

# Forest Bioenergy in the Protected Mediterranean Areas

## CROATIA

### Transferring of past and current know-how

#### 4.3.1 Training reports



January 2018

Work package 4 - Transferring  
Activity A.4.3. - Transferring of past and current know-how  
D 4.3.1 Training reports  
Training reports were prepared by PP7 and PP8

## TABLE OF CONTENTS

<b>1</b>	<b>LIST OF ORGANIZED TRAININGS.....</b>	<b>3</b>
<b>2</b>	<b>TRAINING REPORTS.....</b>	<b>4</b>
2.1	Training no. 1.....	4
2.1.1	Technical report.....	4
2.1.2	Attachments.....	9
2.2	Training no. 2.....	15
2.2.1	Technical report.....	15
2.2.2	Attachments.....	19
2.3	Training no. 3.....	2
2.3.1	Technical report.....	2
2.3.2	Attachments.....	5
2.4	Training no. 4.....	13
2.4.1	Technical report.....	13
2.4.2	Attachments.....	18
2.5	Training no. 5.....	24
2.5.1	Technical report.....	24
2.5.2	Attachments.....	28
2.6	Training no. 6.....	31
2.6.1	Technical report.....	31
2.6.2	Attachments.....	37

## 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	Date	Place	No. of participants
1	PP7 (Zadar County) PP8 (Nature Park Velebit)	Croatia	12. 1. 2018	Croatian Chamber of Economy Špire Brusine 16 23000 Zadar	21
2	PP7 (Zadar County) PP8 (Nature Park Velebit)	Croatia	20.4.2018.	Velebit Nature park Kaniža Gospička 4b 53 000 Gospić	23
3	PP7 (Zadar County) PP8 (Nature Park Velebit)	Croatia	22.11.2018.	Croatian Chamber of Economy Špire Brusine 16 23000 Zadar	21
4	PP7 (Zadar County) PP8 (Nature Park Velebit)	Croatia	12.04.2019	<i>Premises COIN Coworking Zadar, Put Murvice 2, 23 000 Zadar</i>	18
5	PP7 (Zadar County) PP8 (Nature Park Velebit)	Croatia	07.06.2019	Premises in The Croatian Chamber of Economy-Zadar County Chamber	17
6					

## 2 TRAINING REPORTS

### 2.1 Training no. 1

#### 2.1.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County) Nature Park Vransko jezero Nature Park Telaščica Nature park Velebit (area located in Lika-Senj County)</i>
Event title	<i>Review of the knowledge on “Biomass value”</i>
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management AP11 - Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County PP8 - Public institution Nature Park Velebit</i>
Location	<i>Croatian Chamber of Economy, Špire Brusine 16, 23000 Zadar</i>
Date	<i>12. 1. 2018</i>

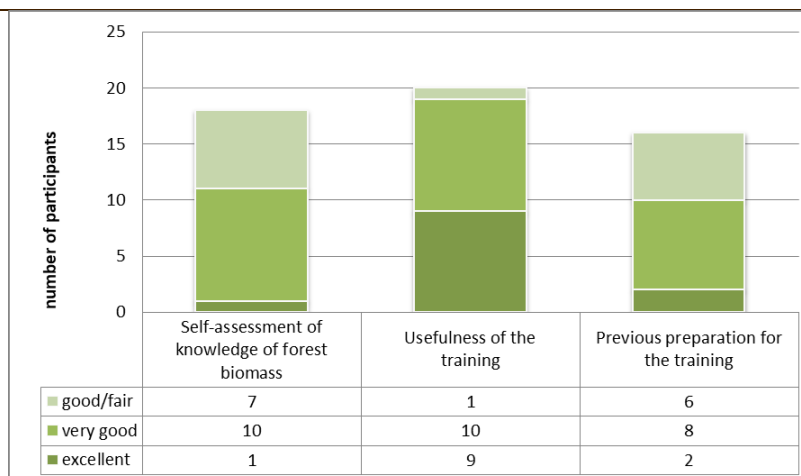
No. of participants	<i>21</i>
Target groups	<i>County representatives; forestry consultants; representative's National energy company (HEP Group), representatives of local communities and wood fuels producers; representatives University of Zadar, Department of Ecology, Agronomy and Aquaculture and other relevant stakeholders.</i>
Trainers/speakers	<i>5 speakers:</i> <ul style="list-style-type: none"> <li>- <i>Prof. Stjepan Risović (Faculty of Forestry, University of Zagreb)</i></li> <li>- <i>Doc.dr.sc. Zoran Šikić (University of Zadar, Department of Ecology, Agronomy and Aquaculture and other relevant stakeholders)</i></li> <li>- <i>dr.sc. Alen Berta, mag.ing.silv., Forestry expert, OIKON</i></li> <li>- <i>Ivan Petry, mag. ing. Silv (Nature Park Velebit)</i></li> <li>- <i>Marija Krnjajić, mag.ing.silv., (Driope)</i></li> </ul>



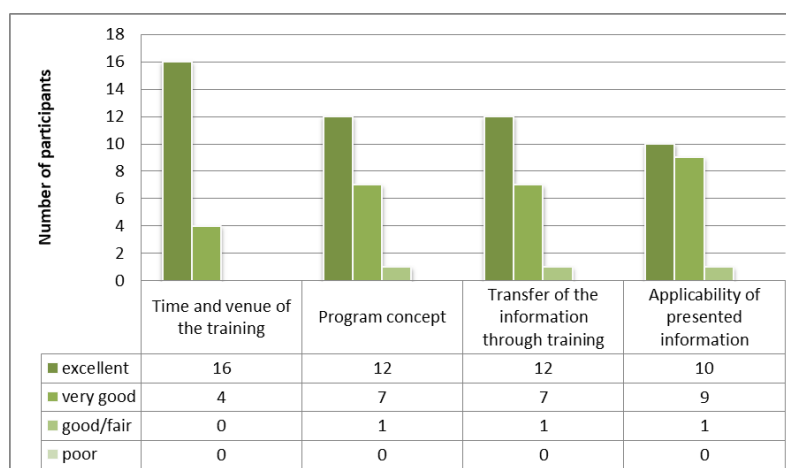
Training materials	<p><i>PPT presentations:</i></p> <ul style="list-style-type: none"> <li>- GENERAL OVERVIEW OF BIOMASS VALUES</li> <li>- BASELINE REVIEW OF THE STUDY AREAS (FOR CROATIA)</li> <li>- ADMINISTRATIVE AND TECHNICAL BARRIERS TO THE PRODUCTION OF BIOMASS IN THE PROTECTED AREAS</li> <li>- PRESENTING RESULTS OF THE FORBIOENERGYFIRST THEMATIC WORKSHOP (TECHNICAL PANEL)</li> <li>- EXAMPLES OF GOOD PRACTICE FROM PREVIOUS PROJECTS</li> </ul> <p><i>Dissemination material:</i></p> <ul style="list-style-type: none"> <li>- ForBioEnergy brochure</li> <li>- ForBioEnergy Roll-up</li> </ul> <p><i>Evaluation questionnaire</i></p>
--------------------	--

Report on training	<p><i>A welcome speech on behalf of the Zadar County was held by Daniel Segarić, Head of the Department of Agriculture, Fisheries, Water Management, Rural and Island Development while Mario Šaban welcomed the gathered-on behalf of the Public Institution of Nature Park Velebit.</i></p> <p><i>Professor Stjepan Risović from the Faculty of Forestry in Zagreb presented General overview of biomass values; doc. Ph.D. Zoran Šikić with the Department of Ecology, Agronomy and Aquaculture at the University of Zadar presented the results of the first thematic WS of technical panels; Ivan Petry from Nature Park Velebit informed about the situation on the pilot area comprising current regulation framework description and current environmental and energy aspects of the study area; Alen Berta from Oikon introduce participants with administrative and technical barriers to the production of biomass in the protected areas; and Marija Krnjajić presented examples of good EU practice from previous similar projects.</i></p> <p><i>After the training, there was an active discussion that concluded that forest biomass as a renewable energy source should be promoted in bioenergy production, with special emphasis being placed on the construction of thermal energy plants from forest biomass that could be used by public institutions such as for example, schools. At the same time, it is necessary to ensure through sustainable development the entire process of obtaining bioenergy from forest biomass in protected areas as well as the process of forest biomass extraction should be improved and accelerated without jeopardizing biodiversity and other forest functions. It is of utmost importance to identify</i></p>
--------------------	--

	<p><i>obstacles and benefits for the construction of logistics centres, to ensure the integration of all relevant stakeholders and to encourage the local population to use forest biomass not only for heating households but also in the creation of new products (souvenirs, toys for children and cosmetics). Biomass energy is considered the energy of the future. It is estimated that in 2040 renewable energy sources will provide 80% of the world's total energy production.</i></p> <p><i>It cannot be ignored the fact that with 43% of forest land in the total state territory and compared with other EU countries and regions, Croatia is among the countries with significant forest land, which, among others, guarantees the increased utilization and share of forest biomass in the total energy balance sheet. Besides the production of thermal energy from forest biomass, numerous other values of biomass energy utilization have been recognized, among which the most important ones are the creation of new jobs and the security of energy supply.</i></p> <p><i>The duration of a training course was 4 hours, it was consisted of 5 lectures.</i></p> <p><i>Participants were mainly from public, educational, state and local institutions, energy companies and NGO.</i></p>
Feedback from participants	<p><i>At the end of the program, participants completed the evaluation questionnaire.</i></p> <p><i>Based on the questionnaire 24 participants out of 20 filled the questionnaire and 4 participants left it blank. For analysis of the questions we will left out 4 blank questionnaires. Number of fully filled and analysed queries is 20.</i></p> <p><i>Ranging from 1 to 5 (where 1 is very bad and 5 is very good), the training course program was evaluated with a grade 4.55; presentations were grade with 4.5 and the usefulness of information they received with was grade 4.3. Participants assessed their knowledge of forest biomass with the grade 3.6.</i></p> <ul style="list-style-type: none"> <li><i>• On the question on did participants who attended training find new information on given topic, 20 participants answered yes, 0 answered no, and 4 were blank.</i></li> <li><i>• Out of 20 participants who filled the query, one assessed his/hers knowledge on the topic as excellent, 10 as very good, 7 as good and 2 as poor.</i></li> <li><i>• - Two out of 20 people that filled the questionnaire were excellently prepared for the training, 8 were very well prepared, 6 were well and 4 poorly prepared.</i></li> </ul>



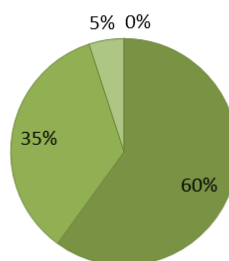
- *Time and venue of the training were evaluated as excellent by 16 and very well by 4 participants.*
- *Among 20 participants who filled the questionnaire, 12 considered that transfer on the information through training was excellent, 7 participants rated it as very good and one as good.*
- *The vast majority of participants found training more than very applicable. Ten stated its applicability as excellent, 9 as very good and one as good.*



*The training as whole was evaluated as excellent by 12 participants, 7 found it very good and one considered it good. No one stated that training was poor.*

### evaluation of the training as whole

■ excellent ■ very good ■ good/fair ■ poor



*All of the participants stated that they plan to use what they learned on training in their future activities.*

*Below are the remarks that participants stated for was the most interesting/useful and what they can apply in their everyday work.*

- Discussion on presented topic
- an overview of legal and administrative obstacles
- evaluation the overview i.e. the way of project management, the way of presentation (problems, obstacles, opportunities)
- new information from the people with years of experience in this field as well as examples from their own experience
- discussion was useful as well as examples from the real life and history
- biomass usage in entrepreneurship
- new information and experience of participants which I could use in the future
- information on the possibilities of usage of biomass and more specific figures on forests in general
- general overview forest biomass usage as a renewable energy source on the local and regional level
- new findings about production and use of pellet and woodchips. Use of olive oil husk waste.
- all possibilities of biomass usability
- new products
- problems regarding Zadar county related to use of forest biomass
- Information on possibility of use of forest biomass in public institutions and possibilities of employment in rural areas


*Participants notes and comments/praise, suggestions/ are the following:*

- Every praise to the organizer*
- well-structured and complete*
- suggestion to include more/several different stakeholders to be presented at future workshops – ministry, HAOP, decision makers*
- need for little more specific solutions on production and placement of biomass*
- good organization*
- everything was great*
- thanks to the project team for understanding topic seriously and efforts in implementing a project whose theme is globally neglected*
- everything was excellent, we are looking forward to the next encounter*
- we need more trainings and meetings like this, regardless of the EU projects*

### **2.1.2 Attachments**

**INVITATION AND PROGRAM  
EVALUATION QUESTIONNAIRE  
LIST OF PARTICIPANTS  
EVENT PHOTOS  
MEDIA REPORTS:**

## INVITATION AND PROGRAM



Project co-financed by the European  
Regional Development Fund

Poštovani,

Zadarska županija u suradnji s Parkom prirode Velebit, poziva Vas na prvi trening za prenošenje znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas – ForBioEnergy" koji će se održati **12. siječnja 2018. godine, u 10.30 sati, u prostoru Hrvatske gospodarske komore – Županijske komore Zadar (Špire Brusine 16, 23 000 Zadar)**

Projekt **"ForBioEnergy"** financira se iz programa MED: teritorijalne suradnje, a njegova je provedba započela 1. studenog 2016. godine i trajat će do 30. travnja 2019. godine. Očiti je cilj projekta "ForBioEnergy" povećanje proizvodnje bioenergije u zaštićenim područjima, nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora.

Svrha je treninga učinkovito korištenje dostupnih znanja, kako u okviru projekta, tako i izvan njega. Transfer znanja provodit će se na ad-hoc tečajima usredotočenima na rezultate "ForBioEnergy" te drugih relevantnih europskih projekata i inicijativa. Tečajevi obuke bit će organizirani ne samo na partnerskim područjima, nego i na drugim područjima uz podršku partners i horizontalnog projekta.



Treninzi su namijenjeni ključnim ciljanim skupinama u koje spadaju: kreatori politika, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehničari, profesionalne udruge koje se bave pitanjima bioenergije i ekološke raznolikosti.


**Program prvog treninga je sljedeći:**

- 10.30 Prijava sudionika
- 10.45 Pozdravni govor (predstavnik Zadarske županije i PP Velebit)
- 11.00 Opići pregled vrijednosti biomase
- 11.45 Prezentacija trenutne situacije (Baseline Review odabranih zaštićenih područja)
- 12.15 Administrativne i tehničke barijere za proizvodnju biomase u zaštićenim područjima
- 12.45 Predstavljanje rezultata održanih tehničkih panela
- 13.15 Rasprava i aktivno sudjelovanje sudionika: izrada zaključaka i preporuka za sljedeće korake
- 13.45 Ručak

Molimo Vas da svoje sudjelovanje potvrdite najkasnije do 10. siječnja 2018. godine, do 12 sati, na e-mail adresu [ans.maver@zadarska-zupanija.hr](mailto:ans.maver@zadarska-zupanija.hr) ili na telefonski broj 023/350-418. Očekujemo Vaš dolazak.

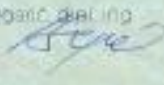
S poštovanjem,



**PROČELNIK**

Gregor Delić



## EVALUATION QUESTIONNAIRE



## Forest Bioenergy in the Protected Mediterranean Areas

### EVALUACIJSKI LIST ZA

Trening prijenosa prijašnjih i sadašnjih znanja i vještina

*Poštovani, kako bi provjerili Vaše zadovoljstvo s ovom treningom molimo odvojite par trenutaka i popunite ovaj upitnik. Vaši odgovori su važni za ocjenu uspješnosti treninga te prilagodbu budućih Vaših potreba.*

Na pitanje odgovorite tako da u svakoj skupini odaberete jedan od ponuđenih odgovora.

Da li ste na ovom treningu saznali neke nove informacije o šumskoj biomasi te o sličnim EU projektima

DA

NE

Kako biste procijenili svoje znanje o šumskoj biomasi i njezinim koristima?



izvršno



vrlo dobro



osrednje



loše

Koliko Vam je ovaj trening bio koristan?



izvršno



vrlo dobro



osrednje



loše

Da li ste se pripremili za ovaj trening?



izvršno



vrlo dobro



osrednje



loše

Programme Cofinancé par le Fonds de Développement Régional  
Programma cofinanciada by the European Regional Development Fund



Molimo ocijenite sljedeće:

1. Temat i mjesto održavanja



izvrno



vrlo dobro



osrednje



loše

2. Konceptcija programa



izvrno



vrlo dobro



osrednje



loše

3. Prijenos informacija putem treninga



izvrno



vrlo dobro



osrednje



loše

4. Primjenjivost prezentiranih informacija



izvrno



vrlo dobro



osrednje



loše

5. Ocjena treninga u cjelini



izvrno



vrlo dobro



osrednje



loše

Planirate li koristiti naučeno u vašim budućim aktivnostima?

DA

NE

Što Vam je bilo najzanimljivije/korisno za vaše buduće aktivnosti?

Prijedloge, pohvale, sugestije: \_\_\_\_\_

Zahvaljujemo na Vašem vremenu  
Projektni tim

## Media reports:

Article on 1st training course published in official Zadar Paper.

**Znanja i vještine u sklopu projekta ForBioEnergy**

# Potrebna energetska postrojenja koja koriste šumsku biomasu

Energija biomase smatra se energijom budućnosti. Procjenjuje se da će 2040. godine obnovljivi izvori energije davati 80 posto ukupne svjetske proizvodnje energije

**ZADAR** – Zadarska županija je u suradnji s Parkom prirode Velebit ovih dana u prostorijama Hrvatske gospodarske komore – Županijske komore Zadar održala prvi trening za prenošenje znanja i vještina u sklopu projekta Forest Bioenergy in the Protected Mediterranean Areas (Bioenergija šuma u zaštićenim mediteranskim područjima) – ForBioEnergy. Ovo je prvi od šest provedenih treninga u okviru projekta ForBioEnergy, a svrha održavanja treninga je učinkovito korištenje dostupnih znanja, kako u okviru projekta, tako i izvan njega. Treningi su namijenjeni ključnim ciljanim skupinama u koje spadaju kreatori politika, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehnici i profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti.

Prvi treninški govor u ime Zadarske županije održao je Daniel Segurić, pročelnik Upravnog odjela za poljoprivredu, ribarstvo i vodno gospodarstvo, čiji je i otvorni riječnik, a zatim je govorio i predstavnik šumske poduzetničke organizacije u ime Parka prirode Velebit, Predrago Babić. Predstavljanje o općem pregledu vrijednosti biomase održao je profesor Srećko Babić sa Škole za

proces dobivanja bioenergije iz biomase u zaštićenim područjima prirode kroz održivi razvoj, bez ugrožavanja bioraznolikosti i ostalih šumskih funkcija. Od iznimne je važnosti i utvrditi koje su prepreke i koristi za izgradnju suvremeno-logističkih centara, osigurati integraciju svih relevantnih disciplina te poticati lokalno stanovništvo na korištenje šumske biomase, ne samo za grijanje kućanstava, nego i u izradi novih proizvoda (suvremena, dječja igračka i kozmetika). Energija biomase smatra se energijom budućnosti. Procjenjuje se da će 2040. godine obnovljivi izvori energije davati 80 posto

ukupne svjetske proizvodnje energije.

Ne smije se ignorirati činjenica da sa svojih 43 posto šumskog zemljišta u ukupnoj državnoj pločini te u usporedbi s ostalim zemljama i regijama Europe, Hrvatska spada među zemlje sa značajnim šumskim zemljištem koje, među ostalim, jamči i mogućnost većeg iskorištenja i odjela šumske biomase u ukupnoj energetske bilanci. Osim proizvodnje toplinske energije iz šumske biomase, povećate su i brojne druge vrijednosti korištenja energije biomase, a među najbitnije spadaju otvaranje novih radnih mjesta te sigurnost opskrbe energijom. (ZL)



Trening je upriličen u HSK-Zadar

## 2.2 Training no. 2

### 2.2.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County) Nature Park Vransko jezero Nature Park Telaščica Nature park Velebit (area located in Lika-Senj County)</i>
Event title	Forest biomass can be used for the growth of local community 2 <sup>nd</sup> Training course for transferring past and current know-how
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management AP11 – Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County PP8 - Public institution Nature Park Velebit</i>
Location	<i>Nature park Velebit, Kaniža Gospićka 4b, 53000 Gospić</i>
Date	20.4.2018.

No. of participants	23
Target groups	<i>County representatives; forestry consultants; representative's National energy company (HEP Group), representatives of local communities and wood fuels producers; representatives University of Zadar, Department of Ecology, Agronomy and Aquaculture and other relevant stakeholders.</i>
Trainers/speakers	<i>Robert Bogdanić, mag. ing. silv. Prof. Stjepan Risović (Faculty of Forestry, University of Zagreb) Dr. sc. Alen Berta, mag. ing. silv., CE Oikon d.o.o. Marija Krnjajić, mag. ing. silv., (Driope)</i>
Training materials	<i>PPT presentations:</i> <ul style="list-style-type: none"> <li>- ASSESSMENT OF THREATS AND BENEFITS OF FOREST BIOMASS HARVESTING/EXTRACTION (with an emphasis on the Velebit Nature Park)</li> <li>- ASSESSMENT OF THREATS AND BENEFITS OF FOREST BIOMASS HARVESTING/EXTRACTION (Zadar County)</li> <li>- APPLYING INTERACTIVE WEB TOOLS IN THE FIELD OF FORESTRY OPTIMIZATION</li> </ul>

- OPPORTUNITIES OF USING FOREST BIOMASS FOR DEVELOPMENT OF THE LOCAL AREA
- INVESTMENTS TO UNLOCK THE POTENTIAL OF BIO-ECONOMICS

Dissemination material:

- ForBioEnergy brochure
- ForBioEnergy Roll-up

Evaluation questionnaire

#### Report on training

A welcome speech on behalf of the Zadar County was held by Katarina Skelin, Assistant Head of the Department of Agriculture, Fisheries, Water Management, Rural and Island Development of Zadar County and Ivana Maras, Director of Velebit Nature Park. The lecture that followed was given by the dr. sc. Alen Berta on the topic of An estimation of threats and benefits of use collecting/extracting forest biomass. Second topic was oriented at the possibility of using biomass for local area development given by S. Ristović. The most welcomed topic by the audience was concerning interactive web tools in the field of optimization of forestry which presented R. Bogdanić. Marija Krnjajic continued on the topics of the investments to unlock the potential of bio-economics. The training was concluded with a discussion in which participants participated actively. Conclusions and recommendations for the next steps have been made.

After the training was held, an active discussion followed with conclusion that use of forest biomass for energy purposes can be increased without compromising the sustainability of forestry. This could be especially possible through the use of various financial instruments. The local community is able to use of EU funds in order to prepare forest biomass projects as important renewable energy source and thereby make a significant contribution to the local community. This would ensure additional value of money retention and circulation in state or in the local community as well as development of rural areas, and creation of new jobs.

Numerous examples of switching from systems using fossil fuels to forest biomass systems have achieved significant savings, primarily in heating costs. Forest biomass systems are in most cases fully automated and their work is not subject to a human factor that gives them safety and efficiency in work.

More work should be concentrated on pilot projects that would bring development of Biomass Trade and Logistic centres for

*sustainable mobilisation of Local Wood Biomass Resources with the focus on local market.*

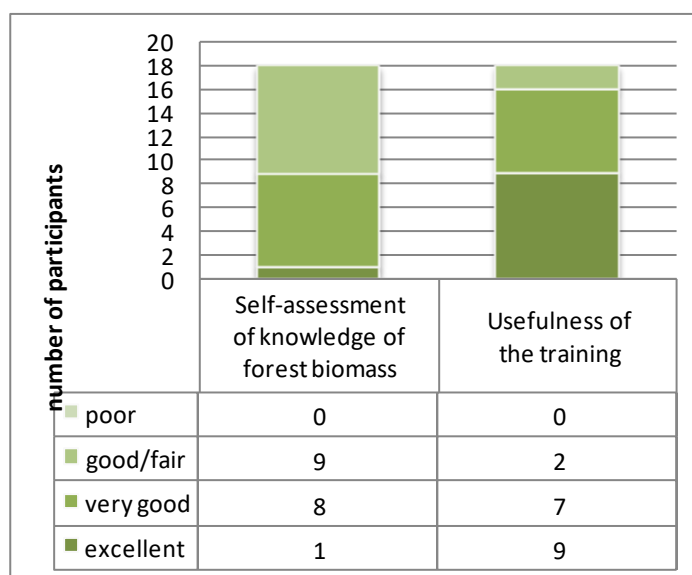
*Biomass trade-logistic centres have proven to be successful business models in Slovenia, Austria, Germany and Finland where they function as regional centres contribute to economic development through new jobs and the development of the local biomass market.*

*In order to activate key stakeholders and reduce obstacles that hinder efficient development of renewable energy sources utilization at EU and national level, it is necessary through local and regional projects implementation to support networks development, initiatives and platforms and to stimulate market development and competitiveness in the bioeconomy sector.*

*At the end of the program, participants completed the evaluation questionnaire.*

*In this training there were 23 participants of who 19 filled the questionnaire and 4 left it blank. For the analysis of the questions we will left out 4 blank questionnaires. Number of analyzed questionnaires is 19.*

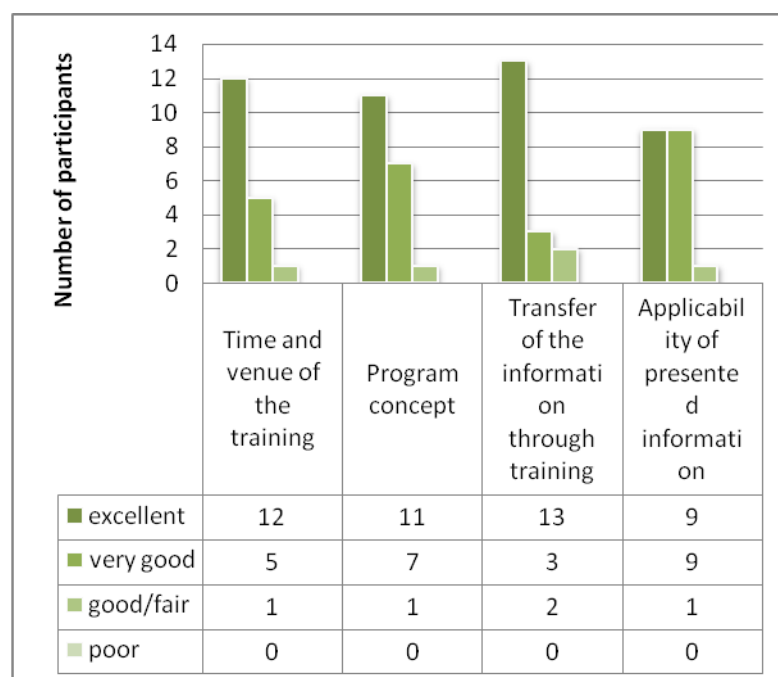
Feedback from participants



- *Time and venue of the training were evaluated as excellent by 12, very well by 5 participants and 1 as good.*
- *Among 19 participants who filled the questionnaire, 13 considered that transfer on the information through training was excellent, 3 participants rated it as very good and 2 as*

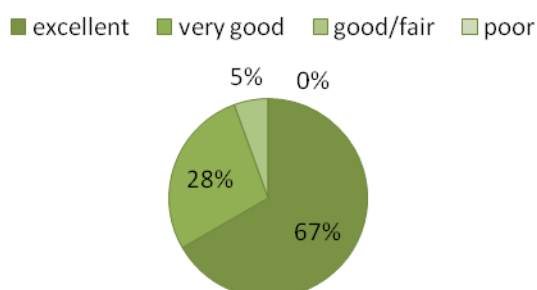
good.

- The vast majority of participants found training more than very applicable. 9 stated its applicability as excellent, 9 as very good and one as good.
- Program concept was evaluated as excellent by 11 participants, very good by 7 and good by one.



The training as whole was evaluated as excellent by 12 participants, 5 found it very good and one considered it good. No one stated that training was poor.

### evaluation of the training as whole



All of the participants stated that they plan to use what they

*learned on training in their future activities.*

*Below are the remarks that participants stated for was the most interesting/useful and what they can apply in their everyday work.*

- usage of web tools*
- discussion with participants*
- discussion*
- comparison and specific data*
- using web tools and applications in heating plants in local communities*
- acquiring new knowledge*
- general information on biomass utility*
- discussion*
- knowledge of the forest area and potential of biomass in the area of PP Velebit*
- knowledge about the possibilities of using biomass and past experience with using biomass*

*Participants notes and comments/praise, suggestions/ are the following:*

- to include more stakeholders from private sector – investors*
- congratulations to the organization, interesting lecturers*
- excellent organization and extremely informative lecturers*

### 2.2.2 Attachments

INVITATION AND PROGRAM

EVALUATION QUESTIONNAIRE

LIST OF PARTICIPANTS

EVENT PHOTOS

MEDIA REPORTS:



## EVENT AGENDA (invitation, program)



Podizani

Project co-financed by the European  
Regional Development Fund

**Podizani**

Žadarska županija u suradnji s Parkom prirode Velebit poziva vas na drugi trening za prenošenje znanja i vještina u sklopu projekta ForBioEnergy/n the Protected Mediterranean Area – ForBioEnergy koji će se održati u **petak, 20. travnja 2018. godine, u 10.30 sati, u prostoru Parka prirode Velebit na adresi Kaniža Gospićka 4b, 53 000 Gospić.**

Projekt **"ForBioEnergy"** financira se iz programa MEO kontinuirane suradnje, a njegova je provedba započela 1. studenog 2015. godine i traje do 30. travnja 2019. godine. Jedni od ciljeva projekta "ForBioEnergy" je povećanje proizvodnje bioenergije u različitim područjima, nuditi prekogranična rješenja za praćavanje potreba koje omiteju razvoj sektora.

Bitna je namjena učinkovito korištenje dostupnih znanja, koje u okviru projekta, tako i izvan njega. Transfer znanja provodi se na različitim razinama suradnicima na razini projekta "ForBioEnergy" te drugih relevantnih suradnih projekata i inicijativa. Očekuje se da će organizirati na samu na bitnim područjima, nego i na drugim područjima uz podršku partnera i horizontalnog projekta.

Treninzi su namijenjeni ključnim dionikima u koji spadaju: investitori, politika, tijela javne vlasti, tijela upravljanja različitim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehnici te profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti.

**Program drugog treninga je sljedeći:**

- 1030: Pojava sudionika
- 1045: Podrobn govori predstavnici Žadarske županije i PP Velebit
- 1100: Podjela pristupa i korekci prijava za Velebit županijske odnose i naglasak na prednost suradnje u tehnici i mogućnost daljnjeg razvoja
- 1145: Mogućnost korištenja šumske biomase za proizvodnju bioenergije
- 1215: Pregled web-stranice u području optimizacije šumstva
- 1245: Investicije za održavanje potencijala biomase
- 1315: Raspisa i aktivno sudjelovanje sudionika iz različitih područja i preporuke za sljedeće korake
- 1345: Ručak

Molimo vas da svoje sudjelovanje potvrdite najkasnije do 15. travnja 2018. godine na e-mail adresu [anamir@zadarska-zupanija.hr](mailto:anamir@zadarska-zupanija.hr) ili na telefonski broj 023580-418. Očekujemo vas do 12:00h.

S poštovanjem






PROČELNIK  
Ana Mirić, dipl. ing.

## EVALUATION QUESTIONNAIRE

[illegible]

- 2.→Koristi se mogu ostvariti samo ako je sirovina za biomasu dobivena odgovorno uzimajući u obzir utjecaj životnog ciklusa ugljičnog dioksida, promjenu uporabe zemljišta, kakvoću tla, vode i zraka te životnih uvjeta uključenih u opskrbni lanac.¶

1→ → → → 2→ → → → 3→ → → → 4→ → → → 5¶

- 3.→Kojom ocjenom biste ocijenili mogućnost izgradnje sabirno-logističkih centara u vašoj općini?¶  
(1-nema potencijala; 5-visok potencijal)¶

1→ → → → 2→ → → → 3→ → → → 4→ → → → 5¶

¶ Zaokružite sljedeće:¶

¶ U svom svakodnevnom radu, s kojim se prijetnjama suočavate? ¶

- ¶ 1.→Poteškoće u uključivanju aktera koji nisu relevantni za sektor.¶  
2.→Nedostatak posebnih akcijskih planova te pridržavanje istih.¶  
3.→Konfliktni interesi između uprave ili tvrtke/ vlasnika, tako da se nikako ne postigne rješenje.¶  
4.→Ostalo: → ¶

¶ Dali primjenjujete web alate u području optimizacije šumarstva? Ako da molim Vas navedite koje?¶

DA.....NE¶

→ ¶

- 1.→Koje su po Vama najveće opasnosti prilikom iskorištavanja šuma u zaštićenim područjima?¶

- a.→Smanjenje biodiverziteta¶  
b.→Sabijanje i oštećenje tla¶  
c.→Erozija¶  
d.→Smanjenje količine mrtvog drva¶  
e.→Buka koja smeta životinjama¶  
f.→Smanjene količine pohranjenog ugljika¶

- 2.→Koju odliku održivog gospodarenja šumama smatrate najbitnijom?¶

- a)→Održavanje biodiverziteta¶  
b)→Razvoj industrije¶  
c)→Zadržavanje stanovništva u ruralnim krajevima¶

- 3.→Prilikom razvoja srednjeg i malog poduzetništva u šumarstvu najveća prepreka su?¶

- a)→Niske cijene rada¶  
b)→Raznorazni porezi i prirezi¶  
c)→Nemogućnost pristupa optimalnoj mehanizaciji¶

- 4.→Smatrate li da u ovim pilot područjima ima dovoljno mogućnosti za razvoj malog i srednjeg poduzetništva. Molimo obrazložite odgovor.¶

DA: \_\_\_\_\_¶

NE: \_\_\_\_\_¶

- 5.→Smatrate li da se nedostatak biomase može nadomjestiti uzgojem KKO (drvenastih kultura kratke ophodnje)?¶

→ ¶

- 6.→Smatrate li da se razvojem tržišta biomase može omogućiti održivi lanac bioenergije (od stabla do energije) i smatrate li još nešto bitnim za stvaranje održivog lanca bioenergije?¶

¶ Molimo ocijenite sljedeće:¶

¶ Kako biste procijenili svoje znanje o šumskoj biomasu i njezinim koristima/prijetnjama?¶

.....😊😊😊.....😊.....😐.....😞.....  
.....Izvršno.....vrlo dobro.....osrednje.....loše¶

¶ Koliko Vam je ovaj trening bio koristan?¶

.....😊😊😊.....😊.....😐.....😞.....  
.....Izvršno.....vrlo dobro.....osrednje.....loše¶



## MEDIA REPORTS:

Published on the websites of Croatian local newspapers

Link:

<https://lokalni.vecernji.hr/zupanije/sumska-biomasa-moze-se-koristiti-za-razvoj-lokalne-zajednice-i-kao-obnovljivi-izvor-energije-8771>

GradoviOptineZupanijeVijestiSpecijali

Šumska biomasa može se koristiti za razvoj lokalne zajednice i kao obnovljivi izvor energije

107 pregleda

Načelnanje

KONCERT  
Thompson u Glini za Dan domovinske zah...

GEORGIČKA ISTRAŽIVANJA  
Na pomoću velika arheološka senzacija...

TEHNIČKA ŠKOLA NIKOLE TESLE U VUKOVARU  
Izradili električni motor i nazvali ga 'Zv...

TAKO TO RADI U VIMKOVCIMA  
Za novorođenčce 2000. a za učenika prvog o...

GRADIT će se PODUZETNIČKI INKUBATORI U DRAHOVICI, PITOMAČI I SLATINI  
Posluju s Kuvajtom i SAD-om, a uspjeli su...

TRENING ZA PRENOŠENJE ZNANJA I VJEŠTINA

Šumska biomasa može se koristiti za razvoj lokalne zajednice i kao obnovljivi izvor energije

Pilov: Majda Mikleničić PD

02. svibnja 2018. u 08:28









Foto: Zadarska županija



U Gospiću je Zadarska županija održala trening koji je namijenjen kreatorima politike, tijelima javne vlasti, agencijama, udrugama...

U suradnji s Parkom prirode Velebit, Zadarska županija održala je u Gospiću drugi trening za prenošenje znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy". Opći cilj projekta, koji traje do 30. travnja 2019., poticanje je proizvodnje bioenergije u zaštićenim područjima nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora. To je drugi od šest predviđenih treninga, a njihova svrha održavanja je učinkovito korištenje dostupnih znanja, kako u okviru projekta, tako i izvan njega.

Programme Cofinancé par le Fonds de Développement Régional  
Programme cofinanced by the European Regional Development Fund

Link: <http://lokalnahrivatska.hr/vijest.php?rss=300852>

**LOKALNA HRVATSKA**  
BESPLATNE NOVOSTI VRIJEME RUBRIKE O PROJEKTU KONTAKT

LH prenosi Odaberite područje Katalog 96 JLS Projekt podržali

## Drugi trening za prenošenje znanja i vještina u sklopu projekta Forest Bioenergy in the Protected Mediterranean Areas – ForBioEnergy

Upravni odjel za poljoprivredu, ribarstvo, vodno gospodarstvo, ruralni i otočni razvoj Utorak, 24 travnja 2018 14:56



Longin: Značajan napredak na području poljoprivrede  
U prostorijama zadarskog Arsenala održana je manifestacija NAŠE DOMAĆE, SADA I UBUĐUĆE...



Župan Longin ugostio veleposlanika  
Priputena: Slovaci investirali 120 milijuna eura u Zadarsku županiju  
Župan Zadarske županije Božidar Longin sa suradnicima je ugostio veleposlanika Slovačke...

HR 14:00 24.5.2018.



## 2.3 Training no. 3

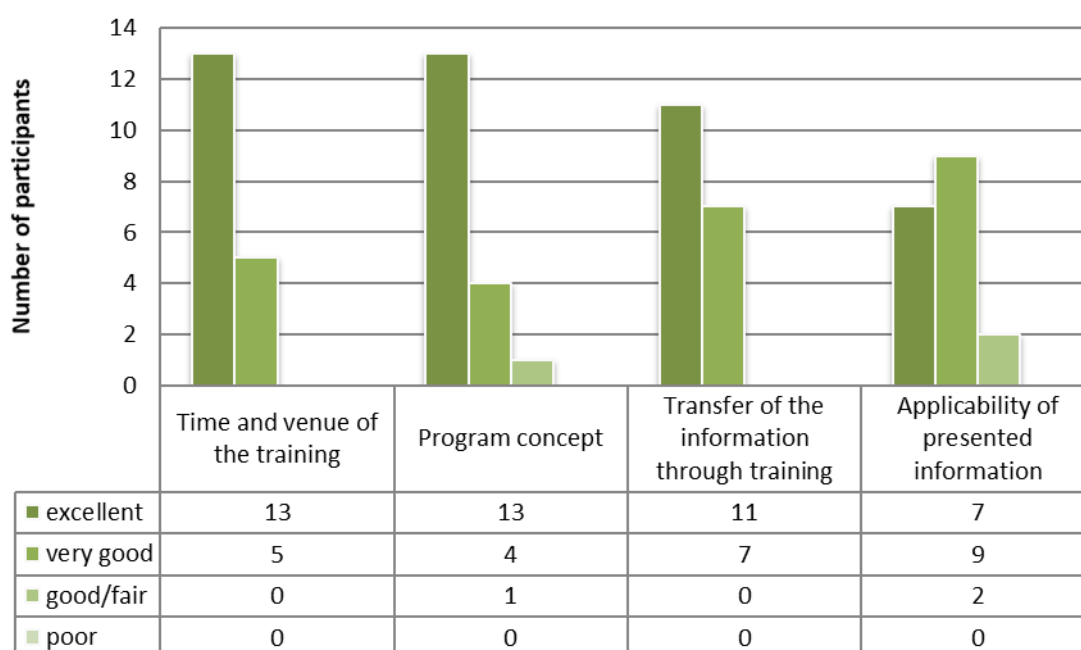
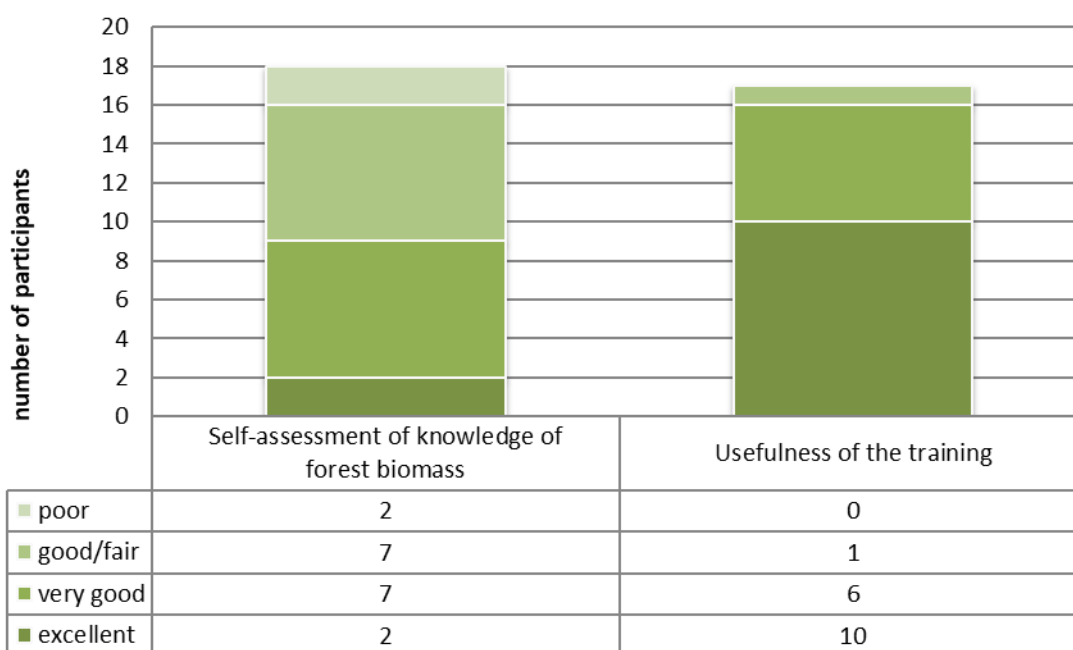
### 2.3.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County) Nature Park Vransko jezero Nature Park Telaščica Nature park Velebit (area located in Lika-Senj County)</i>
Event title	<i>“Action Plan for unblocking administrative barriers”</i>
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management AP11 - Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County PP8 - Public institution Nature Park Velebit</i>
Location	<i>Croatian Chamber of Economy, Špire Brusine 16, 23000 Zadar</i>
Date	<i>22. 11. 2018.</i>

No. of participants	<i>21</i>
Target groups	<i>County representatives; forestry consultants; representative's National energy company (HEP Group), representatives of local communities and wood fuels producers; representatives University of Zadar, Department of Ecology, Agronomy and Aquaculture and other relevant stakeholders.</i>
Trainers/speakers	<i>Robert Bogdanić, mag. ing. silv., Public institution Nature Park Velebit Prof. Stjepan Risović, Faculty of Forestry, University of Zagreb Dr. sc. Alen Berta, mag. ing. silv., CE Oikon d.o.o.</i>
Training materials	<i>PP Presentation:</i> <ul style="list-style-type: none"> <li><i>- Promotion of action plan for unblocking administrative barriers</i></li> <li><i>- Action plan for new regulatory framework for using biomass in protected areas (preparation, implementation and dissemination)</i></li> <li><i>- Process of preparation, implementation and dissemination of</i></li> </ul>



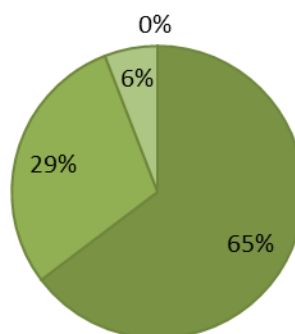
	<p><i>action plan</i></p> <ul style="list-style-type: none"> <li>- <i>Confronting with conflicts in the local area</i></li> </ul> <p><i>Dissemination material:</i></p> <ul style="list-style-type: none"> <li>- <i>ForBioEnergy brochure</i></li> <li>- <i>ForBioEnergy Roll-up</i></li> </ul> <p><i>Evaluation questionnaire</i></p>
Report on training	<p><i>The 3<sup>rd</sup> Training of transferring of past and current know-how was held on November 22, 2018 in the Chamber of Commerce, Zadar. Welcome speech on behalf of Zadar County was held by Daniel Segarić, Head of the Department of Agriculture, Fisheries, Water Management, Rural and Island Development of Zadar County, and Marijo Šaban, director of the fire protection department in Nature Park Velebit. The lecture that followed was given by dr.sc. Alen Berta on the topic of Action plan for the new regulatory framework for using biomass in protected areas: preparation, implementation and dissemination. He highlighted three barriers that we can expect from this action plan. First of all is rural depopulation and lack of manpower which can be solved by approving larger quotas for foreign workers. Second barrier is a lack of forest biomass, and last but not least, timelessness of cadaster. Professor Risović focused on financial analyze of typical measure of boiler replacement and examples of good practice. His lecture prompted a discussion about the effectiveness of heating on forest biomass and the possibility of using olive waste as heating material in schools in Zadar County. Finally, Robert Bogdanović concluded with two presentations. He highlighted three specific objectives. First, to enlarge openness of forests, second one is improvement of private forest management, and third, enhancement of people and property with the preservation of biodiversity. He also explained that there is a severe problem with conflicts on local area, mostly because of unsolved land registry relations and illegal forest logging.</i></p> <p><i>This was the third of the six anticipated trainings under the ForBioEnergy project that was successfully held. The training provided all participants with an excellent insight into the current state of our forestry sector and the obstacles it faces regarding the possibilities of using biomass.</i></p>
Feedback from participants	<p><i>At the end of the program, participants completed the evaluation questionnaire.</i></p> <p><i>In this training regarding Forest Bioenergy there was 18 questionnaires that were filled and analyzed.</i></p>



*Training as whole was evaluated as excellent by 11 participants, very good by 5 participants and good/fair by one.*

## evaluation of the training as whole

■ excellent ■ very good ■ good/fair ■ poor



*The analysis shown that average level of satisfaction with the training, when all relevant variables included, is very good.*

*The average sum of participant's evaluation training as whole showed the high level of satisfaction, and it is graded as excellent.*

*Table 1. Average final grades of the training satisfaction*

<b>average for all participants</b>	<b>4,36</b>	<b>very good</b>
<b>average grade training as whole</b>	<b>4,59</b>	<b>excellent</b>

*Table 2. Equalization of satisfaction level with numeric value grading*

<b>excellent</b>	<b>5</b>
<b>very good</b>	<b>4</b>
<b>good</b>	<b>3</b>
<b>poor</b>	<b>2</b>

### 2.3.2 Attachments

INVITATION AND PROGRAM

EVALUATION QUESTIONNAIRE

LIST OF PARTICIPANTS

EVENT PHOTOS

MEDIA REPORTS:

## EVENT AGENDA (invitation, program)




Project co-financed by the European  
Regional Development Fund

Poštovani,

Zadarska županija, u suradnji s Parkom prirode Velebit, poziva Vas na treći trening za prenošenje znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy", koji će se održati u **četvrtak, 22. studenog 2018. godine, u 10.30 sati, u prostoru Hrvatske gospodarske komore - Županijske komore Zadar (Špire Brusine 16, 23 000 Zadar).**

Projekt **"ForBioEnergy"** financira se iz programa MED teritorijalne suradnje, a njegova je provedba započela 1. studenog 2016. godine i trajat će do 30. travnja 2019. godine. Opći je cilj projekta **"ForBioEnergy"** poticanje proizvodnje bioenergije u zaštićenim područjima, nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora.

Svrha treninga je učinkovito korištenje dostupnih znanja, kako u okviru projekta, tako i izvan njega. Transfer znanja provodit će se na ad hoc tečajevima usredotočenima na rezultate projekta **"ForBioEnergy"** te drugih relevantnih europskih projekata i inicijativa. Tečajevi obuke bit će organizirani ne samo na partnerskim područjima, nego i na drugim područjima uz podršku partnera i horizontalnog projekta.

Treningi su namijenjeni ključnim ciljanim skupinama u koje spadaju: kreatori politike, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehničari te profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti.

**Program trećeg treninga je sljedeći:**

- 10.30 Prijava sudionika
- 10.45 Pozdravni govori (predstavnici Zadarske županije i PP Velebit)
- 11.00 Predstavljanje Akcijskog plana za deblokiranje administrativnih prepreka (Zadarska županija)
- 11.30 Predstavljanje Akcijskog plana za deblokiranje administrativnih prepreka (PP Velebit)
- 12.00 Proces pripreme, provedbe i širenja Akcijskog plana
- 12.30 Svočavanje sa sukobima na lokalnom području
- 13.00 Rasprava i aktivno sudjelovanje sudionika, izrada zaključaka i preporuke za sljedeće korake
- 13.30 Ručak

Molimo Vas da svoje sudjelovanje potvrdite najkasnije do **15. studenog 2018. godine na e-mail adresu: [marilja.krnjajic@zadarska-zupanija.hr](mailto:marilja.krnjajic@zadarska-zupanija.hr).**

Očekujemo Vaš dolazak.

S poštovanjem,







**PROČELNIK**  
Daniel Segarić, dipl. ing.

## EVALUATION QUESTIONNAIRE



Project co-financed by the European  
Regional Development Fund

## Forest Bioenergy in the Protected Mediterranean Areas

### EVALUACIJSKI LIST ZA

#### Treći trening prijenosa prijašnjih i sadašnjih znanja i vještina

Poštovani, kako bi provjerili Vaše zadovoljstvo treningom molimo Vas da odvojite nekoliko trenutaka i popunite upitnik. Vaši odgovori su nam važni za ocjenu uspješnosti treninga te prilagodbu budućih Vašim potrebama.

Koje su po Vama najbitnije uočene barijere/slabosti za provedbu Akcijskog plana za novi regulatorni okvir i za postupak dobivanja dozvola u vezi s korištenjem biomase u zaštićenim područjima?

Ukoliko je ništa od navedenog nadopunite pod rednim brojem 6.

1. nedovoljna politička i administrativna moć da se pokrenu potrebne promjene ili da se utječe na druga tijela u višoj državnoj strukturi,
2. nedovoljna želja da se pokrene implementacija određenih „nepopularnih“ mjera (npr. uvođenje određenih kaznenih odredbi u planove i pravilnike na razini Županije za neobrađeno zemljište, uvođenje dodatnih obveza za određena područja i sl.),
3. nedovoljna financijska stabilnost da se sufinanciraju/refundiraju određeni troškovi nastali radi prenamjene zemljišta iz poljoprivrednog u šumsko ili radi usklađenja katastra/gruntovnice,
4. nedovoljna financijska stabilnost da se sufinanciraju/financiraju određeni projekti proizašli iz ovog projekta,
5. nedovoljna financijska stabilnost da se potiče uvođenje novih tehnologija u proces pridobivanja energije iz biomase (nova mehanizacija, novi kotlovi i sl.),
6. Ostalo \_\_\_\_\_

Koje je po Vama potencijalno rješenje vezano za uočene slabosti za provedbu Akcijskog plana za novi regulatorni okvir i za postupak dobivanja dozvola u vezi s korištenjem biomase u zaštićenim područjima u procesu pridobivanja šumske biomase?

Molimo ocijenite sljedeće tvrdnje (ocjenama od 1 do 5; 1 - najniža vrijednost, 5 - najviša vrijednost)

1. Kojom ocjenom biste ocijenili sigurnost ljudi i imovine s obzirom na situaciju s minsko-sumnjivim područjima unutar Ličko-senjske i Zadarske županije?

1

2

3

4

5

2. Kojom ocjenom biste ocijenili aktivnost/angažman privatnih šumoposjednika u vidu unaprjeđenja gospodarenja vlastitim šumama na području:

Ličko-senjske županije

1 2 3 4 5

Zadarske županije

1 2 3 4 5

3. Zaokružite tvrdnju za koju smatrate da je ispravna: Za unaprjeđenje gospodarenja privatnim šumama, najveću ulogu trebalo bi imati:

1. Udruživanje šumoposjednika
2. Izrada programa gospodarenja za privatne šumoposjednike
3. Potražnja na tržištu drvne sirovine
4. Korištenje EU fondova (financiranje uzgojnih mjera)

Ostalo: \_\_\_\_\_

**Molimo ocijenite sljedeće:**

Kako biste procijenili svoje znanje o šumskoj biomasi i njezinim koristima/prijetnjama?

	Izvršno	vrlo dobro	osrednje	loše
Koliko Vam je ovaj trening bio koristan?				
	Izvršno	vrlo dobro	osrednje	loše
1. Termin i mjesto održavanja				
	Izvršno	vrlo dobro	osrednje	loše
2. Konceptcija programa				
	Izvršno	vrlo dobro	osrednje	loše
3. Prijenos informacija putem treninga				
	Izvršno	vrlo dobro	osrednje	loše
4. Primjenjivost prezentiranih informacija				
	Izvršno	vrlo dobro	osrednje	loše
5. Ocjena treninga u cjelini				
	Izvršno	vrlo dobro	osrednje	loše

Planirate li koristiti naučeno u vašim budućim aktivnostima?

DA

NE

Što Vam je bilo najzanimljivije/korisno za vaše buduće aktivnosti?

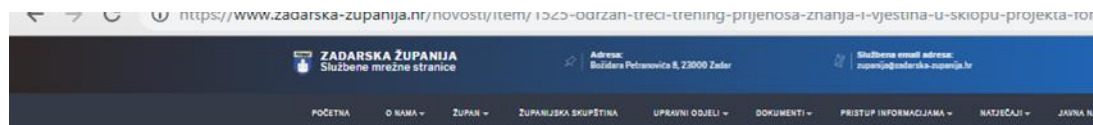
Primjedbe, pohvale, sugestije \_\_\_\_\_

Zahvaljujemo na Vašem vremenu  
Projektni tim



## OTHERS (media reports: newspapers, web page)

<https://www.zadarska-zupanija.hr/novosti/item/1525-odr%C5%BEan-tre%C4%87i-trening-prijenosa-znanja-i-vje%C5%A1tina-u-sklopu-projekta-forbioenergy>



### Održan treći trening prijenosa znanja i vještina u sklopu projekta ForBioEnergy

Upravni odjel za poljoprivredu, ribarstvo, vodno gospodarstvo, ruralni i otočni razvoj Petak, 28. studenoga 2018. 13:53




U prostorijama Hrvatske gospodarske komore – Županijske komore Zadar održan je treći trening prijenosa znanja i vještina u sklopu europskog projekta ForBioEnergy (Forest Bioenergy in the Protected Mediterranean Areas), u kojem je jedan od partnera Zadarska županija. Opći cilj ovog projekta je poticanje proizvodnje bioenergije u zaštićenim područjima, nudeći

<https://lokalni.vecernji.hr/zupanije/odrzan-treci-trening-prijenosa-znanja-i-vjestina-12153>



← → × https://lokalni.vecernji.hr/zupanije/odrzan-treci-trening-prijenosa-znanja-i-vjestina-12153

**Lokalni.hr**    Gradovi    Općine    **Županije**    Vijesti    Specijali    Dani EU


 **Dani EU fondova** >

[Naslovnica](#) > [Županije](#) > [Zadarska](#) 7 pregleda

PROJEKT FORBIOENERGY

## Održan treći trening prijenosa znanja i vještina

Piše: [Majda Mikulandra/PD](#) | 03. prosinca 2018. u 10:39



Waiting for hr.hit.gemius.pl...



REGIONAL | 2018-11-28 21:00 | 521

## KORIŠTENJE BIOMASE: PROJEKT FORBIOENERGY U ZADARSKOJ ŽUPANIJI „Prepreke su depopulacija ruralnih krajeva, manjak radnika, nedostatak drvne mase i neažuriranost katastra!“



Piše Promo  
Foto Zadarska županija



<https://zadarski.slobodnadalmacija.hr/regional/clanak/id/577194/prepreke-su-depopulacija-ruralnih-krajeva-manjak-radnika-nedostatak-drvene-mase-i-neazuriranost-katastra>

## 2.4 Training no. 4

### 2.4.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County) Nature Park Vransko jezero Nature Park Telaščica Nature park Velebit (area located in Lika-Senj County)</i>
Event title	<i>Planning biomass for energy</i>
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management AP11 - Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County PP8 - Public institution Nature Park Velebit</i>
Location	<i>Premises COIN Coworking Zadar, Put Murvice 2, 23 000 Zadar</i>
Date	<i>12. April 2019.</i>

No. of participants	<i>18</i>
Target groups	<i>County representatives; forestry consultants; representatives of local communities and wood fuels producers; representatives University of Zagreb, Faculty of Forestry</i>
Trainers/speakers	<i>Robert Bogdanić, mag. ing. silv., Public institution Nature Park Velebit Prof. Stjepan Risović, Faculty of Forestry, University of Zagreb Dr. sc. Alen Berta, mang.ing.silv., CE Oikon d.o.o.</i>
Training materials	<i>PP Presentation:</i> <ul style="list-style-type: none"> <li><i>• Forest management/planning oriented on forest biomass for Croatia</i></li> <li><i>• Sustainable biomass forest-wood-energy supply chains in the protected areas, Policy Coordination/Administration and how to integrate the planning process</i></li> <li><i>• Sustainable supply chain for energy purposes in the Lika-Senj County</i></li> <li><i>• Biomass utilisation for Energy use and its potentials in</i></li> </ul>

## Croatia

- *Current status and possible scenarios of forest management focusing on biomass for Nature Park Velebit*

## Report on training

*The 4<sup>th</sup> Training of transferring of past and current know-how was held on April 12, 2019 in premises of COIN Coworking space in Zadar. At the beginning of the training Mr. Mario Šaban, Director of Fire Protection Department in Nature Park Velebit briefly welcomes the participants. First presentation followed by Professor Risović with title Biomass oriented forest planning/ management where he spoke that forest biomass has a significant role in the Croatian energy, thermal and electrical. Professor pointed out on short crop cultivation of autochthonous tree species that are grown for production biomass.*

*Next presentation was held by Dr. sc. Alen Berta with a theme "Planning of sustainable forest-wood-energy supply chain in protected areas, coordination of policy/administration and how to integrate the planning process" where he spoke about raising awareness among the general public about biomass use. He also pointed out that state company Croatian Forests determine the price at the market since they are the main producers and that there are only very few companies and personnel in this area that deals with biomass.*

*Then, Robert Bogdanić from Nature Park Velebit held a presentation about "Sustainable supply chains of forest biomass for energy purposes in a protected area". He stresses out the importance of balancing market and that there is a greater demand than the offer. He emphasized that the main objective is to establish sustainable supply chains for forest biomass, to prevent the imbalance in the biomass market, to improve the management of state and private forests, improve the level of habitat protection.*

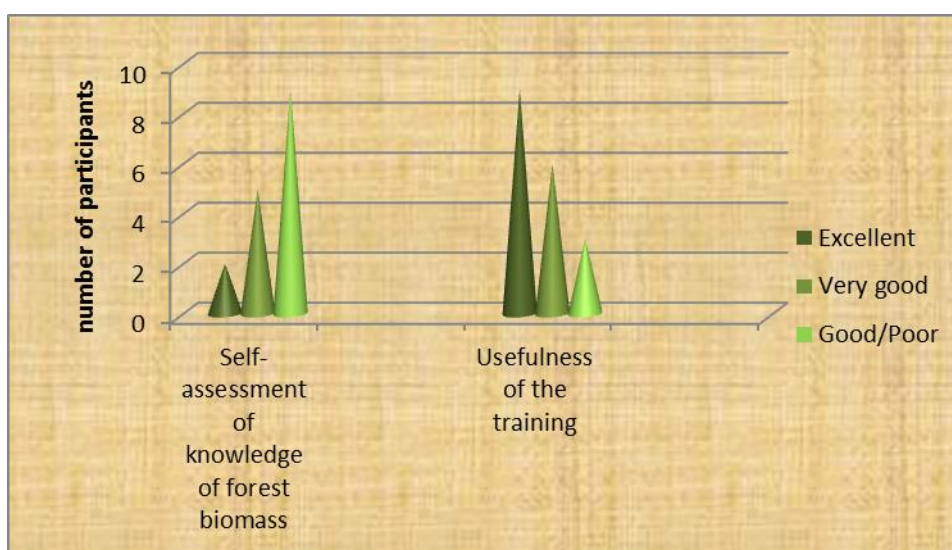
*The next presentation was again held by the professor Risović who described an Austrian model from the 1980's, where micro network was established in places. This refers to the example where the sawmill warms several houses who are near, church. He also said that there must be synergy between local authorities and stakeholders and that there is a need for Biomass Logistics Centres of which the main benefit would be a solid foundation for better market development, getting cheaper energy sources and job creation.*

*Final presentation was presented by Robert Bogdanić where he states that the goal of activities is to increase biomass production in an economically viable way. Measures that have been set aside are*

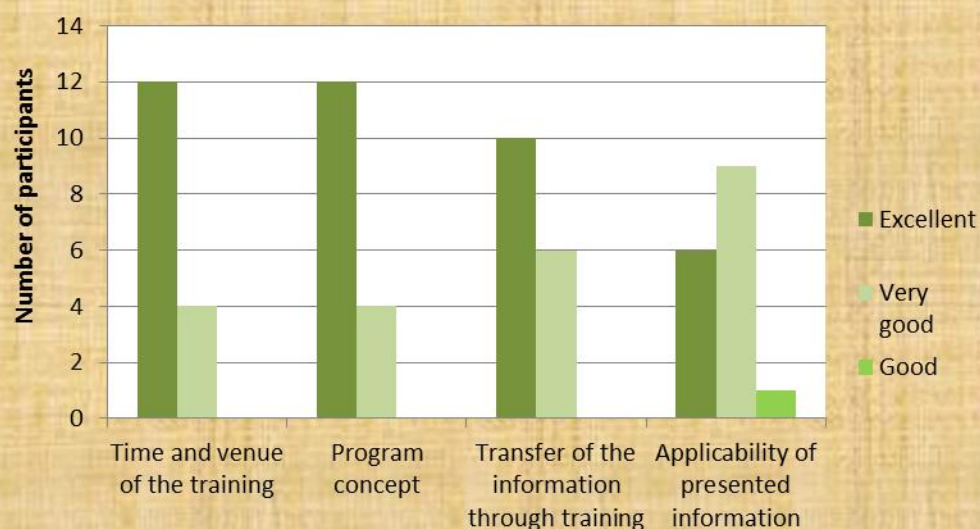
	<p><i>leaving at least 5 dead standing trees per hectare, forest and pest forest protection, environmental rehabilitation along forest roads, hiking trails, routes and roads after logging and harvesting, preventing waste disposal, implementing fire protection measures, preventing the worries of working machines. Training was finished with a conclusion that fundamental task for assessing the possibility of changing the regular way of state forests management, and as an advantage of the new management plan is to increase opening of the state forests, to use modern mechanization, to reduce staff costs, to cut down in the form of a stripes or circles and to increase the biomass logging for 15-20%.</i></p>
<p>Feedback from participants</p>	<p><i>At the end of the training, participants completed the evaluation questionnaire.</i></p> <p><i>In this training regarding Forest Bioenergy there was 16 questionnaires that were filled and analyzed.</i></p> <p>Participants, on the question of the most important barriers/weakness related to the planning and establishment of a sustainable wood-energy supply chain, mostly responded by number 1 (10 participants) Lack of available forest wood mass due to degradation, the same number of participants was marked by 3 The absence of a trade-logistic center for biomass that will connect local suppliers and end users. 6 respondents responding under number 2 A small number of licensed crafts for wood harvesting and the lack of biomass production and distribution, while 5 participants rounded off the answer under number 4 Insufficient financial stability to co-finance the costs of procuring new boilers on biomass and new energy recovery mechanisms for biomass and only one participant decided to answer 6 Insufficient financial stability to co-finance the costs of forest road construction. None of the participants mentioned any other additional barrier/weakness.</p> <p>The most important reason for a very small number of private companies operating in the forestry and biomass sector, participants noted:</p> <p>The most important reason for a very small number of private companies operating in the forestry and biomass sector, participants noted:</p> <ul style="list-style-type: none"> <li>- insufficient education</li> <li>- unstable offer market</li> <li>- the lack of public authorities' interest in informing the public and setting strategic goals</li> <li>- not finding a profitable business</li> <li>- lack of information, lack of infrastructure</li> <li>- low prices of cutting</li> </ul>



- most forest areas are state-owned
- insufficient number of planting areas, logistics
- lack of work force which is caused small payments in the forestry sector
- undeveloped market (uninformed population, uninformed authorities-with subsidies could stimulate investments in environmentally-energized branches)
- insufficiently developed mechanization
- still insufficient awareness of the importance of using biomass, insufficient workforce in forestry
- small demand for biomass
- a small number of hectares of forests

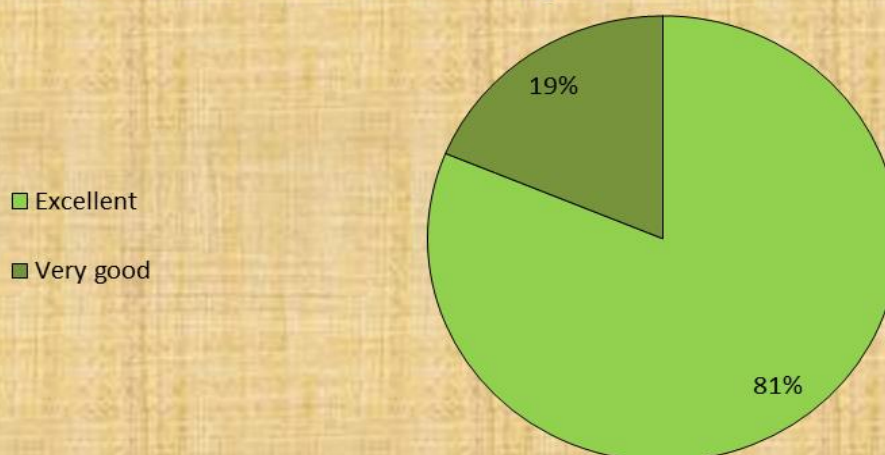


- The usefulness of the training was very positive rated. The lowest rating was good. No one pleaded that the training was poor.
- Participants were evaluating their knowledge of forest biomass and its benefits/threats by majority decision on average rating (good) while only a few rounded up the score was very good. Only two people have assessed their knowledge with the excellent score.



- The participants showed the satisfaction of the time and place of the training. Only four participants marked the time and training with grade 4.
- The concept of training was rated with excellent grades as well. Only four participants rated the concept with very good mark.
- Of the 16 participants who filled out the questionnaire, only four of them rated grade 4 information transfer through training. The others have been rated excellent.
- Participants evaluated the applicability of the presented information mostly with very good. Six participants rated with excellent while only one participant scored with a three.

### evaluation of the training as whole





*Training as whole was evaluated as excellent by 13 participants and very good by 3 participants. There was no lower rating.*

*The analysis shown that average level of satisfaction with the training, when all relevant variables included, is very good.*

*The average sum of participant's evaluation training as whole showed the high level of satisfaction, and it is graded as excellent.*

*Table 1. Average final grades of the training satisfaction*

average per all topics	4,48	very good
average grade training as whole	4,81	excellent

*Table 2. Equalization of satisfaction level with numeric value*

<i>Grading</i>	
<i>Excellent</i>	<i>5</i>
<i>Very good</i>	<i>4</i>
<i>Good</i>	<i>3</i>
<i>Poor</i>	<i>2</i>

### 2.4.2 Attachments

INVITATION AND PROGRAM

EVALUATION QUESTIONNAIRE

LIST OF PARTICIPANTS

EVENT PHOTOS

MEDIA REPORTS:

**EVENT AGENDA (invitation, program)**

Project co-financed by the European  
Regional Development Fund

Poštovani,

Zadarska županija, u suradnji s Parkom prirode Velebit, poziva Vas na četvrti trening za prenošenje znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy", koji će se održati u **petak, 12. travnja 2019. godine u 10.30 sati, u prostoru COIN coworkinga Zadar (Put Murvice 16, Zadar).**

Projekt "**ForBioEnergy**" financira se iz programa MED teritorijalne suradnje, a njegova je provedba započela 1. studenog 2016. godine i trajat će do 30. travnja 2019. godine. Opći je cilj projekta "**ForBioEnergy**" poticanje proizvodnje bioenergije u zaštićenim područjima, nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora.

Svrha treninga je učinkovito korištenje dostupnih znanja, kako u okviru projekta, tako i izvan njega. Transfer znanja provodit će se na ad hoc tečajevima usredotočenima na rezultate projekta "**ForBioEnergy**" te drugih relevantnih europskih projekata i inicijativa. Tečajevi obuke bit će organizirani ne samo na partnerskim područjima, nego i na drugim područjima uz podršku partnera i horizontalnog projekta.

Treninzi su namijenjeni ključnim ciljanim skupinama u koje spadaju: kreatori politike, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehničari te profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti. Četvrti trening prijenosa prijašnjih i sadašnjih znanja i vještina usredotočen je na temu "Planiranje biomase za energiju".

**Program tematske radionice je sljedeći:**

- 10.30 Prijava sudionika
- 10.45 Pozdravni govori (predstavnici Zadarske županije i PP Velebit)
- 11.00 Planiranje/gospodarenje šumama orijentirano na biomasu u Republici Hrvatskoj
- 11.30 Održivi opskrbeni lanci šumske biomase u energetske svrhe u zaštićenim područjima, koordinacija politika/administracije te kako integrirati proces planiranja
- 12.30 Pauza za kavu
- 12.45 Iskorištavanje biomase za energiju i njeni potencijali u HR
- 13.15 Trenutno stanje i mogući scenariji gospodarenja šumama orijentirano na biomasu za PP Velebit
- 14.15 Ručak

Molimo Vas da svoje sudjelovanje potvrdite najkasnije do **10. travnja 2019. godine do 12.00 sati na e-mail adresu: [ana.maver@zadarska-zupanija.hr](mailto:ana.maver@zadarska-zupanija.hr) ili telefonski broj 023/350-418.**

Očekujemo Vaš dolazak.

S poštovanjem,



PROČELNIK

*[Signature]*  
Daniel Segarić, dipl. ing.

## EVALUATION QUESTIONNAIRE



Project co-financed by the European  
Regional Development Fund

## Forest Bioenergy in the Protected Mediterranean Areas

### EVALUACIJSKI LIST ZA

#### Četvrti trening prijenosa prijašnjih i sadašnjih znanja i vještina

Poštovani, kako bi provjerili Vaše zadovoljstvo treningom molimo Vas da odvojite nekoliko trenutaka i popunite upitnik. Vaši odgovori su nam važni za ocjenu uspješnosti treninga te prilagodbu budućih Vašim potrebama.

Koje su po Vama najbitnije uočene barijere/slabosti vezane za planiranje i uspostavu održivog drvno-energetskog opskrbnog lanca? Ukoliko je ništa od navedenog nadopunite pod rednim brojem 7.

1. Nedostatak dostupne šumske drvene mase zbog degradiranosti,
2. Mali broj licenciranih obrta za pridobivanje drva, te nepostojanje tvrtki za proizvodnju i distribuciju energije iz biomase,
3. Nepostojanje sabirno-logističkog centra za biomasu koji bi povezo lokalne dobavljače i krajnje korisnike,
4. Nedovoljna financijska stabilnost u sufinanciranju troškova nabavke novih kotlova na biomasu i nove mehanizacije za pridobivanje energije iz biomase,
5. Nedovoljna financijska stabilnost u sufinanciranju troškova konverzije degradiranih šumskih površina i kultura,
6. Nedovoljna financijska stabilnost u sufinanciranju troškova izgradnje šumskih prometnica.
7. Ostalo \_\_\_\_\_

Koji je po Vama najbitniji razlog za prilično malen broj privatnih tvrtki koje posluju u sektoru šumarstva i biomase?

Koje je po Vama potencijalno rješenje vezano za uspostavu energetsko opskrbnog lanca biomase za PP Vransko Jezero?

**Molimo ocijenite sljedeće:**

Kako biste procijenili svoje znanje o šumskoj biomasi i njezinim koristima/prijetnjama?



Izvršno



vrlo dobro



osrednje



loše

Koliko Vam je ovaj trening bio koristan?



Izvršno



vrlo dobro



osrednje



loše

a) Termin i mjesto održavanja



Izvršno



vrlo dobro



osrednje



loše

b) Konceptija programa



Izvršno



vrlo dobro



osrednje



loše

c) Prijenos informacija putem treniniga



Izvršno



vrlo dobro



osrednje



loše

d) Primjenjivost prezentiranih informacija



Izvršno



vrlo dobro



osrednje



loše

e) Ocjena treninga u cjelini



Izvršno



vrlo dobro



osrednje



loše

Planirate li koristiti naučeno u vašim budućim aktivnostima?

DA

NE

Što Vam je bilo najzanimljivije/korisno za vaše buduće aktivnosti?

---

---

Primjedbe, pohvale, sugestije

---

Zahvaljujemo na Vašem vremenu  
Projektni tim

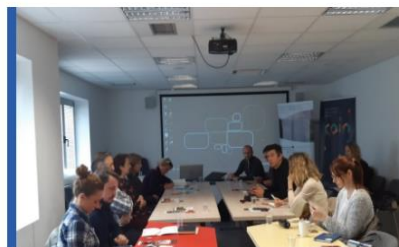


## OTHERS (media reports: newspapers, web page)



## Održan četvrti trening prijenosa znanja i vještina u sklopu projekta „Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy“, u prostoru COIN Coworkinga Zadar

(prema odjelu za publicitet, obrazovno, vodno gospodarstvo, ruralni i turistični razvoj) Petak, 19. travnja 2019. 12:07



Zadarska županija je 12. travnja 2019. godine u suradnji s Parkom prirode Velebit održala četvrti trening prijenosa znanja i vještina u sklopu projekta „Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy“, u prostoru COIN Coworkinga Zadar. Predavanja i prezentacije održali su profesor Stjepan Risović sa Šumarskog fakulteta u Zagrebu, doc. sc. Alen Berta, vanjski stručnjak Zadarske županije na projektu i Robert Roganović, stručni suradnik u Parku prirode Velebit. Ovaj projekt je od iznimne važnosti jer će njegovi rezultati u konačnici pomći modelima kojima će se moći postići održiva proizvodnja šumske biomase u kontekstu multifunkcionalnog upravljanja u mediteranskim šumama.

Profesor Risović je predstavljao prve prezentacije, *Planiranje gospodarstva šumama orijentirano na biomasa u Republici Hrvatskoj*, istaknuo kako Hrvatska raspolaže kvalitetnim i prirodnim šumama čijim gospodarstvom nastaje značajna količina šumske biomase za mehaničku preradu i termičku uporabu, a koja se još uvijek velikim dijelom izlazi iz RH.

Alen Berta je svojim predavanjem na temu *Održivi opskrbi lanci šumske biomase u energetske svrhe u zaštićenim područjima, koordinacija politika administracije je ključ integrirani proces planiranja*, naglasio važnost informiranja građanstva. Također, spomenuo je mogućnost korištenja EU fondova koji bi potaknuli lokalno stanovništvo, javne i ostale zainteresirane osobe na uspostavu održivog drvno-

### ZADNJE OBJAVE



Održana 4. okružna konferencija za projekt AdriSeaMUSE  
Mreža AdriSeaMUSE - Virtualna ulazna točka za projekat AdriSeaMUSE



Održana 15. sjednica Kolegija županija  
Nakon sedmičnog odjeka Kolegija županija održana je 15. sjednica Kolegija



NAJAVLJENO: sjednica Kolegija županija Zadarske županije  
Sjednica Kolegija županija održana je 12. travnja 2019. godine u prostoru COIN Coworkinga Zadar



Održana pokazna - letenjska

← → ↻ ① Nije sigurno | 057info.hr/vijesti/2019-04-20/neiskoristeni-potencijal-sume-za-dobivanje-energije

**Foto dana**

Južina

**tempero**  
center  
za usluge poduzeća

**Vaš glas**

**Tražilica**

057info Google

**SLUŠAJTE**  
**057**

**Vijesti**

**TRENING U ZADRU**

**Neiskoristeni potencijal šume za dobivanje energije**

Objavljeno: 20.04.2019 u 07:31

Piše: 057info, Foto: Zadarska županija

Registrij se kako biste vidjeli što se sviđa vašim prijateljima.

Zadarska županija je u suradnji s Parkom prirode Velebit održala četvrti trening prijenosa znanja i vještina u sklopu projekta „Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy“, u prostoru COIN Coworkinga Zadar.

Predavanja i prezentacije održali su profesor Stjepan Risović sa Šumarskog fakulteta u Zagrebu, doc. sc. Alen Berta, vanjski stručnjak Zadarske županije na projektu i Robert Roganović, stručni suradnik u Parku prirode Velebit. Ovaj projekt je od iznimne važnosti jer će njegovi rezultati u konačnici pomći modelima kojima će se moći postići održiva proizvodnja šumske biomase u kontekstu multifunkcionalnog upravljanja u mediteranskim šumama.

**POSLEDNJE VIJESTI**

- Bez vode dio Arbanasa, cisterna na Trgu Gospe Loretke
- Zadran su jasni: 'Vratite palme, pošaljite ih svu vegetaciju u grad!'
- Privremeno promet dijelom Ulice Jurja Kržančića
- FOTO: Za koncesionara terminala u Gaženici Zadar je veličanstven projekt
- Dvije žene posvuda se su oko vrtne hortikulture
- Lopov provalio u vozilo Švicarca i ukradio dva mobitela
- Od 14 vozača pod utjecajem alkohola, rekorder u Gracu
- Pupić Bakrač traži nadzor prije okončanja natječaj za razmatranje Narodnog muzeja
- Počeli uplati u vrtić ustanova Sunce i Radost
- Hrvatski jezik i književnost postaje odgođeni studij
- Stvarno ne znam kako bi mogla doći tamo i sudjelovati u ciklusu otvaranja terminala
- Pričajmo o starenju s Robertom Maierhofer iz Graza
- Za tri slučaja koje su uzdimala zadarsku javnost - ODO ima isti odgovor
- Projekt Komunalnog odjela - u zadarskim kvartovima kućat će javni satovi
- Županija predana zgrada u Vojnom Stjepana Radića, Vlada sutra danje još dvije

ARHIVA

**VEZANE VIJESTI**

VIJESTI

- Volonteri iz šume uklonili preko pet tona otpada

11.04.2019.

## 2.5 Training no. 5

### 2.5.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County)</i> <i>Nature Park Vransko jezero</i> <i>Nature Park Telaščica</i> <i>Nature park Velebit (area located in Lika-Senj County)</i>
Event title	<i>n/a</i>
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management</i> <i>AP11 - Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County</i> <i>PP8 - Public institution Nature Park Velebit</i>
Location	<i>Premises in The Croatian Chamber of Economy-Zadar County Chamber</i>
Date	<i>7<sup>th</sup> June, 2019., Friday</i>
No. of participants	<i>17</i>
Target groups	<i>County representatives; forestry consultants; representatives of local communities and wood fuels producers; representatives University of Zagreb, Faculty of Forestry</i>
Trainers/speakers	<i>Prof. Stjepan Risović, Faculty of Forestry, University of Zagreb</i> <i>Dr. sc. Alen Berta,mang.ing.silv., CE Oikon d.o.o.</i>
Training materials	<i>PP presentation:</i> <ul style="list-style-type: none"> <li><i>Biomass Quality Requirements from Protected Areas</i></li> <li><i>Quality assurance of wood biomass and certification scheme</i></li> <li><i>Quality issues of wood fuel in region/area of study</i></li> </ul>

# Report on training

Zadar County, in cooperation with Nature Park Velebit, on June 7th, was organized Fifth Training of transferring of past and current know-how within the project „Forest Bioenergy in the Protected Mediterranean Areas-ForBioEnergy“, in the premises of the Croatian Chamber of Commerce - Zadar County Chamber. Lectures and presentations were held by Professor Risović from the Faculty of Forestry in Zagreb and Alen Berta, an expert of the Zadar County. This project is of extremely importance because its results will ultimately create the infrastructure and base for further development of forest biomass exploitation activities and the sustainability of similar jobs. Project ForBioEnergy explains how to ensure, improve and accelerate the entire bioenergy process with the aim of utilizing the full potential (protected) areas, ensuring sustainable development without endangering biodiversity and other forest functions.

Alen Berta presented the first topic, Biomass Quality Requirements from Protected Areas, who describes which characteristics affect the quality of biomass. These characteristics are the share of water, the share of ash, the fuel value and the quantity of certain elements (chlorine, nitrogen, sulfur), which play an important role in fuel quality, which is largely responsible for efficient operation and low boiler biomass emissions. Chemical residues from previous production processes and impurities such as stones, earth and metal is also effect quality. The energy value depends to a large extent on the water department, and to a lesser extent on the type of wood. For traditional use, firewood should not have a water content higher than 25%. The storage value of stored and dried wood is about twice as high as freshly cut wood, since part of the energy is spent for water vapor in wood. Throughout the presentation, it is also noted that the quality assurance system should be simple, cause as little bureaucracy as possible and support the potential of efficiency. ISO standards, „Quality Control“, include product or process quality to ensure the delivery of products and services in accordance with the required properties in the most efficient and most financially advantageous way. Quality assurance includes product and process assessment based on data provided by quality control.

Professor Risović continued with the topic Quality assurance of wood and certification scheme. Forestry certification is a voluntary market-oriented tool that supports responsible management and ensures the realization of the social, economic, ecological, cultural and spiritual needs of present and future generations. Certification allows owners and forest managers-families, communities and businesses access the global market for certified products. Forest managers or owners who want to prove their way of forest management are socially useful, environmentally friendly and economically justified can apply for a certificate of forest management. Manufacturing chain certification is applicable to companies that manufacture, process or trade wood or timber forest products and want to prove to their customers



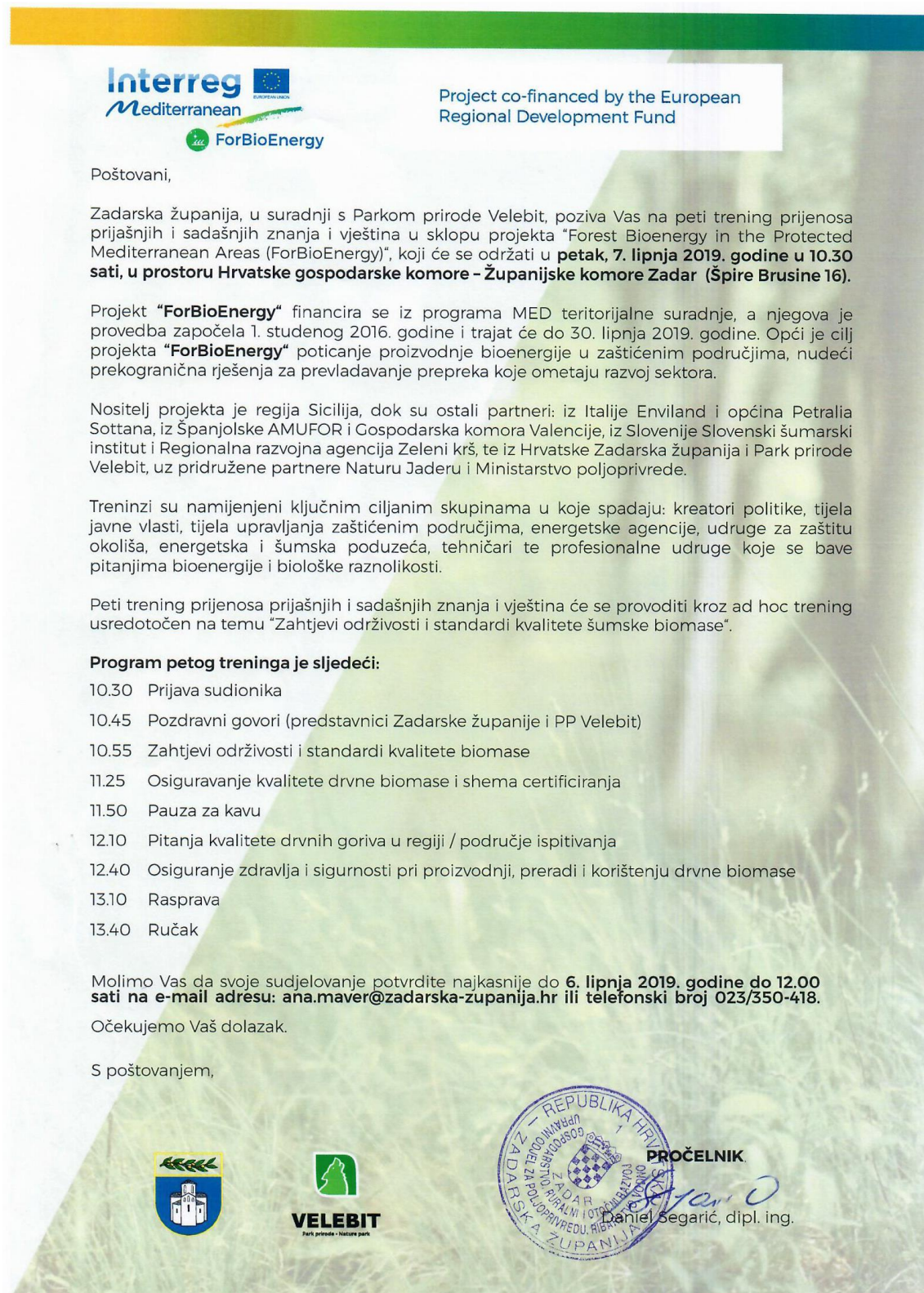
that they responsibly use the produced raw materials. The Forest Products Certification System assures consumers and customers of certified products that these products originate from proven sources with the application of responsible management and collection. Due to growing concerns about the survival of world forests due to uncontrolled logging and illegal timber trade in the nineties, the forest certification process was developed as a toll for responsible management of the ecosystems. The general motivation for developing and applying the forest certification model was due to the concerns of experts and practitioners regarding the destruction and decay of tropical climatic forests. Certification is not an easy procedure for issuing certificates to organizations that master the standards but is a complex system in which different interest groups are involved, where negative impacts can occur besides positive ones. The most important certification systems for forest products have been established by the Forest Stewardship Council (FSC) and the Program for the Endorsement of Forest Certification (PEFC). FSC and PEFC are independent, non-governmental and non-profit organizations established to promote responsible forest management around the world. These organizations promote sustainable forest management through independent certification of third party and provide the mechanism of providing customers with wood and paper products promotion of sustainable management. It can be concluded that certification is a useful tool for promoting the conservation of biodiversity and other environmental values in the forest. There are 10 principles that need to be met for the acquisition of its label, namely: respecting FSC law and principles, land ownership and use, indigenous population, local community and workers' rights, forest use, environmental impact, management plan, monitoring and estimation, high conservation and plantation forests. FSC CoC certification is a confirmation of the chain of care for the sustainable development of world forest resources, forest ecosystems and thus ecological balance. The chain of care monitors FSC certified material through the forest-to-consumer manufacturing process, including all intercessions, and all owners in the production chain must be FSC carriers, to be ultimately final the product could be labeled with prescribed FSC markings.



Another topic presented by Prof. Risović is the question of quality of wood fuel in the region/area of testing. According to the standard HRN EN ISO 16559: 2014 in scientific and technical terms, solid biofuels represent material of biological origin, excluding material deposited in geological formations and/or converted into fossils. Types of solid biofuels, basic characteristics and average values of quality parameters are specified in the standard HRN EN ISO 17225-1:2014 Solid biofuels- Fuel specifications and classes- Part 1: General requirements- Fuel and class specifications. Under the norm of the mentioned market forms of solid biofuels, wood-based solid biofuels, wood chips, wood briquettes and wood pellets, and firewood are the most interesting today;

*either in the traditional one-dimensional form or in the form of short-cut and shredded firewood. Firewood, represents the most prominent energy source in households for heat extraction. In order to serve its purpose, it has to undergo the process of processing into a short cut and chopped firewood. In large parts of rural but also in urban areas, fuel wood is used as an energy source for warming up space and preparing hot water.*

## 2.5.2 Attachments

### EVENT AGENDA (invitation, program)



Project co-financed by the European  
Regional Development Fund

Poštovani,

Zadarska županija, u suradnji s Parkom prirode Velebit, poziva Vas na peti trening prijenosa prijašnjih i sadašnjih znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas (ForBioEnergy)", koji će se održati u **petak, 7. lipnja 2019. godine u 10.30 sati, u prostoru Hrvatske gospodarske komore - Županijske komore Zadar (Špire Brusine 16).**

Projekt "**ForBioEnergy**" financira se iz programa MED teritorijalne suradnje, a njegova je provedba započela 1. studenog 2016. godine i trajat će do 30. lipnja 2019. godine. Opći je cilj projekta "**ForBioEnergy**" poticanje proizvodnje bioenergije u zaštićenim područjima, nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora.

Nositelj projekta je regija Sicilija, dok su ostali partneri: iz Italije Enviland i općina Petralia Sottana, iz Španjolske AMUFOR i Gospodarska komora Valencije, iz Slovenije Slovenski šumarski institut i Regionalna razvojna agencija Zeleni krš, te iz Hrvatske Zadarska županija i Park prirode Velebit, uz pridružene partnere Naturu Jaderu i Ministarstvo poljoprivrede.

Treninzi su namijenjeni ključnim ciljanim skupinama u koje spadaju: kreatori politike, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehničari te profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti.

Peti trening prijenosa prijašnjih i sadašnjih znanja i vještina će se provoditi kroz ad hoc trening usredotočen na temu "Zahtjevi održivosti i standardi kvalitete šumske biomase".


**Program petog treninga je sljedeći:**


- 10.30 Prijava sudionika
- 10.45 Pozdravni govori (predstavnici Zadarske županije i PP Velebit)
- 10.55 Zahtjevi održivosti i standardi kvalitete biomase
- 11.25 Osiguravanje kvalitete drvene biomase i shema certificiranja
- 11.50 Pauza za kavu
- 12.10 Pitanja kvalitete drvnih goriva u regiji / područje ispitivanja
- 12.40 Osiguranje zdravlja i sigurnosti pri proizvodnji, preradi i korištenju drvene biomase
- 13.10 Rasprava
- 13.40 Ručak


Molimo Vas da svoje sudjelovanje potvrdite najkasnije do **6. lipnja 2019. godine do 12.00 sati na e-mail adresu: [ana.maver@zadarska-zupanija.hr](mailto:ana.maver@zadarska-zupanija.hr) ili telefonski broj 023/350-418.**

Očekujemo Vaš dolazak.

S poštovanjem,



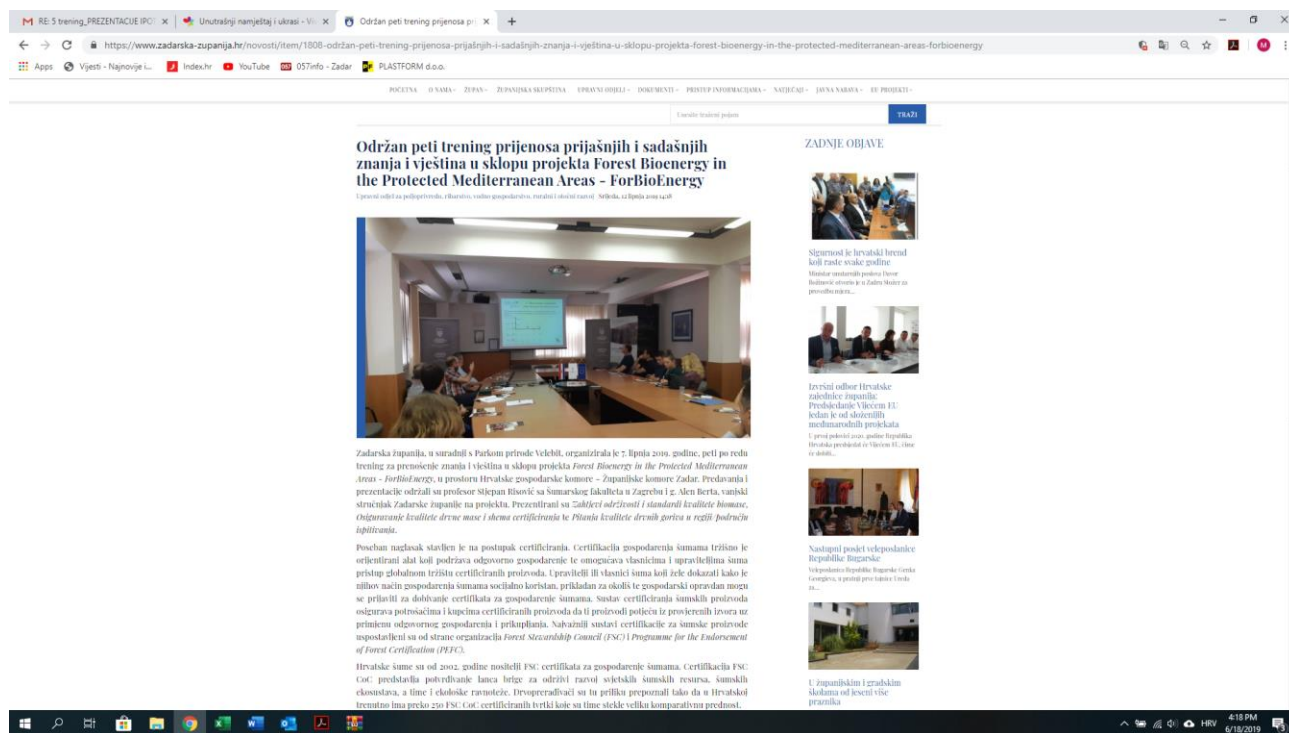




**PROČELNIK**  
*[Signature]*  
Daniel Segarić, dipl. ing.



## OTHERS (media reports: newspapers, web page)





## 2.6 Training no. 6

### 2.6.1 Technical report

Pilot Area	<i>Nature park Velebit (area located in Zadar County) Nature Park Vransko jezero Nature Park Telaščica Nature park Velebit (area located in Lika-Senj County)</i>
Event title	<i>Story behind the establishment of wood biomass chains in the protected areas</i>
Involved partner	<i>AP10 - Advisory service- public institution for advisory activities in agriculture, rural development, fisheries and forest management AP11 - Natura Jadera - Public institution for the management of protected areas in Zadar County</i>
Responsible partners	<i>PP7 - Zadar County PP8 - Public institution Nature Park Velebit</i>
Location	<i>Premises in The Croatian Chamber of Economy-Zadar County Chamber</i>
Date	<i>14<sup>th</sup> june2019, Friday</i>

No. of participants	<i>17</i>
Target groups	<i>County representatives; forestry consultants; representatives of local communities and wood fuels producers; representatives University of Zagreb, Faculty of Forestry</i>
Trainers/speakers	<i>Robert Bogdanić, mag. ing. silv., Public institution Nature Park Velebit Prof. Stjepan Risović, Faculty of Forestry, University of Zagreb Dr. sc. Alen Berta, mag. ing. silv., CE Oikon d.o.o.</i>
Training materials	<i>PP presentations:</i> <ul style="list-style-type: none"> <li><i>• Overview and summary of training courses</i></li> <li><i>• Possibilities for efficient use of available knowledge</i></li> <li><i>• Presenting steps towards sustainable production and using quality wood biomass in protected areas with high support from decision makers and other relevant stakeholders</i></li> </ul>

## Report on training

*Sixth training of transferring of past and current know-how was carried out through ad hoc training focusing on the topic „Story behind the establishment of wood biomass chains in the protected areas”. Lectures and presentations were held by Professor Risović from the Faculty of Forestry in Zagreb, Alen Berta, an expert of the Zadar County and Robert Bogdanić, professional associate at Nature Park Velebit.*

*Robert Bogdanić, a professional associate at Nature Park Velebit presented a section and a summary of all previous training sessions and presented basic guidelines and conclusions with the presentation of the roadmap of activities. In the first training session held in Gospić on 12 January, 2018, the Lika-Senj County was the main occupation of the area of protected areas in the Republic of Croatia (2368km<sup>2</sup> or 58% of of all national parks and nature parks of forest and forest areas, total 286 544 ha and Zadar County, which includes national parks: NP Paklenica and NP Kornati, nature parks: Nature Park Velebit, Nature Park Telašćica and Nature Park Vransko Lake with total area of forests and forest land of 127 606 ha. The Lika-Senj County possesses a large percentage of degraded forests dominated by wood production. Before the opening of the pellet production and cogeneration plants, the production of wood was unprofitable. Sustainable management is carried out for the purpose of economic, ecological and social functions. In the first training, it was concluded that for the increase is a need for road construction (advantage-cost-effectiveness), private forests need to improve management (educate private forest owners and encourage their association) and speed up demining of land so that land can serve purpose. On 2nd training, also held in Gospić, on April 12, 2018, was discussed about the assessment of the threats and benefits of collecting and extracting biomass. Data show that 48,80% of the territory of the Republic of Croatia is forest land, 31% of the territory of the Republic of Croatia belongs to seedlings and stumps, while 13 % of the territory of the Republic of Croatia was made the amount expected to be cut. There are 35 782,41 ha of State Foresters and 471,66 ha of private forests in the area of Nature Park Velebit and Zadar County. The stock of wood amounts to 239,000 m<sup>3</sup> in state forests while in private it is 27,920 m<sup>3</sup>. When assessing the threats and benefits of collecting and extracting biomass Nature Park Velebit is a vegetation and relief rich karst area with a diverse plant and animal world possessing a number of*

economically significant forest communities. The potential for using biomass for local area development would provide savings in heating costs, fully automated heating systems, biomass collecting logistic centers for the domestic market, optimum logistics and buyer selling, less local and regional pilot projects with the development of biomass as an RES. The use of interactive web tools in forestry optimization would enhance productivity and long-term planning, forest inventory, forest road planning, mitigation of negative environmental and nature impacts, fire protection (risk assessment) of an area, hunting management, climate change care and the OECD social function. At the 3rd training session held in Zadar on November 22, 2018, specific objectives of the Action Plan for the pilot area of the Nature Park Velebit were presented, which concluded that is necessary to increase the openness of state forests where the basic priorities are the development of a study of justification for the construction of forest roads. To improve the management of private forests, it is necessary to establish forestry associations, to create private forests cadaster, to inform about the possibilities of financing the breeding measures, to create adequate forest-economy bases and as a result to reduce depopulation. It is also important to increase the safety of people and property while preserving biodiversity within which technical and financial precondition for demining of mine suspected forest areas will be ensured, include demining of forests and forest land in the rural development program and provide other necessary demining capacities (preliminary projects, human capacities, equipment). The barriers for the pilot area of the Zadar County are depopulation and labor shortage, while the specific objectives are to keep the local population, to settle new positions, to increase investment in agriculture and forestry using funds from the Forest Economy Fund and the Rural Development Fund. The problem of lack of wood biomass can be solved by increasing investment, improving the quality of forests and increasing forest openness, ensuring the necessary mechanization, setting up a forest harvesting and agricultural biomass collecting center, and creating annual biomass quotas by "Croatian Forests" so that the local population and small producers could buy at cheaper prices. There are also issues of private-owned forests where it is necessary to raise awareness of the local population about the need to update the cadaster and to develop a simpler and cheaper update process, encourage the maintenance of their own land and the



establishment of forestry associations. On the 4th training session held in Zadar, on April 12, 2019, an analysis of the present situation was presented in the area of the Nature Park Velebit, Croatian Forests Ltd. (for the Gospić Forestry and the Senj Forestry). Sustainable supply chains of forest biomass for energy purposes in the protected areas of Zadar County. It was concluded that the production possibilities of the county (and Vrana Lake) were very small due to the karstic terrain. Useful forest functions are very important because of tourist orientation. There are 1508 ha of state and private forests that are almost entirely covered by degradation stages of spit and macaque. Wood inventory is 10,371 m<sup>3</sup>, while the increase is 347 m<sup>3</sup>, for cut is 0 m<sup>3</sup>, and for degraded surfaces is not prescribed. Analysis of the current situation has shown that they are the largest supplier of wood biomass are the Croatian Woods Ltd., dominated by firewood, but are increasingly using pellets and chipped wood. The number of private companies is quite small, it is present rural depopulation, small areas of production forests with low labor costs in forestry that presents an increasing problem. The 5th training held in Zadar on June 7, 2019, were presented the certification systems. Forestry certification is a voluntary market-oriented tool that supports responsible management and ensures the realization of the social, economic, ecological, cultural and spiritual needs of present and future generations. Certification enables forest owners and forest managers – families, communities and businesses to access the global market of certified products. The most important certification system for forest products were made by the Forest Stewardship Council (FSC) and the PEFC (Forest Certification Program). FSC and PEFC are independent, non-governmental and non-profit organizations established to promote responsible forest management around the world. These organizations promote sustainable forest management through independent third-part certification and provide a mechanism for securing customers of wood and paper products to promote sustainable management. It can be concluded that certification is a useful tool for promoting the conservation of biodiversity and other environmental values in the forests. Professor Stjepan Risović continued his presentation on the topic Opportunities for Effective Use of Available Knowledge. Development of the domestic bioenergy market, the Republic of Croatia is a highly energy dependent country, imports about 50% of the energy needed in the amount of 7,8 to 11,96 billion kunas per year,

more than 75% public sector buildings(owned and used by the central state and JLPRS) as fuel used for fossil fuels under item 322(in the state budget) for 2018 and projections for 2019 and 2020 is planned to be almost HRK 12 billion expenditures for energy. Croatia has high quality and natural forests in which enduring management produces a significant amount of forest biomass, which is still largely exported from the Republic of Croatia. Risović presented an overview of the situation on the world. In 1990, 4 128 billion ha were under forest, which is 31,6% of the worlds surface. 2015, 3999 billion ha (0,51ha/st), a reduction of about 129 million ha. The largest reduction in forest area was observed in the tropical areas of South America and Africa. Ownership structure 76% of forest is publicly owned, 20% of the world's total forest area is located in Russia, 295 Gt of carbon (50% of total quantity) is stored in overland and underground biomasses and is expected to continue the trend of reducing forest areas due to conversion to agricultural purpose (especially in the tropical area). The energy generated from forest biomass accounts for 10% of the total delivered world primary energy generated from all types of biomass.

Alen Berta, an expert associate of the Zadar County, presented steps towards sustainable production and use of quality wood biomass in protected areas with the support of decision-makers and other relevant stakeholders. At the discussion that followed, it was concluded that it was important to encourage the population to use renewable energy sources for energy purposes, especially for forest biomass. End-users, besides developing sustainable development and environmental awareness, are also often considering the price that is a very important factor for household budget with the availability of wood biomass over a long period of time. In previous years, the state financed the biomass boilers, which proved to be a very good practice. Much of the forest biomass is exported and only 14% is used. There are also issues of private forest where it is necessary to raise awareness of the local population about the need to update the cadastre and develop a simpler and cheaper update process. It is also necessary to encourage the maintenance of own land and the establishment of a forestry association. This project is important, but it should only be one of the stairs for future projects that will give further results and encourage the development of forest biomass use. Greater promotion is needed to increase the populations interest. Greater promotion is needed to increase. It is important to have

*general interest and databases obtained through this project and are available on the ForBioEnergy web platform.*

## 2.6.2 Attachments

### EVENT AGENDA (invitation, program)



Project co-financed by the European  
Regional Development Fund

Poštovani,

Zadarska županija, u suradnji s Parkom prirode Velebit, poziva Vas na završni (šesti) trening prijenosa prijašnjih i sadašnjih znanja i vještina u sklopu projekta "Forest Bioenergy in the Protected Mediterranean Areas - ForBioEnergy", koji će se održati u **petak, 14. lipnja 2019. godine u 10.30 sati, u prostoru Hrvatske gospodarske komore – Županijske komore Zadar (Špire Brusine 16, 23 000 Zadar).**

Projekt "ForBioEnergy" financira se iz programa MED teritorijalne suradnje, a njegova je provedba započela 1. studenog 2016. godine i trajat će do 30. lipnja 2019. godine. Opći je cilj projekta "ForBioEnergy" poticanje proizvodnje bioenergije u zaštićenim područjima, nudeći prekogranična rješenja za prevladavanje prepreka koje ometaju razvoj sektora.

Nositelj projekta je regija Sicilija, dok su ostali partneri: iz Italije Enviland i općina Petralia Sottana, iz Španjolske AMUFOR i Gospodarska komora Valencije, iz Slovenije Slovenski šumarski institut i Regionalna razvojna agencija Zeleni krš, te iz Hrvatske Zadarska županija i Park prirode Velebit, uz pridružene partnere Naturu Jaderu i Ministarstvo poljoprivrede.

Treninzi su namijenjeni ključnim ciljanim skupinama u koje spadaju: kreatori politike, tijela javne vlasti, tijela upravljanja zaštićenim područjima, energetske agencije, udruge za zaštitu okoliša, energetska i šumska poduzeća, tehničari te profesionalne udruge koje se bave pitanjima bioenergije i biološke raznolikosti.

Šesti trening prijenosa prijašnjih i sadašnjih znanja i vještina će se provoditi kroz ad hoc trening usredotočen na temu "Priča iza uspostavljanja lanaca drvene biomase u zaštićenim područjima".

**Program petog treninga je sljedeći:**

- 10.45 Pozdravni govori (predstavnici Zadarske županije i PP Velebit)
- 10.55 Kratak pregled i sažetak svih prethodnih treninga
- 11.20 Mogućnosti za učinkovito korištenje dostupnih znanja
- 11.45 Pauza za kavu
- 12.00 Predstavljanje koraka prema održivoj proizvodnji i korištenju kvalitetne drvene biomase u zaštićenim područjima uz visoku podršku donositelja odluka i drugih relevantnih dionika
- 12.25 Rasprava
- 13.00 Ručak

Molimo Vas da svoje sudjelovanje potvrdite najkasnije do **13. lipnja 2019. godine do 12.00 sati na e-mail adresu: [ana.maver@zadarska-zupanija.hr](mailto:ana.maver@zadarska-zupanija.hr) ili na telefonski broj 023/350-418.**

Očekujemo Vaš dolazak.

S poštovanjem,





**VELEBIT**  
Park prirode - National park



**POMOĆNICA PROČELNIKA**  
Katerina Skelin, dipl. ing.



## Forest Bioenergy in the Protected Mediterranean Areas

[www.interreg-med.eu/ForBioEnergy](http://www.interreg-med.eu/ForBioEnergy)



REPUBLIKA SLOVENIJA  
SLUŽBA VLADE REPUBLIKE SLOVENIJE ZA RAZVOJ  
IN EVROPSKO KOHEZIJSKO POLITIKO

### Disclaimer

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.