BOOSTING RURAL BIOECONOMY NETWORKS FOLLOWING CONTRIBUTION ADDRESSION AND ADDRESSION AND ADDRESSION ADDRESSION

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ITABIA

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Institute of BioEconomy

Three appreciated workshops in Finland

1) Farm-scale energy production and side stream utilization solutions On October 13th a varied audience of Finnish primary producers, education institutions, research and development companies, associations and governmental institutions gathered for an online workshop to hear of innovations related to farm-scale energy production solutions and side stream utilization processes. In addition to the presentations, the drivers and barriers related to the presented energy production and side stream utilization technologies in Finnish rural regions were discussed. The workshop was organized together by VTT Technical Research Centre of Finland and ProAgria, Oulu as a joint action between BRANCHES and COOPID projects. The COOPID project is also a Horizon 2020 project that aims to disseminate good bioeconomy practices by identifying successful stories in the EU, organizing visits for primary producers to learn and workhops for discussing the new solutions.

The presented BRANCHES examples at the webinar on farm-scale energy production and side stream utilization technologies were: "PA6. Hybrid solution to ensure energy self-sufficiency in a berry farm"; "PA7. Manure-power milk logistics"; "PA20. Biomass hybrid dryer" and "PA31. Climate-smart food production" all available in BRANCHES webpage. In addition, the presented solutions included an Austrian pellet production facility, where pellets are produced from agricultural biomass residues and side-streams. Also, a Finnish farmer presented concrete climate actions that have been taken at his farm. Furthermore, an overview of the Finnish investment subsidies for farms was given.

After the presentations, drivers and barriers related to the presented solutions in the Finnish rural regions were discussed. The participants provided their contributions via the visual collaboration platform Miro. The collected drivers and barriers gave a good insight and will serve as a good input for the BRANCHES deliverable "Report on drivers and barriers for implementation of bioenergy technologies in rural areas".



Overview of BRANCHES project was also presented at the webinar

2) Terminals and security of supply in the field of forest Energy The second Finnish BRANCHES hybrid workshop related to WP2 was held on Monday 24.10.2022. The meeting was planned and hosted by Finnish partner Luke on the topics of terminals and security of supply in the field of forest energy. The participants (about 60 people) covered the areas R&D, companies, practitioners, public administration, and associations.

The goal was to present a set of three BRANCHES WP2 Practical Abstracts from Finland and to collect

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valuable feedback from practitioners/actors in the field. The hybrid meeting was planned and hosted by Finnish partner Luke with input from partner VTT. The BRANCHES project and the general idea of Finnish National Network was presented by BRANCHES coordinator Johanna Routa. Reijo Wuorio from Hakevuori Oy talked about the challenges and needs from an entrepreneur's point of view. Senior Scientist Perttu Anttila from Luke presented the topic of forest biomass availability in his talk on "Are there enough forest chips?". Feed-in terminals as part of the forest chip supply was the topic of the next presentation by Kari Väätäinen (Luke) and Jyrki Raitila (VTT). And finally, the outcomes from an international survey on the industrial end-users' preferred characteristics for wood biomass feedstocks was presented by Senior Scientist Robert Prinz (Luke). Each presentation was supported



by printed versions of the respective Practical Abstracts (PAs) available to the audience in Finnish. Between the presentations, the workshop involved input and feedback from the audience by using the online tool Mentimeter. The workshop included plenty of

General view of the audience at the BRANCHES workshop in Tampere. (Source: Johanna Routa/Luke)

lively discussions throughout the meeting and in particular after the presentations, including lots of questions. Through Mentimeter, a few questions were asked from participants to collect valuable practitioners' feedback within the project: participants voted the cost-effectiveness of biomass supply chains, security of supply and the role of committed & skilled employees as the three most important aspects of the forest energy supply chain. On the question how the situation has changed from the forest

energy security of supply point of view, participants highlighted the importance of cost-effectiveness in biomass supply chains and of raw material availability. Additional valuable feedback was collected on the presented PAs and the suggested focus of BRANCHES WP2 work for the next period. Especially the entrepreneur's point of view and the feed-interminals as part of the forest chip supply were considered the most important perspectives. The feedback will be considered for the selection of future upcoming topics and activities.



Presenters of the Natural Resources Institute Finland (Luke) at the workshop. (Source: Johanna Routa/Luke)

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3) Boost for biogas production A face-to-face workshop "Boost for biogas production" was organized on November 22nd in the Ylivieska campus of Centria University of Applied Sciences. The workshop was a joint effort of three projects: BRANCHES, COOPID and HABITUS. The workshop audience hear of good biogas production practises from Finland and Europe, collected in BRANCHES and COOPID projects. A keynote speech was given by a local biogas plant supplier (Demeca Oy). Furthermore, a Finnish dairy company Valio presented their perspectives and future plans on farm-scale biogas production. New and innovative solutions for biogas production were also presented in the workshop including biomethanation and biomethane liquefaction at a farm-scale. The biomethane liquefaction unit was introduced for the participants in a lab tour. The



innovation has been developed under the HABITUS project and was of the winner the **BRANCHES Best Innovative** Practice Award in Finland. After the presentations, drivers and barriers for production biogas in Finland were discussed, as well as how to overcome the discussed

barriers. The participants of the workshop wrote their thoughts on notes, which were collected and summarized at the end of the workshop. A total number of 31 participants took part in the workshop, of which 26 participated in the workshop live and 5 remotely.

Some recent activities carried out in **Italy**

1) EIMA International Fair welcomes BRANCHES to discuss biomass and ecological transition Last November, within the international exhibition of agricultural machinery (EIMA) in Bologna, a workshop was held on the main objectives and results obtained by



the H2020 "BRANCHES" project. The bioeconomy and bioenergy will play a central role in achieving the goals established by the Green Deal and relaunched with the Next Generation EU programme. To date, on a technological level, we are able to face many of the challenges launched, while the major obstacles to overcome concern policies and the cultural context. For this reason - as part of the EIMA Energy Exhibition - ITABIA Italian Biomass Association and CNR-IBE (CNR Institute for Bioeconomy) held the workshop entitled "Buone Pratiche di Bioeconomia: un confronto tra progetti Europei sviluppati in Italia" (Bioeconomy Best Practices: a comparison between European projects developed in Italy).. In view of extending the knowledge transfer towards a growing number of stakeholders, the workshop took place in close collaboration with the CREA PB National Rural Network, which supports the interaction of the Operational Groups within the EIP-AGRI initiative. Thanks to the database of operational groups present throughout the national territory, which can be found in the Italian Rural Innovation Portal (www.innovarurale.it), the National Rural Network represents an excellent observatory of good practices to be disseminated. The exchange of experiences between experts, in this promising sector, stimulated an interesting debate thanks also to the active participation of Mr. Giustino Mezzalira, Italian representative of the Focus Group "Agroforestry: Integrating woody crops into specialized crop and livestock systems" of the EIP-Agri. Mr. Mezzalira co-chaired the workshop together with Ms. Sofia Mannelli, chair of Chimica Verde Italia and member of the Italian BRANCHES team.

2) ECOMONDO fair: the European Commission hosts BRANCHES at its stand Last November, Ecomondo is the annual international trade fair for the green and circular economy that attracts over 100,000 visitors and 1,000 exhibitors. The fair provides important opportunities to showcase the best innovation for all sectors of the circular economy, from material and energy recovery to sustainable development. The 26th edition of ECOMONDO took place in Rimini from 7 to 11 November 2022. This year, the European Commission participated in the fair through the Climate, Infrastructure and Environment Executive Agency (CINEA), the European Innovation Council and



SMEs Executive Agency (EISMEA) and the European Research Executive Agency (REA), who joined forces to participate in several activities. With an excellent organization and logistic, the EU agencies prepared a stand where they also invited EU-funded projects to showcase their activities by organising thematic sessions and individual meetings.

The project BRANCHES was also invited to attend ECOMONDO by the EU agencies and share its activities together with other top projects funded by EU that were hosted in the stand organized by EU on the theme "Funding Circular Economy Innovation in Europe". The Project BRANCHES, that during the same days, was also committed to attend the EIMA international fair in Bologna, could only participate one day at the fair, on 11 November, and was represented

by Ms Sofia Mannelli and Mr Alberto Del Lungo, both members of the project. Although BRANCHES was only present for one day, the results were particularly surprising. During the day, in fact, the project received over 40 visitors coming from different countries that stopped by to learn the results provided by BRANCHES. Apart from Italy, nationalities included Nigeria, Germany, Ghana, Greece, Nigeria and Tunisia. Representatives from local administrations, companies, researchers from universities and research institutes, and members of environmental NGOs were engaged with the two BRANCHES representatives in fruitful discussions concerning project activities and the possibility of sharing the results in countries other than the project countries. Even though most of the discussions focused on the Practice Abstracts there was also the opportunity to disseminate the show case that will be organized by BRANCHES in April at the FIUSIS company in Calimera (Apulia, Italy). Finally, the participation in ECOMONDO provided also the interesting opportunity to exchanges information, experience and ideas with the representatives of the other European projects attending at the EU stand.

3) Webinar: Bioeconomy best practices to enhance biomass uses Last December 7, Mr. Vito Pignatelli (Chair of ITABIA) was invited to introduce the BRANCHES Project on the occasion of the seventh webinar of the cycle of online seminars organized by the Kyoto Club, within the F-Faircap project



Future Farmers Awareness-raising and Information for a Resilient CAP

(Future Farmers Awareness- raising and Information for Resilient CAPs). This project, developed with the support of the EU Commission's Directorate General for Agriculture and Rural Development, intends to raise awareness among young farmers, students and civil society on many topical issues, such as: circular economy in the agri-food sector; renewable energy and agriculture; soil protection and biodiversity; support to rural communities. In this context, Mr. Pignatelli's speech – introduced by Mr. Roberto Calabresi, Coordinator of the Kyoto Club's "Agriculture and Forestry" Working Group – concerned the BRANCHES project and its aims, illustrating in detail the areas and innovations of the 10 Italian PAs created which are part of about 40 already shared (about 75% bioenergy and 25% bioeconomy) by the project partners.

The Factsheet "Bioenergy in a time of crisis"

Last October 2022 a new initiative, conceived by the BRANCHES project partners during the BRANCHES Consortium General Assembly held in Valladolid, was launched. Referring to the many PAs collected in the first two years of project activity, it was decided to interview the stakeholders involved in the PAs to understand how the current double crisis - due to COVID19 and the war in Ukraine - has affected their businesses... In a nutshell, the questions were asked with the intent of gauging: 1) the role of bioenergy/renewable energy/local energy in mitigating the effects of the latest energy crisis and/or 2) the opportunities created by such crisis for bioenergy/renewable energy/local energy ventures. All interviews included at least the following points:

- Negative impact of the energy price increase (cost increase)
- Positive impact of the energy price increase (biomass savings, increased biomass operation viability, increased sustainability of land management etc.)
- Plans for the future

This new activity is coordinated by Italy and so far has been actively joined by Finland and Poland. Its ultimate goal is to produce a fact-based report that will show the strengths and weaknesses of the bioeconomy, if the innovative sector is expanding, in a period in which the path towards sustainable development is hampered by hard-to-control dynamics.

A look at the support of international cooperation in the **Ukrainian agro-forestry sector**

The war is strengthening international cooperation in the Ukraine to bolster sustainable agroforestry management systems in meeting the needs of local populations. In the Ukraine, the rural sector still represent an important source of livelihood for about 13 million people living in rural areas, even if the forestry sector and part of the related agroforestry industries are still suffering from the old Soviet approach. Of the 9.6 million hectares of forest area, about two-thirds can be used for the supply of timber while the rest is used for soil conservation and protection. Most of the forestry industry is controlled by the State, with the exception of small woodworking enterprises. Ukraine exports timber logs and semi-finished products to the Baltic countries, to the rest of Europe and to the Near East, providing cheap raw materials for their industries. However, most of the production is consumed internally. The collection of non-wood forest products such as resins, Christmas trees, wild fruits, berries and birch sap are further important activities practiced by the local population. However, the Ukraine is still lacking a strong economy linked to the use of renewable resources provided by forest supply chains.

In addition, nine months of war have contributed to worsening the agroforestry sector; rural households are increasingly affected by the conflict, and many are forced to downsize or abandon farming activities. According to a survey published by the Food and Agriculture Organization of the United Nations (FAO), 25% of Ukraine's rural population involved in agriculture had to stop their activities or reduce their production due to the war and the situation worsens in the regions of Ukraine most dependent on agriculture, where more than 40% of rural households are affected. The



impact of the war on the broader production system, characterized by the interruption of supply chains and price volatility, had strong consequences on the rural population. The Ukrainian forestry and agroforestry sector continues to suffer damage from fires trigged by war and part of the forests have been rendered unusable due to the presence of minefields or unexploded ordnance. For these and other reasons, forestry companies are at a standstill and are interrupting timber supplies to industry which compromise the entire forest supply chain.

Within this framework, FAO and the European Union are committed to supporting Ukraine by trying to make a preliminary estimate of the damage and losses undergone by forest areas and later to reorganize a forest sector which, shortly before the war, had begun a process of renewal of its policies in favour of sustainable use of wood resources and for the restoration of value chains that use sustainable wood from sustainably managed forests. In the next stages of this relevant process, initiated by FAO and the international community, the good practices selected by the BRANCHES project could be a valuable support for Ukraine's rural populations. Thus, the BRANCHES team is willing to share with FAO all the scientific and technical support and know-how gained from the project.

Horizon RuralBioUp project launched

Last October, the kick-off meeting of the EU Project entitled RuralBioUp, acronym of "Empowering EU Rural Regions to scale-Up and adopt small-scale Bio-based" was held in Rome, in which ITABIA also participates. RuralBioUp is a H2020 project of the CIRCBIO line interested in bio-based solutions to be activated in rural areas in the various regions of Europe. Overall,



the partnership is made up of 12 entities representing 9 countries (Austria, Estonia, France,



Ireland, Italy, Latvia, Portugal, the Czech Republic, Romania) coordinated by APRE, Agenzia per la Promozione della Ricerca Europea (Agency for the Promotion of European Research). In a nutshell, the aim will be to make the most of the main experiences gained in other recent EU projects to support policy makers and businesses interested in promoting the development of the circular bioeconomy. In this perspective ITABIA, already involved in the activation of two "Regional Hubs" Marche and Apulia, regions, intends to establish contacts with the BRANCHES Project for the transfer of good practices.

Biomethane from agricultural residues: Riccardo Minarelli describes his production to an international delegation of



journalists

Among the many initiatives carried out in Italy, for the transfer of good practices between networks of bioeconomy and bioenergy stakeholders, last 10 November, a technical visit was organized at the Leona farm located in Codigoro (1,000 hectares of cereals in the Province of Ferrara, Emilia Romagna region) to show to a delegation of journalists coming from all over the world (Botswana, Brazil,

Canada, France, Ethiopia, Ghana, Zambia, etc.) an interesting model of the biogas-biomethane supply chain that can be transferred to many other contexts on a global scale. The visit, coordinated by ITABIA and led by the owner of the company, Mr. Riccardo Minarelli, showed the full sustainability of the production of biogas from agricultural matrices to which a technologically innovative line of anaerobic digestion of straw has also recently been added (known as "steam explosion") to produce biomethane for the transport sector. The involvement of the mass media in these initiatives is of great importance in order to encourage as many people as possible on the need and opportunity of change.

ITABIA interviewed Jim Hall

Since you took part in COP 27, what assessment can you make on the measures taken to combat climate change with the decarbonisation of the economy?



Pleasure to be speaking to you today about renewable energy and some of the things going on politically around the world which are having an impact upon renewable energy. Your first question relates to what was decided at COP 27 in Sharm El Sheikh in Egypt. I was there, but, I have to say, I didn't have any role in the negotiations. These conferences are enormous events, 35,000 people I believe, and I was particularly focused on climate risks in adaptation. So what I've learned about the negotiations and the outcomes, I've learned from the press and reports in the media. Anyway, first of all, there was a significant movement on the question of loss and damage, so that was, for the first time ever, agreed in principle with developing countries that there would be funds made available to

help them to cope with the impact of climate change, and that was significant for negotiations because the countries that contributed least to climate change are suffering some of the worst impacts and so

they regarded that as being an important part of the negotiation, which it was. Meanwhile, however, COP 27 was disappointing with respect to further agreement and further ambition on phasing out fossil fuels. You'll remember that at COP 26 in Glasgow, the commitment was to phase out the use of coal, which is the most polluting fossil fuel. But at the last minute, in order to arrive at the deal, the words phase out were replaced with the words phase down. That was the pressure, apparently, of China and India, amongst other coal-using countries. This time there was not really any reference at all to phasing out or facing down of all fossil fuels in the agreement, and that was disappointing because in the meantime, a lot of progress has been made with renewable energy, particularly in Europe and North America, but also in Asia, Africa and Latin America, And so it was disappointing. Apparently this was a

JAMES HALL, is Professor of Climate and **Environmental Risks and former director** of the Environmental Change Institute at the University of Oxford. He is director of research at the School of Geography and the Environment, Senior Research Fellow at the Department of Engineering Science and Fellow of Linacre College.Hall is a member of the UK Prime Minister's Council for Science and Technology, **Commissioner of the National Infrastructure** Commission and is chair of the Science and Advisory Committee of the International Institute for Applied Systems Analysis. He was appointed as a Fellow of the Royal Academy of Engineering in 2010. He was a member of the Adaptation Sub-Committee of the UK Climate Change Committee from 2009-2019. He was appointed as Vice-President of the Institution of Civil Engineers in 2021 with a view to become President in 2024

consequence of negotiations by Saudi Arabia and Russia, but the wars made no reference to phasing out of fossil fuels. Because I think the time has come and it should be feasible to talk about and plan for the phasing out of fossil fuels. So we shall see what happens at the at the next COOP, but in the meantime it's extremely important that we press all with the rapid uptake of renewable energy.

Besides being a humanitarian tragedy, what impact can the war in Ukraine have on the path of sustainable development?

The Russian invasion of Ukraine obviously has had a dramatic impact on gas prices, especially in Europe, and there is a sign that that is impacting renewable energy and energy efficiency in two significant ways. One is that, because of the high price and also because of energy efficiency campaigns, people's use of gas is less than it would otherwise be, 10% less in some countries, including in Germany. So that is an important sign that actually when there is a price signal and when people understand the importance of conserving energy that is possible at a significant scale. The second effect is driving forward policies within European countries to reduce dependence on Russian gas. Some of that is an is only a temporary measure, because at the same time there's been acceleration in the uptake, in particular the purchases of photovoltaic panels has gone up quite significantly and there has continued growing investment in wind energy interconnectors and in power grids. So, I think Europe recognises that it is possible to have a electric power sector which is completely without fossil fuels and the end possible also to reduce dependence on gas for heating as well, though that is a much bigger challenge.

As a British citizen, do you think Brexit could weaken the effectiveness of European green policies?

The are many reasons why Brexit was disappointing, but I don't think that environment and energy is the greatest of those reasons. It was disappointing that the UK has left the EU emissions trading scheme, though the UK is still highly interconnected with Europe and in fact have been additional investments now in interconnectors, including a new interconnector between the UK and Germany. That's important because the UK is investing very heavily in offshore wind. At the last set of offshore wind auctions were agreed upon another 11 gigawatts of offshore and we foresee possibly up to 30 or 40 gigawatts of additional offshore wind in the coming years. So it's important that it is interconnected with Europe so that we can balance the grids and balance supply and demand. And I think Britain has made quite good progress with emissions reduction. It is now more than 50% reduction in emissions relative to 1990 levels and I think Britain, when it was in the EU, was always a voice for greater ambition within the EU in terms of emissions reduction. So that is one of the many disappointments as to why Britain is no longer a part of the EU and they have a vocal force for emissions reduction. But we will continue to do as best we can and work with European partners on this, along with many other issues.



20-21 April 2023: Event organised whithin the scope of H2020 Project "Branches"

The FIUSIS company opens its gates to talk and show about the energy supply and conversion chain created in support of the biomass plant located in Calimera (LE), South Italy. (See flyer attached)

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