



# Forest Bioenergy in the Protected Mediterranean Areas SPAIN Transferring of past and current know-how

# 4.3.1 Training reports



Work package 4 - Transferring Activity A.4.3. - Transferring of past and current know-how

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## 1 LIST OF ORGANIZED TRAININGS

After each training update this document with latest information regarding the organized event.

Table 1 Summary of organized trainings

No.	Partner	Country	Country Date		No. of participants
1	PP5 & PP6	Spain	20.12.2017	Valencia	19
2	PP5 & PP6	Spain	13.04.2018	Valencia	25
3	PP5 & PP6	Spain	29.10.2018	Valencia	18
4	PP5 & PP6	Spain	22.02.2019	Cirat (Castellón)	17
5	PP5 & PP6	Spain	03.05.2019	Planes (Alicante)	18
6	PP5 & PP6	Spain	07.06.2019	Andilla (Valencia)	17



## **2 TRAINING REPORTS**

# 2.1 Training no. 1

## 2.1.1 <u>Technical report</u>

Pilot Area	Valencia
Event title	Ecoinnovation: management, use and valorisation of forest biomass
Involved partner	<ul> <li>- PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR)</li> <li>- PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)</li> </ul>
Responsible partners	PP5 and PP6
Location	Headquarters of the Official Chamber of Commerce, Industry, Services and Shipping of Valencia  C/Poeta Querol 15 – 46002 València
Date	December 20, 2017

No. of participants	19
Target groups	<u>Target group reached</u> : sectoral agencies, local public authority, business support organization, associations, infrastructure and (public) service provider and Universities.
Trainers/spe akers	COCINSV: Rafael Mossi Peiró. Coordinator of the Competitiveness Department  AMUFOR: Fernando Pradells. Director Rebeca Aleix. Technician  UPV-ITACA: José-Vicente Oliver. Principal Researcher Victoria Lerma. Researcher Bruno Armengot. Researcher Edgar Lorenzo. Researcher
Training materials	<ul> <li>Power-Point Presentations</li> <li>ForBioEnergy project: Forest Bioenergy in the Protected Mediterranean Areas</li> <li>Analysis of the barriers and opportunities across the forest-based bioenergy value chain.</li> <li>Comparison of two methods of forestry interventions for bioenergy purposes.</li> <li>Practical case: environmental assessment after forestry interventions.</li> <li>Ecoinnovation. Valorisation of the biomass through a District heating</li> <li>Forest bioenergy: integral management of the emissions</li> <li>Next steps within the ForBioEnergy project</li> </ul>



#### - Dissemination material

- ForBioEnergy: brochure and roll-up
- Innocámaras: Success stories. A way to make Europe. European Regional Development Fund
- Satisfaction questionnaire of the activity

#### Main objective

To transmit the advances and outputs of the experiences in forest management in protected areas, leading to new use of the wood as bioenergy.

#### Training objectives

- Presentation of the results and technical advances of the ForBioEnergy project.
- Transferring of the knowledge about the management, use and valorisation of the forest biomass based on real studies acquired in the ForBioEnergy project as well as in other relevant European projects and initiatives.

#### **Programme**

The programme was organized to train experts, professionals and decision-makers and to acquire new knowledge about the current situation of the forest sector, its barriers and opportunities, as well as the real experiences that have been done and other which are in developing across the forest-based bioenergy value chain.

- Duration of the programme: Approx. 5h

## Report on training

#### **Training process**

The topics dealt with the biomass value and its uses for bioenergy purposes. First of all, the objectives and outputs of the project were explained, as well as its connection with other European initiatives. Secondly, the result of the common barriers and opportunities analysed in the project were introduced to the assistants. Furthermore, in relation with the outputs of other European initiatives, the different systems of forestry interventions, which will be studied in the ForBioEnergy project, were explained in detail. Thirdly and concerning the final step of the value chain, real cases were presented; concretely, the valorisation of the biomass through a District heating and the integral management of the emissions.

Regarding the practical case which was done between the presentations, its objective was an environmental evaluation after having done forest interventions at short, mid and long term.

The forestry interventions explained for the evaluation were:

Case 1: shelterwood method

Case 2: environmental restoration after forest fires. The method uses for the 2<sup>nd</sup> case was according to the Forest Strategy Plan of the Community of Valencia -Plan de Acción Territorial Forestal de la Comunitat Valenciana (PATFOR).

The criteria to assess were: quality of soil, biodiversity, carbon, erosion, aquifer recharge, forest fires risk and landscape.



#### Discussion and opinion of the participants

The methodology that we used during the training course for the participation process was to make different questions after each presentation and to introduce the practical case. Following the conclusions according to the responses of the participants:

#### Questions and replies:

## PPT Analysis of the barriers and opportunities across the forest-based bioenergy value chain

List of barriers analysed:

Barrier A: Long-time and complexity of authorization for the extraction of biomass in protected areas.

Barrier B: The fragmented ownership of private forest, the inadequate organisation and the lack of interest in biomass production

Barrier C: Reticence to use biomass in protected areas: production function is not balanced with conservation function

Barrier D: Low rentability in biomass production, especially in protected areas.

Barrier E: Poor integration of local stakeholders across the forest-based bioenergy chain

Feedback from participants Barrier F: Lack of synergies and coordination among the administrative levels (local, subregional, regional and national) in the territories included in the protected areas.

#### Question 1: In your daily work, what barriers do you face? Other...

The barriers that the generally the participants facing in their daily work are:

1st: Barrier A and F

2<sup>nd</sup>: Barrier B

3<sup>rd</sup>: Barrier C and D

4<sup>th</sup> Barrier E

Other barriers included:

- 1. Difficulty to incorporate actors no pertinent to the sector.
- 2. Lack of specific Action Plans with commitment to complying them.
- 3. Conflicting interests between administration or company of the administration and the owners, such that no solution is reached.
- 4. Lack of profitability of the activities due to there is not an enough demand.

## Question 2: If you had to prioritize the barriers to address them, what would be your A-F prioritization?

The general prioritization was: A, F, D, B, C, E

Regarding the barrier n°3 proposed in the previous question, the participant included the necessity to do public-private agreements to manage public forests,



## PPT Comparison of two methods of forestry interventions for bioenergy purposes

Question 3: Do you think that each one of the factors studied in the project should be evaluated in a balanced way to choose the best use system?

If so, what importance would you give to each one (in percentage 0% - 100%)?

The global output was the following:

1. Economic/financial profitability: 27%

2. Performance: 24,48% 3. Energy balance: 19,67%

4. Impacts: 17,37%

5. Biomass quality: 11,48%

Question 4: What the presentation has contributed to you? Is there something would you like to know/deepen in terms of forestry interventions?

The data to extrapolate, as well as the different types of machinery and interventions, would be interesting to deepen.

Question 5: How do you imagine the forest stand currently?

Regarding this question, a picture of the actual state of the stand was showed. Concretely, in this stand the intervention was done almost 6 years ago. Before showing it, the assistants imagined that the stand would be healthier.

#### PPT Practical case: environmental assessment after forestry interventions

The purpose of this case was to collect data about the perspective of the assistants. Nevertheless, the results shown below not include representative results; the number of participants who responded the case is not enough to be representative. In addition, it is noted that it would have been necessary to base the real case in quantitative data to allow the participants to fill in the tables objectively.

<u>Case 1</u>: Shelterwood method. The method was explained, as well as each criterion.

The time periods were:

- 1. Short term (ST): 0-5 years
- 2. Mid-term (MT): 5-10 years
- 3. Long term (LT): > 10 years

The categories for the evaluation was very positive (1), positive (2), neutral (3), negative (4) and very negative (5),

#### Results of Case 1:

	S	oil quali	ty	Bic	diversit	ty	Carbon			
	ST	MT	LT	ST	MT	LT	ST	MT	LT	
Preparatory cut – preparating for regeneration	3	3	3	3	2	2	4	3	2	
Seed cut: creating gaps for regeneration	3	3	2	3	2	2	4	3	2	
Removal cut: removing mature trees once regeneration is established	3	3	2	3	2	2	3	2	2	



	Е	rosio	n	Aqu	Aquifer recharge			orest fir	e risk	Landscape			
	ST	МТ	LT	ST	ST MT LT			MT	LT	ST	MT	LT	
Preparatory cut	4	3	3	3	2	2	2	2	2	4	3	2	
Seed cut	4	4	3	3	3	2	1	2	2	4	4	2	
Removal cut	4	3	3	3	3	2	2	2	2	4	3	2	

Case 2: Environmental restoration after forest fires.

- 1. Short term (ST): 0 Immediately interventions.
- 2. Mid-term (MT): 1-5 years
- 3. Long term (LT): 6-20 years

The categories for the evaluation was:

- 1. Very positive
- 2. Positive
- 3. Neutral
- 4. Negative
- 5. Very negative

#### Results of Case 2:

	Soi	l qua	alitv	Bio	odive tv	ersi	C	arbo	on	Erosion		Aquifer recharge		Forest fire risk			Landsca pe		са		
	ST	M	LP	S T	M T	L T	S T	M T	LT	S	M T	L	ST	MT	LT	ST	MT	LT	S T	M T	L T
Forestry tracks, adaptation and improvement	4	3	3	3	3	3	3	3	3	3	3	2	3	3	3	2	2	2	3	3	3
Cutting of burnt trees	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	2	2	3	2	2	2
Faggots	2	2	2	3	3	2	3	2	2	1	1	2	2	2	2	3	3	3	4	3	3
Dykes and restoration of terraces	2	2	2	3	3	2	3	2	2	1	2	2	2	2	2	2	2	2	4	3	3
Treatment or extraction of trees with phytosanitary risk	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2
Cleaning/thinning of a young pole wood	3	3	3	3	3	2	3	3	2	4	4	3	3	3	3	2	2	2	3	3	2
Thinning	4	3	3	3	3	3	4	3	2	4	4	3	3	3	3	1	1	2	4	3	2
Pruning	3	3	3	3	3	3	4	3	3	4	3	3	4	3	3	2	2	2	4	3	3

#### PPT Biomass valorisation through a District heating

Question 9: How do you assess the possibility of implementing a District Heating in your municipality?

Concerning the possibility to set up a District heating system in the municipalities of the assistant, it has been considered that the implementation would be positive and interesting. Nevertheless, there is a lack of awareness and demand. Therefore, we need to explain the benefits of a District heating, as well as how could be



implemented in each municipality.

#### Question 9: What opportunities do you analyse when the local forest is managed?

- 1. Mobilization of biomass, forest fires prevention and forest valorisation.
- 2. Fixation of population. Decrease of fires risks. Economise the purchase of foreign fossils.
- 3. Forest regeneration, energy use, avoids forest fires and the creation of employment.
- 4. It would be very strategic and prevention of forest fires.

#### PPT Forest bioenergy: integral management of emissions

Question 6: What can public administration do to maximize carbon sequestration capacity in the forestry sector? And private owners?

In order to maximize the carbon sequestration capacity of the forest sector and according to the response of the assistants, the public administration should do:

- 1. To use and manage the public forests and support the private forests owners in the same purpose.
- 2. To manage the forest stands, to promote the consumption of wood products and to boost the change of conventional fuels.
- 3. To be really involved in the required reforestations, to promote the public and private plans of carbon compensations and to promote the creation and recuperation of the forest stands allowing its previous regulation for using them with energy purposes.

## Question 7: Could be carbon compensation mechanisms established between important emitters and forest stocks at local level as a part of the solution?

The compensatory payments at local level could be established, the local economy and the future of the municipalities would appreciate it. Another vision was that no one would be willing to pay more unless was a finalist levy. These mechanisms had also been considered by the participants.

#### Question 8: Do you consider this tool for decision making interesting?

The tool is considered interesting to make decisions. Furthermore, it is emphasized that the tool is very useful to base the policy decision in quantifiable and technically justified parameters, as well as to make visible the real difficulties and the possibilities of these alternatives. In summary, the tool would be the optimum.

## **Evaluation of the training**

- Impressions and methodology: 74/100

- Speaker: 77/100 - Global: 72/100

Percentage of participant satisfaction: 74/100



#### Lessons learnt

- 1. Some current barriers have been perceived as traditional, this means that we have some barriers since years ago. Therefore, it is high urgent to overcome them in order to unblock the gaps which impede and slow-down the development of the sector.
- 2. The two most selected barriers according to the daily work and the prioritisation to address them by the participants have been: The long-time and complexity of authorization for the extraction of biomass in protected areas and the lack of synergies and coordination among the administrative levels (local, subregional, regional and national) in the territories included in the protected areas.
- 3. The relevance of studying different methods of forestry interventions leads to continue the study across the Mediterranean area.
- 4. The main factors to study when forestry interventions have been carried out are in terms of percentage assigned by the participants: economic and financial profitability (27%); performance (24,48%); Energy balance (19,67%); Impacts (17,37%) and biomass quality (11,48%).
- 5. It is noted the importance to apply environmental and socioeconomic criteria and indicators which can measure the improvement of the stand after forestry interventions.
- 6. In general terms, the administration should allow private and public owners to manage the forest; promote the consumption of wood products; boost the change of using conventional fuels; establish systems of carbon compensations; promote the creation and recuperation of forest stands for energy purposes and promote the forest projects. In this sense, the administration could maximize the carbon sequestration capacity in the forest sector.
- 7. The establishment of carbon compensations mechanisms at local level has high importance in the municipalities. Although maybe a finalist levy should be fixed for really set up the mechanism.
- 8. The forest sector is a net carbon sink unlike the agricultural sector. Therefore, it is quite important to quantify the risk management in order to arise-awareness of the necessity to do a sustainable forest management.
- 9. The tool, used to quantity the emissions, is positively perceived as a great and significant support for policy decisions.
- 10. The implementation of a District heating system has a positive perception but to set it up the demand is needed. Therefore, to rise-awareness of the benefits to implement this system is essential, as well as of how the resource can be valorised in each municipality.
- 11. The rehabilitation of the public facilities is indispensable.
- 12. The forest when is managed has high benefits and opportunities as: the prevention of forest fires; the forest valorisation; the creation of employment; the fixation of population; the reduction of the dependence on fossil fuels; the forest regeneration, among other.
- 13. The municipalities require the economic resources with the involvement of the administration to implement these initiatives that contribute to the development of the sector.



#### PROGRAMME AND INVITATION











## SEMINARIO: GESTIÓN, APROVECHAMIENTO Y VALORIZACIÓN DE BIOMASA FORESTAL

#### INTRODUCCIÓN:

Una parte significativa de los bosques mediterráneos se encuentra en áreas protegidas e incluso aunque representen una gran oportunidad para el aprovechamiento de bioenergía de base forestal, las actuales restricciones impiden el desarrollo del sector.

El objetivo general del proyecto es fomentar el desarrollo de la cadena de valor bioenergética de base forestal como pilar de una bioeconomía a nivel local, aportando soluciones transnacionales a fin de reducir las barreras que obstaculizan el desarrollo del sector, así como de sus modelos de planificación y los proyectos operativos derivados a implementar en el territorio. La finalidad es aprovechar el potencial de la biomasa forestal a través de la ordenación forestal sostenible y subsidiaria como herramienta del desarrollo rural en áreas protegidas, al mismo tiempo que se preserva la biodiversidad de las áreas protegidas.

#### OBJETIVO:

- Presentación de los resultados y avances técnicos del proyecto ForBioEnergy.
- Transferencia de conocimientos sobre la gestión, aprovechamiento y valorización de la biomasa forestal basada en estudios reales tanto en el marco del proyecto ForBioEnergy como en otros proyectos e iniciativas de la Unión Europea.

#### ORGANIZADORES:

- Asociación de Municipios Forestales de la Comunitat Valenciana (AMUFOR)
- Cámara Oficial de Comercio, Industria, Servicios y Navegación de València (COCISNV)

DIRIGIDO A: Alcaldes, concejales, técnicos municipales y técnicos en general en materia de medio ambiente y gestión forestal.

FECHA: Miércoles, 20 Diciembre 2017

UBICACIÓN: Sede central de la Câmara Oficial de Comercio, Industria, Servicios y Navegación de València.

Fecha límite para inscripciones: 18.12.2017

Inscripciones en: forbioenergy.amufor@gmail.com

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#### **AGENDA**

ITEM	PONENTE	HORARIO
Registro de asistentes	***	9.00 - 9:10
Presentación del seminario	Rafael Mossi	9:10 - 9:15
Presentación del proyecto ForBioEnergy (objetivos, actividades, resultados esperados)	Fernando Pradells	9:15-9:30
Revisión del valor de la biomasa: BARRERAS Y OPORTUNIDADES de la cadena de valor bioenergética de base forestal	Rebeca Aleix	9:30 - 10:00
Revisión de la línea de base de las áreas de estudio: SISTEMAS DE APROVECHAMIENTO FORESTAL	Victoria Lerma	10:00 - 10:30
DESCANSO 1	0.30 - 11.00	
Caso práctico	Todos los asistentes. Dinamizado por los ponentes.	11:00-12:30
Valorización de la biomasa a través de un DISTRICT HEATING	Bruno Armengot	12:30 - 13:00
Bioenergía forestal: GESTIÓN INTEGRAL DE LAS EMISIONES	Edgar Lorenzo	13:00-13:30
Discusión y conclusiones	Todos Dinamizado por los ponentes.	13:30-14:00
Próximos pasos dentro del proyecto ForBioEnergy	José Vicente Oliver	14:00-14:15







Mañana tendrá lugar la "Jornada ecoinnovación: gestión, aprovechamiento y valorización de biomasa forestal" cuyo objetivo es fomentar el desarrollo de la cadena de valor bioenergética de base forestal como pilar de una bioeconomía a nivel local. Cámara Valencia Interreg MED Programme Amufor Red Natura 2000



# Jornada: Jornada Ecoinnovación: Gestión, aprovechamiento y valorización de Biomasa Forestal

miércoles, 20 de diciembre de 2017, de 09:00h. a 14:30h. - Sede Central Cámara Valencia, C/Poeta Querol, 15.

CAMARAVALENCIA.COM



## 2.2Training no. 2

## 2.2.1 Technical report

Pilot Area	Comunitat Valenciana
Event title	"Assessment of opportunities and benefits of the utilization of forest biomass" - "Evaluación de oportunidades y beneficios del aprovechamiento de biomasa forestal"
Involved partner	<ul> <li>- PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR)</li> <li>- PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)</li> </ul>
Responsible partners	PP5
Location	UPV-ITACA, Ciudad Politécnica de la Innovación - Polytechnic City of Innovation
Date	April 13, 2018

No. of participants	25
Target groups	Forest technicians, enterprises/companies, environment research centres, researchers and regional deputies.
Trainers/speakers	AMUFOR: Fernando Pradells, Director of AMUFOR Rebeca Aleix, Technician of AMUFOR  UPV-ITACA: Victoria Lerma, Researcher Edgar Lorenzo, Researcher Bruno Armengot, Researcher José Vicente Oliver, Lead researcher
Training materials	Roll-up, poster, ForBioEnergy brochure, satisfaction questionnaire, PPTs and document of questions.

# Report on training

#### Description of the training course

The training course was focused on the benefits and opportunities of the utilization of forest biomass, especially in the protected Mediterranean areas. The trainers explained the objective of the ForBioEnergy project and its connection with the situation of the Valencia region. It is noted that Natura 2000 is an extraordinary figure for the conservation and management of the Mediterranean forest. Nevertheless, its misinterpretation difficult its correct application, even more at regional level. For this reason, it is necessary to propose actions to unblock the situation of the forestry sector in these



protected areas.

The presentations done by the trainers allow concluding that the bioenergy for the forestry sector represents an opportunity to avoid the rural depopulation, to enhance the local economy, as well as to improve the services offered by our ecosystems. Concretely, there are a wide list of the environment, social and economic opportunities arising from the use of the forest resources in the protected areas (utilization/valorisation of forest products/residues; silviculture as a tool to forest fire prevention; the improvement of the forest ecosystems and their services; population fixation - (in)direct employment; forest enterprises, local investors, etc.). On the other hand, the mobilization of forest biomass through Sustainable Forest Management (SFM) reduces bushfires. Moreover, it is needed low energy to mobilize it which means a great potential to use forest biofuels instead of non-renewable fuels. The valorisation of natural resources and the reduction of the energy dependence make the reactivation of the local economy.

Along with other initiatives linked with the ForBioEnergy project, it is emphasized the SimBioTIC project which is a local solution to move towards smart and sustainable cities. During the training course the Global Emission Management Interactive Information System (GEMINIS) was explained in its different steps. Concretely, GEMINIS is a tactical and operative tool of management of GHG, including the decision by public decision makers, as well as the simulations based on social, economic and environmental criteria. Therefore, it gives business opportunities for local companies. On the other hand, one of the axes of this project, it is the District Heating (DH) project. In the DH the residues obtained in SFM are valorised, generating advantages as a greater energy efficiency, reduction of operating costs, pollutants and fire risks, generation of local employment, lower external dependence and energy saving. Different examples were given about DH implanted in Spain, from municipalities with 50 inhabitants till municipalities with 34.000 inhabitants. In all cases, the forest resources are utilized, reducing operating costs, improving the forest stand and reducing the risk of bushfires.

#### **Participants**

The participants were mostly forest technicians, enterprises/companies, environment research centres, deputies and researchers.

#### Programme and training process

The programme started with the introduction of the ForBioEnergy project (objectives and results obtained), including the role of AMUFOR and CCV in it. After that, the trainers explained what the opportunities and benefits are deriving from the use of forest resources and what their valorisations are to improve the ecosystem services, to generate employment at local level and to reduce the dependence of using fossil fuels, increasing the energy savings. It is noted that after each presentation, trainers asked to participants questions in order to obtain their feedback.



## Discussion and opinion of the participants

The training course was organised to have an active participation with attendants. Hence, a document with questions was given to participants at the beginning of the training.

#### Questions: and replies

Assessment 1-5: Strongly disagree (1) | rather in disagreement (2) | Medium term (3) | Rather agree (4) | Strongly agree (5)

Question 1: If you had to prioritize the barriers in order to address them, what would be your prioritization (Barrier A-F)?

	Global prioritization	В	D	Е	F	С	А
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Another kind of classification has been done, selecting only 1 barrier by participant, being the result:

GRADES	Α	В	С	D	Е	F
% of participants	0	29	14	36	7	14

#### Barriers:

- A. Long-time and complexity of authorization for the extraction of biomass in protected areas.
- B. The fragmented ownership of private forest, the inadequate organisation and the lack of interest in biomass production.
- C. Reticence to use biomass in protected areas: production function is not balanced with conservation function.
- D. Low profitability in biomass production, especially in protected areas.
- E. Poor integration of local stakeholders across the forest-based bioenergy chain.
- F. Lack of synergies and coordination among the administrative levels (local, subregional, regional and national) in the territories included in the protected areas.

Question 2: Do you consider that current policies contribute to the forest utilization? (1-5)

GRADES	1	2	3	4	5
% of participants	20	47	33	0	0

Question 3: Do you consider that forest owners are recognized by the administration and by society (1-5)?

GRADES	1	2	3	4	5
% of participants	7	67	13	13	0

Question 4: Do you think that consumers are aware of the importance of taking advantage of residual forest biomass as a source of renewable energy, instead of using fossil fuels (1 - 5)?

GRADES	1	2	3	4	5
% of participants	27	27	27	20	0

Feedback from participants



Question 5: What measures would you propose for the promotion of forest management in the Community of Valencia?

- DISSEMINATION AND TRANSFERRING: Training and awareness-raising seminars, as well as seminars to promote the sector towards the population on the benefits and opportunities of managing and valuing forest resources in a multifunctional way (e.g., fighting fires) and positively impacting in the political will.
- SIMPLIFY THE ADMINISTRATIVE PROCEDURES: Facilitate forest management to owners through less administrative intervention, streamlining their procedures and fixing economic returns.
- AID: To allocate more funds and subsidies to owners to carry out forest management and to increase the technical support to private owners by the administration.
- INSTRUCTIONS AND MECHANISMS: Technical instructions/financing/ forestry certification mechanisms; implementation of mechanisms as the Payment for Environmental Services (PES) that assess externalities of forest management, to provide infrastructures at regional/local level and work in favour the consumption of biomass in the different areas of society.

Question 6: If you want to implement a Forest Management project in a Natura 2000 area, would you know what the necessary administrative and <u>legislative procedures are?</u>

Yes (36%) | No (64%)

#### In the case that the answer was "Yes":

Evaluation 1-5: Very complex (1) | complex (2) | Normal (3) | Simple (4) | Very simple (5)

## Question 6.1. At what level would you classify the complexity of implementing the procedures for private owners (1-5)?

GRADES	1	2	3	4	5
% of participants	20	80	0	0	0

#### Question 6.2. And to the public (1-5)?

GRADES	1	2	3	4	5
% of participants	0	40	40	20	0

Question 7. If we had to evaluate, in a balanced way, each of the factors studied to choose the best system of utilization, what importance would you give each one (1-5)? Assessment 1-5: No importance (1) | little importance (2) | Impartial (3) | Fairly important (4) | Very important (5)

- Performance.
- Economic-financial profitability.
- Impacts.
- Energy balance.
- Biomass quality.



#### Value over 5 each factor:

GRADES (% participant)	1	2	3	4	5
Performance	10		10	30	50
Economic-financial profitability				30	70
Impacts		10	50	40	
Energy balance			18	45	36
Biomass quality		10	20	40	30
Emissions			25	50	25

#### Rating from 1 to 5, in global:

GRADES	1	2	3	4	5
Performance	20	40		40	
Economic-financial profitability				20	80
Impacts	20	20	40	20	
Energy balance	40	20	20		20
Biomass quality	20	20	40	20	

Question 8. Do you think that one of the two uses present opportunities or benefits with respect to the other that have not been contemplated in the study?

In the case that you have indicated "Yes", list which ones:

The answers have been oriented to the factors that can modified the results obtained, as:

- Slopes.
- Density.
- Accessibility.

On the other hand, it has been remarked social aspects linked with the creation of employment arising from the forest management, besides assuming the total use of the forest as an active fight against forest fires.

Question 9. In what conditions of the stand or conditions of the work (equipment, training, organization, etc.) considers that the results can vary?

- Forest stands: density, age, homogeneity.
- Accessibility to plots (roads).
- Topographic factors (slope).
- Forest stands with previous forest operations.
- Machinery in the extraction and transport.
- Presence of rocky outcrops.
- Efficiency of operators.
- Time invested.
- Number of plots.
- Geographical region.



Assessment 1-5: Strongly disagree (1) | rather in disagreement (2) | Medium term (3) | Rather agree (4) | Strongly agree (5)

Question 10. Do you consider ICT (Information and Communication Technology) a good tool to fight against climate change?

GRADES	1	2	3	4	5
% of participants	0	13	0	20	67

Question 11. Do you consider the carbon offset mechanisms between large emitters and forest stocks at the local level a good opportunity as part of the solution?

GRADES	1	2	3	4	5
% of participants	0	7	13	33	47

Question 12. Do you consider this tool necessary or interesting for political decision-making as a transparency tool?

GRADES	1	2	3	4	5
% of participants	0	0	13	27	60

Assessment 1-5: Strongly disagree (1) | rather in disagreement (2) | Medium term (3) | Rather agree (4) | Strongly agree (5)

Question 13. Do you consider that the implementation of a District Heating system is an opportunity at the local level (1-5)?

GRADES	1	2	3	4	5
% of participants	0	7	13	13	67

Question 14. Do you think that municipalities are aware of how their resources can be valued in a District Heating system (1-5)?

GRADES	1	2	3	4	5
% of participants	87	0	13	0	0

Question 15. What benefits and opportunities do you observed when managing local forests?

- Economic activation and circular economy at local level (rural development): development of companies and local industry, job creation, settlement of the population, economic savings.
- Management and maintenance of the local forest: improvement of the vigour of the stand, valorisation of the forest resources, fire prevention (e.g.:





- Reinforcement of primary and livestock agroforestry economy.
- Reduction of greenhouse emissions.
- Symbiosis with new service activities.
- Visualization of good forestry practices that serve as a basis for training.
- Landscape.
- Recreational use of the forest.

#### Lessons learnt

- The most important barriers to tackle them are D and B:
  - o D: Reticence to use biomass in protected areas: production function is not balanced with conservation function.
  - o B: The fragmented ownership of private forest, the inadequate organisation and the lack of interest in biomass production.
- 47% of the participants are "rather in disagreement" about the contribution of the current policies to the forest utilization.
- -67% of the participants are "rather in disagreement" in the recognition of the forest owners by the administration and by society.
- -80% of the participants are from strongly disagree to medium term in which consumers are aware of the importance of taking advantage of residual forest biomass as a source of renewable energy, instead of using fossil fuels.
- -The measures proposed for the promotion of forest management in the Community of Valencia are linked with the dissemination and transfer of information and knowledge, the simplification of administrative procedures, the necessity to provide aid to forest owners and to implement mechanisms and instructions, as for example PES.
- -64% of the attendants do not know the necessary administrative and legislative procedures to implement a forest management project in the Natura 2000 areas. It has been indicated (80% arising from the 36% who know the procedures) that the complexity of implementing the procedures for private owners are complex, being for public owner's between complex and normal.
- Extrapolating the results obtained in question 7, it is obtained that the most important factors is the economic and financial profitability (70-80%). In the forest management system introduced, there are social, environmental and economic opportunities arising from the use of forest biomass for energy purposes. It is noted that the results obtained in the forest harvesting can varied with other biotic and abiotic conditions.
- 67% of the participants consider ICT a good tool to fight against climate



change.

- 47% of the participants consider the carbon offset mechanisms between large emitters and forest stocks at local level a good opportunity as a part of the solution.
- -60% recognize the GEMINIS tool necessary or interesting for political decision-making as a transparency tool.
- -67% of the participants have reflected that the implementation of a District heating system is an opportunity at the local level.
- -87% are strongly disagreed in that municipalities are aware of how their resources can be valued in a District heating system.
- There is a wide list of benefits and opportunities derived from the use of forest resources at the local level (rural development, improvement of the vigour and health of the forest stand, etc.)

#### Evaluation of the training:

1. Contents and methodology: 78,9/100

2. Trainer: 89,06/100 3. Global: 79.17/100

4. Level of satisfaction: 86,6/100

General (1-4): 83,43/100

All the participants would participate in other training courses.

It is important to explain real cases, besides the application of new technologies and the implication of the key stakeholders.



#### PROGRAMME AND INVITATION

#### Industria

# Evaluación de oportunidades y beneficios del aprovechamiento de biomasa forestal

FECHA

13/04/2018, de 09:00 a 14:00 h.

INTRODUCCIÓN

Una parte significativa de los bosques mediterráneos se encuentra en áreas protegidas e incluso aunque representen una gran oportunidad para el aprovechamiento de bioenergía de base forestal, las actuales restricciones impiden el desarrollo del sector.

El objetivo general del proyecto es fomentar el desarrollo de la cadena de valor bioenergética de base forestal como pilar de bioeconomia a nivel local, aportando soluciones transnacionales a fin de reducir las barreras que obstaculizan el desarrollo del sector, así como de sus modelos de planificación y los proyectos operativos derivados a implementar en el territorio. La finalidad es aprovechar el potencial de la biomasa forestal a través de la ordenación forestal sostenible y subsidiaria como herramienta del desarrollo rural en áreas protegidas, al mismo tiempo que se preserva la biodiversidad de las áreas protegidas.

#### DIRIGIDO

Técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestal, energias renovables e innovación, empresas energéticas y organismos u organizaciones empresariales.

El objetivo del seminario es la presentación de los resultados y avances técnicos del proyecto ForBioEnergy, así como la transferencia de conocimiento a través de las ponencias y el debate abierto entre los participantes sobre la evaluación de oportunidades y beneficios del aprovechamiento de biomasa forestal en el Mediterráneo.

#### CERTIFICADOS

Certificado de asistencia firmado por AMUFOR, COCINSV y UPV por la asistencia a 1 seminario.

Certificado de aprovechamiento firmado por AMUFOR, COCINSV y UPV por la asistencia a, al menos, 4 seminarios.

# Jornadas/Seminarios



## PROGRAMA

09.00h Recepción y registro de asistentes

Presentación del programa de seminarios de formación ForBioEnergy Rafael Mossi Peiró. Coordinador de Competitividad Cámara de

09.20 h. Proyecto ForBioEnergy: actuales resultados y futuros desafios Fernando Pradells, AMUFOR

Presentación y debate abierto: Oportunidades de bioenergía forestal para el desarrollo a nivel local Rebeca Aleix, AMUFOR

10:30 h Descanso, Café

Presentación y debate abierto: Aprovechamiento de biomasa 10:45 h para usos bioenergéticos en monte mediterráneo Victoria Lerma, UPV-ITACA

Presentación y debate abierto: Herramientas TIC interactivas en el campo de la bioenergia forestal y la mitigación del cambio

Edgar Lorenzo, UPV-ITACA.

Presentación y debate abierto: Valorización de la biomasa forestal forestal en soluciones de District heating Bruno Armengot, UPV-ITACA

Conclusiones y próximos pasos dentro del proyecto ForBioEnergy José Vicente Oliver, UPV-ITACA

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#### LUGAR DE CELEBRACIÓN

Sala de Juntas UPV-ITACA Planta 3. Edificio 8G, Ciudad Politécnica de la Innovación, Camino de Vera, s/n

46022 Valencia

#### PRÓXIMOS SEMINARIOS

Pinche aqui para información de próximos seminarios Forbioenergy





#### APROVECHAMIENTO DE BIOMASA FORESTAL: EVALUACIÓN DE OPORTUNIDADES Y BENEFICIOS

more Planning projects. Approximation of Associal Sector Editor in the some stone y benefities.

29

Seminario de evolvación de oportunidades y beneficios del aprovechamiento de biomasa



ForBloEnergy



"Europe in Question"



Catalogación y estudio de los abrigos rupestres del Arco Mediterráneo español.



Converso de Colaboración



MAR 2016

Come parte de sas actividades desarrolladas denha del proyecto ForBioEnergy, el próximo viernes, 11 de abril de 2018 se celebrarii un seminaro de formación para la presentación de los resultados y avances Hicroso del proyects, así como la transferencia de conocimientos sobre la exaluación de oportunidades y terreficios del aprovechamento de la tramaca Strental en el Meditenúrves.

Mediante las punencias y el detute atrieto, se analizará la situación de los bosques meditenómeos situados en áreas protegidas, además de como las actuales relificciones impiden el desarrato del sector pain cuando suportika un importante beneficio.

Con el proyecto ForBioEnergy se persigue fumentar el desamillo de la caderia de valor bioenergética de base. fuental como plia de bioscoromia a nivel lucal. El aproxechamiento del putencial de la biomasa forental a través de la actienación forestal poctenible y subsidiaria debir ser una herramienta más para el desarrollo rural y la presenzación de la biodiversidad de las áreas peringidas.

Las diferentes soluciones transnacionales que aportará el proyecto contriburán a reducir las harreras que abstacultan el desarrollo del arctor ferestal en general y de la cadena bicenergetica en purficular. Además de mejorar los modelos de planificación y los proyectos operativos demados a implementar en el territorio.

Este seminario va dirigido a tecnicos en materia de mecin protecrite, gestión forestal, energias renovables e annovación, empresas energeticas y organismos o organismos empresariales.

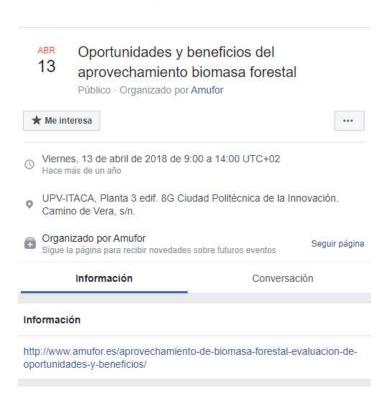
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# 2.3 Training no. 3

# 2.3.1 <u>Technical report</u>

Pilot Area	Comunitat Valenciana
Event title	Action Plan for unblocking the barriers that hinder the sustainable forest management in protected areas
Involved partner	- PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR)
	- PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)
Responsible partners	PP5
Location	UPV-ITACA, Ciudad Politécnica de la Innovación – Polytechnic City of Innovation.
Date	29.10.2018

No. of participants	18
Target groups	Local Public Authority, Researchers and technicians, SME, enterprise, Interest group including NGOs.
	AMUFOR:
	Fernando Pradells, Director of AMUFOR
	Rebeca Aleix, Technician of AMUFOR
Trainers/speakers	<u>UPV-ITACA</u> :
	José Vicente Oliver, Lead researcher
	HEIZOMAT:
	Gregor Baer, responsible of HEIZOMAT-Spain
Training materials	Roll-up, poster, ForBioEnergy brochure, satisfaction questionnaire, PPTs and document of questions to participants.

	Description of the training course
Report on training	The objective of the ForBioEnergy project is "to develop the forest-based bioenergy value chain as a pillar of circular bioeconomy at the local level in the rural Mediterranean areas based on regional cooperation, overcoming the barriers that slow-down its development.
	The current regulatory restrictions, as well as the lack of appropriate action plans, prevent and slow down the use of biomass. A key element of the forest preservation effort is the environmental assessment derived from the short, medium and long term exploitation, as well as the development of an Action Plan for a new



regulatory framework which facilitates the energy valorization of forest biomass and simplifies the permit route, ensuring the sustainability of this particular value chain and the forestry sector, in general.

The seminar is aimed at technicians in local administrations and technicians in general in the field of environment, forest management, renewable energy and innovation, energy companies and business organizations.

The objective of the seminar is the presentation of the results and technical advances of the ForBioEnergy project, as well as the transfer of knowledge on the Action Plan for unblocking the barriers that hinder the sustainable forest management in protected areas.

#### **Participants**

The participants were mostly researchers and technicians. Moreover, in the training was represented as target groups the local public authorities, SME, enterprises and Interest group including NGOs.

#### Programme and training process

The programme started with the introduction of the results and objectives of the ForBioEnergy project. After that, the trainers explained the environmental and socioeconomic evaluation of the use of forest biomass, biomass valorization to energy (boilers, wood chippers and equipment of the use of biomass with energy purposes), the conflict situation in a local area - representative case study "forest management plan in Enquera (Valencia) and the action plan to unblock administrative, technical, environmental and socioeconomic barriers. It is noted that after each presentation, trainers asked to participants questions in order to obtain their feedback.

#### Discussion and opinion of the participants

The training course was organised to have an active participation with attendants. Hence, a document with questions was given to participants at the beginning of the training.

#### Questions

Feedback from participants

PPT "Environmental and socioeconomic evaluation of the use of forest biomass"

1) Do you consider that there is another factor that must be taken into account? Yes / No

If the answer is yes, indicate which one:

Some participants demanded to explain deeply the economic profitability derived from the sustainable forest management.



2) Why do you consider that there are no more forestry companies dedicated to forest management and use of biomass for energy purposes?

In general, participants answered that:

- Lack of management: there is a high quantity of legal problems in the operations (barriers).
- Currently, there are few benefits obtained after the use of forest
- Lack of an established market: low profitable, there is not enough demand and there are no consumers.
- Lack of support at the legislative level.
- Lack of premiums for these energies.

## PPT "Energy valorization of the biomass: boilers, wood chippers and equipment of the use of biomass with energy purposes"

1) Do you think that public administrations should be an example to society by installing boilers?

Participants replied that "YES", public administrations has to be the reference to promote the sustainable development, to engage the society and to explain the energy savings derived from the use of forest biomass as bioenergy and its contribution to the circular bioeconomy.

2) What do you think about district heating? Do you consider that it is a good solution to reduce energy consumption and CO<sub>2</sub> emissions locally? Yes/No

A district heating allows the transition forward to sustainable energy models (energy efficiency, valorization of the residues, employment, energy saving....) and of course it is a good solution.

- 3) What actions do you consider necessary to implement them? Indicate maximum 3.
  - 1. Greater support from the public administration: transparent regulations and support for the financing of the installation in order to reduce the costs of the installation (e.g., provide more public subsidies).
  - 2. Raise-awareness and information to society through an active communication and dissemination of the possibilities derived from the use of biomass at the local level as it is the consumption of chips, pellets and firewood.
  - 3. Local technical training and feasibility studies.



#### PPT "Conflict situation in the local area: representative case study "Forest Management Plan in Enguera (Valencia)"

1)Do you consider that the project was paralyzed for a scientifictechnical reason? List 3 reasons why you think it was paralyzed\*

As the trainer explains, of the 800 ha which were managed, only 30 hectares (5% of the total ha managed) were deficient. Nevertheless, the lack of knowledge about the benefits that a forest management provides in the environment, social and economic terms did not allow to understand why the project had to continue being implemented, having put a sanction/penalization for this 5%. So, the negative pressure of the media "a lot of communications in the newsletters appeared" carried out to finalize with the execution of the plan.

Therefore, it is necessary to explain:

The situation of these 30 ha,

The management criteria included in the plan,

The intensity of the cutting and the consequences generated in terms of ecological-landscape value,

The social impact.

The forest requires an active management in order to be preserved, so it is required to make a high effort in communication to explain to society the benefits derived from the SFM.

2)Do you consider that the project should be reactivated? Yes/No. Explain briefly the reason of your response

The majority of the participants answered "YES" due to the benefits obtained (employment, reduce of the risk of forest fires and the pests and diseases, preservation of the forests) and its contribution to the circular bioeconomy. The inclusion of measures/actions is necessary to avoid that this situation happens again.

If you answered "yes", indicate 3 priority actions that you consider that it should be done to reactivate it.

- To follow the normative that facilitates the sustainable development and to reduce the bureaucracy regulations.
- To determine a regulatory model of sanctioning mechanisms in cases of negligence; control of the levels/quantities in the cuttinas.
- To provide the society knowledge on forest management and bioenergy: improve the information and local awareness.

#### "Action Plan to unblock administrative, technical. environmental and socioeconomic barriers"

1) Among the three specific objectives explained, what is the priority for you?

Not representative answer; only 1 person answered this question, giving the importance to the communication plan. Nevertheless, in the discussion, it is noted that the objective links with the communication is quite important to participants; to raise-awareness



about the benefits of the use of forest biomass, the renewable energy sources, etc.

2) What other actions would you propose to overcome the barriers? List maximum 3.

- Economic boost.
- Preventive actions: economic reserve fund to reduce the risk to invest in forestry and in the linked projects, as well as to the possible losses of these forestry works.
- To put in value other environmental services: compensation mechanisms.

#### Lessons learnt

- Companies, mostly SMEs, not have the security to develop its economic activity in the forestry sector focused on the forest management and bioenergy.
- The public administration has to be an example for the sustainable development by installing boilers/district heating and to provide a greater support.
- It is essential to have a communication plan to raise-awareness about the benefits derived from the use of forest biomass.
- The Forest Management Plan should be reactivated due to the benefits obtained of its implementation, including a regulatory model of sanctioning mechanisms in cases of negligence.
- Preventive actions are necessary to reduce the risks to invest in the forestry sector.

#### Evaluation of the training

- Impressions and methodology: 82/100

- Speaker: 92,5/100 - Global: 82.5/100

Percentage of participant satisfaction: 80/100



#### PROGRAMME AND INVITATION

#### Industria

Plan de acción para desbloquear las barreras que dificultan la valorización energética de la biomasa forestal en áreas protegidas

# Jornadas/Seminarios



#### FECHA

29 / 10 / 2018, de 16:00 a 20:00 h.

#### DIRIGIDO

Técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestal, energías renovables e innovación, empresas energéticas y organismos u organizaciones empresariales.

#### INTRODUCCIÓN Proyecto ForBioEnergy

La mayor parte de la superficie forestal de las regiones ForBioEnergy està situada en àreas protegidas, por lo que representa una oportunidad significativa para la valorización energética de la biomasa forestal.

Sin embargo, las restricciones regulatorias actuales, así como la falta de planes de acción apropiados, impiden y ralentizan el aprovechamiento de la biomasa.

El objetivo del proyecto es fomentar la cadena de valor bioenergética de base forestal en áreas protegidas proporcionando soluciones transnacionales a fin de reducir las barreras que obstaculizan el desarrollo del sector y diseñar modelos que permitan aprovechar todo el potencial de la biomasa preservando la biodiversidad.

Por tanto, un elemento clave de este esfuerzo de preservación es la evaluación ambiental derivado del aprovechamiento a corto, medio y largo plazo, así como el desarrollo de un Plan de Acción para un nuevo marco regulatorio que facilite dicha valorización y simplifique la hoja de ruta, asegurando la sostenibilidad de esta cadena de valor en particular y del sector forestal, en general.

### OBJETIVO

El objetivo del seminario es la presentación de los resultados y avances técnicos del proyecto ForBioEnergy, así como la transferencia de conocimiento.

#### DINÁMICA

Tras la presentación de cada ponente, se realiza una actividad con los participantes respecto a la temática abordada y con la finalidad de asegurar su participación activa.

#### PROGRAMA

16:00 h Recepción y registro de asistentes 16:10 h

Presentación del seminario de formación (Rafael Mossi, Cámara Valencia)

16:20 h Evaluación ambiental y socioeconómica del aprovechamiento de biomasa forestal (Rebeca Aleix, AMUFOR)

17:00 h Descanso, Café.

Valorización energética de la biomasa: calderas, astilladoras y 17:20 h equipos de aprovechamiento energético (Gregor Baer, HEIZOMAT

18:00 h Situación de conflicto en el área local: estudio de caso representativo "Proyecto de Ordenación Forestal en Enguera (Valencia)" (Fernando Pradells, AMUFOR)

18:40 h Plan de Acción para desbloquear barreras administrativas, técnicas, ambientales y socioeconómicas (José Vicente Oliver, UPV-ITACA y Rebeca Aleix, AMUFOR)

19:10 h Dinámica en grupo de barreras prioritarias contempladas en el Plan de Acción (José Vicente Oliver, UPV-ITACA)

Preguntas

Conclusiones y próximos pasos dentro del proyecto ForBioEnergy (Rafael Mossi, Cámara Valencia)

#### LUGAR DE CELEBRACIÓN Sala de Juntas UPV-ITACA

Planta 3. Edificio 8G, Ciudad Politécnica de la Innovación,

Camino de Vera, s/n 46022 Valencia

### PRÓXIMOS SEMINARIOS



- Planificación de biomasa con fines energéticos (25.01.2019)
- Requisitos de sostenibilidad y estándares de calidad de biomasa forestal (15.02.2019)
- Situación actual del aprovechamiento de la bioenergía forestal en condiciones mediterráneas: próximos pasos (08.03.2019)

#### CERTIFICADOS

Certificado de asistencia firmado por AMUFOR, Cámara Valencia y UPV por la asistencia a 1 seminario.

Certificado de aprovechamiento firmado por AMUFOR. Camara Valencia v UPV por la asistencia a, al menos. 4 seminarios.









Poeta Querol, 15 - 46002 Valencia T 963 103 900 / F 963 531 742 iornadas@camaravalencia.com www.camaravalencia.com











#ValorizaciónEnergética #BiomasaForestal #ĀreasProtegidas

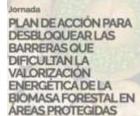




El viernes, 19 de octubre, tendrà lugar una jornada donde se presentarán los resultados y avances técnicos del proyecto ForBioEnergy

Se trata de una acción gratuita dirigida a Técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestal, energias renovables e innovación, empresas energéticas y organismos u organizaciones empresariales

¡Descarga el programa, informate y ûnetel .... Ver más







Seminario ForBioEnergy: Plan de Acción - valorización energética



Me gusta











# 2.4Training no. 4

# 2.4.1 <u>Technical report</u>

Pilot Area	Comunitat Valenciana: Cirat (Castellón)
Event title	Biomass planning for energy purposes
Involved partner	PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR)
	- PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)
Responsible partners	PP5 & PP6
Location	Ayuntamiento de Cirat; Plaza Mayor, núm. 18 12231 Castellón
Date	22.02.2019

No. of participants	17
Target groups	The participants were mostly researchers; local councils – mayors, technicians, workers; associations of municipalities, provincial council, companies related to the forestry sector.
Trainers/speakers	AMUFOR:
	Javier Martínez, Technician of AMUFOR
	Rebeca Aleix, Technician of AMUFOR
	<u>UPV-ITACA</u> :
	David Vinué, Researcher
	Victoria Lerma, Researcher
	Edgar Lorenzo, Researcher
	José Vicente Oliver, Lead researcher
Training materials	Roll-up, poster, ForBioEnergy brochure, satisfaction questionnaire,
	PPTs and document of questions.

Report on training	Main aim and goals of the training
	The objective of the training course is the presentation of the results and technical advances of the ForBioEnergy project, as well as the transfer of knowledge on the planning of biomass for energy purposes.
	<u>Participants</u>



The training course is aimed at technicians in local administrations and technicians in general in the field of environment, forest management, renewable energy and innovation, energy companies and business organizations or organizations.

Target groups reached in the training: The participants were mostly researchers; local councils - mayors, technicians, workers; associations of municipalities, provincial council, companies related to the forestry sector.

#### Description of the programme and training processs

ForBioEnergy aims to achieve the use of forest biomass in the protected areas (Natura 2000 sites) for rural development and mitigation of climate change.

Firstly, it is necessary to quantify the biomass that our forests have and the potential to valorise it as bioenergy. In this case, the use of new technologies such as remote sensing is noted due to its efficiency and low cost to estimate it.

The forest-based bioenergy value chain has a high potential at the three levels of sustainability (environmental, social and economic). The coordination of policies and its integration within the sustainable bioeconomy framework is essential to overcome the barriers and implement the actions proposed by ForBioEnergy. Hence, the use of solid biofuels is a renewable alternative that has to be considered in policies; their high quality has been already shown by scientific analysis.

On the other hand, a key issue is the role of forest ecosystems in capturing and storing carbon atmosphere and their impact across energy value chain. At this point, there are ICT tools which are managing GHG emissions to face climate changes in a context of Smart City. The aim is to contribute in the decision making of companies and public administrations.

#### Training process:

In this training course, 7 presentations were made; 2 general presentations and 5 on technical aspects of the ForBioEnergy project and other initiatives linked to it.

## Feedback from participants

Although the following questions were distributed to the participants as in other training courses, this time, the participants preferred to give us their feedback through the debate.

Thus, the participants are aware of the use of agroforest biomass and the benefits that the municipalities can obtain of it. However, due to the situation of depopulation, the situation of small and rural



municipalities is quite complex due to basic services are being reduced: lack of public transport, technological disconnection, cashiers removed. This situation means that many young people decide to leave town, as well as complicates the investment in the different business unit due to the poor internet connection.

The methods such as remote sensing would allow reducing costs and time for the biomass quantification to know the available resources that the municipalities have. On the other hand, participants agreed the importance of carbon as environmental service that also has current value in the market, being really important the payment of environmental services.

Finally, an effort has to be made to raise awareness in society about how a sustainable management in the municipality can revert in the territory, generating employment and, consequently, establishing population, as well as the role of the forestry sector in decarbonisation (sink, storage, replacement).

PPT Greenhouse Gas (GHG) emissions management tool as Smart City against Climate Change

(1)Do you consider the model shown in your municipality to be replicable? How do you consider that the reduction of emissions affects the competitiveness of companies? Do you consider a local carbon offsetting market viable?

PPT Forest planning oriented to bioenergy in protected areas adapted to the local area.

(1) Do you consider the calculation of the biomass price in your territory of interest? Would you be willing to include these developments in your territorial planning and/or employment in rural areas? What barriers do you find for the forest management in your territory?

PPT Forest-based bioenergy supply chain in protected areas, policy coordination and integration within the framework of a sustainable bioeconomy.

(1) In what paradox is the Valencian forestry sector currently? How can we value forest bioenergy in a context of climate change? What concrete projects can we develop in villages in the interior of Castellón?

PPT Use of biomass for energy and its potentials.

(1) Do you consider feasible the use of the biomass potential of your region/ municipality? Is there a detailed study of its concrete potential or a project in this line? What are the main challenges and opportunities specific to your region for the use of forest biomass?

PPT Impact on the carbon footprint in the bioenergy value chain.

(1)Do you consider that the impact on the carbon footprint derived from the use of biomass for energy purposes should be compared with the impact on the use of fossil fuels?

(2)Do you consider that the abandonment of management has a negative impact on the fixation of carbon in forest ecosystems? Do you think there is a good integration of the key local actors of this particular value chain?



PPT Greenhouse Gas (GHG) emissions management tool such as Smart City against Climate Change

(1)Do you consider the model shown in your municipality replicable? How do you consider that reducing emissions affects the competitiveness of companies? Do you consider a carbon offset market to be viable at the local level?

#### Evaluation of the training

In addition to the appreciation for the presentations and the global vision that was provided on how to value our resources, but also on the current situation of the forest-based bioenergy value chain in particular and the forestry sector, in general, the participants valued very positively that these training course are held in the rural territory with the people of the town.

#### **LESSONS LEARNT**

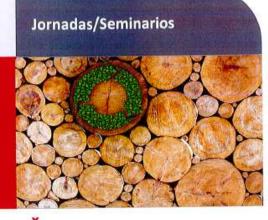
- We have resources to not be energetically dependent. Therefore, a sustainable energy strategy has to be initiated in the Comunitat Valenciana. To achieve that, the energy from the agroforest biomass has to be complemented with the main renewable energies in the region (wind, hydraulic and photovoltaic energy).
- Adaptive silviculture needs to be applied to face climate change, making our ecosystems resilient to major disturbances.
- The use of remote sensing acquires a high level of determination between the data obtained by its application and inventories of the Pinus halepensis stands.
- The application of a SFM, the increase in the rate of use, the innovation in value chains (materials and energy) and the improvement by the substitution of materials and energy derived from fossil carbon are absolutely necessary to reach a low-carbon economy or decarbonised economy.



# PROGRAMME AND INVITATION

# Industria

## Planificación de la biomasa con fines energéticos



## FECHA

22/02/2019, de 10:15 a 14:15 h.

#### DIRIGIDO

Técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestall, energías renovables e innovación, empresas energéticas y organismos u organizaciones empresariales.

#### INTRODUCCIÓN Proyecto ForBioEnergy

La mayor parte de la superficie forestal de las regiones ForBioEnergy està situada en âreas protegidas, por lo que representa una oportunidad significativa para la valorización energética de la biomasa forestal.

El objetivo del proyecto es fomentar la caden a de valor bioenergética de base forestal en áreas protegidas proporcionando soluciones transnacionales a fin de reducir las barreras que obstaculizan el desarrollo del sector y diseñar modelos que permitan aprovechar todo el potencial de la biomasa preservando la biodiversidad.

#### OBJETIVO

Presentación de los resultados y avances técnicos del proyecto ForBioEnergy, así como la transferencia de conocimiento sobre la planificación de la biomasa con fines energéticos.

#### CERTIFICADOS

Certificado de asistencia firmado por AMUFOR, Cámara Valencia y UPV por la asistencia a 1 seminario

Certificado de aprovechamiento firmado por AMUFOR, Cámara Valencia y UPV por la asistencia a, al menos, 4 seminarios.

LUGAR DE CELEBRACIÓN Ayuntamiento de Cirat Plaza Mayor, núm. 18 12231 Castellón

#### PROGRAMA

Recepción y registro de asistentes

Presentación de AMUFOR

Javier Martinez y Fernando Pradells, AMUFOR

10:45 h Presentación de ForBioEnergy: objetivos y resultados obtenidos Rebeca Aleix, AMUFOR y Rafael Mossi, Cámara de Valencia

11:00 h Planificación forestal orientada a la bioenergía en áreas protegidas adaptadas al área local

David Vinue, UPV-ITACA

11:30 h Cadena de suministro bioenergética de base forestal en áreas protegidas, coordinación de políticas e integración en el marco de una bioeconomía sostenible

José Vicente Oliver, UPV-ITACA

12:00 h Pausa Café

12:30 h Uso de la biomasa para energia y sus potenciales

Victoria Lerma, UPV-ITACA

13:00 h Impacto de la huella de carbono en la cadena de valor de la bloenergia

Rebeca Aleix, AMUFOR

13:30 h Herramienta de gestión de emisiones de Gases de Efecto Invernadero (GEI) como Smart City frente al Cambio Climático

Edgar Lorenzo, UPVITACA

14:00 h Conclusiones

14:15 h Finalización del seminario

















#planificación forestal, el uso de la biomasa, la cadena de valor de la (#RedNatura2000) como fuerza impulsora de desarrollo y mitigac #CambioClimático. #bioenergía y herramientas frente al #CambioClimático. En esta ocación, el seminario presentará, además de los resultad INSCRIPCIONES EN: forbioenergy.amufor@gmail.com avances técnicos del proyecto, diferentes ponencias relacionadas #planificación forestal, el uso de la biomasa, la cadena de valor

Accede al programa en: http://www.amufor.es/planificacion-de-la-biomasacon-fines-energeticos/

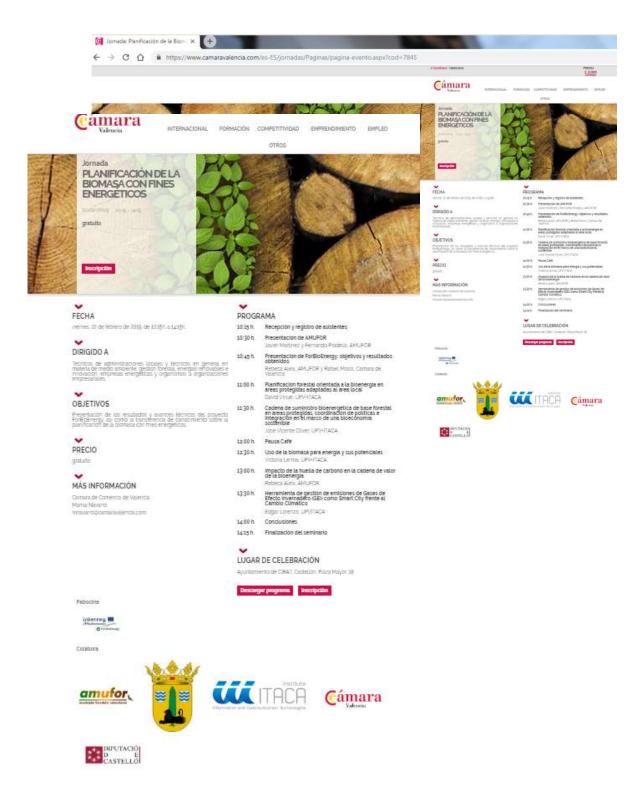
Ver menos ▲

Contactos profesionales

utilización de la biomasa #forestal de las áreas protegidas









amufor.es/planificacion-de-la-biomasa-con-fines-energeticos/



AMUFOR

SERVICIOS

PROYECTOS

ACTUALIDAD

PERFIL

# PLANIFICACIÓN DE LA BIOMASA CON FINES ENERGÉTICOS

Inicio / Actividades / Planificación de la biomasa con fines energéticos

FEB 2019

Seminario de formación: Planificación de la biomasa con fines energéticos,

El próximo 22 de febrero nos trasladamos al municipio de Cirat en Castellón para dar continuidad a los seminarios de formación. En esta ocasión, estará dirigido a la transferencia de conocimientos sobre la planificación de la biomasa con fines energéticos.

Siendo una apuesta innovadora para el desarrollo sostenible de las zonas rurales del sur de Europa, el proyecto ForBioenergy, propone la utilización de la biomasa forestal de las áreas protegidas (Red Natura 2000) como fuerza impulsora de desarrollo y mitigación del cambio climático.

En esta ocación, el seminario presentará, además de los resultados y avances técnicos del proyecto, diferentes ponencias ponencias relacionadas con la planificación forestal, el uso de la biomasa, la cadena de valor bioenergética y herramientas frente al efecto invernadero.

#### FECHA:

Viernes 22/02/2019, de 10:15 a 14:15 h

#### INSCRIPCIONES EN:

forbioenergy.amufor@gmail.com

PROGRAMA DEL SEMINARIO



# 2.5 Training no. 5

#### 2.5.1 Technical report

Pilot Area	Comunitat Valenciana: Planes (Alicante)
Event title	Situación actual de la valorización bioenergética de la biomasa forestal. Requisitos y estándares de calidad - Current situation of bioenergy valorization of forest biomass. Requirements and quality standards.
Involved partner	PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR) - PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)
Responsible partners	PP5 & PP6
Location	Centro Cultural y Social Joan Pont C/Jaume I, 1 Planes (Alicante)
Date	03.05.2019

No. of participants	18
Target groups	University, local actions groups, councils, agricultural cooperative and collective defense of the territory.
	Rebeca Aleix (technician of AMUFOR)
	Francisco Javier Sendra (Board of directors of AMUFOR, Enviornmental Deputy of the Province of Alicante and Mayor of Planes)
Trainers/speakers	Bruno Armengot (researcher UPV-ITACA)
	Victoria Lerma (researcher UPV-ITACA)
	David Bordes (Local Action Group of "Rural Muntanya d'Alacant and forest engineer of PegoViu)
Training materials	Roll-up, poster, ForBioEnergy brochure, satisfaction questionnaire, narrative stortytellings, PPTs and document of questions.

# Main aim and goals of the training In the first part, the training course was focused on the presentation of the results and technical advances of the project, as well as on the transfer of knowledge about the requirements and quality standards of forest biomass. In a second part, there was an active debate in the field where it was possible to get knowledge about the constraints to Report on training face in the management of the forest stands for the extraction of biomass. **Participants** University, local actions groups, councils, agricultural cooperative and collective defense of the territory.



## Description of the program and training process

Firstly, the training course was based on technical presentations (theoretical part) about the project. Specifically, about the barriers of the forest-wood-energy supply chains, the energy valorization of forest biomass at the local level, as well as what are the requirements and standards of the quality of pellets and woodchips. A high participation of the attendants is noted. After each presentation, participants answered the document of questions.

Secondly, participants were to the plots located in two municipalities "Beniaia" and "Vall d'Alcalà" to analyse the historical evolution of the landscape and the possibility of extracting forest biomass in private and public areas.

Specifically, in Beniaia, it was possible to visit private terraces with different historical evolution and evaluate how the forest area is increasing due to the pine forest is colonizing old agricultural fields. Therefore, it was noted the necessity to recover the agroforestry mosaics; natural firewalls and landscape creators.

On the other hand, the speaker included a clear example of the situation of private plots "high fragmentation of property", focusing on the difficulties to recovery and enhancement a small forest area "excessive administrative bureaucracy and complex legislative process", even more when the property is unknown - According to PATFOR (2013) 85,934.2 ha with respect to the forest area of the Comunitat Valenciana (6.2% of the total) are unknown.

Finally, in the Vall d'Alcalà, a clear example of a silvicultural treatment near the route was explained. At this point, It was noted to raiseawareness about the importance of implement an active management for the positive impacts or benefits derived from it.

## Discussion and opinion of the participants

Assessment 1-5: Strongly disagree (1) | rather in disagreement (2) | Medium term (3) | Rather agree (4) | Strongly agree (5)

## PPT Barriers of the forest-wood-energy supply chain in the Comunitat Valenciana

Feedback from participants

1) At the level of the Comunitat Valenciana, if it had to prioritize the barriers in order to address them, what would be its prioritization (barrier 1-3)? Please give reasons for your answer.

(1)Lack of scientific-technical basis for implement the forest project and technical plans in the Natura 2000 protected areas.

(2)Low awareness and pressure from local conservation groups that thinder the execution of forestry Works in protected areas.

(3) High number of protection and overlapping figures which difficult the forest management, as well as the excessive and complex



administrative procedure.

Nearly all participants agreed the priority to address barrier 3. It is the first step with a big gap; in addition the procedures are complex. Nearly equal barrier 1-2.

2) In your daily work, do you have other barriers not mentioned in the presentation? If yes, list them in order of relevance.

Among the barriers described by the participants, it is included a lack of political leadership, the aging population and its limited generational change and the lack of information/awareness of opportunities. Moreover, participants noted the fact that the ownership of many lands is unknown; the owners or their boundaries are not found.

3) What other actions would you propose to overcome the barriers? List max. 3

The following actions were proposed by participants:

- Information and dissemination of the advantages and opportunities.
- To decrease the administrative procedures.
- To bring the management and use of forests to schools.
- To bring the economy from the coast to the mountain.
- To identify good practices and transfer results.
- Supporting on administrative procedures.
- To implement forest practices in the protected areas.

Participants noted the lack of administrative support, the expropriation by the administration of the management of private property and the lack of concrete training to encourage the biomass consumption.

# PPT Energy valorisation of the forest biomass at the local level through District heating

1) Do you consider that society is aware of the importance of using residual forest biomass as a source of renewable energy, instead of using fossil fuels (1-5)? Please give reasons for your answer.

The participants agreed that society is not aware of the importance of use the biomass and it has been adopted a comfortable way of living without thinking in the resources that we have to supply the fossil fuels. Concretely, (urban) society does not know the benefits of the use of forest biomass; for people biomass is unfamiliar.

On the other hand, participants indicate that fossil fuel is still too cheap.



There is a hard work to raise-awareness about the use of the forest stand.

2) Do you consider that the implementation of a District heating system is an opportunity at the local level (1-5)? Please give reasons for your answer.

Almost all of the participants agreed that district heating is a great opportunity, although it is clarified that whenever there is profitability reverberated at the domestic level, of their extraction expenditure. They also indicate that resource management generates a circular bioeconomy, generates employment and energy efficiency and it is much more efficient than specific solutions. In addition, the case of Llíria has shown that its implementation is much more efficient and respectful with the environment than fossil energy.

3) What measures do you consider necessary to implement them? Indicate maximum 3.

Among the noted measures, it is the awareness, training and subsidy initial economic and technical assistance, in machinery adapted to the Mediterranean forest. It is required to communicate - information, invest in awareness and training so that there is greater citizen awareness. The participants expressed that it is necessary to invest in local centres of forest experimentation, and that the management of protected areas be defined, as well as that there be local autonomy and political support.

#### PPT Requirements and quality standards for wood chips

1) Do you consider that the implementation of quality standards for woodchips and pellets favours the development of markets for these products (1-5)? Please give reasons for your answer.

Practically, all participants agreed that the implementation of these standards favours the development of the woodchip and pellet markets. It is noted that these markets mobilize innovation, being linked with the supply and demand, according to the public-private boiler feed.

2) Do you think that the development of solid biofuels from residual forest biomass can enhance the mobilization and sustainable management of forest resources at the local level (1-5)? Please give reasons for your answer.

The participants agreed this consideration; explaining that it is necessary as an alternative source of incomes, which generates local demand, as well as the maintenance of forests, landscape and a sustainable value chain. In addition, it represents an advance for its transport and use in urban spaces and public buildings.



## Evaluation of the training

- Impressions and methodology: 83,59/100

- Speaker: 90,63/100 - Global: 81.25/100

Percentage of participant satisfaction: 82,86/100

All participants would come back to a ForBioEnergy training course.

#### The best of the activity

Interventions to the public; approach to the sector; the socioeconomic focus; information; scientific experience; the efficiency and savings that the use of biomass provides; to know an experience of cogeneration and regional realities; practical examples and specific seminar.

#### What would improve

Adaptation of times - the schedule to make it more extensive and to have a more participatory-dynamic training.

#### Identification of other needs

Agricultural biomass, particular problems depending on each case. Biomass of gardening. The joint use of heritage and mountains. The tools of sustainable forest solution which includes the combination of uses and other forest uses.

#### Observations and suggestions

- When talking about barriers, listen to the part related to the administration (town halls, town hall techniques); experiences at the local scales with different number of inhabitants. (Number of inhabitants / experience) and that a work space be allowed within the fabric of local / regional requests.

#### Lessons learnt

- The Mediterranean forests have a high potential to produce solid biofuels.
- The chains of use have to be at the local level.
- Facilities for tri-generation (or combined heat, power and cooling -CHPC) are being studied.
- It is expected that there will be subsidies for the implementation of district heating.
- Public buildings fed by woodchips reduce harvesting costs. In addition, the current woodchips boilers are very advanced.
- We have much more availability than demand; there is still a lot of work to be done to structure and formalize the markets.
- The district heating allows completing the forest-based bioenergy



value chain, generating local economy.

- It is possible that mixtures of different types of biomass are made to feed the boiler, knowing before the limits of each material and the material basis of the matrix.
- Not all products (ex.: reed) with high added value for energy can feed boilers due to the corrosive chemical elements that contain (ex: chlorine); the processes to eliminate it are very expensive, making no sense on a small scale.

#### PROGRAMME AND INVITATION





# SEMINARIO DE FORMACIÓN ForBioEnergy:

Situación actual de la valorización bioenergética de la biomasa forestal. Requisitos y estándares de calidad

Valorización biomasa forestal - requisitos y estándares calidad

Público - Organizado por Amufor



#### Información

Continuamos con los seminarios de formación ForBioEnergy y en esta ocasión se realizará en el municipio de Planes en Alicante, el próximo 03 de marzo de 9:30 a 13:45.

Más información e inscripción en: http://www.amufor.es/seminario-deformacion/



# 2.6Training no. 6

# 2.6.1 <u>Technical report</u>

Pilot Area	Comunitat Valenciana: Andilla (Valencia)
Event title	Current situation of the integral use of the forest bioenergy in Mediterranean conditions. Next steps.
	Situación actual del uso integral de la bioenergía forestal en condiciones mediterráneas. Próximos pasos.
Involved partner	PP5: Association of Forest Municipalities of the Comunitat Valenciana (AMUFOR)
	- PP6: Valencia Official Chamber of Commerce, Industry, Services and Shipping (COCINSV)
Responsible partners	PP5 & PP6
Location	Ayuntamiento de Andilla, Plaza de Bardés, 10 - CP: 46162
Date	07.06.2019

No. of participants	17 participants
Target groups	Regional public authority, local public authority, higher education and research, SMEs and business support organisation.
Trainers/speakers	Consuelo Alfonso, mayoress of Andilla
	José Vicente Oliver, researcher UPV-ITACA
	Edgar Lorenzo, researcher UPV-ITACA
	Rebeca Aleix, technician of AMUFOR
	Bruno Armengot, researcher of UPV-ITACA
	Héctor Vives, municipal technician of Andilla
	Rafael Mossi, Project Management Coordinator Chamber of
	Commerce of Valencia
Training materials	Roll-up, poster, ForBioEnergy brochure, satisfaction questionnaire, narrative stortytellings, PPTs and document of questions.

	Main aim and goals of the training
Report on training	The objective of the 6 <sup>th</sup> training course was focused on the results and technical advances of the ForBioEnergy project, on the transfer of knowledge about current situation (and the next steps) of the integral use of forest bioenergy in Mediterranean conditions), as well as on the acquisition of knowledge about the forest actions implemented in Andilla.



## **Participants**

The training course is aimed at technicians in local administrations and technicians in general in the field of environment, forest management, renewable energy and innovation, energy companies and business organizations.

Target groups reached in the training: regional public authority, local public authority, higher education and research, SMEs and business support organization.

#### Description of the programme

The 6<sup>th</sup> training course was divided in two parts. In the first part, technical presentations were done to explain results and technical advances of the ForBioEnergy project, as well as to transfer of knowledge and the second one, post-fire forest operations implemented in the municipality in Andilla were visited.

### Training process

Three technical presentations were done about the current situation of the integral use of forest biomass for energy purposes in Mediterranean conditions, the Action Plan of the forest-based bioenergy value chain in the Mediterranean basin and a case study of the energy valorization of forest biomass at the local level through District heating. Regarding the forest actions implemented in Andilla, two areas were visited: the recreational area of "La Tejería" where postfire (1993) silvicultural treatments have been implemented in the young forest and Artaj (district of the municipality of Andilla) where silvicultural actions have been implemented to potentiate the regenerate of the fire (2012).

Finally, conclusions were done in the field, after the last visit in Artaj.

Discussion and opinion of the participants

Feedback from participants

As it has been done in the other TC, questions have been provided to participants in order to compile quantitative and qualitative perspective about the thematic presentations. Participants had an active participation during the seminar and even though questions were not filled in as expected by all participants, it can be obtained some conclusions.

These following questions were provided:

PPT 1 Current situation of the integral forest biomass use for energy purposes in Mediterranean conditions

1) In what paradox is the Valencian forestry sector nowadays?



- 2) How can forest bioenergy be valorised in a context of climate change?
- 3) What concrete projects can be developed in the rural areas of the Province of Valencia?

PPT 2 Action Plan of the forest-based bioenergy value chain in the Mediterranean basin

- 1) What other actions would you propose to overcome the barriers? List them in order
- 2) What are the main challenges and particular opportunities of your municipality for the use of forest biomass?

PP3 Case study of the energy valorization of forest biomass at the local level

1)Do you consider that municipalities are aware of how their resources can be valorised in a District Heating system (1-5)? Reason your answer

Assessment 1-5: Strongly disagree (1) | rather in disagreement (2) | Medium term (3) | Rather agree (4) | Strongly agree (5)

2)What concrete actions would you apply in your municipality to develop the forestbased bioenergy value chain?

#### Conclusions

The participants agreed on the positive effect of the energy valorisation of forest biomass through a district heating. The interior forestry municipalities have a high potential for the forest use, with agricultural structures and principles.

Concrete projects allow creating a difference value in each municipality. For example, during the seminar, it was explained the Andilla's initiative regarding the establishment of the first national oxygen bank; project framed in the Natura Life Foundation that will serve to compensate for the excess CO<sub>2</sub> emissions.

On the other hand, the participants noted the importance of implementing a communication plan to raise awareness about the benefits and opportunities of the use of forest biomass and its valorisation in thermal/electrical energy. Thus, the proposed actions to overcome the barriers allow giving visibility to forest bioenergy as a solution to the current depopulation dynamics.

It is noted that other challenges and opportunities were presented by participants such as the generation of bioproducts with high value from organic waste, as well as the composting in parks and gardens.

#### Evaluation of the training

As not all questionnaires were filled in, the answers are not representatives. Nevertheless, along with the feedback that we got and the answers, it is concluded that the training course in terms of



contents and methodology, trainer and global, has a high score. All participants would attend another ForBioEnergy training courses

Participants noted that the training course was held in the municipality of Andilla, a rural interior municipality that has been affected by bushfires. Therefore, it was possible to visualize in situ what are the actions being implemented by the municipality.

Finally, innovative tools were asked by participants, as well as the different biomass management models in the interior areas and scenarios in which it can be happened.

## Lessons learnt

- Sustainable Forest Management favours the environmental services that motivated the declaration of the protected areas. Therefore, there is a clear compatibility between "management" and conservation".
- Different press releases on climate change show the importance of implemented actions at the local level that have a positive impact at the global level in order to reduce greenhouse gas emissions.
- Comparisons between plots with and without management after forest fires in Andilla clearly show the positive impact of forestry actions on the preservation of the forest ecosystem and on improving its vigour and resilience against possible disturbances (forest fires, pests and diseases...).
- The prioritization of the actions to be implemented, defined by the deadlines (short, medium and long term), along with the key actors is essential to unlock the current situation of the forestry sector.
- Awareness of society is essential to implement actions that contribute to rural development; the use of forest biomass generates employment in rural agroforestry municipalities, contributing to rural social and economic structures, while forest ecosystems are preserved.
- The valorisation of forest biomass to thermal energy locally has a high potential for both public and private use.



#### PROGRAMME AND INVITATION

#### Industria

# Situación actual del uso integral de la bioenergia forestal en condiciones Mediterráneas. Próximos pasos

7 / 06 / 2019, de 09:30 a 14:15 h.

#### DIRIGIDO

FECHA

Técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestal, energías renovables e innovación, empresas energéticas y organismos u organizaciones empresariales.

#### PROYECTO FORBIOENERGY

La mayor parte de la superficie forestal de las regiones ForBioEnergy está situada en áreas protegidas, por lo que representa una oportunidad significativa para la valorización energética de la biomasa

El objetivo del proyecto es fomentar la cadena de valor bioenergética de base forestal en áreas protegidas proporcionando soluciones transnacionales a fin de reducir las barreras que obstaculizan el desarrollo del sector y diseñar modelos que permitan aprovechar todo el potencial de la biomasa preservando la biodiversidad.

## **OBJETIVO DEL SEMINARIO**

Primera parte: Presentación de los resultados y avances técnicos del proyecto ForBioEnergy, así como la transferencia de conocimiento sobre la situación actual del uso integral de la bionergía forestal en condiciones Mediterráneas.

Segunda parte: Visita al área recreativa de La Tejería donde se han realizado actuaciones de tratamientos silvícolas sobre masas forestales post incendio del año 1993, en estado de monte bravo. Visita a Artaj donde se han realizado actuaciones silvicolas de ayuda al regenerado del incendio de 2012.

#### CERTIFICADOS

Certificado de asistencia firmado por AMUFOR. Cámara Valencia y UPV por la asistencia a 1 seminario. Certificado de aprovechamiento firmado por AMUFOR, Cámara Valencia y UPV por la asistencia a, al menos, 4 seminarios,

## Seminario



# PROGRAMA

09:30 h Recepción y registro de asistentes

09:45 h Presentación de la jornada (Consuelo Alfonso, Alcaldesa de Andilla)

10:00 h Situación actual del uso integral de la bioenergía forestal en condiciones mediterráneas (José Vicente Oliver, investigador UPV-ITACA)

10:25 h Plan de Acción de la cadena de valor bioenergética en la cuenca Mediterránea (Rebeca Aleix, técnico AMUFOR)

10:50 h Caso práctico de valorización energética de la biomasa forestal a

nivel local mediante District heating (Bruno Armengot, investigador UPV-ITACA)

11:15 Pausa Café

11:30 PARADA 1: Salida a campo, área recreativa de La Tejería (Héctor Vives, técnico municipal) PARADA 2: Salida a campo, Artaj

(Héctor Vives, técnico municipal).

14:00 Conclusiones: proyectos y actividades futuros (Rafael Mossi, Coordinador Gestión de Proyectos Cámara Comercio de Valencia)

14:15 h Finalización del seminario



LUGAR DE CELEBRACIÓN Avuntamiento de Andilla Plaza de Bardés, 10 - CP: 46162





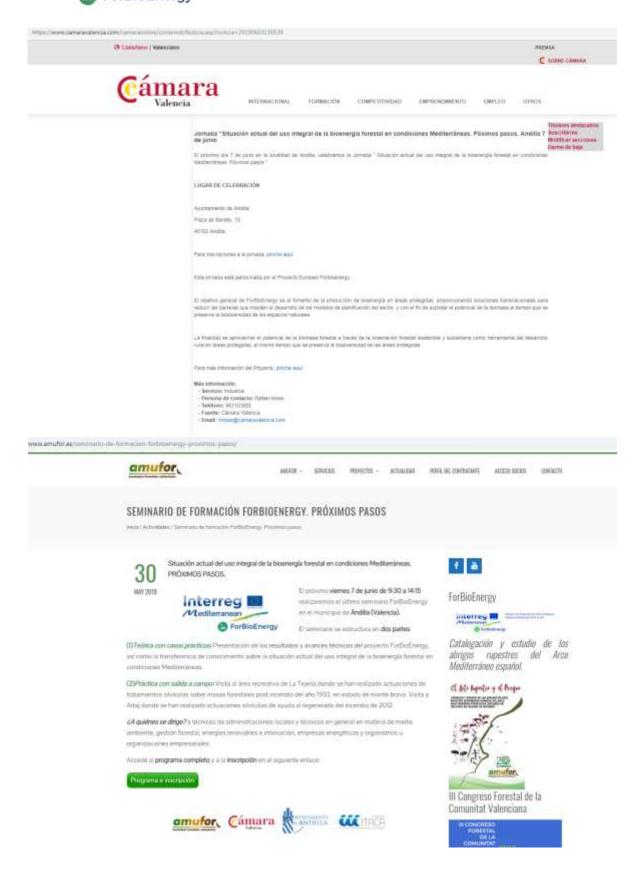






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Amufor Próximos pasos de la valorización energética de





#### Información

El próximo viernes 7 de junio de 9:30 a 14:15 realizaremos el último seminario Forbioenergy del programa Interreg MED Programme en el municipio de Andilla (Valencia).

El seminario se estructura en dos partes:

(1)Teórica con casos prácticos: Presentación de los resultados y avances técnicos del proyecto ForBioEnergy, así como la transferencia de conocimiento sobre la situación actual del uso integral de la bioenergía forestal en condiciones Mediterrâneas.

(2)Práctica con salida a campo: Visita al área recreativa de La Tejería donde se han realizado actuaciones de tratamientos silvícolas sobre masas forestales post incendio del año 1993, en estado de monte bravo. Visita a Artaj donde se han realizado actuaciones silvícolas de ayuda al regenerado del incendio de 2012.

¿A quiénes se dirige? a técnicos de administraciones locales y técnicos en general en materia de medio ambiente, gestión forestal, energías renovables e innovación, empresas energéticas y organismos u organizaciones empresariales.

Accede al programa completo y a la inscripción en el siguiente enlace: http://www.amufor.es/seminario-de-formacion-forbigenergy-proximos-pasos/



# Forest Bioenergy in the Protected Mediterranean Areas

# forbioenergy.interreg-med.eu



















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