian PhD Research on Food Science Technology and Biotechnology"	researchers		UNIBO	10 Italian research groups
28- 30.09.201 7	Italy, Portugal	Researchers' Night	General public	5000	UNIBO, FVA, LOBA	1120 visitors of



		BIOWAYS
		event