

Project no. 311919

## StarTree

# Multipurpose trees and non-wood forest products a challenge and opportunity

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Collaborative Project

FP7-KBBE-2012-6-singlestage

### Deliverable 5.1. Database of innovative examples for new forest products - draft

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**University of Natural Resources and Life Sciences (BOKU), Vienna**

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## Reference

Aggestam, F.; Weiss, G.; Petz, K.M. & Zivojinovic, I.(2013) StarTree Deliverable 5.1. Database of innovative examples for new forest products - draft.

## Executive summary

The draft database of innovative examples for new forest products (Deliverable 5.1) focuses on innovative non-wood forest products and innovations by the forest-based sector in general. The database on innovative cases from the forest sector has been integrated with a database on forest policy to form the *Forest Policy and Forest Innovation Database*. This website contains policies and innovative cases relevant to the forest-based sector in Europe and internationally and is currently and in future maintained by EFI so that it stays operational and updated also after the end of the StarTree project. The website is currently fully operational but requires registration and approval from the website administrator to gain access. All content is provided for free to the potential user once an account has been registered. The database currently contains already short descriptions of nearly 400 innovation cases.

The draft database can be tested now from within the StarTree project and is open for further comments from practice users. It can be used already to collect further cases in course of StarTree. After finalising the database structure, it may be further developed with an interface for the “StarTree NWFP Innovation database”.



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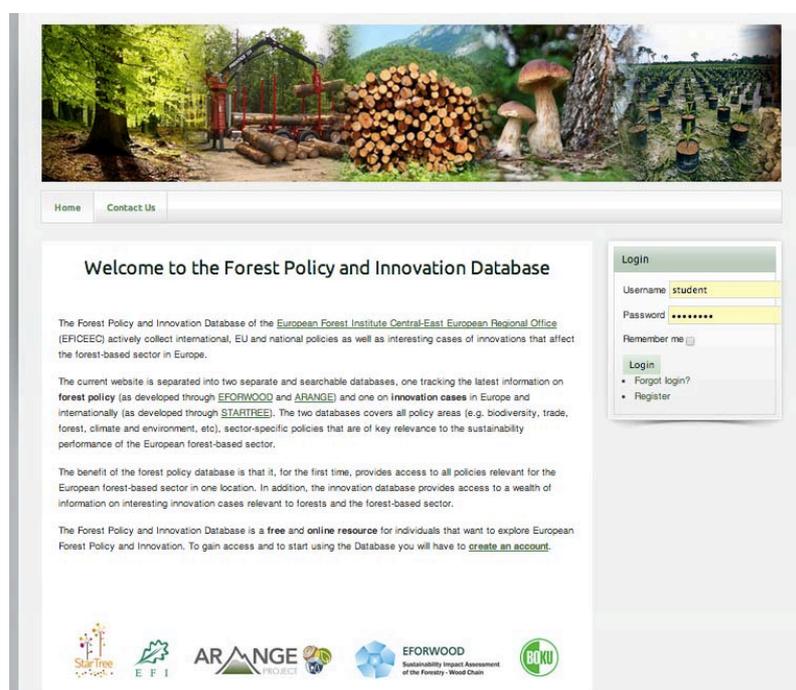
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# 1 The Forest Policy and Innovation Database

## 1.1 Introduction

As one of the StarTree outputs a database focusing on innovative non-wood forest products, multi-purpose trees, and innovations by the forest-based sector in general, will be developed. The innovation database will be an integral part of the “Forest Policy and Forest Innovation Database” website, containing policies and innovative cases relevant to the forest-based sector in Europe and internationally. The content on the website has for this reason also been categorized and divided into two separate databases. It is possible to search all the content together or to browse the databases separately. The Forest Policy and Innovation Database (see Figure 1) can be found under <http://policydatabase.boku.ac.at>. To gain full access requires registration and approval from the website administrator, but it is foreseen to be open-access once it is fully operational.



**Figure 1.** The Forest Policy and Innovation Database

As noted, one of the databases track the latest information on forest policy and was originally developed and conceptualised through the EFORWOOD<sup>1</sup> and ARANGE<sup>2</sup> projects. The second database is on innovation cases (with a special focus on non-wood forest products) in Europe and internationally and was developed for the StarTree<sup>3</sup> project. The creation of an online platform that allowed for the integration of these two databases was made possible through the StarTree project. The underlying basis for the integration was to reduce development costs using (in part) a pre-existing platform; relating the StarTree database to other

<sup>1</sup> See <http://www.innovawood.com/eforwood/>

<sup>2</sup> See <http://www.arange-project.eu/>

<sup>3</sup> See <http://star-tree.eu/>

pertinent content (e.g. forest policy); and to develop a more robust and usable platform in terms of making information available to the forest sector and research community. The current “Forest Policy and Innovation Database” website is as such the product of two initiatives that have been integrated within the context of the StarTree to create a superior end product. The website is hosted and maintained by the University of Natural Resources and Life Sciences (BOKU).

The purpose of the following deliverable is to document the development of the Forest Policy and Innovation Database, provide a brief introduction to the structure and content of the innovation database, and to introduce the work that remains to be done on the database as specific to the StarTree project.

## 1.2 Why is there a need for an innovation database?

The promotion of non-wood forest products (NWFP) and multi-purpose trees represents a key area for the StarTree project. More specifically, the intent is to improve the utilisation of NWFP in order to contribute to the sustainable management of forests, particularly within the context of rural development. However, to strengthen and diversify economic activities in rural areas, one key aspect is the access to information as regards the type of non-wood forest products that can be found on the market as well as information on how these products are being developed, produced and marketed. Essentially, this kind of key information can help to speed up the transfer of research and innovations to markets.

To facilitate the dissemination and exchange of relevant information on NWFPs, StarTree has developed an open-access database featuring innovative cases from the forest-based sector. It is foreseen that the innovation database will serve as a basis for gathering, analysing and disseminating information on NWFPs and to help in assessing how NWFPs can contribute to the continued socio-economic development of rural areas. As such, it represents not only a valuable resource for research communities working on innovation but also for rural communities and entrepreneurs looking to find out more about non-wood forest products.

### 1.2.1 What will the database bring to the Non-wood Forest Products (NWFP) sector?

One key challenge for rural development is how to find information that can help to spread innovative ideas. The Forest Policy and Innovation Database addresses this problem and brings one key feature, or function, to the NWFP sector, namely, the provision of easily accessible and pertinent information on innovative NWFPs. This type of product or information service currently does not exist specifically for the NWFPs sector. It may therefore bring an added value to the sector simply by disseminating information on innovations collected by researchers. This information can then be utilised by rural communities or entrepreneurs trying to find new ways to develop their NWFPs. The database will in this way become an innovative vehicle used principally for dissemination, and it is expected that this approach may enhance the spread of information and indirectly help to improve the innovative capabilities of the NWFP sector.

### 1.2.2 Who can contribute?

The intent is that any user, whether coming from the public or private sector, but having an interest in forest innovation and non-wood forest products will be able to utilise the website and all its available resources. To provide the potential user with a sense of ownership the possibility to contribute content to the website has also been made an integral part of the online platform. This will furthermore ensure that the available content grows over time and lives beyond the timeframe set for the StarTree project.



### 1.2.3 Who are the end-users?

The Forest Policy and Innovation Database has been developed with a broad range of end-users in mind. It may appear equally interesting to a researcher as well as an entrepreneur working on innovative product development in the NWFP sector. The key issue as regards to the potential community that may use the website is its topical focus, namely, on forest policy, innovation in the forest sector and associated research tools.

## 1.3 An innovative database for the Non-wood Forest Products (NWFP) sector

The innovation database currently represents a growing collection of information related to innovations in the forest-based sectors, of relevance to European practitioners, researchers and forestry students. Cases are real life examples across a broad range of forestry related enterprises mostly within Europe, but also a few from outside of Europe that maybe be of interest to database users. Individual cases have varied levels of content and detail available. The content of these cases can be accessed through a number of filters that are available to engage with the database. These elements are included under the available forest innovation database and are as follows (see also Figure 2):

- (1) List of Cases,
- (2) Search Cases,
- (3) Suggest a Case, and
- (4) Manage Database.

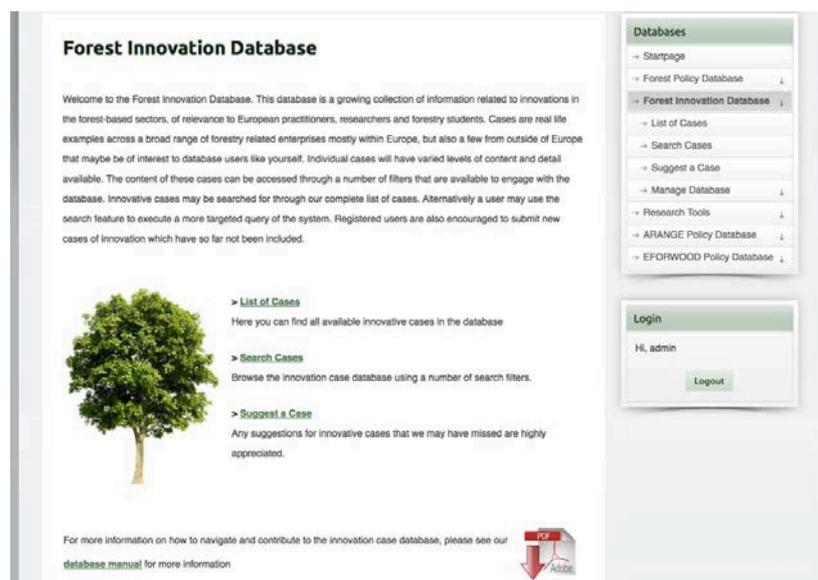


Figure 2. Interface to the Forest Innovation Database

**Section 1** provides the user with a basic list of all cases included, which also provide some basic information on the innovation cases, namely, the *title*, a *basic description* and *country of origin* and the option to find *more information* on the case (see Figure 3).



Title	Description	Country
Pinus sylvestris Cultivar - Negoretskaya Pine	Proposal for the use of a new improved cultivar of Scots Pine for forest regeneration	BY
Software Package for calculation and visualization of forest fire dynamics	This software package can be used for estimation of characteristics of forest fires on the basis of predefined parameters and basic scenarios, for modeling dynamics of forest fires and visualization of the results of calculations.	BY
Private tree burl collection	unique family collection of tree burls	BY
Annual meeting of wood carvers	Annual meeting of wood carvers gathering masters from Ukraine, Belarus and Russia will be held in August, 2013 for the forth time.	UA

Figure 3. Example of a list of innovation cases in the database

**Section 2** enables the user to segment (or search) the database according to the criteria applied to the innovation cases. Alternatively a user may use the search feature to execute a more targeted query of the system. Innovative cases may be searched for through our complete list of cases. Both Section 1 and 2 provide the user with access to more in-depth information on each individual case (see Figure 4).

Case Description
General Description: Proposal for the use of a new improved cultivar of Scots Pine for forest regeneration
Company: Belarus State Technological University
Country: Belarus
Type of Organisation: Public
Organisation Size: Large (>250)
Case Source: <a href="http://www.lesgazeta.by/archivea/articles/5550.html">http://www.lesgazeta.by/archivea/articles/5550.html</a>
Type of Innovation
Product Innovation: Timber, Protective services
Summary: Sergey Rebko has proposed to use a new cultivar of Scots pine - Negoretskaya for forest regeneration in Belarus due to its improved quality and faster growth.
Company: Sergey Rebko - the author of the project - is a teaching assistant at the Department of forest crops and soil science of Belarus State Technological University. This project has recently won the second prize
Innovation: Planting Negoretskaya pine is economically feasible as its apical growth 16-25% higher than of a standard Scots pine and seed production earlier than usual. The aim of the

Figure 4. Individual presentation of an innovative case

**Section 3** allows the user to suggest relevant new innovation cases. Registered users are also encouraged to submit new innovative cases that have so far not been included. The intent is to have a continuously growing and up-to-date database of innovation cases where new content is added both by the administrators as well as by registered users.

**Section 4** is only visible to the administrative users and allows the user to edit content and the ability to add new cases to the database (see Figure 5). Each suggested case would first have to be reviewed by an administrator prior to being included in the public list of innovation cases.

**Figure 5.** Adding an innovation case to the database

Aside from access to the innovation database, the user can also browse the policy database (a collection of information related to forest policies and measures structured into a common format) and access available research tools. Users are also welcome to add content in the library and online resources (a collection of relevant documents and websites for policy and innovation research) as well as to share experiences in forum.

More information on the structure and content of the database is further presented and discussed in documentation available on the website. This can be found under the “Research Tools” and then the “Library” section. For more information on how to use the Forest Policy and Innovation Database you can also contact the administrator directly.

## 2 Developing a database for the NWFP research community

### 2.1 Conceptual development

The concept for the NWFP innovation database described in the previous section was developed step-by-step through a number of internal meetings held at BOKU throughout 2013. During these meetings the purpose and functionalities of the innovation database was discussed and developed. More specifically, a number of concept notes were drafted and used as a basis for the continued development of a database template. These covered, for example, issues such as the categories to include as search functions for public use, the structure of the interface, implementation and time schedule, etc. However, the most



important aspect of this preparatory work was the development of a table for data collection in the form of categories to be included in the database. These were as follows:

<b>ID</b>	Numerical code that is in the database, not a sequential case number entered. Each ID refers to one database entered case, if entries are deleted then the numbers do not change for the other cases.		
<b>Title</b>	A descriptive name for the case.		
<b>Country</b>	A 2 letter code of that country.		
<b>What / Description</b>	Brief description of what the innovation case is.		
<b>Link</b>	A link to the source if a website URL, if a report the report title in and year of publication etc.		
<b>Thumbnail picture</b>	A picture from the innovation case.		
<b>Type of innovation</b>			
<b>Product Innovation</b>	Good	Timber	Goods that are a product made of timber.
		Non-Timber	Goods that are not principally made of timber.
	Service	Ecological services	Biodiversity conservation.
			Carbon sequestration and climate regulation.
			Protective services & Biospheric services
		Societal services	Recreational, tourism and sports services.
			Cultural, spiritual, historical, educational services and research.
<b>Organisational Innovation</b>	The OECD classification of innovation is followed. Our own taxonomy has wood and non-wood under the product innovation. The Millenium Ecosystem Assessment scheme for Forest Ecosystem Services and the Pan-European Indicators for Sustainable Forest Management (Forest Europe, FE) are largely followed for services, but named and grouped a little differently. Explanation is given in brackets.		
<b>Marketing Innovation</b>			
<b>Process Innovation</b>			
<b>Institutional Innovation</b>	This category is additional to the OECD categories, which are strictly related to company innovations. It comprises public organisations, policies and procedures.		
<b>Case Description</b>			
A series of paragraphs are added to the database as separate cells, these aggregate to give a max. one page text of a full case description. New paragraphs may be added for new projects, or research directions.			
<b>Summary</b>	An aggregation of data from other categories in the database into a form that looks like a written text (who/what/when/where).		



<b>Company</b>	Company and key person / team who was responsible, their short characterisation/business field and possibly their motivation for the innovation (if known).		
<b>The Innovation</b>	What is the innovation about, what is innovative about it.		
<b>Chronology</b>	Origins of the innovation with starting date and location, and chronology of the innovation's development and implementation.		
<b>Outcome</b>	Current status and outcome with a date.		
<b>Analysis</b>	If known, an analysis of the innovation process, e.g. by giving fostering and hindering factors, etc.		
<b>Updates</b>	Updated info to be added or subsequent data or cleaning date. Future updates and reports to be added. Each new additions appended to the end of the paragraph and dated.		
<b>Additional information</b>	Any other feature of interest not previously mentioned.		
<b>Other information</b>			
<b>Type of Organisation</b>	This says if the company is a firm, or a cooperative or state sector operator like a government agency.		
	Public	Private	Mixed/other
<b>Organization Size (number of staff)</b>	Indicating the size of the organization based on numbers of active persons involved.		
<b>Additional value to the market</b>	Rather than the monetary value, which is difficult to calculate, the impact in terms of type of innovation is recorded.		
	Incremental (improvement)	New to the sector in the country	
<b>Files</b>	Files that may be downloaded by any registered user.		
<b>Picture Files</b>	Pictures for public use.		
<b>Author</b>	The person who collected the case, wrote or updated it last and when they did this.		
<b>Entry date / date of updating information</b>	Entry date and all dates of updating.		

These categories were used to: (1) structure the online database in terms of the template used to add cases to the database (see section 1.3) and later in the design of the content that is currently accessible for users on the website; and (2) used as a template during the process of data collection, which was later used to add the actually content to the database.

## 2.2 Developing a StarTree interface for the database

The NWFP innovation database is currently in a beta testing phase and updates are expected that may change how the database looks as well as the content that is available. At this stage it is however not foreseen that the categories described above will change significantly, instead what remains to be done is



rather cosmetics, namely, to decide which content should be available to users and how it should be displayed and accessed.

As the website is already up-and-running, the continued development of the NWFP innovation database concerns the particular needs of the StarTree project. More specifically, to determine whether the available content is sufficient for the purposes of the project. The aim is that the website can help to facilitate knowledge transfer and exchange of information, including information on management and marketing guidance. It is therefore essential to ensure that the website is easy to use and that it provides key information on innovation. Also, the continued development of the database is to determine whether it will feature as part of the StarTree Market Place, particularly as a tool to disseminate innovative findings on NWFPs.

### 2.3 Next steps

Two steps are required for the continued development and finalisation of the StarTree NWFP innovation database:

- (1) Assess whether the available content on the NWFP innovation cases are sufficient for the purposes of the project or whether it has to be complemented somehow. This will be achieved by reviewing the above-given categories and by testing the database itself, to determine whether more data would need to be collected or added to the current set of cases included. Users will also be asked to provide feedback on the website to determine whether it is working properly or if any particular aspect could be improved (e.g. search functions, presentation of the cases, or the general layout, etc.).
- (2) Further develop and finalise the interface for the StarTree NWFP Innovation database. Using input from the first step, the intent will be to complete the interface as regards to how it should look, who will have access and how the content will be presented, etc.

These steps are essentially about ensuring that the database is working properly and has been tested before it is disseminated to a wider audience. It should however be noted that the innovation database is currently operational and can be access by all interested users.

See <http://policydatabase.boku.ac.at> for more information.

Guest login details are as follows.

User: Guest

Password: hello123

