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### SUN DA-I FEST brought clean energy to the heart of Chisinau



Thousands of people gathered, on 26 of June, in the Stefan cel Mare si Sfant Public Garden to see, touch and test renewable energy technologies and enjoy music powered by solar panels. The SUN Dă-I Fest is organized by the Energy and Biomass Project – funded by the European Union and implemented by the United Nations Development Programme – the Energy Efficiency Agency and POT Music.

"I am very happy to be here again at the SUN Dă-I Fest. The EU is supporting the 5th edition of this event, which is both a fun day out for all the family and an opportunity to learn more about renewable and sustainable energy, which can have a positive impact on the daily life in the Republic of Moldova. Music, workshops, interactive games and eco-initiatives from young people are some of the fun activities on offer", said Aneil Singh, Head of Cooperation Section within European Union Delegation.

Visitors discovered eco-designed innovations created by young people in schools and universities. Micro-hydropower plants, wind turbines built from waste, solar parabolic antennas, solar ovens, robots, remote energy consumption monitoring systems, homes supplied exclusively with renewable energy, are just some of the innovations exhibited at SUN Dă-l Fest Festival.

"I am delighted to see the enthusiasm of young innovators. I have no doubts that their ideas will not stop with these models and prototypes, but will grow into valuable projects that will change the world into an environment-friendly one. I can also see increased interest of people in clean energy produced in their own country, which brings new jobs, new businesses and money invested in Moldova", said Dafina Gercheva, UN Resident Coordinator and UNDP Resident Representative in the Republic of Moldova.



The fifth edition of SUN Dă-I Fest Festival celebrated green energy and renewable energy technologies. Visitors had a chance to see them working in real life: biomass boilers producing heat, photovoltaic panels generating clean electricity and solar collectors heating water. They tested electric cars, scooters and bicycles, received first-hand information from producers of clean technologies in our country and learned the stories of people who switched from fossil to clean energy produced in Moldova.

"The technologies exhibited here promote smart consumption of clean energy and technologies that enhance our energy independence. I am happy to see more and more offers on the local energy market year by year and I admire the enthusiasts who have replaced the energy from fossil sources with renewable energy", noted Calin Negura, Head of Energy Department, Ministry of Economy.

Sun Dă-l Fest also came with a fair for craftsmen passionate about traditional arts, who exhibited for

sale handmade art crafts, paintings made of natural products, eco cosmetics. Children had the opportunity to paint a safari out of cardboard animals, light electric bulbs by using citrus fruits, run through the labyrinth of straw bales and discover other secrets of energy coming from natural sources.

Adults took active part in interactive contests on green energy topics, and practical workshops on renewable energy and waste recycling, learning how to make environmentally-friendly dishes and competed in challenging sport games. "It is our second time at this festival and we love what we see here. Good music, played live in open air and powered by solar energy, new technologies and innovations, interesting activities and games for both adults and children. It's an eco-mini-universe where I would like to live all the time", said Elena Carafizi, who came to SUN Da-I Fest with her family.

SUN Dă-I Fest culminates with a live music performance by Flat Foot (Sweden), Domino (Romania), Hi



Mum, Sillaje, Glimpse, Via Daca, Ambertraps who play with solar-powered musical instruments.

**The event's partners** are Efes Vitanta, Compass, Media Security, Volta, Apa Buna, Consumers Protection Association. **The media partners** are: Realitatea TV, Afisha.md, Diez, Noi.md, Agora, Radio Studentus, TVR Moldova, 999.md.

The 2015–2017 Energy and Biomass Project II is a EUR 9.41 million project granted by the European Union and implemented by the United Nations Development Programme. This continues the Phase I of the Energy and Biomass Project, implemented during 2011–2014, with a total budget amounting to 14.56 million Euro, allocated by the European Union (14 million Euro) and UNDP (560 000 Euro).

For more information about the Energy and Biomass Project, visit our website <u>biomasa.md</u> and on the <u>Facebook</u> account.

Photo gallery can be found here.

#### Proper drafting of the tender books for the public procurements is a pre-requisite for the quality of the biofuel purchased by public institutions



Clear and accurate guidelines for the participants in biofuel public procurement competitions help the companies deliver quality products, in accordance with the tender book, Alexandru Matrohin, biofuel producer, said at a thematic seminar held on Thursday by the Energy and Biomass Project for the public authorities and biofuel producers.

Matrohin pointed out that, when choosing the winning bid, the public authorities in charge of procurements should focus on the calorific value of the biofuel proposed to them, rather than on the lowest price per kilogram. Or, the biofuel may have different properties, depending on the raw material, and the object of purchase should be the amount of heat.

Discussions on the ways how to ensure the biofuel quality, on the procurement procedures and time limits, on the price calculation formula, on the components and the management of the public procurement contracts took place during the training. In this regard, the Project developed a Biofuel Public Procurement Guide, intended to help the consumers. It can be downloaded at the **following link**. The participants in the training shared the difficulties they face in the public procurement process, such as planning of biofuel procurements, the transparency of procedures and the payment deadlines, the correct wording of the tender books and the use of quality certificates, the lack of storage facilities in public institutions that require the delivery of small quantities of biofuel, what leads to the increase of its price.

All these issues have been discussed and systemic solutions will be identified with the support of the Energy and Biomass Project.

Representatives of the kindergartens and schools connected to biomass heating, as well as of the

district councils that have launched public-private partnerships to provide biomass heat to public institutions attended the training.

## 7 schools and kindergartens in the district of Ungheni are provided with green energy within a Public Private Partnership



7 schools and kindergartens from Ungheni district switched from gas & coal to green energy supplied by a private company. The Ungheni District Council signed a Public-Private Partnership (PPP) contract with the Green Energo company, which provides green energy to the beneficiary institution at the price of 750 lei Gcal. The PPP was launched thanks to a grant of 2,131,000 lei, received by the Unghei District Council, allocated from the European funds of the Energy and Biomass Project.

Ungheni is the second district benefiting from Public-Private Partnership for the supply of biomass thermal energy within the Moldova Energy and Biomass Project, following the successful example of Leova district. The selected entrepreneur for Ungheni is responsible to maintain 5 biomass heating systems installed with funding from the EU in the framework of the Moldova Energy and Biomass Project, set up 2 new green energy systems and performed energy efficiency works in several institutions. The to-

tal investments of the private company are valued at 1,000,000 lei. The beneficiaries of the Ungheni PPP's are: schools from Bumbata, Zagarancea, Valea Mare, Sculeni, Harcesti and kindergartens from Floritoaia Veche, and Condratesti.

"Last winter, we cherished the first positive results of the public-private partnership. Both children and teachers enjoyed during cold season the warmth of classrooms, with a temperature of 18–20 degrees. This is the optimal temperature that meets sanitary standards, which before we could not assure day by day, unfortunately. Now managers of educational institutions only pay for the cost per Gcal and they are no longer concerned about purchasing biofuel, hiring operators or maintaining properly the heating plants. In addition to the quality of services, this partnership also brings comfort for the managers of the institutions, who now have more time and financial resources to focus on other priorities of the institution", stated Ludmila Guzun, President of Ungheni district.

The establishment of the partnership was a challenge for the company and public authorities, which was welcomed, and its implementation was beneficial to both parties. "We are aware that all changes are perceived with reluctance but, throughout the last heating season, the managers of the institutions were convinced that this partnership was beneficial to them. The 7 institutions were duly supplied with

thermal heating, as per contractual provisions and at a reasonable price, the cost of a Gcal being of 750 Lei, compared to 1400 Lei, in case of gas heating", said Victor Vorobiov, the private partner.

"Children from 3 neighbouring villages study in our secondary school and it was very difficult in winter – children were freezing on the way to school, and inside they could not warm themselves, so they did not take off their coats during lessons. Now, we have a comfortable temperature, a very good attendance. I would even say that, with the increase of the temperature in the classrooms, the school performance has also enhanced. The number of respiratory illnesses also decreased", mentioned Irina Bodrug, director of the secondary school of Harcesti.

The private partner manages the supply with biomass heating and the proper operation of the bioenergy heating plants in 7 institutions connected to biomass heating systems with the support of the company's funds. The company has hired operators for these heating plants and covers their salaries; it supplies biofuel throughout the heating season. The heating plants will be managed by the company during a period of ten years, throughout which local authorities will pay an optimal tariff for a Gcal. Afterwards, the heating plants will become property of the Ungheni District Council.

# One year after having planted an energy willow plantation, the Vocational School of Cuhurestii de Sus has harvested over one ton of wood mass per hectare



The vocational school of Cuhureştii de Sus is the first in Moldova and it has rich traditions in terms of training professionals for various areas of the real economy. At present, 120 students are being trained in specialties which are in demand on the labour market and a module on "Energy plants as a renewable energy source" was introduced in 2015 in forestry specialisation.

12 students have studied the course this year. "We have chosen this profession, because biomass energy

is being used on a wider scale, and the applied technologies create jobs and are environment-friendly", llie Pânzaru, graduate of the "Energy Plants" module at the Vocational School of Cuhureștii de Sus, said.

The use of biomass for energy purposes implies the application of high-performance technologies, requiring qualified professionals in certain areas that were not studied in specialised educational institutions from Moldova until recently. "A lot of entrepreneurs would

like to start a business like this, but they are facing the lack of well-trained specialists. Because quite large investments are necessary, the entrepreneurs would like to be sure they have well-trained staff to undertake the works for the maintenance of the plantation", stated Vladimir Bragaru, a businessman who planted several hectares of energy willow in Moldova.

At the initiative of the Energy and Biomass Project, a pilot-project for teaching the module on "Energy plants as a renewable energy source" in the vocational schools of Orhei and of the village of Cuhureștii de Sus, district of Florești, and a module on "Solid biofuel heating plants" in the vocational school no.3 of Chișinău was developed and launched on 1st of September 2015. During the first year of study, 75 students participated in these training modules.

In addition to it, the vocational school of Cuhureştii de Sus planted an energy willow plantation of 1 ha and another 1 ha plantation of energy acacia. Over 80% of seedlings took roots and the acacia grew more than two meters high within the first year. According to the technological requirements, it was cut from the stem after the first year of growth, in order to have a more vigorous growth in the coming years. "In the first year, we harvested over 1 000 kilograms of wood biomass,

that was chopped with the help of a company from the community", Ion Murea, director of the vocational school, noted.

The energy willow is the most common type of energy plant and it grows 3 centimetres a day, reaching the height of 6–7 meters within 2–3 years. The calorific power of the biofuel produced from its stem is almost equal to that of coal.

The school has 360 hectares of agricultural land, 267 of them are rented to entrepreneurs and 37 are used for training, being sown with sunflower, corn, etc.

In addition to it, with the support of the Energy and Biomass Project, a new biomass boiler room will be installed to heat the sports hall and the canteen. The school's boiler room was built in 1956 and it is no longer in operation since 1990. The school is going to finance the arrangement of the canteen and of the sports halls, as well as the replacement of the windows, and the thermal insulation and roof repair works. The school director hopes to get enough fuel to heat these areas from the school's demonstrative farming plots and from the four hectares of forest belts managed by the school.



## Chișinău got connected to nature on the World Environment Day



Sunset with classical music played by the pianist Marcel Lazar, workshops, entertainment, leisure, eco exhibitions and fairs in the "Valea Morilor" Park — this was how hundreds of people celebrated the World Environment Day yesterday evening, on the 4th of June, in Chişinău.

As mentioned by the organizers — the environmental and green energy projects of the United Nations Development Programme in Moldova (UNDP), together with the Republican Center "Gutta-Club" and the Association of Environment and Ecological Tourism Journalists — the topic of the current edition of the World Environment Day is "Connecting People to Nature" and this is exactly what was envisaged for Chişinău.

"The topic of this year calls upon us to spend more time in the middle of nature, to enjoy the services and goods provided by urban ecosystems, but also to take attitude towards actions leading to environment degradation, such as excessive pollution, irrational use of natural resources or unsustainable production and consumption", said Doina Munteanu, Head of Programme at UNDP Moldova, attending the event.

Hence, informative and useful workshops were organized during the Environment Day, such as "Urban Composting", "Ecological AgriCulture", "Impact of used vegetable oil waste on environment", "Water Story. Questions and Answers", "Everything about planting trees", "Getting to know the renewables' potential in your community". Several social and psychological topics were also tackled, such as "Gender equality and biodiversity" or "Environment role in humans", Bio-psycho-social health".

During these workshops, the participants had the possibility to observe biodiversity under the mi-



croscope, learn about artistic recycling, pottery art, equipping touristic camping, making herbariums and attend the "Eco-quest" — an intellectual game of questions and answers.

The event also hosted an assorted exhibition of bio-humus, biomass-based boilers, green technologies invented by children, information stands showcasing adaptation to climate change, biodiversity of plants in the Botanical Garden, retro-bicycles, Red Book of 2016, magazines, photos, etc.

Another important moment of the day was the possibility for every participant to calculate the dose of nitrates in the well or the pond they use, to bring used batteries and equipment to the "Recycling Guard" and to find out how many trees they owe to the planet based on a personalized software for calculating carbonfoot prints. The participants also left letters in the "Promises' Tree" with personal environmental commitments for 2017.

The entertainment during the event was also close to nature. Children and adults have drawn, walked on the rope and played on a field with paper bands. A thematic library was made available, while the guest enjoyed vinyl music, prepared by DJ Gonzo (Katana Record Shop).

The event ended with the surprise of the year – a concert of classical music at the sunset, played by the pianist Marcel Lazar.

"We had the great pleasure of attending this event. We, the Moldo Crescendo project, besides promotion of classical music, aim to promote other values that are essential to society. I was deeply impressed of the effect of classical music, as I noticed people connected to Chopin and the wind", noted the artist.

The World Environment Day is celebrated annually on June 5. The topic of this year was "Connecting People to Nature", and the slogan of the event organized in Chişinău was "Be informed, Love and Live!"

The event was organized by the environment and green energy projects of the United Nations Development Programme in Moldova (UNDP) — Biodiversity, Adaptation to Climate Change, The Small Grants Programme of the Global Environment Facility, Energy and Biomass, ESCO — together with the Republican Center "Gutta-Club" and the Association of Environment and Ecological Tourism Journalists.

**The partners of the event** were: P.A. Ecovisio, Ecological Movement of Moldova, University "Ion Creanga",

P.A. Tree of Life, P.A. "Hai Moldova", LTD Bioecoil, P.A. "Quality of environment", Club of Cyclers, Botanical Garden, Zoology Institute, Institute of Ecology and Geography, Initiative Group "We Plant Good Acts", P.A. Moldrec, P.A. Gender Center, Agency for Energy Efficiency, Water OM Kids.

**Media partners** were: the Magazine "Nature", the Magazine "Waste Management", Locals.md, Unimedia, Zugo.md, Diez.md, Radio Eco FM, Ecopresa.md.

## The winners of the national competition "Renewable energy sources", 1st edition, were nominated



Parabolic solar collector to heat water, electro-thermal heater operating on renewable energy, cooking oil recycling system, micro-hydropower station and wind turbine which generate green electricity, solar water treatment facility – these are just some of the winner projects of the 32 schools admitted to the final stage of the "Renewable Energy Sources Contest", held for the first time this year. The contest was organized by the Ministry of Education, in partnership with the Energy and Biomass Project, funded by the European Union and implemented by the United Nations Development Programme.

65 young people from 32 schools presented their works before the jury on May 26–27. Eleven of the projects, including the Grand Prix and special award obtained the maximum score and were declared the winners:

Grand Prix: Micro-hydropower and wind turbine generating electricity", Ion Ursu and Ion Mereacre, the high school in Costesti, rl Ialoveni

1st place: Electro-thermal power plant producing renewable energy " Andrei Lupasco and Dumitru Burlacu, Constantin Stere High School, Soroca



1st place: "Production of biodiesel and soap from roasted oil", Petronela Ciobanu and Olivia Enache, Lyceum from Nicoreni village, Drochia district

Each winner received a diploma and a cash prize, awarded by the Ministry of Education.

Petronela Ciobanu și Olivia Enache from Nicoreni, Drochia are among the winners of the green energy contest. They have won this title thanks to the project for recycling oil used in cooking. "Frying oil causes corrosion of sewer systems. That's why it's important not to throw it after use. It can be transformed into biodiesel, and out of the remaining dry wastes soap or decofrant can be made, a material used to mold building blocks, " say project authors who, in team with their teacher, have convinced an economic agent to launch a initiative to collected used cooking oil in the Drochia district.

Most schools participating in the contest are beneficiaries of the Energy and Biomass Project, connected to biomass heating systems due to European investments, and their curriculum includes renewable energy subject.

"The young generation can bring about change and help with its own beliefs and lifestyles to rationally consume energy and harness the natural energy resources to live in a cleaner environment. We are impressed by the large number of works and, in particular, the multitude of innovative solutions, prototypes of equipment that produce green energy, "says Lina Acălugăriței, training and education specialist, Energy and Biomass Project.

The Ministry of Education has launched the "Renewable Energy Sources" national contest to promote and motivate young people with innovative solutions for green energy use and environmental protection. "Due to this course students learn about the importance of rational use of energy resources for the purpose of protecting and preserving the environment. During the contest the participants demonstrated creativity and remarkable skills in the development, presentation and promotion of renewable energy sources project models," said Mariana Goras, Deputy Head of the Pre–University Education Department, Ministry of Education.

Since 2011, the renewable energy and energy efficiency subject has been taught in all communities, which connected their schools and kindergartens to biomass heating systems under the "Energy and Biomass" Project. In 2013, the Ministry of Education included this course in the list of optional subjects. So far, over 21,000 students have learned in school what renewable energy is and how energy can be produced from the sun, wind, water, and biomass.

### Students from Alcedar are greening their school



Youth from Alcedar, Soldanesti district, came up with ingenious solutions for a school with zero fossil energy consumption. Their initiatives were presented at a public lesson held on 16 of May within the optional course on "Renewable Energy Sources", launched by the EU funded Energy and Biomass Project.

"We have seen that in the European Union, for example – in Germany, there are communities that generate their own energy from renewable sources and they sell the surplus to other consumers. I am convinced that this is also possible in our country, where we do not have our own gas and coal, but we have a huge potential for biomass, alongside with sunlight and enough wind", says 14-years-old Elena Mereuta. Elena presented a project for a school building that uses exclusively green energy.

The students provided arguments for the use of renewable energy and of the models of green energy systems developed by them, with help from their teachers.

The public lesson was moderated by Aurelia Svet, a member of the team of authors of the teacher's guide and of the manual on "Renewable Energy Sources".

"According to the data of the International Energy Agency, the global energy consumption will continue to grow on average by 2% per year. Thus, the energy consumption will double every 35 years. That is why it is important that the educational system is evolving in step with the constantly changing realities. The renewable energy means the future of the planet, and, in order to be competitive, the children need knowledge and skills relevant for the current context and for the adult life", noted Aurelia Svet.

The optional course was developed at the initiative of the Energy and Biomass Project and it was initially tested in the 127 schools that switched to biomass heating throughout the period 2011–2014. Then, 370 other schools joined the initiative and, as a result, over 21,000 students studied the "Renewable Energy Sources" course.

"We initiated this optional course, because sustainable energy will play an important, if not dominant, role in future technological developments. For us it is important to offer young people with an opportunity to gain knowledge of social, environmental and technological issues related to the sustainable supply of energy. This will better equip them for future challenges ", said Lina Acalugaritei, Moldova Energy and Biomass Project's capacity development specialist.

At the initiative of the Energy and Biomass Project, the "Renewable Energy Sources" course was included in the list of the optional subjects for students of V–IX grades, as provided by the Ordinance no. 679 of 07.07.2013 of the Ministry of Education, and in 2015 the course was included in the National Curriculum for the optional courses.

The Energy and Biomass Project, the second stage, is a three-year project implemented throughout the period 2015-2017. The Project has a total budget of 9,41 million Euros allocated by the European Union and it is implemented by the United Nations Development Programme. It follows up the first stage of the project, implemented in 2011-2014, with a total budget of 14,56 million Euros, provided by the European Union (14 million Euros) and the UNDP (560,000 Euros).



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## Lajos Vajda: If a link of the value chain does not work properly, the final consumer will suffer



Interview with Lajos Vajda, President of the Biomass Innovative Cluster in Romania.

The bioenergy cluster in the Republic of Moldova was set up at the end of March 2017 and it aims at developing the relations between all the stakeholders on the biomass market and at its innovative development. A meeting of the 25 cluster members took place in June, where five sectoral working groups were established.

The launch and the development of the cluster were supported by the Energy and Biomass Project and were facilitated by Lajos Vajda, President of Green Energy Biomass Innovative Cluster in Romania, which has been active since 2011.

#### Why is it important to have a bioenergy cluster?

Biomass sources exist in the Republic of Moldova in the form of agricultural waste in the first place and that is why a cluster was established. This waste is a problem for both agriculture and for the environment. At the same time, this waste is a raw material for another cycle, thus we can talk about a circular economy, a new element for Moldova. This resource is valuable and we can get energy from it, therefore, this sector is worth being developed.

If we start an individual business separately, without having a value chain starting, from the hazardous waste to the finished good called energy, that provides a thermal comfort first of all to public buildings, the things will not always work well. If a chain's link comes out of the normality, for example, if the price of the raw material raises, then the final consumer will suffer, as the price of the thermal energy will increase, too. But if the price is correctly established across the value chain, then the final price will be appropriate.

Not everything can be analysed from the point of viewpoint of money and of the economic efficiency, because of the environmental aspect of the agricultural waste. The communities, the population of the Republic of Moldova must be aware that the agricultural waste is a resource and they must get involved. We need to analyse all the effects, including the social ones, that is how the community perceives and understands, how it engages and participates through volunteering or by solving the local social problems.

So, talking about biomass, we need to talk about an ecosystem in which the companies, the universities,

the authorities have their own role. And the cluster, with all its components, fosters the development of the market.

How do you appreciate the developments of the bioenergy cluster in the Republic of Moldova and what are the next steps towards its development?

Two months have passed since the agreement on the establishment of the bioenergy cluster in the Republic of Moldova has been signed. I was surprised that to-day's meeting was attended by almost all those who participated in the establishment of the cluster, what shows their interest and involvement.

At the last meeting, we set up the working teams for the cluster's development pillars: 1. the economic development pillar; 2. the research and innovation pillar; 3. the education and human resource development pillar; 4. the internationalisation pillar; 5. the marketing and communication pillar. It should be pointed out that, as far as large organisations, with a lot of members, are concerned, it is very important to have an internal communication, both with the business environment, and among the links of the value chain, to organise the relations between the institutions, and on the dimension of the cluster internationalisation.

The development of the vision, obviously – based on innovation, will follow; and of the mission, which can be a noble one – to protect the environment and to ensure the thermal comfort, using the local resources; clear objectives must be identified and relations with the neighbouring countries must be established.

The five working teams are supposed to come up with ideas and proposals for activities to be included in the cluster's development strategy. At the next meeting, we will set up the cluster's agenda, with events and activities, we will establish our project's portfolio of ideas, then, through different networks, we will establish partnerships and access funds.

What recommendations would you make to your colleagues from Moldova, taking into account the the experience of the Bioenergy Innovative Cluster in Romania?

First of all, I have to say that the clusters initiated from the bottom up have a much more solid basis. In Austria or Norway, for example, the government policies encourage the consolidation of different stakeholders within clusters for the sake of developing the economy. It is, after all, a matter of cooperation, that is not limited to signing of an act, but is based on confidence, which develops over time. And confidence, in turn, re-



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quires an effort to listen to the other, to consider his or her opinion. This implies a change of mentality, an understanding of the phenomenon and it is based on inter-human relations.

As for the numerical composition of the cluster, we have an ideal situation in Moldova, with 25 members. When a critical mass is achieved, other stakeholders can be attracted. In Romania, we have 75 members, but in Europe there are entities with more than 1000 members.

How did things evolve in Romania in the field of bioenergetics? What is the share of the biomass in the energy system?

Biomass makes up 65% of the consumed renewable energy. There are still some problems, because the Government has initially promoted the construction of very large plants that request very large investments, while the system was not ready to provide the required raw material for such plants. In addition, if these plants operate at their full capacity, the issue of energy use arises. In a large number of cases, heat is lost and then what is the point to invest, if we waste the energy we produce?

The Green Energy Biomass Innovative Cluster promotes the small, integrated systems at the local level, following the "One Village – 1 MW" principle. With 1 MW of thermal energy, the energy independence of the public buildings in the community can be achieved. In the communities of Romania, where the heating season can last 6–7 months of the year, we focus on the production of the thermal energy, and this energy can be provided by the biomass derived from wood waste produced by the households – from orchards, fruit

trees, shrubs, cleaning the parks and the pastures, the riverbeds, deforestation or forest clearing, etc. At present, we have medium capacity biomass thermal power plants with private investments with an average installed capacity of over 20 MW – flower greenhouses, local administration premises, sanitation enterprises, the business incubator in Sfântu Gheorghe, private houses with automated systems.

#### What are the most impactful achievements of the Green Energy Cluster?

I think the ones achieved in terms of internationalisation. Our colleagues in the Western countries wish to promote the solutions that have worked for them, but which are not necessarily compatible with the mentality and with the potential of the concerned area in our country. Or, the cluster in Moldova should be able to explain the Moldovan reality. In Romania, for example, the situation is very different in Banat, Dobrogea or Muntenia. Although certain models are very good and they work in Austria or in Braşov area, they might not work in Galați. Within the cluster, we have professionals who are able to present our reality and submit arguments in favour of one decision or another.

The Green Energy Cluster has been acknowledged by the European Secretariat for Cluster Analysis (ESCA) and awarded the Silver label certificate for Cluster Excellence. The assessment preceding the award of this certificate includes a comparison with the quality of cluster management across the world, they check if missions are organised, the access to projects, the links with the business environment, the research, the investments, the effectiveness of the communication. All these items are checked and an appraisal label is awarded every two years.

The Newsletter is produced by the Energy and Biomass Project II. The project has a total budget of 9.41 million euros, granted by the European Union and it is implemented by the United Nations Development Programme during 2015–2017.

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