



# SCALE<sup>UP</sup>

community-driven  
bioeconomy development

## Region-specific information packages

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## EXECUTIVE SUMMARY

This report presents the information packages that have been compiled for the bio-based solutions in six European rural regions. The information packages form an important knowledge base for the regional platforms that have been established under the SCALE-UP project. The structure and content of the packages have been developed inspired by the results of the cross-regional assessment workshop and identified needs from the training survey which were held in the first year of the project.

The packages contain valuable information on EU- and local policies, EU-projects and on biomass availability, technical solutions and nutrient recycling possibilities. The packages vary per region in content and focus. This is due to large variations in available biomass resources and different interests in bio-based solutions.

Special attention has been given to the accessibility of the information. The format is in Excel sheets with well-structured tabs, digital links to publications, and translation tools making articles understandable for local stakeholders. Packages are presented on the SCALE-UP website to make access easier, also by parties that are not participating in the regional platforms. The information has also been offered to the JRC Knowledge Centre for Bioeconomy.

The information packages have been reviewed by local stakeholders on their usefulness. The main conclusion is that the information packages can form a good potential source of information for regional bioeconomy development. Important factors remain the dedication to local solutions and regular actualisation of the information. These issues are addressed in the recommendations to be taken up by the regional platforms.



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# 1 Introduction

The information packages have been developed to support bio-based solutions in the six SCALE-UP-regions: Andalusia (Spain), the French Atlantic Arc, North Sweden, Mazovia (Poland), Strumica (North Macedonia) and Upper Austria. The packages summarise results from previous projects and sister projects. They bundle scientific and technical information for the assessment of resources, the possibilities for nutrient recycling and the production processes for bio-based products.

The information packages have been compiled to support knowledge transfer, capacity-building activities and other innovation support activities of the regional platforms.

This document describes the design and compilation of the packages (methodology) and presents the results for each region. Conclusions are presented on the process and results as well as recommendations to keep the packages up to date.

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## 2 Methodology

The structure and content of the information packages was based on the results of the important **cross-regional assessment workshop** that was organised at the beginning of the SCALE-UP project. During this event, all participating regions shared their views on priorities, practical knowledge, capacities and gaps with respect to regional bio-based production. These first ideas were supported by the outcomes of the capacity needs assessment that was carried out for the design of the SCALE-UP regional training program.

It was decided to collect information on the following subjects: EU policies, EU projects, local policies, scientific and technical information, and biomass availability and nutrients. This selection is justified as follows:

1. EU policies: EU's objectives and policies for a sustainable bioeconomy. By understanding these policies, stakeholders can align their activities and initiatives.
2. EU projects: The SCALE-UP project wants to build on the work of previous and ongoing EU-funded projects and collaborates with sister projects to enhance the development of regional bio-economies across Europe.
3. Local policies: This category includes the national and regional policies on the bioeconomy in the region. By understanding these policies, stakeholders can adjust their activities to the specific needs and priorities of the region.
4. Scientific and technical information: Information on the biomass processing routes. The SCALE-UP project supports innovation and relies on scientific and technical information for this. By accessing relevant scientific and technical information, stakeholders can stay up to date on the latest developments and identify opportunities for innovation.

**Biomass availability and nutrient recycling:** The SCALE-UP project aims at promoting bio-based production processes while respecting the ecological boundaries of the region and recognizes the importance of biomass availability and nutrient recycling in this. By collecting this information, stakeholders can make informed decisions on resource management and identify promising opportunities for bio-based production. The information was subsequently collected by regional partners, then screened and analysed, structured and presented. The format chosen was an Excel file per region with a separate page for each subject. To these pages, various sources of information were added, including the year published, a link, authors/organizations, as well as a short description and the relevance to the SCALE-UP project or specifically to the bio-based solutions.

Key knowledge holders from each region were asked to review the form and contents of the information packages, to verify their usefulness in practice.

To enhance accessibility and communication, it was decided to design the information packages in such a way that could be presented on the website (see try-out on the SCALE-UP website for the North Sweden region in Figure 1). This way, stakeholders and other interested parties can easily view and download the information packages.

## Information package

For more information on the EU policies & projects, national policies, technical information and studies on biomass availability and nutrient recycling, relevant to the Swedish forestry sector, please look at the information package below.

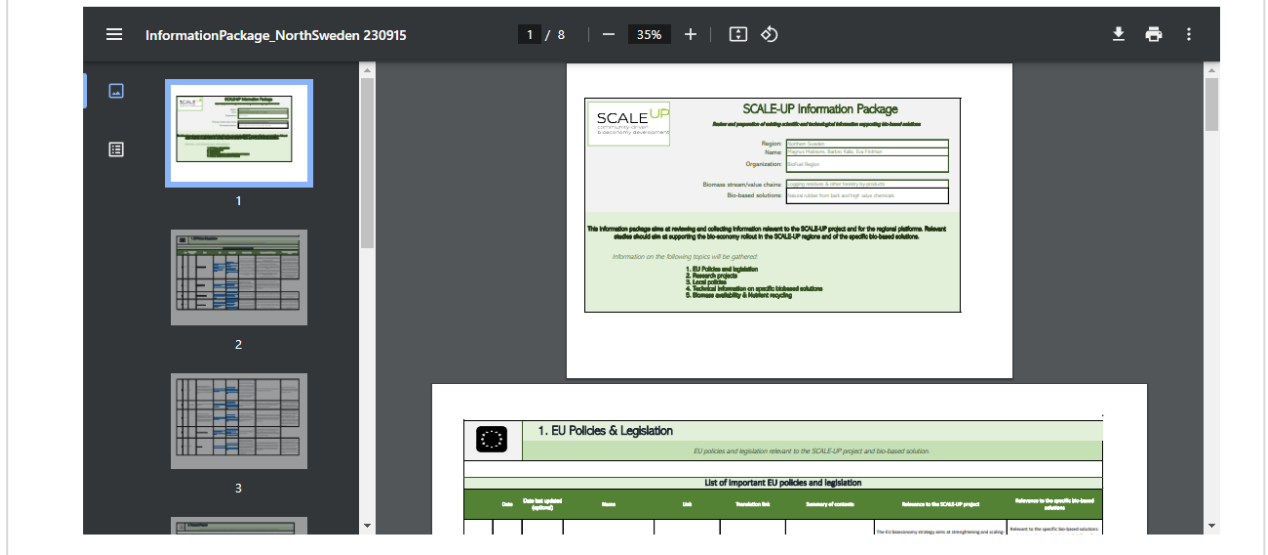


Figure 1: Information package embedded in SCALE-UP website.

Additionally, a tool was added that translates the information into the languages spoken in each region (see Figure 2). A demonstration was prepared and shared with the regional partners during a SCALE-UP coordination meeting.

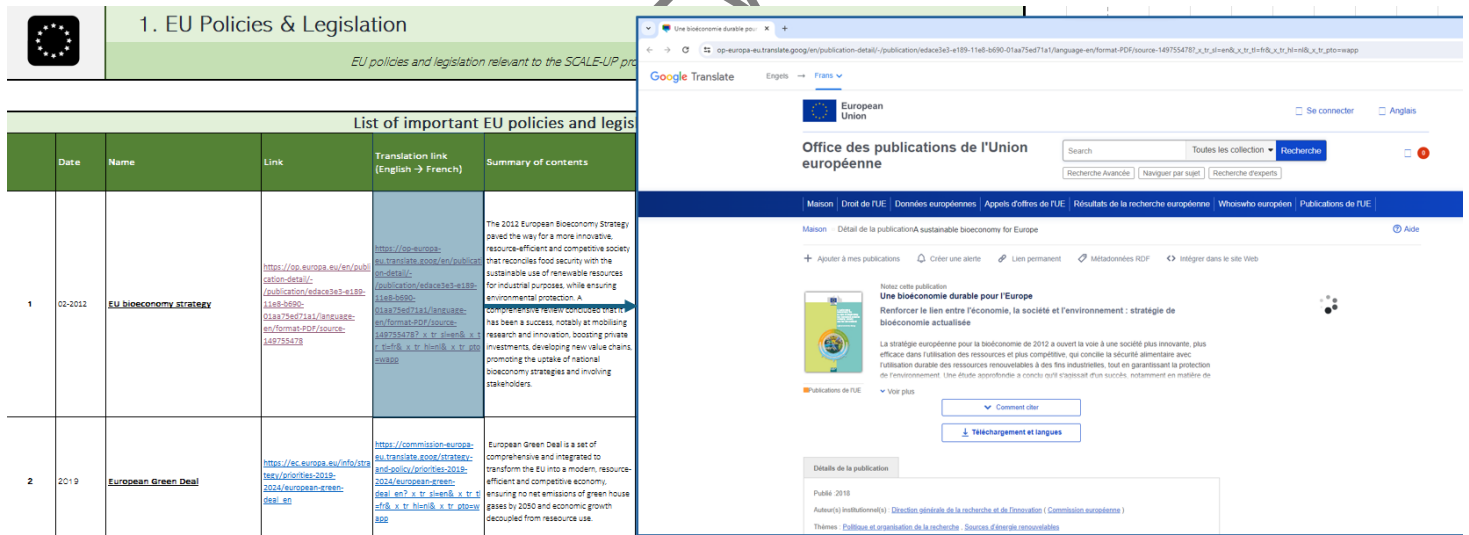


Figure 2: Example translation links in information package



### 3 Feedback from the regions

The regional partners shared (drafts of the) information packages with the members of their regional platforms through email, in which they asked the platform members to review the information packages. This led to the following feedback:

- In Poland, the information package was shared with all members of the regional platform. Seven members took part in an online meeting to discuss the information package. Here, the members mentioned that some of the information is not easily accessible due to a language barrier, as many English documents are included in the information package (Note: in the later version of the package, a translation tool was added). Another point of feedback was that some of the information is quite general and that the stakeholders would appreciate more specific information on the future of the bioeconomy in the region.
- In France, the information package got positive feedback from the regional platform. The stakeholders, from various companies working in the bioeconomy or in construction, provided new sources of information, which were included in the information package.
- In Upper Austria, the information packages were presented and discussed during one of the platform meetings. The stakeholders in attendance were happy with the document and had several suggestions of literature for the information package, which were later added to the document.
- In North Macedonia, four key knowledge holders were asked to provide feedback on the information package. The main message from these key knowledge holders was that the main documents that are relevant and of interest to the stakeholders in the region are covered in the information package and that no additions were needed.
- In Spain, several key knowledge holders with specific knowledge of the olive value chain were contacted and asked to review the contents of the information package. The key knowledge holders found the information package to be a very comprehensive document, with the correct and up-to-date information. Some small suggestions regarding formatting and clarifications were given and included in the information package.
- In Sweden, platform members have stressed the need for publication of the information package and biomass assessments on the website.

## 4 Information packages

Six regional information packages have been compiled and can be found in the Annex.







As the bio-based production routes vary, the interests of the regions and their platforms vary. This results in different contents of the information package per region. This is the case for the biomass availability and technical subjects, but also for the local policies. In the table on the next page, an overview is given of the focus of the information package of each region.

Many publications exist on EU policies and EU projects. A good overview can be found at the Knowledge Centre for Bioeconomy. A [link](#) is therefore added in all regional information packages. Information from the Centre is valuable for the SCALE-UP project. In turn, following communication with the JRC-staff, information that comes available from the SCALE-UP project has been offered to the Knowledge Centre.

Despite various attempts, limited information could be obtained from the SCALE-UP sister projects, therefore this part of the information package is not complete yet. It will, however, be filled as results become available.

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Table 1, Regional focus within categories of information packages.

Focus within information packages	EU policies	EU projects	Local policies	Technical information	Biomass & nutrients
 <b>Andalusia, Spain</b>	<p>The European Union has a range of policies, aimed at developing the EU bioeconomy. These are listed in each regional package.</p> <p>Policies directly influencing the bioeconomy are the EU bioeconomy strategy and the European Green Deal.</p> <p>Link to the EU JRC Knowledge Centre for Bioeconomy.</p> <p>Indirectly, policies such as the European Digital Strategy and European Data Strategy help provide information and support innovation in the bioeconomy.</p>	<p>Information on sister projects that also aim to support regional bio economies in different parts of Europe by supporting local bio-based solutions, organizing capacity-building events and establishing regional platforms (still to be completed).</p> <p>Information on previous EU-projects.</p> <p>Link to the EU JRC Knowledge Centre for Bioeconomy</p>	Regional and national policies related to the bioeconomy, olive industry, circular economy, biodiversity, waste, and soil, as well as the CAP.	Reports and papers on olive production process and use of residues for bio-based products	Studies on the resource potential for prunings and secondary resources at the olive mills. Information on nutrient recycling possibilities, such as composting.
 <b>French Atlantic Arc</b>			Regional and national policies for the bioeconomy, and more specifically the use of bio-based products in construction.	Reports and papers on straw and fibre crops (hemp, flax & miscanthus), and their use in construction.	Tools and reports on the availability of biomass resources and construction projects, and information on the cultivation of fibre crops.
 <b>North Sweden</b>			Swedish policies on forestry, the bioeconomy and regional development.	Reports on the optimization of biomass in biorefineries and data on Swedish forests.	Reports and papers on forestry residues and attempts to bring nutrients back to the forests.
 <b>Mazovia, Poland</b>			Mazovia regional economic development policy papers	Information on properties and various applications of apple pomace and other apple industry by-products.	Studies on bio-energy potential based on prunings and apple pomace.
 <b>Strumica, North Macedonia</b>			National policies on (organic) agriculture, rural development, fertilizers, waste management, the environment and biodiversity.	Studies on compost, mycelium from agricultural residues, climate change impacts and adaptation, and data on agricultural activity.	Studies on the upcycling of nutrients through compost, and information on soil quality, natural resource management, and agricultural production.
 <b>Upper Austria</b>			Policies related to the Austrian bioeconomy, economic and socio-political trends in the region, the generation of food waste, and the use of food waste for animal feed.	Various applications of brewers' spent grains, waste management for breweries and bakeries, and applications of bread in biogas, the chemical industry and for soil improvement.	Information on food production and waste in Upper Austria and its various applications, food waste prevention, and the nutrient contents of bread and bakery by-products.

## 5 Conclusions

There are the following conclusions and observations:

1. Regional partners were able to compile useful six region-specific information packages. They are a potential useful tool for the development of regional bio economies. This was concluded from the reviews among stakeholders.
2. The following subjects were found relevant for the information packages: EU policies, EU projects, local policies, scientific and technical information, and biomass availability and nutrient recycling.
3. The information packages are very different per region in terms of content and focus. This is due to the difference in priorities and the level of development of the selected bio-based solutions.
4. The translation tool is essential. This was concluded by the regional partners and confirmed in the feedback from the platform partners. The tool translates the articles into languages spoken in the SCALE-UP regions and makes the information accessible to local stakeholders.
5. Publication on the SCALE-UP website is important, it helps to make the information more accessible for local stakeholders. Especially Swedish partners have stressed this need.
6. The information packages are living documents. When, for example, information was found during the regional biomass availability assessment, relevant sources were added to the information packages. Also, the innovation support program has already led to useful information, which was added to the information packages. It is expected that this will continue over the remaining project period.

## 6 Recommendations

To optimize the effectiveness of the information packages, the following recommendations are given:

- a) The information packages should be updated regularly to ensure that they include the latest developments, policies and scientific advancements, keeping the information relevant and useful to stakeholders. This should preferably be done by experts familiar with the relevant sector. It is also advised that the platforms take up this task in their annual activities and disseminate through their own channels.
- b) Stakeholders should be actively engaged and involved, ensuring that the packages meet the specific needs and priorities of the stakeholders. Close collaboration and communication with the regional platforms will also help disseminate the information packages among the stakeholders and other interested parties.
- c) The information packages should be integrated and promoted across various project activities, such as the capacity-building workshops in WP3 and other events.

By implementing these recommendations, the SCALE-UP project can maximize the impact of the information packages and support the development and implementation of sustainable bio-based solutions across the six SCALE-UP project regions.

## 7 Annex

Contents of Annex:

- Information package: Andalusia, Spain
- Information package: French Atlantic Arc
- Information package: North Sweden
- Information package: Mazovia, Poland
- Information package: Strumica, North Macedonia
- Information package: Upper Austria

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