



ENERGY PORTAL MAGAZINE

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KYLE SCOTT

Ambassador of the United States

We Have Broader National Awareness of the Need for Personal Engagement

ANA MILIC

Head of Business Department at ProCredit Bank

Dedication To Clients as a Leitmotif

SEM FABRIZI

Head of EU Delegation to Serbia

Climate Change as a Fundamental Challenge of Our Era

SOKO AMONG ENGINEERS



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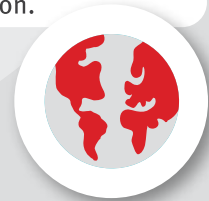
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Dear readers,

The Study of the United Nations from 1991 showed that almost 40 per cent of arable land had been degraded due to intensive agricultural production. There is no doubt that such a method of production causes enormous damage to the environment. That is why we have decided to devote this issue of our Magazine to Sustainable Agriculture. We want to encourage the decision-makers at different levels to adopt measures that will ensure the sustainability of not only agricultural production, but also the entire society.

In this issue, you will have the opportunity to read an interesting interview with Kyle Scott, the US Ambassador to Serbia. He believes that the best solutions often come from individuals and small groups, and the entire environmental movement in the United States behind recycling is truly grassroots. According to him, although the US government plays a key role in the promotion and implementation of environmental protection, still everybody decides whether to throw a firecracker out of the window or whether to use energy-saving lights.

Given that Sem Fabrizi, the Head of the Delegation of the European Union in our country, is one of the most knowledgeable in the negotiations for the accession to the European Union, we decided to discuss with him a crucial topic, Chapter 27. We have talked about the challenges our country is facing, but also the ones his home country Italy has, and how the Italian government is dealing with the same problems.

It is a great pleasure for us to present to you our local company "Soko Inzinjeering" in this issue. Not only does this socially responsible company take care about environmental protection, since they use only ecological freons and natural cooling fluids and they are also involved in the waste recycling system, but even care about their employees and provide them with incentives in a number of ways.

Best regards

Nevena Đukić

Nevena Đukić,
Editor in Chief



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The U.S. Ambassador

We Have Adopted Laws Because Citizens Were Asking for Changes

According to Kyle Scott, the environmental movement in the United States came from the citizens who were frustrated by the lack of progress in their government to protect what is most important in sustaining life: air, water, and food. "The Endangered Species Act, Clean Air and Water acts, along with other groundbreaking environmental protection laws from the 1960s and 70s, were adopted by Congress and the President because citizens demanded changes", says the U.S. Ambassador to Serbia.



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The Head of Business Department at ProCredit Bank

We Are Dedicated to Our Clients, not to the Products

In this bank a client is not looked at only through an option of getting one loan. "Quite the contrary. We take into account all his needs and we put them in correlation with expected benefit", Ana explains adding that the key to their success is the advisory service they offer. "I could say this is actually classic ProCredit approach to clients. We want long-term arrangement with our clients."

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 The Head of EU Delegation to Serbia Environmental Protection Represents a New Paradigm for the Functioning of Society
 Positive results gave the EU the necessary credibility to take the lead at a global level in the climate negotiations concluded successfully with the adoption of the UNFCCC agreement in Paris in 2015. Serbia as an acceding country must continue to work hard to align its internal legislation and economic development model in this direction as a matter of priority, says SemFabrizi in the interview for our Magazine.

30 LJILJANA TUBIC
 Ph.D. in Biological Sciences at the Institute for Biological Research "Sinisa Stankovic" The Lady Standing Behind the Fascination of Plants Day
 Exactly one year ago, the European Plant Science Organisation (EPSO), based in Brussels, appointed LjiljanaTubic as the National Coordinator of the Fascination of Plants Day which has been held around the world since 2012. Within this manifestation, Belgradians learned about the vital role of plants in the environmental conservation, says Ljiljana, and this year participants from other towns in Serbia will join the celebration of the Day dedicated to plants.

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THE SOLUTION IS SUSTAINABLE AGRICULTURE

“Only when the last tree has been cut down, the last fish caught and the last stream poisoned, only then you will realise that you cannot eat money.” This is the Indian proverb which we are not far from at this moment, and it fits perfectly into a topic that is becoming more and more relevant. How much do we actually know what sustainable agriculture really is?

Would the Latin word *sustinere* (sus-under, tenere-hold), which implies sustaining or preserving over a long period, help us understand what sustainable agriculture is and how much it differs from organic or traditional agricultural production?

To fully understand the notion of sustainable agriculture, we would first have to compare it with intensive agriculture.

At the beginning of the twentieth century, people began to use heavy machinery for soil cultivation, as well as pesticides, mineral fertilisers and high-yielding plant genotypes. Intensive agriculture initially requires more investment, but the yield is incomparably greater and more certain. Thanks to this, the number of hungry people in the world has also been reduced, but this production has resulted in severe damage to the environment.

On the other hand, if we observe sustainable agriculture over a longer period of time, we can conclude that it improves the quality of the environment and the resources on which the production is based. It meets people's need

THE PRINCIPLES OF SUSTAINABLE AGRICULTURE

Sustainable agriculture, according to the Food and Agriculture Organization of the United Nations (FAO) is based on the following postulates:

- For agriculture to be sustainable, it must meet the needs of present and future generations for its products and services, while ensuring profitability, environmental health and social and economic equity
- Sustainable agriculture should foster healthy ecosystems and promote sustainable management of soil, water and natural resources while providing global food security
- Global implementation of sustainable production will require great progress in the efficient use of resources and environmental protection
- Sustainable agriculture requires a global management system that promotes food safety in terms of trade requirements and agronomic policies to promote local and regional markets for agricultural products.

for food, at the same time having economic profitability and enhancing the quality of life of farmers and the entire society.

Sustainable agriculture, as a part of overall sustainable development, was defined in Agenda 21 at the United Nations Conference on Environment and Development (Rio de Janeiro, 1992). It is a production system that combines ecological and economic elements of production and care for human health, taking into account the diversity of agriculture and community.

The primary task of sustainable agriculture is the production of enough food for all. Sustainable agriculture involves the production of food and other plant and animal products, using agricultural techniques which protect the

environment, public health, community and animal welfare.

For something to be sustainable, it should survive on a sufficiently good level, or to develop in terms of quantity and/or quality, without any negative impact on the environment.

Sustainable agriculture requires a global management system that promotes food safety in terms of trade requirements and agronomic policies to promote local and regional markets for agricultural products. That requires higher crop yields, better efficiency of fertilisers and use of water, environmental governance principles, reasonable use of pesticides and antibiotics, as well as significant changes in livestock production practices.

Prepared by: Nevena Djukic



Kyle Scott, the Ambassador of the United States of America

We Have Broader National Awareness of the Need for Personal Engagement

It is a well-known fact that in 2017, the United States of America withdrew from the Paris Agreement. By signing it, states have committed themselves to the fight against climate change but above everything, to limiting the average temperature rise that causes global warming. Ever since then, the current American president has stated a few times that the United States would consider its re-approval if the agreement went through some modifications.



Meanwhile, according to the U.S. ambassador in Serbia Kyle Scott, not only that the care about environmental protection has not been missed, but this field, side by side with renewable energy sources, has experienced a boom in his homeland. In the interview with Kyle Scott, among other things, you will find out how the laws in the field of renewable energy are being passed and learn about the emergence of the ecological movement in the U.S. and about sectors in which Serbia could increase its profit.

EP *EP A's report for 2015 and 2014 on the US recycling rate was almost at the same level and it was something below 25 per cent. Would you say that this percentage is good enough for the USA regarding the size of the country and population, and eventually, what is being done for its improvement?*

Kyle Scott We can always do better, but our recycling rate has increased from less than 7 per cent in 1960 to the current rate of about 35 per cent, according to the EPA. Recycling is critical not just from an environmental perspective, but also

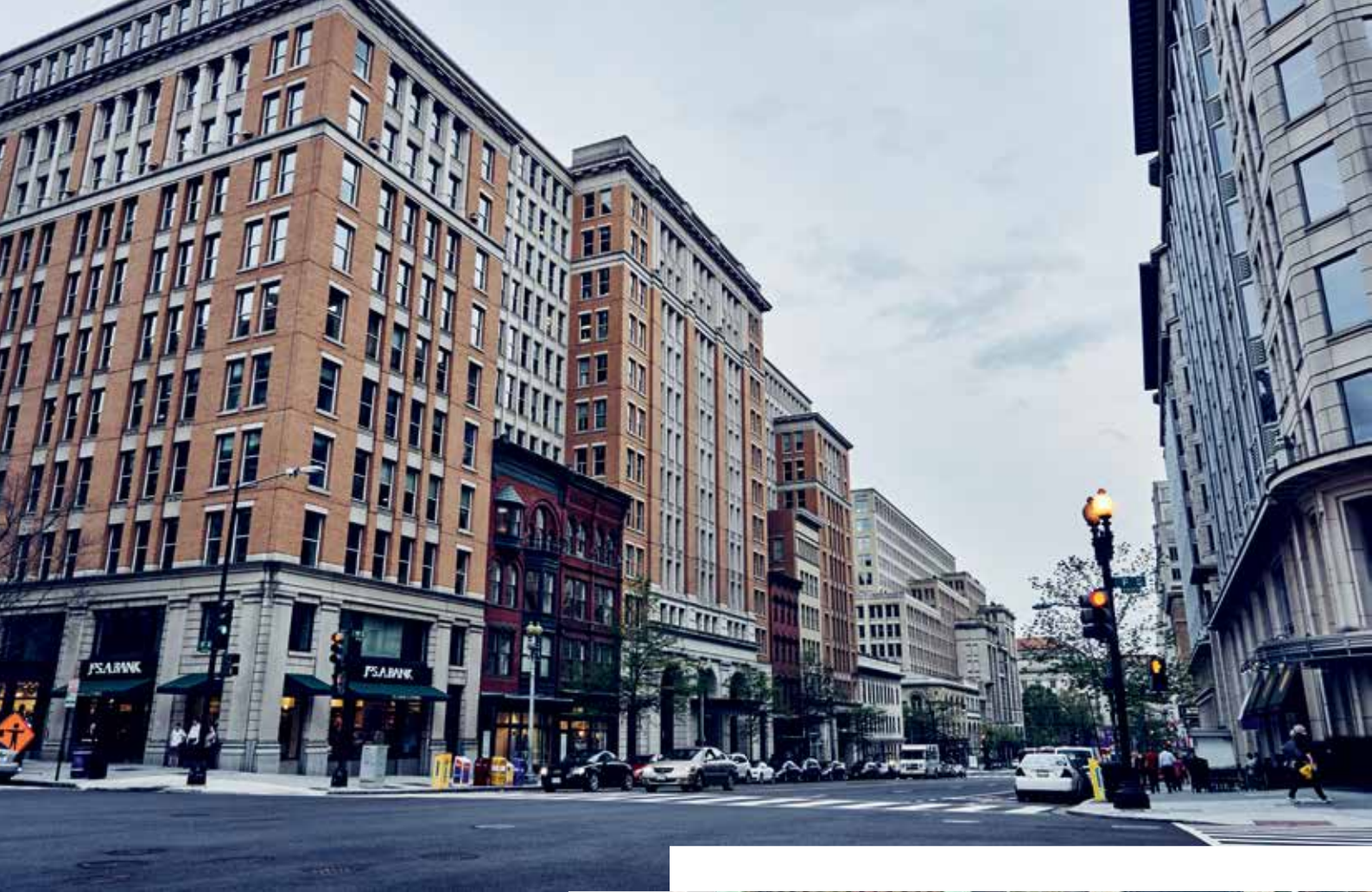
By some estimates, ecotourism contributed more than \$730 billion to the U.S. economy last year

from a business point of view. In fact, a study from the EPA found that every 10,000 tons of materials recycled supports nearly 16 jobs and \$760,000 in annual wages.

Recycling laws in the U.S. also vary widely between states and cities. In many communities, you can now receive fines for not recycling, while others are not as strict.

I also want to point out that the entire green movement behind recycling is truly grassroots. I work for the government but I believe the best solutions often come from individuals and small groups. In the U.S., our environmental movement came from citizens who were frustrated by the lack of progress in their government to protect what is most important to sustaining life: air, water, and food. The Endangered Species Act, Clean Air and Water acts, along with other groundbreaking environmental protection laws from the 1960s and 70s, were adopted by Congress and the President because citizens demanded changes. When I was growing up, for example, I remember reading stories about rivers in industrial parts of the U.S. actually catching fire because they were so polluted. These same rivers now support healthy fish populations.

EP *Many American websites promote ecotourism, and it is a significant part for the future progress of tourism. Do you have any data on how important this is for Americans; do you*



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Through coaching on how to attract foreign direct investment, business retention and expansion trainings, brownfield redevelopment and asset management guidance, SLDP helped partner IMC areas attract **\$211.8 million of investments** from 2013 to 2016 and helped creation of **6,958 new jobs**

work on promoting this type of tourism and if so, how do you do it?

Kyle Scott From the coral reefs of Florida to the Great Lakes of the Midwest, and the Grand Canyon of my home state of Arizona, Americans are fanatics about enjoying their vast and beautiful natural landscape. In fact, the world's first national park, Yellowstone, was established more than a century ago in the American West. A half-century ago, we passed the Wilderness Act, which protected millions of acres of forest, grassland, and desert from all human development. Not only do these areas protect wildlife and supply us with clean air and water but local communities benefit from tourism. By some estimates, ecotourism contributed more than \$730 billion to the U.S. economy last year.

As the world becomes more and more crowded, I think ecotourism will become even more important both environmentally and economically speaking. Serbia has incredible potential in this regard. Your rivers, mountains, and forests have the potential to boost local economies by drawing these tourists. People who enjoy nature are often willing to spend a lot of money to have the opportunity to trek the mountains of eastern Serbia, ski the slopes of Kopaonik, float down the Tara River, or watch birds in Fruska Gora.

EP **What campaigns have you run in the USA for the promotion of environmental protection, do you still have some that are active and is there any that could be useful to apply in Serbia?**

Kyle Scott The U.S. started massive anti-litter campaigns in the 1950s that focused on changing the actions of individuals – to help people understand that throwing trash from your car, for example, is indeed an insult to your own country.

Volunteers routinely spend time cleaning up the environment in their communities. Schools teach children from the youngest ages the importance of protecting the environment and how actions such as dumping waste oil in a stream could poison fish and insects for decades.

There's now a broader national awareness of the need for individual action – the government plays a key role, but in the end, individuals decide whether or not to throw a cigarette butt out their car window, or recycle an aluminum can or use energy-efficient lighting in their homes. I would say that these educational campaigns have been quite successful, but they must start at a young age.

As I mentioned earlier, Serbia is blessed with an amazing natural environment. Protecting this resource is good for the planet and will also help bring economic benefits to rural places, which often need them the most.

Photographs: (on the previous page at the top) Unsplash/Alexey Topolovskiy; (on the previous page, middle left) Unsplash/Lizzy Gerosa; (bottom) Unsplash/Phil Hauser



USAID IN SERBIA

Since 2001, the United States has provided nearly \$1 billion in assistance to Serbia, through the U.S. Agency for International Development (USAID). Part of this support has been used for the improvement of infrastructure, as an incentive to the construction industry, and for moving companies out of the shadow economy, as well as implementing the measurements that made reporting corruption and fraud easier and safer. Ambassador Scott said that he was really proud of all projects and that it would be hard for him to choose just one. "I couldn't say that a major water project is more important than a smaller grant that renovates the school in Gornja Mutnica or provided housing for refugees in Zitiste. To get an idea of all of the good work we've been doing, please take a look at a map we've created where all the projects are highlighted (<https://rs.usembassy.gov/united-states-provided-nearly-1-billion-assistance-serbia/>)."



EP *Natural gas was the largest source – about 32 per cent – of U.S. electricity generation in 2017; coal was the second with 30 per cent, nuclear power 20 per cent and renewables 17 per cent. The share of renewables has grown since 2016. What is the plan of the USA for renewables in the forthcoming years? Which states have achieved the best results in using the renewables and which ones are lagging?*

Kyle Scott The United States supports a balanced approach to climate policy that lowers emissions while promoting economic growth and ensuring energy security. We practice cooperative federalism. In our system, states and cities make many of their own choices on renewable energy at the local level, while real renewable energy investments are decided by the private sector, which takes federal, state and local policies into account.

Each country needs to make its own decisions, but people need to know that renewable energy has become very affordable. The market situation is very different from just a few years ago. The United States stands ready to work with other countries to help them use traditional fossil fuels more efficiently, as well as to help deploy renewable

and other clean energy resources that improve energy security for all of us.

The United States remains committed to lowering its greenhouse gas emissions, and we are doing that through technology, innovation, and entrepreneurship. We will continue to be a world leader in innovation, particularly the development of next-generation energy technology.

EP *Hydropower has the highest share of 44 per cent from all renewables, and solar the lowest of about 5 per cent. Are there any particular reasons for relying more on hydropower than on solar? Each country in the USA has its incentives for renewable energy, but is there any general law by which they are driven?*

Kyle Scott As you note, different states and cities make their own choices regarding energy programs. Some state and local governments offer tax incentives to promote renewable forms of energy, including allowing homeowners to sell the energy they generate back onto the grid. So, in some areas, we have a lot of rooftop solar development on private homes.





A study from the EPA found that **every 10,000 tons of materials recycled** supports nearly **16 jobs** and **\$760,000 in annual wages**



The Southwestern U.S., including my home state of Arizona, has for nearly a century benefited from abundant, economical electricity generated by hydropower from some of the world's largest, longest and most powerful rivers, including the Snake, Colorado, and Columbia. These rivers are powered by snowmelt from the Rocky Mountains, and the dams that produce the hydropower were built many decades ago, mostly in the early 20th century and up into the 1950s and 60s.

Arizona and the entire Southwest region are now also at the cutting edge of solar power, but this is a much more recent development, which is why I think you see such a discrepancy. Also, the price of solar energy has come down very quickly, so we will see where things go in the coming years.

EP *When you say Tesla, the first thing that comes to our mind is the Serbian scientist, but therewith is the company of Elon*

Musk, thanks to the most famous electric cars in the world. This company does not develop only vehicles but also produces clean energy and makes massive energy storage. Did the Authorities help the improvement of this successful company and in what way? Apart from Tesla, is there any other company, involved in the production of electricity from renewable energy or in environmental protection, which is not well known as Tesla, but it might soon become?

Kyle Scott I must admit that after being Ambassador to Serbia for nearly three years, I must know more about Dr. Nikola Tesla than the American company now bearing his name! The field of renewable energy and environmental protection is incredibly dynamic and is booming in the U.S. In fact, Silicon Valley is now full of CleanTech Startups, ranging from small companies involved with concentrated solar technology to biomimicry, to using algae and mushrooms to help clean up the environment. These companies are fed by the world's best and largest university system (the U.S. has more than 4,300 colleges and universities), so I believe this combination of entrepreneurship and innovation will continue to take science to levels that not even Tesla could have imagined.

EP *According to the Environmental Performance Index (EP I) ranking for 2018 the USA has taken the twenty-seventh place. Does the USA have plans for the improvement of your ranking?*

In the U.S, our environmental movement came from **citizens who were frustrated by the lack of progress in their government to protect** what is most important to sustaining life: **air, water, and food**



Kyle Scott The United States led the world in the reduction of carbon dioxide emissions in 2017. That's not just me or even the U.S. Government saying that, it's in BP's annual *Statistical Review of World Energy*. The same report also notes that the United States has led the world in CO₂ reductions nine times in the 21st century so far.

Regardless of our position on the Paris Agreement, the United States is leading the world in providing affordable, abundant, and secure energy to our citizens, while protect-



ing the environment and reducing emissions through job-creating innovation.

EP *USAID has also participated in choosing food producers in Serbia and sending them to Fancy Food Show in New York, and it also participated in organization of Belgrade Food Show. The USAID Competitive Economy Project is a four-year, \$11.95 million activity to strengthen the competitiveness of the Serbian food processing industry. The project started in April 2017 and it will last till April 2021. Can you give us more details about the project and the results that it has already achieved? What would you consider as the main benefits of this Food Show that local producers can make use of?*

Kyle Scott To improve the competitiveness of Serbia's SMEs, USAID focuses on strengthening the food processing industry to increase sector sales and exports. USAID continued to improve the skills of and collaboration among enterprises working in the food processing sector - enterprises, associations, financial institutions, research and development institutions, and government institutions. This collaborative model is expected to be replicated in other sub-sectors and industries. As an example, USAID worked with four incubators to provide a range of support services to 22 food start-ups to enter both domestic and international markets. USAID also partnered with 17 additional institutions to support initiatives including trade fairs, trainings, and technical assistance activities, which impacted a total

of 113 firms. At one trade fair (Biofach 2018, Nurnberg, Germany), 14 companies signed a total of 15 contracts worth \$240,000 with the potential for additional future growth.

The Belgrade Food Show, in particular, is an important step in raising Serbia's profile as a source for high-quality food products. The food show provided an excellent opportunity for over 80 exhibiting companies to establish partnerships and forge new sales contracts (many are under negotiation) with domestic and international buyers, retailers, and distributors. The participants also had an opportunity to learn about the latest global and regional food industry trends and doing business in various foreign markets.

EP *There was USAID's Sustainable Local Development Project, which aimed to reduce unemployment in 32 Serbia municipalities. The program ran from December 2010 to August 2016. What are the results? Are there going to be any similar program in the future?*

Kyle Scott USAID's Sustainable Local Development Project was a \$22 million, a five-year project supporting local



governments, businesses and civil society to increase their efficiency and achieve economies of scale. It focused on Inter-Municipal Cooperation (IMC) to accelerate economic growth, create jobs, and reduce unemployment in regional economies within Serbia. The project provided technical assistance, grants and subcontracts.

Through coaching on how to attract foreign direct investment, business retention and expansion trainings, brownfield redevelopment and asset management guidance, SLDP helped partner IMC areas attract \$211.8 million of investments from 2013 to 2016 and helped creation of 6,958 new jobs. Project experts assisted 69 individual companies and nine sector clusters/associations of producers, to improve their production, expand product offer, modernize promotional activities and materials, and establish contact with potential buyers abroad. From 2013-2015, business revenues of the partner companies increased by \$25 million, and employment by 529. A total of 782 youths participated in Project's educational programs, and 452 internships were organized, enabling 657 youths to find employment.

Interview by: Nevena Djukic



Ana Milic, the head of business department at ProCredit Bank

DEDICATION TO CLIENTS AS A LEITMOTIF

It was 18 years ago when ProCredit Holding founded a bank in Serbia, driven by the idea of developing the local financial sector and active participation in long-term economic growth. The banking sector has been changing and improving so at ProCredit Bank they have also been adopting the transformations. And with a lot of success, judging by the results, they have achieved so far. However, in many areas, such as the use of renewable sources energy and electromobility, they also imposed themselves as leaders. We asked Ana Milic, the head of business department at ProCredit Bank, to compare today's financial market with the situation they found at the time of the bank's founding in 2001, as well as to determine the footings of their business success in financing small and medium enterprises.

EP *The program of the Ministry of Economy for the subsidy for machinery and equipment purchase was renewed in February.*

Five banks were chosen, including ProCredit, to be in charge of its implementation. What would you point out as the key benefits of this program for small businesses and entrepreneurs?

Ana Milic This is a multi-year program established by the Ministry of Economy to encourage the development of small enterprises. It means that 25 per cent of the total investment makes up non-refundable financial assistance coming from the budget Republic of Serbia. It is evident why clients want to apply for this program. Still, apart from the key benefits in terms of subsidies which amounts to a quarter of the investment, our clients can count on the success of our assessment of compliance with the conditions imposed by the Ministry. Our engagement is provided by responsible banking officers who are familiar with the program, have excellent communication with the Ministry of Economy, and if some questions and technical issues come up, they can get explanations and answers in a short time. The Ministry has a limited amount of resources available for one year, so it is essential to react promptly. On the other side, it is essential to know clients and their needs so that you can identify how much they meet the criteria. Our efficiency and flexibility demonstrated in the procedure of the client's credit and business ability identification have a huge impact on the approval rate of such loans.

EP Now that you have mentioned it, what is the rate?

Ana Milic Almost 100 per cent, because success mostly depends on our assessment, expertise and experience. It is a work of high intensity. We are generally dedicated to our clients, not to the products, which means that the client is not looked at only through the option of getting one loan. Quite the contrary. We take into account all his needs and we put them in correlation with the expected benefit. We collect all necessary documentation and we take a decision in accordance with internal procedures, then we send request to the Ministry Committee to decide. Clients are satisfied with this arrangement, and we get the recognition of our commitment to small and medium enterprises.

EP What is the Committee decision shaped by in the approval process of the aforementioned loans for the equipment and machines purchases?

Our engagement is provided by responsible banking officers who are familiar with the program, have excellent communication with the Ministry of Economy, and if some questions and technical issues come up, they can get explanations and answers in a short time

Ana Milic The Committee evaluates the type of activity and the type of new equipment or machinery for which the funding is applied for. Have in mind that we have put in so much time and effort that we already know how the program works. That's why we are successful. When we acquire a new client, checking the registration and other documentation is a must, but that's not merely all we do. We make individual analysis while visiting the client and talking to him. Then we lay down a credit limit that is a clear indicator of how much the bank is ready to back up the client in his business. This way, when the program starts, the client already knows whether he fits in taking into account his activity, the needs and readiness to invest in a new machine. It's important to know that this program is really great due to its best effect on the further development of small and medium enterprises, as well as entrepreneurs.

EP What are banking service terms for 75 per cent of planned investment in terms of this program?

Ana Milic Banking terms are set out in the program. Repayment period goes from 18 to 60 months. Since loans are mostly taken for new equipment, i.e. capital assets, repayment periods are longer. Clients usually pay off loans in a period of 48 up to 60 months. Interest rates are pre-determined and publicly available, having reached the historical minimum at the Serbian market, so that is completely ruled out as an obstacle for the client. The equipment or machine, which is subject of a loan, is accepted as a means of security for the loan. So the client is able to apply for a loan, although hasn't got other assets that would guarantee repayment of the loan. This is another key benefit. Let me stress that the biggest benefit for clients is the opportunity to obtain grants in the amount of 25 per cent of the investment.

EP You have already said that your relationship with clients surpasses the approach banks usually have. What makes that comparative advantage?

Ana Milic What makes the difference is the advisory service we offer and the procedure for determining the credit limit for each client whose parts are those visits and talks. That makes our relationship with client different, and therefore we have the results. I could say this is actually a classic



ProCredit First To Embrace “Green” Energy

Thanks to their agreement with “Elektroprivreda Srbije”, the public enterprise electric power industry, ProCredit became the first big buyer of “green” electric energy in Serbia, as well as the first national company which in future will get guarantee of origin from “Elektroprivreda Srbije” that the energy used by the bank is produced exclusively from renewable energy sources.

“We have made a step forward having gotten the energy from the grid, the one that completely comes from renewable energy sources. The agreement was signed in public and it got almost total media coverage. But that is not merely the end. We are about to make an additional step. Right now we are in the middle of installation of mini solar power plant on the roof of our bank in Novi Beograd which will have the capacity of 42kW and will produce electric energy for our needs”, says Ana Milic. She adds that all of the measures that had been introduced up to this moment have already contributed in reduction of electric energy consumption by 25 per cent, and in reduction of heat energy by 30 per cent.

ProCredit approach to clients. We want a long-term arrangement with our clients.

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EP *Recently you have announced the ProOptimist Index 2018 research results about the expectation in two groups of small and medium enterprises and entrepreneurs. The first group consisted of enterprises who were in business with German companies whereas the second was composed of those who haven't had that kind of business relations. What does the Small business Optimism Index show?*

Ana Milic We are the only bank with 100 per cent of German ownership in the Serbian market. The goal of this research was to highlight the benefits derived from the connection between the Serbian and German economies. A client who does business with the economically developed countries has to adapt their internal business activity to these standards. It was the lodestar in this research. We wanted to see whether there were any differences in the way of thinking, expectations and outlook for growth, between those who work with economically developed companies and those who are not in business with them. Their estimates certainly differ. The results show that the first group has more optimism than the other, who does not do business with German companies. A lot of clients plan investments in 2019 which is a good sign. When it comes to problems, most often they mention disloyal competition and extensive bureaucracy.

I would like to point out that any company that plans or has the capacity to do foreign trade, should think about meeting the necessary standards. They are a prerequisite, but also a chance for establishing long-term cooperation with foreign partners.

EP *We assume there is a progress compared to the research from previous years.*

Ana Milic Certainly, since the companies used to underline more as a problem high-interest rate and request for large guarantee for collaterals. That is not a stumbling-block any more. In 2016 we signed the contract with the European Investment Fund for Guarantee Instrument scheme. According to this, the client has an easement in terms of lesser guarantee for the needed loan, because one part of the loan guarantee is covered by this fund. This way bank has got an investment guarantee whereas client has a benefit. That is still active. We have two programs with European Investment Fund and up to this moment, we have paid around 190 million through those programs. That detail speaks volume.

EP *Having been a constant and reliable partner to farms in their efforts to progress and corner domestic and foreign markets, we assume you will be involved also in another turn of subsidized loans given by the Ministry of Agriculture.*

Ana Milic For more than a decade the Ministry of Agriculture has been counting on us as a reliable partner in the programme of subsidized loans for farmers. New programme will start soon and we are going to submit the applications on behalf of our clients according to the established procedure. Here is one of the prominent details when it comes to the nature of our cooperation with farmers. During the winter seminar on Tara, which is held each year by the end of January, our bank has won the prize for a partnership that has been lasting for more than 15 years. No wonder if you consider the fact that we are the first bank in Serbia who has made the approval methodology for loans to farmers, aside from the abovementioned program by the line Ministry which counts for only a part of our support to farmers. Our farmers always need additional help in acquiring capital assets, which comprises investments in land. We have made a huge step at one point and offered 15 years repayment period which is in line with our clients' needs.

EP *When you look back at 2001 and the beginning of doing business in Serbia, what would you say was the biggest change?*

Ana Milic We are of age, and meanwhile, we have gone through the myriad of transformations and betterments. Progress and change are pretty obvious. The most notable improvement is a digital transformation of the banking sector.





We have introduced the concept of ProCredit direct which means that clients can do numerous banking procedures digitally. No more waiting in queue and waste of time. To illustrate the usage of this service, I will say that in transactional banking at the ProCredit bank almost 100 per cent of all the transactions are done electronically. Companies are leading, but retail banking has its share too. We haven't just come to this by chance, moreover, we set the goal and reached it.

EP *What kind of satisfaction you get from the fact that you are a leader in the field of corporate environment responsibility?*

Ana Milic Environmental protection, renewable energy sources and energy efficiency are common issues at the ProCredit. It has been ten years since we have adopted that approach and I am proud of working in the financial institution which places a particular emphasis on diverse kind of environmental solutions. As a country, we are at the very beginning when it comes to implementation of energy efficiency and use of green energy, but Procredit really sets a good example, so I might as well say that we are leaders in those fields.

EP *It is known that you imported the fleet of 7 new electric vehicles. You also have a solar power plant at the car park of the bank headquarters for charging up electric cars. What would you highlight as the most significant benefit of introducing the electromobility and installing the power plant?*

Ana Milic Electric vehicles are another example of what we want to show as a road we are going to take as a society. In future time the number of electric cars will rise just as it happened in Europe when they introduced the electromobility. Today our bank has 15 electric cars which aren't in use only in Belgrade, but we distributed them to local branches, consequently, we had to install chargers too. Our employees use these vehicles for client visits, and chargers are at disposal for all electric car owners. When you draw the line, you have the triple benefit. The first one being the save in fuel, when it comes to electric cars, the second one is we charge them on renewable energy sources, and the third is the fact we

continue to bring awareness of our employees, clients and the broader audience about the environmental protection. Thanks to electric vehicles, our bank merely during the second half of 2018 has reduced the CO₂ emission by 5,800 kg, which is by 60 per cent less emission than what would have otherwise been if we had used diesel cars. We also managed to save in financial terms significantly. Indeed, thanks to electric cars our bank has saved in half-year period around 4,000 euros on fuel expenses, which is an encouraging point.

As for our clients' interests in energy efficiency and renewable energy sources, we are witnessing that they increasingly consider the implementation of energy efficiency measures because those undoubtedly bring double benefit, as both in terms of cutting the expenses in the balance sheet, and in terms of reducing CO₂ emissions. In our portfolio, we have clients who implemented those measures and used the energy from renewable sources. Up to this moment, the ProCredit bank has paid off more than 200 million euros in different loans for improvement of energy efficiency and use of clean energy sources. That is a fact worth the attention of your readers.

EP *Having in mind you have clients who are owners of vast farmland, have you financed in the biogas plant projects?*

Ana Milic These clients have the perfect opportunity to encompass the whole business process. A few years ago, we organized a seminar for farmers about the installation of a biogas power plant where farming waste is used for electric energy production. The interest was high, and one client was inspired to build this plant on his farm in Cestereg, and a year after that he set about realisation of the project ending in putting the biogas power plant into service in 2018. The second biogas plant is in Sombor.

EP *Are you pleased with the results and what are the plans for this year?*

Ana Milic The increase in the portfolio in the last year has surpassed 15 per cent. The expectations for this year are the same. We are ready to introduce the electronic signature which has multiple benefits for our bank. From an efficiency point of view, this is a great novelty, not to mention the cutting down on paper. It will be possible to sign each loan contract with a corporate client electronically. So, we are shortening the administrative and operational parts of the procedure.

We are trying to be the best assistant to our clients. If you want to have the best small and medium enterprises in your portfolio, then you have to nurture the relationship with them which means that you know what they need, visit them regularly and have the right information for them based on their needs. As our client grows and change, so do we. Our leading quality is precisely that readiness for a change. When you can get at all the benefits from the change, then its implementation is considerably easier.

Interviewed by: Tamara Zjacic



PANCEVO GOT A STATION FOR ELECTRIC VEHICLE CHARGING

The solar canopy combined with EV charger is an ideal solution for electric car users who will practically use a fully renewable energy source to start their vehicle. Precisely, such a canopy with solar panels and EV charger is installed in eight parking spaces in Pancevo. The Belgrade-based company “MT-KOMEX” was engaged for the installation project.

The solar canopy covers eight parking spaces and serves for more comfortable use of the place for electric cars. Schneider Electric chargers are below it. Three chargers were installed in the first phase. The first charger is EVlink Parking manufactured by Schneider Electric with two charging points, each with a capacity of 22 kW. Additionally, two more chargers named Smart Wall Box, each has one charging point, with individual power of 22kW were installed.

The design and construction of the canopy were made by the company “Propulzija” Ltd. from Belgrade, while the company “MT-KOMEX” Ltd did the project of incorporating



business web portal on **clean** energy

because it lowers the amount of energy that the consumer takes from the grid and thus reduces electricity bills.

“MT-KOMEX” regular business activities were expanded for the first time in 2009 in terms of investing in energy sector. Then, they started building solar, hydro and gas power plants, and now they can be proud of having constructed 16 solar power plants with a total of 2.6 MW installed power and more than 10,000 built-in panels. It is worth mentioning that this company built the first solar power plant in Serbia in 2013 for domestic investors, and it is also the largest solar power plant that is privately owned in Serbia.

So far, this Belgrade –based company has installed 51 chargers and opened 60 places for charging of electric vehicles in Serbia. The first chargers for electric vehicles in Belgrade were installed in 2017 in the garage at Obilicev venac, and the company “MT-KOMEX” also performed the installation and commissioning. Creating an efficient network of charging stations for electric vehicles will significantly affect their development and sales, leading to a significant reduction in a negative impact on the environ-



the solar power plant as well as the installation, connection and putting the solar canopy into operation. The construction of solar power plants carries a total of 72 solar panels, each of individual power of 275V, while inverter of 20 kW of Austrian manufacturer Fronius was used for the need of converting electricity from DC into AC. The company “MT-KOMEX” is a general representative and authorised service provider for Fronius.

Solar panels that were used are manufactured by Luxor Solar. The aluminum substructure of the German manufacturer, whose general representative is also the company “MT-KOMEX”, was used for fixing solar panels to the construction. The expected production of energy is 21,779 kWh/year.

Solar power plants are installations that produce clean energy and can be placed on the roof of a building or land. The energy produced in a solar power plant can be used to meet one’s own energy consumption needs. This clean energy helps a consumer to make significant savings

ment. The estimates of experts suggest that the demand for electric vehicles is rising, regardless of their still high price, and the most common reasons are the lower costs of use, but also the rise of ecological awareness.

The company “MT-KOMEX” made a step forward in business two years ago and directed its activities in support of the introduction of electric vehicles in transportation. They have developed a new web platform www.elektropunjaci.com which contains all information on car charging technology, electric vehicles, offers and quality itself, as well as an online shop where customers can purchase chargers and accompanying equipment.

Prepared by: Zeljka Vesic



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Sem Fabrizi, the head of the EU Delegation to Serbia

CLIMATE CHANGE AS A FUNDAMENTAL CHALLENGE OF OUR ERA

To become a full member of the European Union one day, Serbia needs to harmonise its legislation with *acquis* of this group of countries. One of the fields that we need to work on is the environment. Who would be the better interlocutor to talk about how far we are from the standards that we are required to reach than the head of the EU Delegation to Serbia Sem Fabrizi?

EP *When we talk about ecology, it is impossible to avoid mentioning Chapter 27. Serbian authorities predict that we should open it by the end of 2019. Do you find this to be a manageable deadline and why so?*

Sem Fabrizi Chapter 27 is complex and requires time and dedication from many experts, national and international, to be prepared. The EU is actively supporting Serbia with these preparations. At this stage, Serbia submitted last December to the European Commission the “Negotiating Positions” document: the European Commission will shortly comment on the revised draft. This preparatory work is done at a technical level but is an integral part of the necessary preparation. Once the work on the negotiating positions is finalised, the chapter will be discussed with the EU Member States, who will ultimately decide on its opening.

EP *Which is, in your opinion, our weakest point in the field of environmental protection? Which one of the regulations will be the hardest to implement here?*

Sem Fabrizi Protection of the environment should be seen as a new paradigm of the way societies and economies must operate. Climate changes are happening. They have become one of the central challenges of our time: drought, soils erosion, extreme weathers conditions, and the rise of sea levels are unfortunately becoming the new normal. The European Union has decided to break the “business as

Sem Fabrizi has been the EU Ambassador to Serbia from July 2017. Previously, he served as the EU Ambassador to Australia.

As the Italian diplomat, he was an advisor of the President of the European Council in Brussels in charge of the international relations, as well as an advisor in the Italian Prime Minister’s Office. He used to work in the EU department of the Ministry of Foreign Affairs in Rome and the cabinet of the General Secretary.

He also performed diplomatic functions in the permanent mission of Italy at the World Trade Organization and the United Nations in Geneva, but at the Embassy of the Republic of Italy in Beijing as well.

He graduated from the Department of International Law and International Economics in Rome and served as a lieutenant in the Italian Army. He was honoured with the Order of the Knight of the Republic of Italy.

usual” model. Energy efficiency, use of renewables, emission reductions, clean water and air policies, circular economy, are all part of a vast mix of policies that the EU – over the course of the past two decades – have designed and implemented to preserve the environment, to set a new sustainability for the economy, and to prevent and mitigate climate changes. It hasn’t been an easy nor a short

Photograph: Office of the EU Delegation

“Protection of the environment should be seen as a new paradigm of the way societies and economies must operate”



THE PATH FROM COAL AND STEEL TO WIND AND SUN

An organisation that once was the European Coal and Steel Community is among the most influential fighters against climate change today. We asked the Ambassador what a crucial moment for this shift was. "The creation of the coal and steel community was at the same time the symbol of 'shared sovereignty' on the resources that the European industry did use to wage a war until the recent past and at the same time the resources necessary to build the new Europe destroyed by the war," said Sem Fabrizi, referring to the occurrence of the European Union's precursor in 1951. "The fight against climate change became a necessity when the evidence that a man-made climate change risked becoming an irreversible challenge, and that fossils resources could not be longer considered part of a sustainable energetic mix," he recalled and added that energy security had also played a role. "Since the oil shocks in the 1970s, several Countries in the EU decided to invest in renewable resources, also a part of a more balanced energy mix. In 2015 we established the Energy Union," he reminded.

process, but the environment has become a mainstream policy where the right balance between economic growth and climate protection has been found and in a sustainable direction. Data show that the EU economy has continued to grow while the carbon emissions have halved, and that the "green economy" is one of the fastest growing sectors in the EU. These positive results gave the EU the necessary credibility to take the lead at a global level in the climate





negotiations concluded successfully with the adoption of the UNFCCC agreement in Paris in 2015. We are now in the implementation phase and the EU continues to be the world largest climate donor.

Serbia as an acceding country must continue to work hard to align its internal legislation and economic development model in this direction as a matter of priority. Environment protection is no longer a policy option, rather an immediate and concrete responsibility for the well-being of citizens, and a new opportunity for sustainable economic growth.

EP *You have been the head of the EU Delegation to Serbia for two years almost. Have you noticed any progress in environmental protection?*

Sem Fabrizi In our 2018 report we have assessed that Serbia has some level of preparation and some progress has been made in the alignment of the EU acquis, planning and implementation. We have recommended a number of key actions to advance in this area: making operational the new

financing facility (Green Fund), strengthening the impact assessment in extractive industries, adopt a national air quality strategy, improve the implementation of waste management, address treatment of sewage for the water quality, align the legislation on industrial pollution. The EU is supporting – through grants: i.e. non-refundable - a number of projects that both deliver immediate results for improving citizen's life and set a long term and sustainable protection of the environment. Over the past months, I had the pleasure to attend the opening of the EU funded Waste Water Treatments (WWTP) in the cities of Raska and Sabac. The construction of the Nis Waste Water Treatment Plant should start soon, and more WWTPs are foreseen in Kraljevo, Brus and Blace. Two weeks ago, I attended the opening of EU the 9.2 million euros grant project for the reduction of NoX emissions at the Tesla power Plant in Obrenovac. Between 2000 and 2018 the EU granted to Serbia 400 million euros for environment protection and climate action, including around 166 million euros for wastewater treatment and networks, making it the biggest donor for Serbia also in that field.

EP *Do you think that the awareness of Serbian citizens needs to be raised on those issues?*

Sem Fabrizi Absolutely, I think it is important that every citizen perceives environment protection as part of his or her to have cleaner air and water, and at the same time as his or her obligation to contribute to a better environment. Citizens must be actors of this new mindset and call for the necessary changes. For instance, waste separation at home is crucial to start having a solid waste system that works. Information about waste separation and awareness will support the transition to household waste separation.

EP *You are from Italy, which is a member, but also a founder, of the European Union. Could you please compare our country to yours when it comes to ecology so we could have an example to look up to?*

Sem Fabrizi Italy as a founding member of the EU has contributed to shaping and implementing the policies over the years. As in many other EU Countries environment has become a mainstream policy and an essential request from the citizens, especially at local level, where the quality of life is widely determined by the quality of air, water and natural landscape. As a leading agricultural and manufacturing country Italy has mainly contributed to making the EU finding the right balance between economic growth and environmental protection. As a global touristic destination – with half of the world UNESCO heritage sites - it has invested in preserving the quality of the environment in urban, coastal and rural areas. It has also significantly invested in an efficient system of civil protection and dedicated police forces for prevention and enforcing environmental legislation. Of course, environment protection is a continuous process, and Italy needs to continue to invest substantially into this sector.

It is important that every citizen perceives environment protection as part of his or her **right to have cleaner air and water**, and at the same time as his or her obligation to contribute to a better environment



SECRET PIZZA RECIPE

We could not resist trying to get insider information for making a thin-dough, crispy pizza from an Italian. "Pizza in Italy is a very serious *affaire*. An ever-growing number of variety and recipes are on offer throughout the country. And everyone has its recipe. I have mine..." he said. Just when we reached for a notebook to write the recipe down, the Ambassador continued: "...but of course it is a secret!"

We wanted to find out what was his favourite destination that he visited in Serbia as well. "I travelled extensively throughout Serbia. It is not easy to say what the best place I visited. It is a country with a rich history and a great variety of landscapes. I will tell you when I will have completed my bucket list of destinations," the Ambassador replied and confirmed what we did not doubt at any time - that he is indeed an excellent diplomat.





EP *The energy transition from fossil fuels to renewable energy has caused concern about the justice of this process to the current workers in the energy sector. How could it be managed to be fairer to them?*

Sem Fabrizi Like any economic evolution this transition needs to be explained and accompanied with appropriate measures. Technology also plays an important role in reducing emissions and having climate-friendly policies. And remember that the green economy is a strong opportunity for growth.

EP *What is the most significant environmental challenge for your homeland?*

Sem Fabrizi Same as all EU countries: air pollution, waste management, soil erosion, management of the territory.

EP *Italy seems to have a struggle with air pollution. How does it deal with this problem?*

Sem Fabrizi Italy is not, unfortunately, the only country in the EU to have air pollution issues. I believe it is mostly related to a number of urban and industrial areas. Thanks to the EU, Italy can count on an innovative and coherent approach to tackle these situations.

EP *As an advocate of the fight against climate change, what do you think about the climate protests of youth that are emerging across Europe?*

Sem Fabrizi I think that the younger generation has the full right to make a clear request for a clean environment for their future. Older generations – including mine – often complain that the new generations are video-dependent and not interested in public goods. This proves the contrary. The role of those who are entrusted with political and economic responsibilities is to listen to the youth and provide solutions.

Interview by: Jelena Kozbasic

ABB ABILITY™ ELECTRICAL DISTRIBUTION CONTROL SYSTEM

Digital transformation of low voltage distribution networks

ABB Ability™ Electrical Distribution Control System allows collecting data from networked ABB low-voltage devices. Data is transmitted to the cloud platform using Emax 2 circuit breakers, Ekip UP measuring package or TruONE automatic transfer switch. Authorized users can access data via the Online Portal Ekip SmartVision.

ABB Ability™ is the name for a full portfolio of digital services based on decades of innovative ABB technologies and experiences that help customers in the fields of energy, industry, transport, and infrastructure to develop new and improved existing processes by optimizing real-time planning and management. Digitalization process through ABB Ability™ digital services aims to improve key business indicators such as efficiency, reliability, and continuity of production processes.

An important part of the ABB Ability™ Digital Services portfolio is the **ABB Ability™ Electrical Distribution Control System (EDCS)**, a cloud platform that allows detailed monitoring of the electricity consumption of industrial and commercial objects, as well as diagnostics of the state of networked ABB low-voltage equipment. The EDCS platform is designed for the needs of energy and asset management to discover the potential for making significant savings in total operating costs of the business. Asset management implies optimum use of equipment, namely preventing breakdowns and extending the exploitation period while reducing maintenance costs.

The operation of the EDCS system is based on the collection of measurement data from ABB low voltage switch-

es and measuring devices, and then sending this data to the cloud. The new generation of ABB devices, which enable the digitization of low voltage distribution networks, is made up of Emax2 circuit breakers, EkipUP measuring package and TruONE automatic transfer switch. Measuring data can also be obtained from a large number of other new generation ABB devices intended for installation in low voltage distribution cabinets. Networking of these devices can be accomplished through a large number of available communication protocols. All measurement data collected by ABB devices are forwarded to the cloud via encrypted Ethernet TCP/IP communication.

An online portal through which via computers, mobile phones or tablets, access data sent to the cloud is called the **Ekip SmartVision**. It serves us both to track data in real time and to generate various types of reports based on stored data. In the standard version of this service, the measured data are stored for two years, and it is also possible for a significantly longer time, following the users' needs. The



data that can be monitored on the **Ekip SmartVision** portal includes the general parameters of the device (type, serial number, nominal voltages, software version), device status data, service log records, diagnostics of failures, preventive user-defined warnings, consumption data electricity, power consumption, effective values of current and voltage, their overall harmonic distortion. The user thus receives full insight into the state of the electrical network and all relevant information necessary for efficient management of electricity and organizing the activities of predictive maintenance.

Among the basic functionality of the **EDCS** service is the **Alert Center**, which implies that the chosen recipients receive notifications via text messages and/or email in the case of a predefined event such as overload or short circuit. Users can also load diagrams, photographs and technical drawings of the distribution enclosures on the **Ekip Smart-Vision** portal. The uploaded images can be made interactive via tags and markers. Also, there are direct links to ABB documentation and manuals.

The first step towards managing electricity consumption in a commercial or industrial facility is to obtain precise data on the consumption of individual energy consumers in order to determine which consumers most contribute to total consumption and in what periods the highest costs arise. With this information, it is possible to allocate electricity consumers and electric drives with the greatest potential for making savings by investing in more energy-efficient equipment, or by switching from unregulated to regulated electric motor drive. ABB offers a ready-made solution for new and existing facilities aimed at completing the energy management system. Measurement of all relevant electrical parameters for energy management can be achieved by ABB CMS700 measuring device and ABB EQmatic energy analyzer, and by integrating these devices into the **ABB Ability™ Electrical Distribution Control System**, the measurement data and reports on electricity consumption become, therefore, remotely accessible to the user via the portal.

Users of **ABB Ability™ EDCS** system can implement a large number of additional functionalities. One of them is the **Power Controller**, the control function of the Emax2 switch and the EkipUP measuring device. Savings and penalty avoidance are guaranteed by merely cutting down demand through a non-priority load shedding/reinsertion routine. Users can set remotely the power demand they want to target with a weekly, daily or hourly resolution. The limitation of electrical power consumption prevents additional costs, as well as the overload of transformers and switchgear equipment. **ABB EDCS Predictive Maintenance** is one of the additional options in the offer to create a predictive maintenance plan for the equipment so that the service is performed when the automatic analy-

sis of the measurement data shows that this is necessary, making the maintenance process smarter, quicker and less expensive. The analysis takes into consideration different key factors, such as the number of mechanical operations of the switch, nominal current, overloads and short circuits, as well as environmental conditions such as humidity, temperature, and vibration. This cloud-based solution significantly increases the reliability of the equipment and reduces the risk of unplanned shutdowns.

The communication channel for data transmission to the *cloud* platform is encrypted with the same level of security that is applied in electronic banking services. There are used *Microsoft data* centers and *Microsoft Azure* cloud platforms. Only users who are authorized and identified can access the data on the portal. One of the key advantages of this platform compared to traditional SCADA surveillance systems is the ease of communicating equipment with the cloud platform, quick start-up and a ready-made environment in which data will be monitored, and reports relevant to portal users will be generated. Also, the user does not have to worry about storing the measured data.

ABB Ability™ Electrical Distribution Control System found use in industrial plants and public buildings such as office buildings, hotels, shopping malls, medical facilities and sports centers. The service relies on the power of the digital revolution and allows for a reduction in maintenance costs, a longer lifetime of equipment, more efficient business, reducing the negative impact on the environment and improving the safety of the workforce.



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A LOOK AT
THE WORLD
THROUGH
GREEN
COLOURED
GLASSES





Ljiljana Tubic, Ph.D. in Biological Sciences at the Institute for Biological Research "Sinisa Stankovic"

According to a common metaphor, for an optimistic view, we need rose-coloured glasses. However, amid today's overall degradation of nature, it is also good to look through the green coloured lenses.

When someone tells you that they always wanted to figure out how water from the soil reaches just every leaf on the tree, be sure that that person is watching the world through green-coloured glasses. Such a perspective also has Ljiljana Tubic, Ph.D. in Biological Sciences at the Institute for Biological Research "Sinisa Stankovic", who has recently become a post-doctoral fellow in Brno, in the Czech Republic. Between work in the laboratory, brainstorming about new projects and getting to know her new residence, she found time to satisfy our curiosity about the origin of her fascination with plants. Ljiljana revealed to us the importance of the Fascination of Plants Day for "greening" the awareness of the youth and emphasised that it is necessary that all citizens contribute to achieving the ideal of sustainable agriculture.

EP *You are the coordinator of the international manifestation of Fascination of Plants Day at the national level. What is the purpose of its organisation and was there a big turnout of citizens?*

Ljiljana Tubic Exactly one year ago, the European Plant Science Organisation (EPSO), based in Brussels, appointed me as the National Coordinator of the Fascination of

Plants Day. Last year, our goal was to point out, through socialisation with our fellow citizens in an educative and creative manner, the vital role of plants in the environmental conservation, which is also the key message of this manifestation that has been held around the world since 2012. Scientists, along with nature lovers, want to show that plant science is essential for the development of agriculture, horticulture, forestry, and pharmacy.

Last year, we had the opportunity to collectively discover, observe, feel and hear so much that is fascinating about plants, the whole day, starting from scientific research, all the way to art and music we create that is inspired by plants. We started the day with a series of workshops for children, during which the participants had the opportunity in the setting of creative experiments, to learn all about the fascinating phenomena in plants. We continued our interaction with the exchange of cuttings and useful tips for the successful cultivation of plants. The attention was drawn to the competition in making different types of vertical gardens. Our fellow citizens were creative, with a strong teamwork spirit. Throughout the whole day, we were able to enjoy the exhibition of artistic photography "Nature and Society" by author Branislava Brandic. Along with fascinating lectures we walked through different topics and learned something new about orchids, mosses, organically grown grapes, hazardous plants of the Balkans, as well as the green roofs of Belgrade. The evening was dedicated to music and the performance by electro-blues duo "Violet."

We are pleased that the marking of this event has gone beyond the frame of our Institute and we think that we have managed to draw attention to the importance of plants to some extent. We have received positive comments, as well as messages from the parents after the workshops about their children wanting to plant themselves a plant in the garden and to look after it.

EP *What are you preparing for the next Fascination of Plants Day that takes place on May 18?*

Ljiljana Tubic As a national coordinator of this event, I want this story to spread and to have a variety of events throughout Serbia. I believe that we will succeed in this because we will be joined by Bulevar Books bookstore and the *Čitanjac* project from Novi Sad, as well as Faculty of Natural Sciences and Mathematics from Kragujevac. In Belgrade in addition to the last year's participants the Institute for Biological Research "Sinisa Stankovic" and the Faculty of Biology, Botanical Garden "Jevremovac", some kindergartens will also participate. All the necessary information can be found on the following link: <https://plantday18may.org/category/europe/serbia/>. It is important to note that everyone is welcome to join in the celebration of this day.

EP *How did you become interested in the physiology of plants?*

Ljiljana Tubic It has always been fascinating to me that



Ljiljana Tubic, Ph.D. in Biological Sciences, has been employed at the Institute for Biological Research "Sinisa Stankovic" at the Department of Plant Physiology since 2010. She is a participant in the Biotechnology in vitro - cultivated, medicinal and endangered plant species project.

She has always wanted to share her fascination with the youngest, which she successfully does through various workshops and lectures (Fascination of Plants Day, Researchers' Night, Scientific Truck and Open Door Institute).

She is currently a postdoctoral fellow at the Faculty of Agriculture in the Czech Republic, and she believes that she will contribute to the improvement of agricultural production in Serbia with her new experience.

Plant reproduction processes in the laboratory represent a critical step in the **conservation of endangered plant species**



one tiny seed grows into such a big plant and how the water from the soil reaches all the leaves of a tree. It's a real challenge to discover what is happening in a leaf during the process of photosynthesis. I believe you will agree with me that this is indeed a genuine little green factory.

In my second year of college, I had the subject Physiology of plants and thanks to the extraordinarily picturesque and inspiring lectures of our prof. Zlatko Giba, PhD., I stepped into that world. There are so many phenomena in plants that I want to continue to learn more about and to participate in research that will enable plants to deal more efficiently with problems that have arisen as a result of climate change.

EP *Agriculture accounts for 13 per cent of harmful emissions, and this sector is by size considered to be the world's second emitter. What do you find to be the key steps toward more sustainable agriculture?*

Ljiljana Tubic I think it is necessary that we all get involved in finding the key elements that will make a balance between the increase in productivity in agriculture and environmental protection. Research in the laboratory is essential, but also a daily work on the field with the application of this knowledge in the education of the local population about the changes in agricultural production. We should pay the most attention to improving the quality of land, natural water sources and preserving the diversity of

the living world. Abandoned agricultural land should be restored and resettled by indigenous plant and animal species.

EP *What do you think about organic production?*

Ljiljana Tubic It is a very important topic that involves the application of knowledge from different scientific disciplines, and which can significantly help in the preservation of biodiversity. If the main ecological principles are respected correctly, I think that we will only be able to talk about the positive aspects of organic production in the future.

EP *According to your first impressions, who is more aware of the importance of plants for agriculture - we or the Czechs?*

Ljiljana Tubic The first impression is that the Czechs are more aware of the importance of plants for agriculture. What I first noticed was the existence of close cooperation between various faculties and institutes. In this way, scientists from different fields are involved in problem-solving, and their knowledge, experience and exchange of ideas will contribute to more steady progress in agricultural production.

EP *When it comes to the extinction of species, most often the focus is placed on the animal world. What is the situation with rare and endangered plants in Serbia?*

Ljiljana Tubic Unfortunately, we do not talk enough about rare and endangered plant species in Serbia. Our country is a rich floristic region, but all things considered, we are not doing enough to preserve this biodiversity. Many plant species are endangered and vulnerable, so we can soon face their extinction and disappearance. It is worth mentioning that some of these plant species are endemic, and therefore the importance of their preservation is greater. I believe that we must preserve the natural habitats of plants by working primarily on eliminating the harmful effects that they are daily exposed to. Education about the importance

THE CONSEQUENCES OF IMPROPER USE OF PESTICIDES WILL BE FELT IN THE FUTURE!

Five pesticides that are harmful to bees have recently been banned in France. We asked Ljiljana Tubic whether in agricultural production solution exists that does not endanger the fertility of crops or the population of these valuable insects. "We are also faced every day with the consequences of improper use of pesticides in our country. It is important to note that these consequences will be very much reflected in the future as well. I believe that a solution exists in biological measures to combat plant pathogens. In our country the research is currently being done that will help solve this problem," Ljiljana revealed. According to her, the focus should be directed towards finding varieties of agronomically important plants that are resistant to diseases. Selection of the right polycultures and their professional cultivation significantly reduces the need for the use of pesticides.

of biodiversity is essential, and then it is necessary to go out on the field and work on the protection of natural habitats of plant species that are often very specific. It is also imperative that every country has a well-developed collection of genes and seeds. Plant reproduction processes in the laboratory (in vitro culture) represent a critical step in the conservation of endangered plant species. A very successful project for the reproduction and reintroduction of cultivated Rtanj mint plants (*Nepeta rtanjensis*) was carried out in Serbia. This significant project involved scientists from the Institute of Biological Research "Sinisa Stankovic" and the Faculty of Biology in Belgrade, under the leadership of prof. Dragoljub Grubisic, Ph.D.

Interviewed by Jelena Kozbasic



Photograph: Branišlava Brandić



Everyone is welcome to join
in the celebration of the
Fascination of Plants Day



AMONG ENGINEERS

It was 26 years ago when around ten young engineers and technicians were heading for their first day at work in a newly opened plant in Belgrade. Driven by the idea of taking a professional and personal leap they began their line of production in the field of cooling and ventilation equipment. In those years the circumstances in the country were less than favourable for newly formed production. Nevertheless, despite the dominant business climate back then, the company was developing and growing. Today, it has 165 full-time employees, among whom are 35 machine and electrical engineers, 15 economists and two Doctors of science.



The proof that quality knows no bounds is also their presence in **Russia, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Switzerland and Germany**

Let us introduce the “Soko Inzinjering” company specialised in ventilation, heating and cooling equipment, whose headquarters in Stara Pazova we recently visited in an attempt to find out the secret behind their success.

We were welcomed by a team of young experts who deserve credit for excellent business results. Bojan Mavrak, MSc in mechanical engineering and production manager at this company, says that the products and services made in the “Soko Inzinjering” plant are well-known throughout Serbia and in our region. They export equipment and carry out works in Bulgaria, Romania, Macedonia, Bosnia and Herzegovina, Croatia, Slovenia and Montenegro. The proof that quality knows no bounds is also their presence in Russia, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Switzerland and Germany. Obviously, they do not lack the reasons to be proud of, and we want to know about their strong points in exports.

“Although the demand for our products depends on the moment and market, we can say that our climate cham-

bers, electrical cabinets and cooling units are currently the most sought after”, says Bojan.

As for Dejana Soldo, MSc in mechanical engineering who works as a sales manager, one of the greatest successes is also the fact that they have made their staff the highly skilled professionals.

“Our references are the result of the successful mutual work and effort. Our employees and our company are laureates of professional awards. Thanks to the innovations we introduced, we have been getting the awards of the Society for KGH, the Association of Mechanical and Electrical engineers of Serbia, Engineering Chamber, Faculty of Mechanical Engineering, Belgrade Fair and other organisations”, says Dejana, stressing out that the award for energy saving using heat condensation is hold dear, which is now standard for most of their projects. Nearly ten years ago, they were the first in this region to make a cascading plant with CO₂ what made them get into the field of environmental protection.



Dejan Soldo explains that in the production process they solely use **ecologically friendly freons** as well as **natural cooling fluids**, and they work on the development and application of a natural refrigerant R744

“Soko Inzinjering” is a long-standing leading sponsor of the International Congress and Exhibition on ventilation, heating and cooling, and at the last 49th Congress that was held last December Dejana Soldo was awarded the KGH Society recognition – KGH Medal.

The achievements in production and sales in the past twenty years made them feel compelled to follow the ongoing trends and regulations for environmental protection. They have implemented the Integrated system of quality management, environmental protection and occupational safety. Dejana stresses that they renew this certificate on a regular basis according to the latest requirements of the relevant standards. “Every year we get inspection visiting our factory to check and ensure that all measures are taken regularly and adequately”, Dejana says.

The team of experts led by Milena Pistalo, MSc in mechanical engineering, is in charge of the product development at the “Soko Inzinjering” company. Milan Markovic, MSc in mechanical engineering and one of the members of the product development team, underlines that the promi-

nent place in their offer holds up-to-date, energy-efficiency solutions such as cooling systems with ecological cooling fluids and ventilation systems with energy recovery.

“In industrial cooling systems, we use the heat of oil cooling to get hot water which can be used to heat the plant in the winter or to heat the sanitary hot water.

In addition to the waste heat of oil cooling, we use the heat of preheating but also the total heat of condensation to obtain hot water. So far, we have carried out the installation according to the LEED and BREEAM standards”, says Milan.

In climate chambers, as a form of regeneration of waste air heat we use a rotary enthalpy exchanger which has a heat recovery degree of more than 90 per cent, but we also use a rotary condensation recuperator, plate recuperator and circular circulation system.

When it comes to efficiency, “Soko Inzinjering” is in line with the latest standard and regulation requirements such as ErP 2018, which calls for a minimum recovery rate of 73 per cent for rotary and plate exchangers, and 68 per cent for circular circulation systems.



ADDRESSING ENVIRONMENTAL ISSUES

When it comes to ecology, Dejan Soldo explains that in the production process they solely use ecologically friendly freons as well as natural cooling fluids, and they work on the development and application of a natural refrigerant R744 (CO₂).

“Soko Inzinjering” is involved in the recycling system which means that generated waste is passed on to licensed operators for collection and permanent waste repository. As a result of their production, the biggest share is metal waste.

Besides, they also have a certain amount of waste (metal barrels made of polyol and isocyanate) which according to categorisation of the City Public Health Institute in Belgrade belongs to hazardous waste. That waste is also handed over to the operator who has a license to collect it.

Electronic waste is handed over to the operator who subsequently recycles it, while printer toners aren't disposed of but sent for refilling.

With the following operators authorised for waste collection, they have contracts: the company Beo Rec for sheet metal waste, Elton for hazardous chemical waste, and PUC Pazova takes care of the cardboard and plastic. Having sold waste materials in this organised manner, they had acquired a substantial amount of money which they invested in landscaping and maintenance of the land around the factory.

Although the cost for electric energy makes up only 5 per cent of the total costs of the production, they plan to switch from conventional lighting to LED bulbs.



EMPLOYEE RELATIONS

Jelena Jergovic, Master of Economics who is in charge of marketing at “Soko Inzinjering”, says the company motivates the employees in numerous ways. “We reward workers who get married or have a baby, but we do not forget our pensioners either who get a certain amount paid every month, which is our way of expressing the gratitude for the efforts they have invested in the development of the company. They are our regular guests at New Year’s celebrations, anniversaries and all other events we organise. On the eve of the New Year, we always make a performance with gift giving to children of all employees in our company. We’re trying to nurture the sense of community, so all employees have breakfast and lunch together in our canteen. We offer company loans too to help employees get what they need without otherwise usual interest rates and commissions”, says Jelena proudly and adds that there are many women employed in “Soko Inzinjering” in a typical male working environment.

They are trying to get as many parts as possible from domestic producers. They make contracts with small-scale specialised companies which, exclusively for them, make certain components. For their climate chambers and cooling units, as well as for electrical cabinets, they import fans, exchangers, recuperators and compressors, whereas everything else they produce in their own factory.

The biggest challenge they have faced so far came off through a project they implemented at the Delhaize distribution centre where all the previous knowledge from several areas had to be integrated: industrial cooling, ventilation and central control and facility management. In the centre that covers an area of approximately 78,000 square meters,



They are trying to get as many parts as possible from domestic producers. They make contracts with small-scale specialised companies which, exclusively for them, make certain components. For their climate chambers and cooling units, as well as for electrical cabinets, they import fans, exchangers, recuperators and compressors, whereas everything else they produce in their own factory





business web portal on **clean energy**

Nearly ten years ago, they were **the first in this region to make a cascading plant with CO₂** what made them get into the field of the environmental protection



Milan says they made a cooled area of 22,000 square meters with regimes -25 °C, 0 °C and + 12 °C.

“The height of the cooled object is more than 12 meters. Similar job we carried out at the Lidl distribution centre where the cooled area was about 14,000 square meters. We have taken Ikea as another challenge with its specific requirements that made us develop the largest capacities of our ventilation equipment”, explains Milan and adds that every object is always a new challenge.

“With the success we carried out MEP installation works far away in Kyrgyzstan (complete mechanical, electrical and plumbing works) by implementing our equipment and equipment of Johnson Controls, our principal company. The building is quite distinct because we used water-to-water heat pumps for heating at extremely low temperatures. That’s not where it ends. Similar projects have been successfully completed in Tajikistan, Iran and Serbia “, highlights Milan.

They are not forgetful of the fact that knowledge transfer is essential for the progress of society. That’s why they donated to the Faculty of Mechanical Engineering a cooling unit with a CO₂ cascade system so that students of this faculty could have an opportunity to find out about the practical application of cooling cycle’s processes for high-pressure cooling systems.

Prepared by: Milica Jordan and Tamara Zjacic



50. MEĐUNARODNI KONGRES I IZLOŽBA O KGH
50th INTERNATIONAL HVAC&R CONGRESS AND EXHIBITION

General Patron
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Belgrade, Serbia
Sava Center, December 4–6, 2019



Kladovo Gets a New Biomass Heating Plant

Hospital in Kladovo and primary school “Vuk Karadzic”, which houses also a music school and a school for children with special needs, will soon fulfil needs for heating and hot water consumption with the new biomass system PEMCI 1. The requirements of this large school, almost 185 years old, currently attended by more than a thousand pupils, is presently covered by heating plants Centar and Pemci. In the first heating plant, located in the residential zone in the centre of Kladovo, a 2% sulphur fuel oil is used, while coal is used in the second heating plant. The new biomass heating plant will be able to meet the overall energy needs of the above mentioned users.

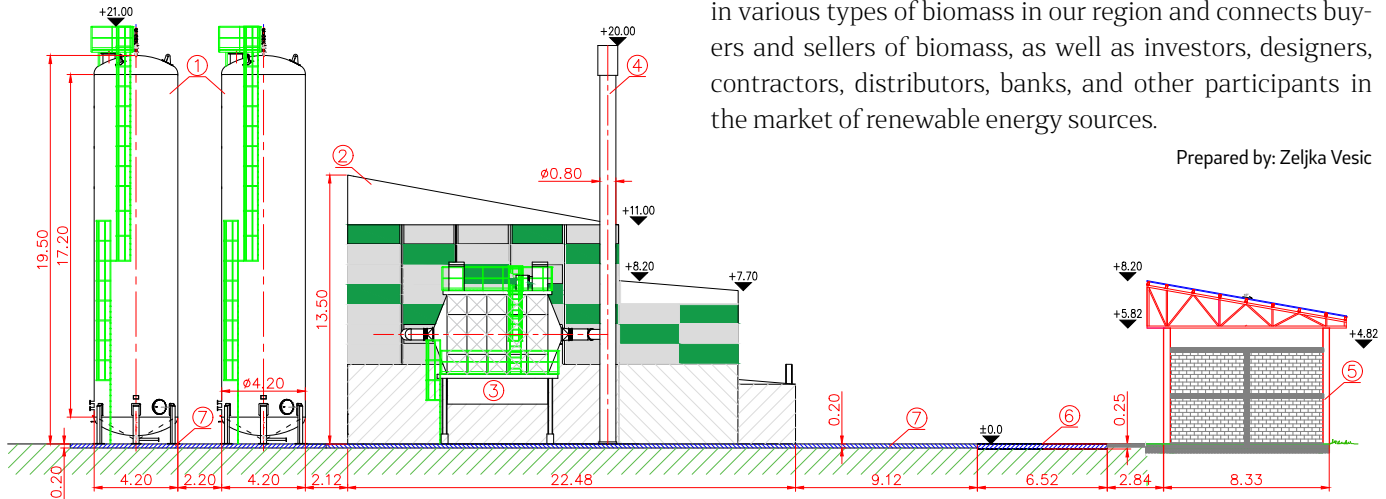
There are several good sides of the transition from fossil fuels to biomass, and one of the most important is cleaner air. The future heating plant will use wood residues from sawmills, forestry residues, and available wood chips. The



main difference between the old heating and the new one will be the reduction of CO₂ emissions by almost 100 per cent. Kladovo, as a town famous for exceptional natural beauties, the Danube, Djerdap, turbulent history, energy resources, and hospitality again shows interest in sustainable energy and environmental protection. After two solar power plants were commissioned which were designed by **CEEFOR ENERGY EFFICIENT SOLUTION**, carbon dioxide emissions in Kladovo have been significantly reduced. This new heating plant will additionally enable citizens of Kladovo to inhale cleaner air.

Global warming and the greenhouse effect are the consequences of increased carbon dioxide concentration in the atmosphere. This project envisages that the new plant, with the current 5,852 tons of carbon dioxide released by the heating plant on the fuel oil annually, will reduce the emission of these particles to 75 tons.

The new heating plant PEMCI 1 should be connected with the central heating system to the heating plant Centar, located in the centre of Kladovo, and through it with the hot water distribution system into the district heating system in Kladovo. This heating plant on wood chips with the installed capacity of 2×3.0 MW will be located in the northwestern part in Kladovo, in the settlement Pemci, in the vicinity of the existing plant, with the installed capacity of 1.1 MW which uses coal as a fuel, will be shut down after commissioning the mentioned biomass power plant. It is envisaged to install two identical hot water horizon-



tal boilers of 2×3.0 MW output, with automated purification through compressed air, taking out ash underneath the griddle by road transport into an ash container. It will enable connection with the existing heating plants Pemci 1 and Centrala and meeting the needs for heating of the hospital and school.

According to the project, it is envisaged that the new heating plant delivers an almost equal amount of energy. In the heating period from October 2017 to April 2018, a total of 17,789,400.62 kWh was produced by these two heating plants, while for the new heating plant it is planned to deliver 17,550,864.47 kWh. The future heating plant will consist of a heat accumulator, two boilers, an electro filter, a chimney, a warehouse for wood chips for several days need, a service road, and a service plateau.

Of all renewable energy sources in Serbia, biomass has the highest potential. Green Energy Portal provides support to investors and companies that want to improve their efficiency and switch to renewable energy sources. This unique platform represents a part of the activities of the Serbian Chamber of Commerce within the "Reducing the barriers for rapid biomass market development in Serbia" Project, implemented by UNDP in cooperation with the Ministry of Mining and Energy, the Ministry of Agriculture and Environmental Protection, the competent institutions and partners from civil sector. Green Energy Portal is the first online trade in various types of biomass in our region and connects buyers and sellers of biomass, as well as investors, designers, contractors, distributors, banks, and other participants in the market of renewable energy sources.

Prepared by: Zeljka Vesic

CEEFOR – CONSULTANT WORTHY OF CREDIT

Thanks to a team of 25 designers, CEEFOR can respond to all challenges in the implementation of renewable energy sources. For more information about the projects, you can contact their engineers.

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ARE COMPUTERS RAM-MING EMISSIONS INTO THE ATMOSPHERE?

Computers and other digital technologies around the world are pumping large amounts of emissions into the atmosphere.

That's the suggestion made in a new report from French thinktank The Shift Project, which shows the digital sector's energy intensity is increasing by 4% per year, in stark opposition to global GDP's 1.8% decline.

The report shows rather than falling, the direct energy consumption generated by \$1 (£0.76) being invested in digital technologies has actually increased by 37% since 2010, clashing with Paris Agreement goals to decouple energy consumption and climate change from GDP growth.

The carbon dioxide emissions of the digital industry have risen by nearly half a billion tonnes since 2013, while overall global emissions decreased by 250 million tonnes over.

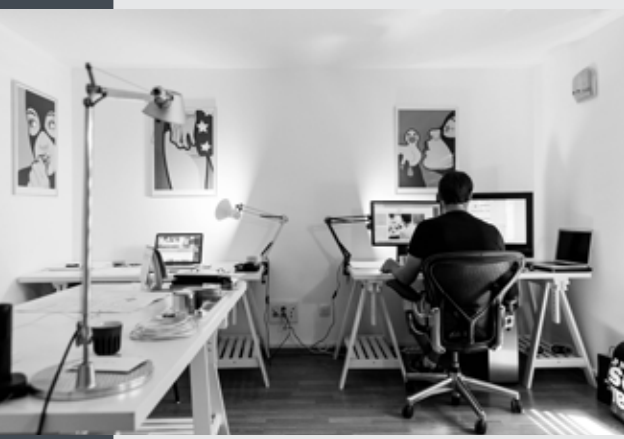
The main offenders are revealed to be countries – the study notes in 2018, an average American consumed around 140 gigabytes of data every month, compared to the average Indian's usage of only two gigabytes.

The Shift Project calls for companies and governments to adopt “digital sobriety” as a principle of action by encouraging people to reduce the of devices they own and the amount of time they spend online.

It also calls for awareness of associated environmental impacts to be increased, with carbon audits being undertaken for digital projects in the same way as they are for large infrastructure schemes, where environmental impacts are taken seriously as decision-making criteria.

Hugues Ferreboeuf, Director of the Lean ICT working group at The Shift Project, said: “Our Lean ICT report brings evidence to companies that their digital transformation is not automatically compatible with their climate change mitigation targets.”

Source: [Energy Live News](#)



ENERGY WORKERS 'MUST BE SUPPORTED THROUGH RENEWABLE TRANSITION'

The Institute for Public Policy Research (IPPR) has called on the government to set up a body to help energy workers in the north of England make the most of the renewable transition.

The organisation says to make the most of the clean energy revolution, a body should be set up 'as soon as possible' to secure the future of workers and the communities they live in.

It suggests this so-called 'Just Transition Commission' should be led not by government but by regional representatives such as city mayors, Local Authorities, communities, businesses, trade unions civil society.

The IPPR warns if is not properly managed, it risks leaving people like coal workers unsupported and out of a job.

The report makes a number of other suggestions, including reusing assets from carbon-based energy generation in new low carbon technologies and wages for fossil fuel workers who may be made redundant as their sector declines.

Josh Emden, Research Fellow at IPPR, said: “Reducing our carbon emissions is one of the biggest challenges that we face today in the UK but without radical we put our natural environment and Northern energy jobs at risk.

“Putting the principle of a 'just transition' at the heart of government climate policy at all levels is vital. Not least if we're to make the most of the low carbon transition and ensure the benefits are fairly and widely shared.”

Source: [Energy Live News](#)



HEINEKEN BREWS UP WATER REDUCTION PLEDGE

Heineken has pledged to reduce its water usage and treat 100% of the water used for brewing by 2030.

Every Drop' water ambitions – developed in support of the UN Sustainable Development Goal – aims to water circularity in areas through recovery, reuse recycling and treat all of its wastewater worldwide.

Heineken currently treats 96.5% of its wastewater worldwide, returning it clean to the environment – it now plans to increase reusing treated wastewater in its own operations and share treated water with other users.

It says water is crucial to brewing beer, as it is made up of 95% water.

It has also committed to reducing water usage to an average of 2.8 hectolitres of water per hectolitre of beer (hl/hl)– from 3.2hl/hl – for breweries in areas and from 3.5hl/hl to 3.2hl/hl on average for all breweries worldwide by 2030.

The company is already undertaking water balancing programmes in stressed areas – it is investing in rainwater harvesting projects in Malaysia to help communities save water and in Indonesia, it works with employees and communities to install "" holes, which are narrow, meter-deep pits dug into the soil and filled with vegetables and compost material.

By slowing rainwater runoff, the holes preserve water and prevent flooding.

Jean-François van Boxmeer, Chairman of the Executive Board/CEO of Heineken said: "The world needs to pay more attention to water. Water is a precious but unfortunately undervalued resource.

"By 2025, of the global population could be living in water-stressed conditions. We need to do more to protect water so communities living in water-stressed areas can continue to thrive."

Source: [Energy Live News](#)



IKEA INTRODUCES ENVIRONMENTALLY-FRIENDLY ICE CREAM

IKEA has introduced an environmentally-friendly vegan ice cream to its Bistro menu in Europe.

Starting from April 2019, the retailer will sell its sustainable strawberry-flavour soft ice, which it says has almost half the carbon footprint of traditional dairy-based soft ice and is one of the most popular IKEA Bistro products on sale.

The launch of the more environmentally-friendly, plant-based version follows the development and success of the brand's vegetarian hot dog.

Sandra Lindh, Commercial Manager IKEA Food Services, said: "Our ambition was to create a plant-based treat that is as soft, airy and delicious as our popular dairy-based soft ice.

"It's an easy, affordable and delicious treat for customers that either need or want to skip dairy products and prefer plant-based food options."

IKEA plans to develop other types of plant-based soft ice in the future, which could potentially be made with oats or soy.

IKEA has pledged to remove the use of single-use plastic straws from its restaurants and product range across the UK and Ireland.



Source: [Energy Live News](#)

LIDL TRIALS REMOVAL OF 9P PLASTIC BAGS IN WALES

Lidl is the removal of 9p plastic bags from 54 of its shops in Wales.

The brand says it discovered the cheap reusable bags were frequently being used just once before being thrown away – to combat this, it will now only offer 38p and 65p options.

It expects the decision will help to save more than 150 tonnes of plastic waste every year and cut plastic bag production by five million units.

It believes these figures would increase to a total of 2,500 tonnes and 80 million bags if the scheme was expanded across the rest of the UK.

The supermarket, which has committed to reducing plastic packaging by a fifth by 2022, aims to roll out the scheme across the rest of Britain if it works in Wales.

Lidl CEO Christian Härtnagel said: “We’re proud of our work at Lidl to reduce plastic across our stores, and particularly the steps we have taken over the years to reduce sales of plastic carrier bags.

“After seeing that our 9p reusable bag was increasingly being used as a single use option, we wanted to look at how we could mitigate this pattern.”

Lidl announced it would remove black plastic from its fruit and vegetable range towards the end of 2018.

Source: [Energy Live News](#)



KOALAS SHOULD BE GIVEN ENDANGERED LISTING, ENVIRONMENT GROUPS SAY

In south-east Queensland, once a stronghold for koala populations, habitat continues to be bulldozed through ineffective offset strategies, loopholes in development restrictions and poor planning for population growth, environment groups warned.

Last month, the Queensland government released a discussion paper about the state’s environmental offset strategy. It found that in 97% of cases, developers chose to pay a “financial settlement” to clear land rather than provide new habitat for koalas and other species.

The state recently flagged it would use a planning loophole to clear another five hectares of bushland on Brisbane’s south side, by designating the expansion of a shooting complex “essential infrastructure”. The plan is opposed by the Brisbane city council and local conservation groups.

“They seem to regard clay pigeons as essential, but not koalas,” said Michael Petter, the president of the Bulimba Creek catchment coordinating committee.

“The loss of koala habitat doesn’t happen 10,000 hectares at a time, it’s clearing. The tyranny of small decisions.”

Martin Taylor, the protected areas and science conservation manager for WWF-Australia, told Guardian Australia that development pressure on koala habitats was unnecessary and could be avoided, even as Brisbane’s population grew.

From 1990 to 2016, at least 9.6m hectares of koala habitat was bulldozed in Queensland and New South Wales.

WWF-Australia and other conservation groups this month released a new strategy, led by the ecologist David Paull, designed to save koalas from extinction. One of its key recommendations was to upgrade the species’ listing from “vulnerable” to “endangered”.

“Weak state, federal and local government laws which allow excessive tree clearing are the main driver of the loss and fragmentation of koala habitat,” Paull said.

The Queensland government says there is “little evidence of any koala population” in the section of bushland it plans to bulldoze to expand the shooting complex, but has extended a public consultation period after concerns were raised.

Source: [Guardian](#)



WE ARE EATING LARGE WILD ANIMALS INTO EXTINCTION

Much of the planet's megafauna is being driven extinct because of the usual causes: habitat loss and rampant poaching for body parts like horns, bones tusks.

But there is another reason large vertebrates are going extinct: people keep on eating them.

A team of researchers has analyzed how human activities are impacting populations of megafauna within six classes: mammals, ray-finned fish, cartilaginous fish, amphibians, birds, and reptiles. Their findings make for sobering reading. Of the 362 megafauna species the researchers have surveyed, a staggering 70% are showing signs that they are decreasing in number while 59% are directly threatened with extinction.

"Surprisingly, direct harvesting of megafauna for human consumption of meat or body parts is the largest individual threat to each of the classes examined, and a threat for 98% (159/162) of threatened species with threat data available," they explain.

In many bushmeat is a large part of local diets. In some countries like Cambodia and there are even restaurants that specialize in bushmeat. Their business model often involves the poaching of protected and endangered species to be served to diners at higher prices.



Meanwhile, other animals like pangolins and sharks are widely consumed because their meat or parts like fins are considered to be exotic delicacies. Yet other large animal species like tigers and rhinos are at risk of being driven extinct because their body parts are prized in traditional Chinese medicine.

"Maintaining biodiversity is crucial to ecosystem structure and function, but it is compromised by population declines and geographic range losses that have left roughly of the world's vertebrate species threatened with extinction," the authors write.

The phenomenon of people hunting and eating large animals into extinction is hardly new. Even at the dawn of human history people made an ecological mark by driving several species of large animals into extinction (from giant ground sloths to giant monitor lizards to giant birds) soon after they'd arrived in new lands from Australia to the Americas.

Large animals are especially at threat from human hunters because they usually bear few offspring, which take a long time to reach full maturity. If they are killed in large enough numbers within a short period of time, they may never recover.

In the past 250 years 9 megafauna species have gone extinct either entirely or in all their wild habitats, including two species of giant tortoise and two species of deer. At risk of imminent extinction right now is the Chinese giant salamander, which is considered a delicacy in Asia.

Source: [Sustainability Times](#)

TOKYO 2020: FINISHING LINE IN SIGHT FOR SUSTAINABLE MEDALS

Mobile phones, digital cameras, handheld games laptops are being recycled to manufacture all the medals for the 2020 Summer Olympics and Paralympics in Tokyo.

The Tokyo Organising Committee of the Olympic and Paralympic Games said it had already collected 47,488 tons of discarded electronic devices and more than five million used mobile phones by October last year.

It had set targets to extract 2,700kg of bronze, 4,100kg of silver and 30.3kg of gold, with the goal for bronze reached last June.

By October 2018, it also extracted more than 90% of the gold and 85% of the silver – and is on track to achieve both targets for the athletes' medals by 31st March 2019.

The project, which attracted donations from the public and businesses, is part of Tokyo 2020's efforts to draw attention to the importance of sustainability under its slogan 'Be better together – for the planet and the people'.

Tokyo 2020 said: "Thanks to the huge levels of support from the public and companies across Japan and from national and international athletes, it is estimated that the remaining amounts of metals required to manufacture all Olympic and Paralympic medals can be extracted from the devices already donated."

The designs for the medals will be unveiled this summer.



Source: [Energy Live News](#)

UK'S FIRST OFFSHORE WIND FARM RETIRES

The offshore wind farm built in the UK is to be decommissioned starting next month.

Developer E.ON says the Blyth Offshore Wind Farm, which has two 2MW turbines, has generated enough electricity to supply more than 2,000 homes and saved more than 4,500 tonnes of carbon emissions every year.

It was built by a consortium – consisting of the energy supplier, Shell Renewables, Nuon UK and AMEC Wind – in 2000, which means the wind farm has reached the end of its time as they typically have a lifespan of around 20 to 25 years.

Work to take it down will start in April and is expected to last around four to six weeks.

Patrick Rainey, Offshore Technical Specialist at E.ON said: "Blyth Offshore Wind Farm holds a special significance for us all at E.ON as our – and the UK's – first offshore development. Through Blyth, we were able to demonstrate to the watching world that the technology worked and we've been able to use our experience and learning to go on to develop a further 1.5GW of wind capacity off the UK coast.

"I think we can all be proud of the role it's played in the renewable energy industry and its legacy for the port and waters around Blyth."

Source: [Energy Live News](#)



OSLO ADDING 70 ELECTRIC BUSES THIS YEAR

Oslo, Norway is the capital environmental city for Europe in 2019 and is dedicated to becoming a city by 2030. So it is fitting that it is adding 70 electric buses to its public transportation fleet this year. Several electric buses have been operating in the city for the past two years. The lessons learned from those vehicles has convinced Ruter, the agency in charge of public transportation for Oslo, to place an order for 70 more.

“We hope Oslo citizens welcome the electric buses. We believe our customers will appreciate buses that will provide better air quality, less noise, and a more comfortable and quiet journey,” says Snorre Lægran, planning director for Ruter. It has entered into agreements with three local bus companies – Unibuss, Nobina Norgesbuss – according to a report by Elbil, the Norwegian Electric Vehicle Association.

The buses will be manufactured by Netherlands company VDL. About of them will be articulated vehicles that seat 46 passengers, have a 170 kWh battery, a range of 70 to 90 km, and a maximum charging power of 450 kW. The conventional buses will seat 34, have a 127 kWh battery, a range of 70 to 110 km, and a maximum charging power of 375 kW.



Electric buses don't just show up one day and immediately begin replacing existing vehicles. Up to 600 drivers need to be how to operate them properly as their range depends on several factors, including topography, weather conditions, and driving style. Extensive testing will also be done to study the interaction between the buses and the charging infrastructure they will use under various conditions. Stress tests will be conducted to see how far they can go on a single charge without leaving passengers stranded in the middle of a route.

Other Norwegian cities making the transition to electric buses include Trondheim, Lillehammer, and Kristiansand. Norway is proud of its leadership role among European nations when it comes to electric transportation. Thanks to aggressive government policies, it is the world leader in sales of electric and plug-in hybrid cars and is rapidly transitioning its extensive ferry fleet to electric propulsion. While other nations are talking the talk about cutting carbon emissions, Norway is walking the walk.

Source: [Clean Technica](#)

BIRDS

OUR NEXT DOOR NEIGHBORS

Bird Protection and Study Society of Serbia (BPSSS) was established on November 18th, 1989 as Bird Protection and Study Society of Vojvodina. This organisation, active and dedicated for decades, carefully sustains a network of active members throughout the whole of Serbia. Its members at the local, regional and national level are working to protect birds and their habitats and increase knowledge about birds and their needs in Serbia. One of them is our interlocutor Nikola Stanojevic.

EP *As a member of the Bird Protection and Study Society of Serbia, you can surely point out several ongoing and accomplished projects of the organisation.*

Nikola Stanojevic The BPSSS is currently participating in more than ten projects with different thematic, of course, within their mission to protect birds and their habitats. The most significant one among them is probably *LIFE Panon Eagle*, the project that gathers state authorities and civil society organizations in the Pannonian countries in the EU and Serbia on various activities aimed to protecting globally



endangered eastern imperial eagle, followed by the fourth continuation of *Adriatic Flyway* project that is focused on the establishment of a sustainable system of resting places and wintering grounds for migrating birds at their Adriatic migration station; third continuation of *The Civil Society Acts for Environmentally Sound Socio-Economic Development* (CO-SEED) project that works on the improvement and consistent implementation of regulations in the fields of environmental protection and protection of wild animals.

Some of the fundamental projects in the period behind us were working on the Red Book of Birds of Serbia, participating in the making of the second Atlas of Nesting Birds of Europe, and in the projects in which the Society was engaged by the Institute for the Protection of Nature of Serbia. They should lead to the establishment of a functional ecological network in our country. At the same time, in cooperation with the managers, the Society has been involved in researching birds and their habitats in various protected areas in Serbia for many years now. The list goes on because many smaller projects and campaigns for popularising birds through the involvement of members and citizens are being developed over the years, such as Spring Live, Sparrow – My First Neighbour, the course of identification of birds BirdID and others. There is, of course, a regional IPA project entitled *The Civil Society Acts for Envi-*

ronmentally Sound Socio-Economic Development in which I am engaged, and which is just about to end.

EP *Your Society has been collecting and is currently processing the data needed for making of the first Atlas of nesting birds of Serbia. Where does the need for this monograph come from, what is its purpose and when will it be available?*

Nikola Stanojevic Although the Society had previously participated in the preparation of publications that should present an image of the state of the environment through a survey of bird populations in Serbia, working on the Atlas is a process that, apart from their qualitative and quantitative status, should show their spatial distribution on the map of Serbia. Creators of the Atlas have the ambition to collect and process all available data from this decade, and, along with that, members and sympathisers with specific field research come up with data on species that are little known in Serbia. It should not be emphasised how much this preparatory work can be demanded, not only in the organisational but also in the material sense, and the plan is to transfer the collected data to a manuscript and publication within two years. The purpose of this work is to present changes in demographics, numbers and distribution of bird populations and thus provide information that, in addition to improving the protection of birds, at the same time serve to understand



changes in the environment, or its ability to support a living world of which we all depend.

EP From 10th to 30th of January you conducted the traditional winter index of waterbirds. Describe us, ordinary people, how this action unfolds and what equipment is used.

Nikola Stanojevic This activity is being piloted as a part of the African-Eurasian Waterbird Census in Europe from 1967. The Society has been coordinating it on Serbian territory from 2012. The essence is to collect data on changes in these ecosystems, which is a long-term process. Birds play a key role in wetlands, but they are also essential for people at the same time. This is a traditional opportunity for almost the entire membership of the Society to “sweep” through wet and aquatic habitats throughout the country - from puddles and ponds, through canals and fisheries to big rivers - and watch hundreds of thousands of waterbirds that winter there. Sometimes there are walks on muddy fields to reach the meads of Potamisje, sometimes counting the countless flocks of seagulls in landfills, and sometimes the time-consuming telescope observation on a ship drifting along the Danube when counting different kinds of ducks and geese. Every year, more and more of our members are responding to this call, regardless of occasionally rough weather.

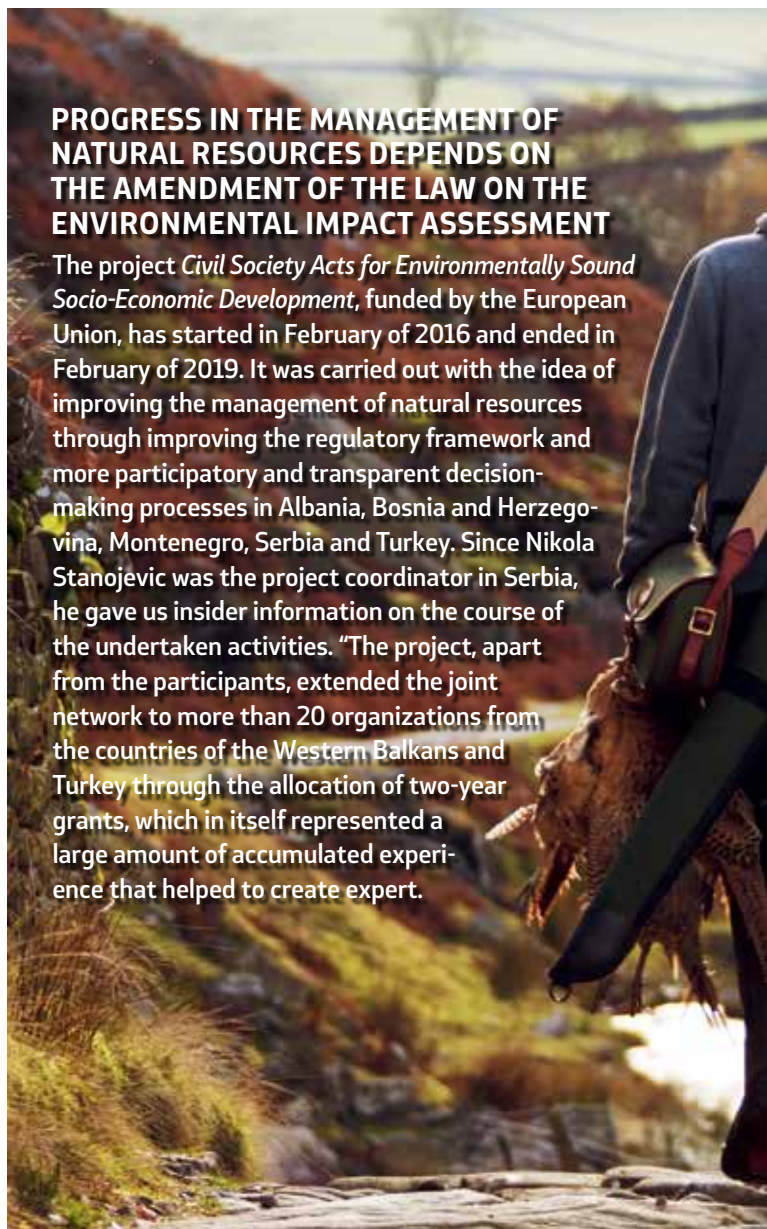
EP The Society also records cases of poaching, as well as the state of ecosystems, coasts and forests in the coastal area of rivers and wild landfills. According to your data, in which areas of our country people are treating nature the worst?

Nikola Stanojevic It is neither easy nor pleasurable to answer that question. Nevertheless, it should be said that neglecting nature is a ubiquitous phenomenon and has different aspects.

On the one hand, it is not easy to expect a high level of awareness of the problems that are caused by certain activi-

PROGRESS IN THE MANAGEMENT OF NATURAL RESOURCES DEPENDS ON THE AMENDMENT OF THE LAW ON THE ENVIRONMENTAL IMPACT ASSESSMENT

The project *Civil Society Acts for Environmentally Sound Socio-Economic Development*, funded by the European Union, has started in February of 2016 and ended in February of 2019. It was carried out with the idea of improving the management of natural resources through improving the regulatory framework and more participatory and transparent decision-making processes in Albania, Bosnia and Herzegovina, Montenegro, Serbia and Turkey. Since Nikola Stanojevic was the project coordinator in Serbia, he gave us insider information on the course of the undertaken activities. “The project, apart from the participants, extended the joint network to more than 20 organizations from the countries of the Western Balkans and Turkey through the allocation of two-year grants, which in itself represented a large amount of accumulated experience that helped to create expert.



Fourteen bird species of the fauna of Serbia have disappeared, and six of them have globally unfavourable protection status: White-headed duck, Little bustard, Dalmatian pelican, Bearded vulture, Egyptian vulture and Aquatic warbler

ties from the population in poverty, and on the other hand neither the state punishes and enforces the rules in such circumstances too often. As long as these things do not improve, we can hardly expect a certain systemic progress.

EP The long-standing work of the Society on the protection of birds has been recognised by the international public as well. In 2018, you won the Marjan-Marsh Award. How did you earn this prestigious prize?

Nikola Stanojevic Award is given by the Royal College of London for a special contribution to protecting nature in areas where it is confronted with human conflicts. The Society received the prize for its efforts to prevent illegal hunting and generally bird starvation by people. We conducted numerous campaigns to recognise the significance of this problem and to involve state authorities actively and systematically in its solving, often

It is not easy to expect a high level of awareness of the problems that are caused by certain activities from the population in poverty

documents later used in dialogue with the competent authorities," Stanojevic stressed.

Still, the implementation process did not proceed without setbacks: "The main obstacle was slow operating of the system which was a product of the lack of capacity in state bodies, namely their constant clutter with the bureaucratic demands in everyday work. Another difficulty was that impact assessments and strategic impact assessments were little-known instruments and that the general public was not taught to have a say in decision-making by state authorities." The solution to these problems Stanojevic sees in – time. "Time is needed for these hurdles to be overcome, as

well as specially designed public information campaigns adapted to different parts of the public," said Nikola.

He is not completely satisfied with the project results because its goal was the Amendment of the Law on the Environmental Impact Assessment which was once again postponed until mid-2019.

"Nevertheless, I can be proud that I have learned a lot in a relatively short time about the topic that should contribute to the work of the Society on the protection of valuable bird habitats, and that, therefore, I am invited to present a professional opinion in the working group for amending this law. I am most satisfied with the wider dialogue with this sector of the Ministry of Environmental Protection being opened, and because there is a good basis for constructive participation in the decision-making process and that the process of change will continue, and that there are good prospects for the proposed changes to be adopted," concluded Nikola Stanojevic.

encountering not only non-cooperation and obstruction but threats and confrontation. Interestingly, the prize was named after a lion who spent his whole life in a zoo in Kabul, Afghanistan, where he lived during the state's catastrophic last quarter of the century, and he neither escaped Taliban bullets. It shows a high degree of the Society's commitment to a serious social problem, although the fact that among the past recipients of the award are mainly individuals and associations from the war-torn African countries is devastating.

EP What are the most endangered bird species in Serbia?

Nikola Stanojevic These days, after a lot of difficulties, the Red Book of Birds of Serbia came out of the press. One of the publishers is our Society, which has done a huge amount of work on this publication. The Red Book says that the total number of 123 species is endangered, which is close to half of all species settled in Serbia - 359. Fourteen bird species of the fauna of Serbia have disappeared, and six of them have globally unfavourable protection status: Whi-

te-headed duck, Little bustard, Dalmatian pelican, Bearded vulture, Egyptian vulture and Aquatic warbler. There are 35 critically endangered nesting birds in Serbia. Among them, there are many well-known species, such as Eastern imperial eagle, Great bustard and Saker falcon. This mathematics is not simple at all because some species of overall low-end vulnerability record a rapid and unstoppable decline in numbers and are for real in a more difficult situation than a few species with stable populations. Besides, it is not uncommon that changes in habitats that are largely due to human activities are endangering some species and favouring others, which on the whole is a loss of biological diversity that is happening as we speak.

EP By burning the dry vegetation, humans endanger thousands of plant and animal species, and rare habitats, protected areas, properties, and even human lives. Illegal disposal of animal remains poses a threat to the spread of infectious diseases. Are stricter penalties the solution?

Nikola Stanojevic It is clear that activities such as burning vegetation or illegal landfills of animal and other waste cause more harm to everyone, rather than benefits, and that this situation arose out of lack of education and punishment. But not only illegal activities are those that can have harmful effects on the environment. For example, the exploitation of sand and gravel is, to a large extent, lawful and planned, but has a significant impact on the natural ecosystems of river banks, sandbars and watercourses that are not recognised at all which is especially severe considering the critical importance of the ecological water quality for human life.

To solve each of these problems, a comprehensive approach is required, as all of them exceed the sectoral

competences and capacities of the competent state bodies. Cooperation with non-governmental organisations dealing with nature protection is of particular importance. Their capacities are not generally used by public authorities, or they are used in periodic and short-term campaigns that cannot produce lasting results as such.

EP *Agricultural practices also reflect negatively on animals and pollute the environment. During October, in Vrsac, a significant number of wild and domestic animals died and were suspected of being poisoned by wheat from nearby fields. How to deal with these dangerous and illegal actions?*

Nikola Stanojevic For many years our Society has been pointing out the use of illegal plant protection products. This problem was specially processed in the first report on the bird starvation in Serbia from 2017, which is now constantly being updated. A certain improvement was achieved, the problem was recognised by the Ministry of Environmental Protection and the Institute for Nature Protection, but it is necessary that its solution is systematically set. The first step would be to jointly draft and adopt a protocol on acting and cooperation of authorities and organisations on poisoning suppression, which would provide clear guidance to all civil servants are involved in the case of poisoning or use of prohibited chemicals - from the sector of internal affairs, through agriculture, to environmental protection. Citizens play a key role in this process by providing information, while civil society organisations can best teach conscientious action and good practice.

Unfortunately, until this circle is closed, we will face problems one by one, and we can only hope that it will not produce even more severe consequences.

EP *Poaching is also one of the diseases of our Society. Which birds are most often victims of illegal hunting and which are the most popular method of poaching? How difficult is it to trace the perpetrators?*

Nikola Stanojevic Illegal hunting is essentially a form of ecological crime whose primary victims are natural values, namely protected hunting species, as well as strictly protected species, those whose hunting is not permitted under any circumstances. This is a problem that the state, unfortunately, does not treat as it should, and the reasons are numerous. The poacher, at least those who hunt birds, are rarely marked in their hunting associations, the game wardens are in a highly dependent position in relation to those that should be controlled, hunting prohibitions are not clearly incriminated in the criminal law, and ultimately this matter is constantly out of focus of the police, prosecutor's offices and judicial authorities. A result is a small number of fines, while illegal hunting of quails with the help of electronic devices continues, as well as the hunting of strictly protected species of ducks and geese on rivers and ponds.

Interview by: Jelena Kozbasic

PIGEON IN THE PALM IS BETTER THAN A SPARROW ON GUNPOINT!

The Bird Protection and Study Society of Serbia has treated all bird lovers with the first digital handbook on wild birds of our homeland "Birds in the Palm". "The application is used to identify birds and allows anyone who has an Android phone to find out without any prior knowledge, just by choosing the shape, the colours of the bird and the landscape in which he sees it, what kind of a species it is," Stanojevic pointed out.

The application was created as a result of the work of one of the best European illustrators of birds and our ecologists, biologists and developers and is entirely free. "By spreading the knowledge about birds, we want to compel the interest in citizens to enjoy birds, while at the same time to make them understand the importance of preserving the environment, of which we are all inseparable," our interlocutor said.

The Society is particularly pleased with the army of young users who use modern tools and programs, such as mobile applications, as an integral part of the learning process.



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CAT

PRUNA



PRUNA

MORE THAN JUST WETTING YOUR WHISTLE

"In wine there is truth," says one of the oldest Latin proverbs. Nevertheless, "in brandy, there is strength" it's been said in our region. No wonder we have taken on this extension of the ancient phrase having in mind that we gladly prove mythical effects of brandy. And wine.

Is it necessary to choose between these two standpoints, are they opposed to each other and what exactly do we know about the history of wine and brandy and the way they are made, these are some of the questions which forced themselves on the authors of these lines. Although our scarce knowledge of Dionysus and his arts of viticulture has never prevented us from enjoying the flavours and scents in beautiful glasses, we tried to find someone who could provide a professional and interesting way of either confirming suspicions or freeing us from the illusion that we can only give our love to one. Wine or brandy.

When we started researching this field, we discovered that there are more winery and distillery in our country than we could ever imagine. Mostly, these are successful companies who already have their devotees. However, one of them has an exceptional appeal. The story about "Pruna" is a story worth telling. Let's take you through all the phases that lead to the ultimate goal – an unparalleled feast for all the senses.

When Slobodan Ilic, the owner of the winery and distillery, decided in 2011 to renew and modernise the family tradition of brandy production, he relied on his business intuition and genes. In the village of Vukovici, where Slobodan's family comes from, grandfather Bogica was the first to buy a brandy still, and he started production for the needs of his family, occasionally distilling alcohols on demand of other householders too.

Nowadays, the image of that brandy still brings the memory of the ancestors, whereas the up-to-date technology which they implemented in the strong liquors production, starting from growing fruits through the brandy processing to placing stylish bottle into transport packaging, becomes a step forward, the one that is always expected of descendants to make. Considering the opportunities Serbia has in fruit production, the decision was simple


- restoring family tradition and investing in growing agribusiness.

It might be that the decision on where to invest was easy, but determining the location, boundaries and ownership of grandparents' plots of land was a difficult task. Predrag Jojic, the manager of the company Pruna, told us about the state of the existing vineyards and orchards and he also indicated that the entire infrastructure of fruit and vineyard production was left to decay.

"Everything was in such a mess that even the locations of all the plots were not clearly delineated and legally regulated. Obviously, it had to be the starting point of this project. Having identified the family property, the next steps were additional land acquisition and making new plantations of fruit and vines. Those seedlings are today in full vegetative maturity, and they bring high-quality fruits which are taken care of by the entire team responsible exclusively for primary agricultural production", says Predrag pointing out that the same kind of fruit on different

One of the authors of this article tried to get an answer to the question about the right choice of drink when we want to give colours to a day or to put us at our ease. Predrag says that no one has ever asked him about it, but instead of answering, "he put the ball in our court" with a suggestion that she should seek an answer tasting some of the most tempting products from their treasury. So, based on a personal affinity, but also on an indisputable sense for beauty and delicacy, here are the suggestions:

- **When you're sad or maybe hopelessly in love, take a sip of exquisite Vilijamovka brandy which will gently slip down your palate, all the way to the belly, without leaving the slightest trace of strength or burning. With its particular sweetness it will shade off the initial sad and bitter emotions;**
- **If you want to celebrate with some business partners a deal closing, then we sincerely recommend white wine Umbro Tamjanika, which will lift up the atmosphere with its subtle and delicate taste, but staying within the limits that comply with the norms of good behaviour;**
- **And when you are happy as a clam and want to tell the whole world, make sure you open the bottle of Umbro rosé. With that flavour of the wine which is grippingly scented, but not too sweet, and yet again luxurious one, bring up all that is good and happy which has filled your heart;**
- **And finally, when having ended a long diet you wish for succulent sour cherry pie, allow yourself a luxury and indulge yourself in a glass of Visnja 2015 red wine.**



"We should be drinking less and enjoying more quality wines and strong alcohol drinks because they were made to ignite our senses and receptors, not to make them numb"

GIN FROM EASTERN SERBIA MADE IT TO JAPAN

The "Pruna" company team, always challenge driven, set to master the production of beverages which don't belong to our tradition, so "Pruna" became the first gin producer from eastern Serbia. The idea came out of sheer curiosity. "We are sure that we can make gin as good as any famous producers worldwide", says Predrag. They are already set on to promote their gin all over the world because no local manufacturer has ever tried to do so. On their way to conquering the world, "Pruna" branded bottles with gin have recently arrived in Japan. Predrag says they are looking forward to getting feedback on how much the Japanese enjoyed a top Serbian gin.

terrain does not end up making identical taste in the same type of product.

"Each terrain has particularities that directly contribute to the quality, taste and balance of all relevant biochemical factors which affect the fruit or vine itself. Those are micro-climate, the influence of Homolje mountains, altitude, the wind rose, soil composition and the vicinity of the Danube in its widest course. A compendium of all these factors allows a unique taste of all the plant species we grow", explains the manager of "Pruna", adding: "All manufacturers have their magic formula. Our secret boils down to enriching and modernising the tradition of Serbian brandy by the implementation of modern technology and oenological methods of our highly skilled personnel." This is the way that a completely new taste was created which either immediately captures hearts or leaves them untouched. According to Predrag, that is the core of their vision - they wanted a product which will gain fans, not something that will please everyone's taste.

While the deep dark wine is rippling in the glasses and the scent of sour cherry is in the air, we are asking our interviewee about one of the most popular wines that come out of "Pruna" winery, with a very particular and unique savour and aroma. The "Sour cherry 2015" is a famous wine made of cherries which is fermented juice produced by merely grinding the best and most ripe fresh cherries. Predrag

FRUIT AND VINEYARDS IN THE TIME OF CLIMATE CHANGE

Talking about the cultivation of vines and fruits affected by the climate change consequences, Predrag says that any change in climate also brings changes in all living organisms on Earth. "It's up to us to adapt to changes, and at the same time to do everything in our power so that our activities would not become one of those factors detrimental to climate change. As a responsible company, it's the least that we can do for the environment. It's imminent for the change to happen both in quality of grape varieties and in soil. I already mentioned that there are many contributing factors to the quality of grapes and fruits, and they are in immediate relation with the climatic conditions."

says this product falls into the category of fruit wines and it is made technologically the way the red wine is produced. "Branicevo district, along with Merosina, belongs to the best-known regions for the production of Oblacinska sour cherry in Serbia, and Oblacinska sour cherry is the most famous Serbian brand when it comes to fresh fruits at both the European and global market. Therefore we came to the conclusion that is better to turn our best raw material into

an authentic product instead of selling fresh fruits which is now the case with 98 per cent of sour cherry production in Serbia“, Predrag throws light on how they got an idea for the sour cherry wine.

However, this wine is not the only thing that “Pruna” has to offer. At the last year’s BeoWine Fair, which is held under the Tourism Fair, their Cabernet Sauvignon from 2015 was awarded the “Golden Diploma” in competition with 124 wines. At this year’s Fair, there was no lack of awards: The “Golden Diploma” was granted to the Chardonnay from 2016, Cabernet Sauvignon won silver, whereas bronze was given to the “Umbra“ rosé. While we notice that obviously there are many reasons for this company to be proud of, Predrag says that true awards and recognitions come exclusively from people who, having come across their products for the first time, keep coming back to that unique savour which stirs up in us exactly what was seeking to come alive again. So, as you might expect, wine lovers feel compelled to share their impressions. “You get formal awards if you go in for a competition. Contrary to awards, there is a continuous quest for an experience, and that is what makes us humans. Depending on taste, everyone chooses their wine. Having been awarded or not is of less importance if it affords the experience you expect.”

We can’t resist asking whether we know at all how to enjoy a good drink. Predrag asserts we are slowly getting there. “We should be drinking less and enjoying more quality wines and strong alcohol drinks because they were made to ignite our senses and receptors, not to make them numb.” And what is the true quality of our wines and other alcoholic beverages, the answer comes straight away. The distillation technology was introduced in Europe after the Ottoman Empire had spread its power throughout South-eastern Balkans, although there is some indication of this production in the era of Byzantium too”, says the manager of the “Pruna”. As far as the distillate from fruit (brandy) is concerned, Predrag believes that we are at the very top in this category, which is something we owe to the high quality of fruits growing in this region. When it comes to wine, we are making a giant leap forward and founding our place with success, even though the tradition of wine production originates from the countries of the Old World, to put it in vinic terms. Primarily, there are France, Italy and Spain, but despite this strong competition, Predrag says that our winemakers make great wines which are getting better year after year. At this moment, “Pruna” with its products has a share of the markets in Switzerland, Austria, Italy and Germany. Currently, they are in the middle of negotiations on entering the markets in Romania and Bulgaria. The completion of this project is expected in the next three months.

Contrary to winemakers, as the substantial progress has been made in their sector on the National level and primarily in the fields of protection of the geological ori-

gin, the types of subsidy or granting financial assistance to this kind of production, Predrag says that brandy manufacturers in our country deal with the system that is still highly unregulated. “As for brandy, little has been done, and we are famous for our brandy far and wide. Nevertheless, it is still unprotected as a brand. The French have protected cognac, the Italian their grappa, whereas we don’t see worth in our brandy. Regarding the market entry, we mainly rely on our resources, although there are certain associations at the Serbian Chamber of Commerce whose range also comprises alcoholic drinks. However, it is still of a formal nature, without practical help and results”, Predrag puts forward.

These facts don’t stay in their way in terms of making a new combination of fruits and creating extraordinary savours. “Our unique and exceptional products come in limited editions, and currently we are developing a few products which never have been made”, Predrag says, adding that the four types of Single Barrel brandy (Apple, Sour cherry, Plum and Grappa) are by far his favourite choices of all the beverages. Upon our request to give us a little clue on these new products, he said in a very kind way that every secret reveals itself in its own time. It is clear that we will have to wait for the bottles distinctly shaped, but this time with new tastes, to be put on the market.

Prepared by: Milica Jordan and Tamara Zjacic



Predrag Jojic, the manager of the Pruna company

“All manufacturers have their magic formula. Our secret boils down to enriching and modernising the tradition of Serbian brandy by the implementation of modern technology and oenological methods of our highly skilled personnel”



KNOWLEDGE LEADS THE WAY TO BETTER PLAN PROTECTION



Aleksa Obradovic, PhD,
full-time professor at the Department
of Phytomedicine at the Faculty of
Agriculture in Belgrade

The intensive **use of pesticides** provides
a **high yield**, but it is a **short-term
profit**. Getting into and retention of
pesticides in the environment and the
presence in the food chain **can have
serious consequences**

In the seventies of the last century started a new approach to plant protection called “integrated protection”. This term refers to a plant protection system that includes the use of all available methods for controlling the disease-producing agents, pest and weeds to prevent the increase in their number beyond the levels when significant economic damages start to occur. This approach in practice has proved to be a reliable, steady and safe way of protecting plants. It is an economically justified and socially acceptable model that provides rational management of harmful organisms in plant protection, ensuring the sustainability of resources and ecosystems. We talked about this ever-present topic with Aleksa Obradovic, a full-time professor at the Institute for Phytomedicine at the Faculty of Agriculture in Belgrade.

EP You say that integrated plant protection is a prerequisite for sustainable production. Could you briefly explain to us what integrated protection is?

Aleksa Obradovic Integrated management of harmful organisms is an effective and environmentally sensitive approach to plant protection. It involves careful consideration of all available pest control techniques and subsequent integra-

Prof. Aleksa Obradovic, PhD is the author or co-author of over 380 scientific and technical papers and books dedicated to a particular field, printed in the country and abroad. Regarding scientific research, he was engaged in foreign projects FP7 and H2020, as well as in national projects of the Ministry of Science of the Republic of Serbia, primarily in research in the field of Phytopathology and plant protection technology. He studied mainly the bacterial diseases of vegetable plants, but also apple and stone fruits. With his research, he has contributed to the improvement of the protection technology of certain types of vegetables, both by applying chemical measures and by studying the resistance of genotypes of certain species, which contributes to the creation of new selections.

He was a scholarship holder of Humboldt and Fulbright Foundation. He is a member of the Association of Microbiologists of Serbia, the Plant Protection Society of Serbia, the Serbian Fruit Growers Society, the American Phytopathological Society, the editorial board of “Herbal Doctor” and “Pesticides and Phytomedicine” magazines. He is also a registered reviewer of the “Proceedings of the Institute of Field and Vegetable Crops”, “Journal of Plant Pathology,” and “Phytopathology” journals. In the period 2016 - 2018 he was the Senior Editor of “Plant Disease” magazine of American Phytopathology Association.

tion of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically and ecologically justified and reduce or minimise risks to human health and the environment.

WHAT DOES INTEGRATED PLANT PROTECTION RELY ON?

Integrated plant protection is currently the only way to ensure satisfactory efficiency in plant health management with minimal human and environmental risks. This protection relies on a number of different approaches, methods, and tactics that together provide adequate efficiency that is sustainable in time and space in solving problems of plant protection, both in intensive production and farms, urban greenery and all areas where plants are endangered. It is a multidisciplinary approach, which is planned and implemented over a more extended period, primarily to avoid or create unfavorable conditions for the appearance of harmful organisms, resorting to intervention as an ultimate choice.

EP *Can we at all protect plants in intensive agriculture when pesticides are used excessively and without restriction?*

Aleksa Obradovic We can. Integrated plant protection uses all available options for managing harmful agents, including the rational use of pesticides, with the least possible disruption to agroecosystems and encourages natural pest control mechanisms.

The intensive use of pesticides provides a high yield, but it is a short-term profit. The problem arises due to neglecting the long-term consequences of excessive pesticide use, such as environmental pollution.

We can only advance with knowledge, free from commercial and advertising effects which often come from the pesticide-industry representatives





transmitted from the academic level and adapted to the end users, i.e. agricultural producers.

EP *Tell us what the induced resistance in plants is and why it is important to us?*

Aleksa Obradovic It is a natural defense mechanism within plants against attacks by harmful agents. It is essential because in some situations it can significantly contribute to reducing the intensity of plant infections and thus cut the losses and the need for chemical protection.

EP *What do you recommend and advise, what can we do to ensure an adequate efficiency in the plant health management with minimal risks to the man and the environment?*

Aleksa Obradovic The recommendation is that besides tradition we rely more on the knowledge and modern technologies in agricultural production, that we use more natural protection mechanisms, as well as to adequately inform the public about the risks because false and sensationalist information can cause great harm to everyone.

Interview by Milisav Pajevic

EP *How much does this excessive use of pesticides damage the soil, meadows, pastures, surface waters, livestock, bees, and humans?*

Aleksa Obradovic Getting into and retention of pesticides in the environment and the presence in the food chain can have serious consequences. They can be acute but also cumulative and chronic.

EP *Is it possible to protect plants while using fewer pesticides?*

Aleksa Obradovic It is. By combining biological, agro-technical, physical and chemical measures, in a way that minimises the risks to human health and the environment, it is possible to protect plants and ensure the cost-effectiveness of the production. This approach requires a comprehensive knowledge of all available protective measures and proper planning of the activities before the onset of a disease.

EP *Can the environment also be protected in intensive crop production?*

Aleksa Obradovic It can, if the principles of safe chemical use for plant protection are respected.

EP *How to help the crop and fruit grower to understand better and recognise the importance of protecting plants from pests?*

Aleksa Obradovic With education. We can only advance with knowledge, free from commercial and advertising effects which often come from the pesticide-industry representatives. With knowledge derived from the latest scientific research, with modern technologies, proven in practice,

APPLICATION OF BACTERIOPHAGES IN PLANT PROTECTION

With a lack of effective bactericides, the prevention of the appearance and spread of bacterial diseases in plants can only be achieved by integrating the positive effects of various protection methods, among which biological measures are increasingly gaining in importance.

From the few biological agents that have found application in practice, viruses that parasitise bacteria, i.e., bacteriophages are attracting a lot of attention lately.

Bacteriophages represent a specific group of viruses whose hosts are bacteria. It has been experimentally shown that they can be used as a beneficial means of controlling harmful bacteria.

Knowledge of their biology and ecology has contributed to improving the efficiency of their use.

The application of selected strains of bacteriophage, formulated with skimmed milk and sucrose, in combination with plant resistance activators, has provided effective protection for tomatoes even under extremely favorable conditions for the occurrence of the disease. This combination of treatment has become part of the standard tomato protection program in the United States and has thus shown that bacteriophages can be successfully used as biological agents in plant protection against pathogenic bacteria.

BEE,

SMALL, HARDWORKING AND NOBLE



When I was suddenly given the task to write my first article about bees and honey, I thought I already knew a lot. How hard can it be to write about this ubiquitous food? It turned out that this writing of mine did not run as smoothly as I had imagined until I met an interesting lady who found herself among the bees just as I found myself among the first letters for honey and honey products. Quite accidentally.

Milena Miltenovic is a beekeeper and owner of a beautiful honey shop “Flora med”, and to my question how the idea of beekeeping was born, she answered that the bees were brought to her to bring beauty and vibrancy to her yard.

“I was not interested in them at the time since I had too many responsibilities: little children, work, weekend cottage, apartment ... It was the beginning of January in 1995 when my attention was drawn to a colony which had particles in front of the entrance to the hive, unlike the other colony. I was confused, so I called an experienced beekeeper to inspect the hives. When he opened the hive with particles, several mice ran out, while the bees were in the other half of the hive. He asked if I had any patty (for bee feeding). I replied that I did not bring bread because I just came to visit the house. So much for my knowledge of beekeeping“, Milena summarized with a smile her first encounter with beekeeping.

“At that time, companies were collapsing, and such was the fate of the department store I worked in. I was looking for an alternative, and a solution just knocked on my door. I simply started beekeeping”, Milena said, pointing out that the moment represented the beginning of a learning process. By working patiently, she was slowly preparing for the fulfillment of a dream that would follow in a few years.

“Flora med” shop opened in 2002 and various bottles of bee products are displayed on its shelves. The smell of wax and honey can be felt from the street. Milena proudly points out that until the opening of her shop she had a lot to learn, first of all, how to listen to a bee.

“Bees correct some of our minor mistakes by themselves. Each bee product is impeccably clean, of good quality and irreplaceable in the human diet. Everything imperfect in bee products is the consequence of human negligence,” she told me, revealing that initially, customers did not have confidence in her as a beekeeper, primarily because she was a woman. Today she enjoys the trust of her customers and ships the honey to all continents. “Our people who live abroad, buy honey and bee products when visiting Serbia. Our fellow citizens often buy and carry honey as a gift. Serbia is a country of honey, where there are many experts on bees and benefits of their products. However, besides honey, pollen, propolis, royal jelly, and bee-bread (Perga) are more and more in use,” Milena explained, and it seems to me that after a decade and a half of work

there are no more unknowns, although she is still learning and preparing new honey products.

It is interesting that Milena does not make the beebread as a mixture, but sells it in its original state, topped with acacia honey. She collects it from the honeycomb, directly at the store, so that customers can see the process of obtaining the beebread. What is more, she makes all the blends of bee products in front of the customers’ eyes, as she thinks that in this way, she gains their highest level of trust, and along the way, explains to them everything they want to know.



ALL OUR MISCONCEPTIONS ABOUT HONEY

This wise lady among beekeepers leads a unique “war” with our false beliefs.

“I’ve noticed that crystallised honey is unjustly neglected in our country. With great effort, I managed to educate my customers about this natural property of honey. Sunflower honey is unfairly neglected as well, while it is, for example highly valued in France due to the high concentration of pollen. All beekeepers are well aware that bees on the sunflower are completely yellow from pollen. Although pollen is very healthy, buyers underestimate sunflower honey due to rapid crystallisation. Then, we should not forget the honey bee tan which is excellent for consumption. We all know that sesame is healthy, and in combination with honey, you get a real vitamin bomb.”



Each bee product is impeccably clean, of good quality and irreplaceable in the human diet.

Everything imperfect in bee products is the consequence of human negligence

In Milena's store, in addition to bee products, a complete range of utensils and tools for beekeepers can be purchased. Here you will find the best quality supplemental bee cake and wax. Her sweet store is a mirror of her work and personal biography. Since she has been learning for a long time, she decided to organize trainings, seminars and practical application of knowledge that she unreservedly shares with anyone who has the desire and need to learn something new.

"To start with beekeeping, the year's cycle needs to close. Perhaps the hive from the outside looks quite ordinary, but every colony is different, and not a single year is the same. Two years ago, in cooperation with Prof. Mica Mladenovic, PhD (professor of apiculture at the Faculty of Agriculture in Belgrade) and Sasa Grubic, PhD of veteri-

MILENA RECOMMENDS

Mountain honey has five times more minerals than others

Acacia honey an excellent choice if you are allergic to pollen because it contains the least pollen

Royal jelly beneficial for all of the endocrine glands and male sex glands

Pollen irreplaceable for prostate

Propolis the only natural preparation that has an antiviral and antibacterial effect

Perga good for myocardial diseases

Honey in the comb irreplaceable if you suffer from constipation.



Our story about honey would sound like a fairy tale if we did not touch the real problems in beekeeping which are caused by the increasing pollution and the numerous consequences of climate change. Milena is aware that she cannot influence climate change but remarks that beekeepers in other countries are trying to tackle these concerns in different ways.

“I talked to a Greek who moves hives 11 times during the year. I saw a considerable number of beehives in a desert, and in the Czech Republic, they perform artificial insemination because the natural period is too short. I worry about uncontrolled logging of trees that provide nectar, the lack of planting of trees, river contamination, then water spills, uncontrolled spraying of flowers in bloom with insecticides that poison the bees, and treatment of sunflower seeds with agents that kill bees. Any pollution that affects humans affects the bees as well. Bees often suffer to the extent that there is no honey left in the hives. In the summer and under favourable conditions when the bee collects nectar, its life span is up to 45 days. Due to pollution and the use of pesticides, bees do not even get as far as collecting the nectar, and societies become weak. In that case, there is neither honey nor healthy bees. When we start to treat nature with kindness, bees are going to be healthy, active, and therefore there will be plenty of bee products,” Milena concluded, visibly worried.

To end our sweet story about bees and their golden products on a positive note, I asked my guest to reveal how she sees the development of her business.

“I would like to see the ‘Flora med’ shop’s website on the tourist map of the city, where tourists can find my store when visiting Belgrade and can buy high-quality honey as well as all other products.

I also rely on my family, and I am pleased to train them to become the trustworthy heirs of my efforts and work,” she concluded smiling.

Prepared by Milica Jordan

nary medicine, I organised a practical training for 150 participants in my yard where I keep the hives. Education involves practical work with the equipment, learning about with breeding and production of queen bees, treatment of bees, as well as answering all the questions and all the doubts that the participants might have,” Milena told us and at the same time revealed that she had never used any subsidies. “I know that the state is working hard on improving the beekeeping, and this is largely thanks to the engagement of the SPOS (Beekeeping Association of Serbia), especially the president of that organisation. This success is best seen in the work intensity in honey bottling plants in Raca, which stimulates the beekeepers to make even more effort.”





A photograph of two women in a studio setting, performing handstands. The woman on the left is wearing a teal long-sleeved top and white shorts, with her right leg raised high. The woman on the right is wearing a white long-sleeved top and white shorts, with her right leg raised high. They are both on a wooden floor, with their heads and hands on the ground. The background is a white brick wall with two large arched windows.

DIETARY FIBRES FROM NATURE


The use of antibiotics significantly improved the medical practice of the 20th century, and with the vaccination it contributed to almost completely eradicating certain diseases. Yet, their efficiency and availability led to overuse, which enabled bad bacteria to develop resistance to antibiotics, while good bacteria were destroyed.

Therefore, it is very important to find out more about beneficial bacteria, which are crucial for our health, as well as how to protect those bacteria from antibiotics, and preserve them in natural way.

Gut Flora in Balance

Do you know that human guts are “habitats” of billions of living bacteria whose total weight can be even 1.3 to 2 kg?! It may sound terrifying, but many of them are needed and helpful. All the bacteria that live in our intestines can be divided into “good” - useful and “bad” - pathogenic. Useful ones make up 75 per cent of immunity and help us get important nutrients and energy from food, accelerate calcium absorption, and vitamin B12 synthesis, regulate blood sugar level, hormones, neurotransmitters ... That’s why it’s important to have them as much as possible.

Today it is not easy to achieve that, since the foods are abundant with additives and preservatives. Nutritionists say that after all, there is a solution: natural plant fibers -



Inulin reduces the pH in the colon, so the lower the risk of cancer

The Guardian of the Overall Health

Inulin is simple. A bag of 5 grams is dissolved in a beverage, and can be added to ice cream and soup, sauces and other. Just mix and get a probiotic meal in a natural way.

ALLERGIES A higher concentration of useful bacteria drastically reduces the risk of allergy.

CANDIDA If we have a handful of good bacteria in the intestines that are also well-fed with inulin, they are able to fight the candida and prevent it from becoming the systemic illness.

IMMUNE SYSTEM BOOST Inulin in food stimulates the creation of T-cells important for the defense system. By feeding good bacteria, we strengthen the immunity of the digestive system, but also the whole organism.

PREVENTION OF THE OBSTIPATION By helping to develop normal intestinal flora, inulin makes it easier to digest. According to many studies, doses of 5 to 10 grams daily stimulate the growth of bifidobacteria and lactobacilli.

SUITABLE FOR DIABETICS In the digestive tract, inulin is converted into inulin-propionate, which leads to increased insulin secretion from the pancreas and contributes to the regulation of blood sugar. At the same time, it does not increase blood glucose levels.

REDUCES RISK CANCER A lower pH in the colon causes a lower risk of cancer because cancer-causing enzymes are inhibited. Bacteria produce butyrate, which is associated with suicide of cancerous cells and increased glutathione antioxidants in the intestines.

PREVENTS OSTEOPOROSIS Calcium is absorbed along with inulin and thus contents of minerals in bones is improved and the density of the bone mass.

PROPERLY FUNCTIONING COLON Enables complete detoxification and prevents the reabsorption of harmful substances into the bloodstream.

inulin, which help to bring the intestinal flora into balance and for the good bacteria to overpower the bad ones. Inulin comes from roots of the chicory plant and represents the reserve carbohydrate of the plant. It belongs to prebiotics - this means that it is food for probiotics. Only one bag of 5 grams of inulin multiplies the number of useful bacteria by several hundred billion.



REDUCES ANXIETY AND DEPRESSION Apart from inulin, serotonin synthesis is regulated, which is 80 per cent synthesized in the intestine. If there is a disorder in the microflora and colon functioning, serotonin synthesis is severely affected.

VITAMIN B₁₂ SYNTHESIS This is very important for vegans, because if they do not eat foods of animal origin and do not have a good microflora, there is a deficit of vitamin B₁₂. But if good bacteria are supplied with inulin, they themselves synthesize vitamin B₁₂.

Only one bag of 5g **multiplies**
the number of useful bacteria
by several hundred billion

MEAL IN A SACHET

Inulin is simple. A bag of 5 grams is dissolved in a beverage, and can be added to ice cream and soup, sauces and other. Just mix and get a probiotic meal in a natural way.



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The secret
of Dusko's
recipes and his
grandfather's
machines





Dusko Djurin, the owner of "Bee&Well" company

In Dusko Djurin's family, they began to extract perga (beebread) from the hives in 1963. Not much is known about this product even today, and at that time knowledge was still more scarce. To make things all the stranger, perga is considered to be an extremely valuable bee product that is three times healthier than royal jelly.

It all started when Dusko's grandfather, a pilot in the Yugoslav Air Force while flying over Fruska Gora noticed how beautiful and fertile it was. Since military pilots retire early, his grandfather decided that his next job would be the beekeeping and that's why he bought a piece of land, precisely on the slopes of Fruska Gora. He soon became a beekeeper with one of the biggest bee farms in Yugoslavia, although it was not challenging enough for him, so he also enrolled in the Faculty of Mechanical Engineering. The knowledge he gained at college was just as much beneficial for the beekeeping.

When Dusko's father got a severe form of asthma, his grandfather was trying with all the natural ways to cure him. Perga gave the best results. That is why he decided to explore its properties and an efficient method of extracting

perga from the hives. Unfortunately, there were almost no written records about this bee product. The only thing the grandfather managed to get were Russian books, written in small editions and with very little information. There was no other solution, so he began to design the first machine for perga extraction in larger quantities. Since then, he has been working on developing devices until the end of his life. He left his family the technology that distinguishes them from other beekeepers.

Today, his grandson Dusko Djurin continues the tradition in the hope that as many people as possible learn about the healing properties of perga. Needless to say, that he regularly visits and maintains the hives on Fruska Gora. "Few people even know that Perga is a bee product and that it is found in the hive. The reason for this is the fact that it is quite challenging to take it out, so the beekeepers are reluctant to tackle this task. Perga is extracted with a sewing needle or with small, special pumps. As if this were not enough to dissuade even the biggest enthusiasts, the amount that is taken out is generally so small that this undertaking is almost not worth the effort," Dusko says. He also points out that even though the process of obtaining perga resembles a Sisyphus's job, perga is unfairly neglected since its medicinal properties considerably surpass all other bee products.

In Europe and even in the rest of the world, almost nobody works with perga. Some data suggests that a certain amount of this bee product is obtained in Russia and China, but the Russians do not pay enough attention to it. On the other hand, the Chinese are treating their bees with

antibiotics beyond measure, so that there is no benefit from these bees and bee products, nor they can be exported.

"Serbia is the absolute leader in perga production because of our serious engagement, we do not treat bees with antibiotics, and we control each batch (amount of extracted perga) in laboratories authorised to test the accuracy and quality. But according to our law perga is categorised as food, even though its medicinal and healing effects are generally known," Dusko explains, revealing the truth that once honey was much healthier. "In general, our knowledge of the benefits of honey is dated from the time when the honey was squeezed manually and when we did not use the centrifugal force for the honey extraction, as it is done today. At that time, the honey had a huge amount of perga, and therefore it was healthier than it is now.



Today's honey, which is made in a honey extractor, has only energy value which has the same effect as when we eat a piece of chocolate. The most valuable in the hive is left in the honeycomb and perga, "Dusko says.

Dusko managed to succeed that this blessing for our organism does not remain at the bottom of a hive. He opened the company "Bee & Well" and used the technology left by his grandfather. Thanks to his family's ideas and machines, he managed to combine perga, which is granulated, with the buttery honey by which he obtained a lacto-fermented product that does not change its shape and structure and can last up to ten years.

The owner of the "Bee & Well" company says that there is a great difference in perga quality depending on the location of the hives. "In collaboration with the Faculty of Biology in Belgrade researches were conducted, and their botanists discovered that there are seven hundred different species of medicinal herbs in Fruska Gora. It is a unique oasis of health in the world because so many plants that provide nectar are concentrated in such a small area. Considering that a bee has a very small radius of movement, it flies over the Fruska Gora and collects pollen from a variety of plants. That provides perga with uniqueness and aroma because it is, in fact, fermented pollen, created by combining the secretion from the salivary glands of bees and pollen." Perga's quality can also be seen with a naked eye, Dusko says because its variety in colours tells you from how many different plants pollen was collected. The more

colourful the perga is the better quality and more variety it has.

Perga is a natural substance that contains rutin, also known as vitamin P. It is beneficial for the purification of blood vessels, which means it can be used in the fight against cholesterol and cardiovascular diseases as it strengthens the walls of blood vessels.

The honey, perga and propolis compound is found in the **PERGA PROPOLIS** product. Dusko says this is a unique preparation in the world, in which propolis is combined with other ingredients and not dissolved. "It's a pure gel of propolis that does not exist anywhere in the world, except here. It is intended for people who have been infected with some bacterium or a virus as this preparation literally 'burns' bacteria and viruses in the shortest time possible. I want to point out that propolis is a natural antibiotic, and in combination with perga and honey, has an even stronger effect," Dusko explains, adding that this product is irreplaceable for sinusitis and colds.

PERGA ENERGY preparation is designed for people who spend a lot of physical energy, athletes, people who train regularly, or those who are exposed to an increased physical effort in some period of their lives. The product is packed in 30 bags that are taken daily instead

Serbia is the absolute leader in perga production because of our serious engagement, **we do not treat bees with antibiotics, and we control each batch (amount of extracted perga) in laboratories authorised to test the accuracy and quality**



of a protein shake since perga belongs to proteins. Dusko reminds us that there are 227 good microorganisms, minerals, vitamins and 39 good bacteria in bee products.

Preparations with perga have shown excellent results in alleviating the symptoms of asthma and allergies, although this may sound strange as pollen belongs to allergens. Dusan explains that when the process of fermentation of pollen with perga is completed, this new compound has nothing to do with pollen, but is an entirely new product. "In the

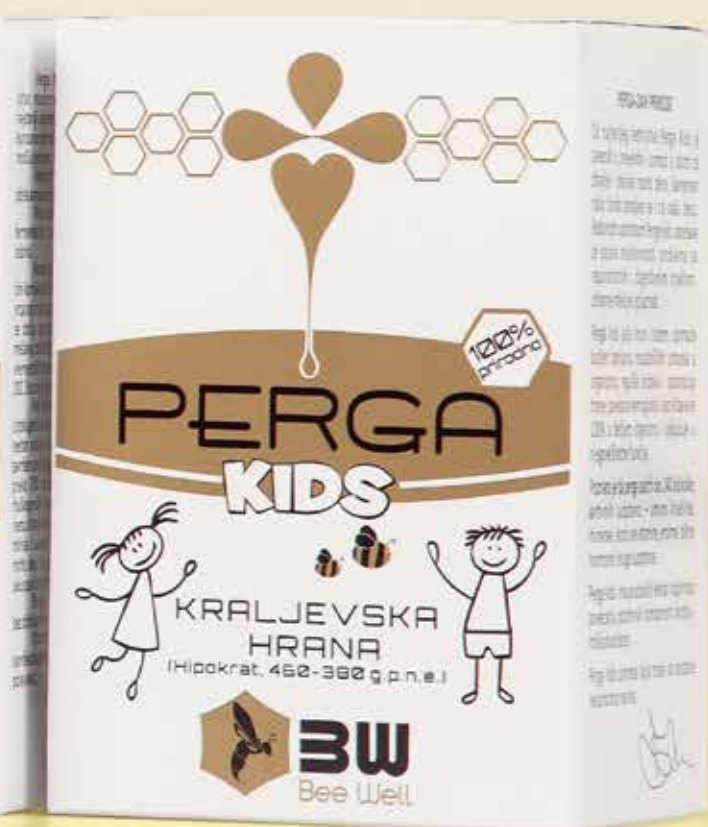
period of 6 months to a year, regular use of **PERGA21**, as well as of **PERGA ENERGY**, can drastically reduce the intensity of pollen allergy.

Dusko says that it is unfortunate that he is the only perga producer, considering that all the burden of product promotion falls on his shoulders. "It appears that the pioneering work has fallen on me, but with all the difficulties I still enjoy

this job. I have invested my own financial and technological resources, and I did not use any loans or subsidies from the state. However, I would appreciate assistance in the form of contacts with partners and customers from foreign markets."

With all of the effort and work, Dusko acknowledges that perga is not sufficiently available and familiar to most people; thus, much more engagement is needed to get the status it deserves. He is, of course, interested in the Western market penetration and hopes to make new medicinal and cosmetic products with perga and bee products in the future. Above all, he wants to succeed in the bee venom's placement for cosmetic purposes. "Bee venom is a natural botox. And when it comes to its healing effect, it is extremely effective in treating rheumatism, bone diseases, and sports injuries," Dusko says, stating that beekeepers have long known about this property in the form of poison. Until he prepares new products, we can strengthen the organism by using perga in this manufacturer's preparations that are tailored to different needs. Perga and perga products from "Bee&Well" can be purchased at better-equipped pharmacies and in some health food stores.

Prepared by Milica Jordan



A photograph of an EV charging station in a parking garage. The station is a white rectangular box mounted on an orange wall, with the brand name 'EVlink' and 'Schneider' visible. A blue charging cable is plugged into the station and connected to a dark-colored car. The car's charging port is illuminated with a blue light. The background shows the interior of a parking garage with orange walls and a concrete floor.

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The logo for SLV, featuring a stylized yellow and black symbol to the left of the letters "SLV" in a bold, black, sans-serif font.



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