



**WORLD BIOENERGY
ASSOCIATION**

Annual report 2017



www.worldbioenergy.org

ANNUAL REPORT FOR THE FINANCIAL YEAR 2017

The Board presents the following annual report.

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INTRODUCTION BY THE PRESIDENT

Dear Members,

The year 2017 has seen interesting developments in the bioenergy sector and WBA was present globally to observe and influence the change. We had successful trips to Graz (Austria), Helsinki (Finland), Tokyo and Nagano (Japan), Sao Paulo (Brazil), Changchun (China), Astana (Kazakhstan), Bonn (Germany), Kiev (Ukraine) and Brussels (Belgium). We feel confident that we were on track with our mission by disseminating success stories of bioenergy around the world. We were able to meet with local policy makers and inform on the success of bioenergy development. Our members have gained information on new markets worldwide.

We have established through our work last year – a wide network of professionals in all sectors of bioenergy. We have farmers, professors, investors, policy makers, media etc. in our contacts and they belong to all bioenergy sectors including biogas, biofuels, solid biomass, charcoal, pellets etc. We are still expanding our networks and one of the most important activity we had last year was the setting up of the 1st branch office in Changchun, China. The branch office serves as a contact point for mutual exchange of information, networking opportunities and delegate mission trips. We will set up new branch offices in Indonesia, Canada, Brazil etc. in 2018 and the aim is to cover all continents of the world.

One of the key tools for promoting technology transfer is our updated online platform of BioED. This tool increases market accessibility by connecting clients looking for information and equipment manufacturers exploring newer markets. We had a new website with added functionality and improved information access which will be an ideal platform for promoting bioenergy.

We also published factsheet, statistics report, mission reports, press releases and news items informing our members and supporters on the latest developments in the bioenergy sector.

Finally, I wish to express my sincere gratitude to our board members who have been instrumental in guiding the organization on a sustainable path. Their inputs have been valuable. My special thanks to our Senior Advisor Karin Haara and our Senior Consultant Heinz Kopetz who are still very actively contributing to promoting the organization worldwide. Last but not the least, my final gratitude is dedicated to our members. Our members and supporters – companies, associations, individuals, institutions etc. support us immensely by contributing financially with the membership fee but also with their expertise. Special thanks to our Official Supporter Enerstena Group of Companies, Silver Supporters Agrana and Lantmännen and the Austrian Government.

Wishing you all a very successful 2018!

*Remigijus Lapinskas,
President, World Bioenergy Association*



Remigijus Lapinskas
President, World Bioenergy
Association

SUMMARY OF ACTIVITIES

WBA had a successful year in 2017.

We started the year by organizing the World Bioenergy Day at the 5th Central European Bioenergy Conference. The 1-day event saw speakers from various countries and bioenergy sectors. They informed the audience about the market developments in their regions. Soon after the conference, we organized our webinar on Pyrolysis Oil. The webinar had leading experts in the pyrolysis oil sector informing on the latest developments.

The 2017 edition of the Nordic Baltic Conference was held in Helsinki, Finland. We participated with a speech on global bioenergy development and a moderation of the concluding session. In April, we had the pleasure of hosting a delegation from Lithuania.

In the summer, we had a very busy period with so many interesting developments. We visited couple of interesting bioenergy conferences in Gothenburg and Kuala Lumpur while we also organized our 2nd webinar of the year on Sustainable Biomass Residues. Most importantly, we had our annual meetings where the members and the board gathered together in Tokyo and Nagano for a very successful mission trip. It included two conferences focussing on wood energy followed by study visits and official meetings.

The mission to Japan was followed by another successful mission trip to Brazil. We were invited by UNICA to attend the Ethanol Summit which gathered together the leading experts in the ethanol sector in Brazil. The mission also included study visits to a 2nd generation ethanol plant and a pellet plant. The third webinar of the year was held in collaboration with AEBIOM and RECP which focussed on the development of bioenergy in Sub Saharan Africa.

With regard to publications, we published our 4th edition of the Global Bioenergy Statistics report in June. The report has been improving over the past years and is gaining recognition as an important publication. This publication was followed by the much-anticipated factsheet on Energy Re-

covery from Waste. The factsheet presented the state of art on the technology and logistics of waste to energy sector.

After a brief break, we were back in September with one of the most important activity of the year – the setting up of the 1st ever branch office which is now located in Changchun, China. We signed MoU's (Memorandum of Understanding) and held interesting meetings with local stakeholders on promoting bioenergy in the region. As a follow up of the meeting, we are expecting a delegation of policy makers, companies and investors to Scandinavia. The successful trip to China was followed by missions to Kazakhstan and Ukraine – two very interesting regions with good renewable energy targets and where biomass has great potential.

Climate change is a major threat and bioenergy has an important role to play. Hence, we attended the COP23 climate conference in Bonn, Germany where we had many activities: side events, exhibition stand, press conferences, meetings etc. We finally concluded the year with our final event: Exporting European Technology organized at the European Bioenergy Future Conference in Brussels, Belgium.

Apart from events and publications, we continued providing valuable service to our members and supporters by assisting in finding data, expanding networks and providing valuable information on different markets. We continued our collaboration with international partners including REN Alliance, REN21, IRENA, Go100% etc. We express our sincere gratitude to our members, partners and supporters for their support.

2017 was great, and we hope we continue the good work towards 2018 as well.

ADMINISTRATIVE REPORT

World Bioenergy Association had a good year in 2017. We continued our mission of promoting sustainable bioenergy globally and to support the business environment for bioenergy.

Membership is the core foundation of any association. We continued to provide service to our members and invited new companies, associations and individuals to join our association. We continued our collaborations with international partners in jointly promoting the sustainable development of renewable energy technologies and at the same time, explored new collaboration possibilities. We participated in various bioenergy events worldwide as speakers, panellists or participant. We published factsheets, newsletters, statistics reports and country mission reports to inform our membership and the wider global audience on the developments in the bioenergy sector. We organized successful trade missions. We became global with our first branch office in China. We ended the year with a note of optimism based on our strong membership base and the focused work plan on promoting bioenergy.

Membership and supporters

Membership forms the foundation of any associations and WBA has been fortunate to have a good basis via our membership. By the end of 2017, we can report that our membership has reached 244 with 30 full members (associations), 75 associated members (companies) and 139 individual members (individuals). Most of the members are based in Europe while we have good presence in other parts of the world as well. Overall, the membership base represents close to 60 countries.

WBA appreciates the strong membership support. We also have a special appreciation to our support members: Enerstena Group of Companies (Lithuania) as Official Supporter followed by Agrana (Austria) and newly joined Lantmännen (Sweden) as silver supporters of the WBA.

Table 1. WBA membership in 2016

	Full members	Associated members	Individual members	Total
Africa	6	3	22	31
America	3	5	23	31
Asia	2	3	32	37
Europe	18	63	57	138
Oceania	1	1	5	7
Total	30	75	139	244

An overview of the various membership schemes and benefits is presented below. We have members from a wide

variety of organizations: companies, associations, research institutes, individuals etc. The membership table below sets a guideline on the annual membership fee.

Communication activities

Secretariat

The secretariat of WBA is responsible for executing the activities of the organization and is located in Stockholm, Sweden. In the first week of July 2017, there was a change in leadership with Bharadwaj Kummamuru (formerly Project Officer) taking over the role of Executive Director from Karin Haara. Karin Haara continued to work with WBA in a new role as Senior Consultant. Viktorija Kazlauskaite was the Project Assistant until September 2017 when she then took up maternity leave and we hope to have her join us in the future. The office recently shifted premises to a new location:

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The office hours are usually from 8.30 till 17.30 hours (CET). We share our premises with Svebio – Swedish Bioenergy Association. WBA welcomes all our members to come and visit us in our office for a Swedish fika (Coffee and Snacks) anytime.

Website

One of our major projects in 2017 was the launch of our new website. The website is available here: www.worldbioenergy.org. We had the assistance from Texus – a web company based in Lithuania. The new website was created keeping in mind the changing needs of the organization.

The website is classified into About Us, News & Events, Resources, BioED and Membership. About Us has all information about the organization, board members, members, secretariat, statutes, annual reports etc. News and Events section deals with the latest postings from the organization. We have gathered all our publications under one title – Resources. Here, you can access our factsheets, statistics reports, mission reports (members only), sustainability guide and magazine. BioED is our online platform for technology transfer which will be launched soon. Finally, we have one section dedicated to our existing members and also information for potential new members including benefits, fees.

We also have various upgrades in the website functioning:

- The homepage has an interactive news feed with scrolling information on latest WBA activities
- WBA has strengthened the payment and registration systems with in-house capabilities
- Now it is easier for members to renew/pay membership via the website

- The member section provides additional functionality for WBA to make changes to meet the needs
- A map on the homepage shows the extent of the organization member network
- Visitors can easily subscribe/unsubscribe from our mailing lists

We encourage all our members to visit the website and suggest improvements

Social media

WBA has social media accounts in Facebook, LinkedIn and Twitter. WBA also created a new company page on LinkedIn and a new YouTube account as well:

Facebook (2 370 followers): <https://www.facebook.com/World-Bioenergy-Association-102103226497174/>

Twitter (730 followers): https://twitter.com/World_Bioenergy

LinkedIn (Group – 1 238 members): <https://www.linkedin-in.com/groups/4154386>

LinkedIn (Company – 73 followers): <https://www.linkedin-in.com/company/world-bioenergy-association>

YouTube (3 subscribers): <https://www.youtube.com/channel/UCLiobHKWzRYFnV77YPYKdDQ>

Member letters

WBA published 6 bi monthly newsletters to our members, which included recent developments in bioenergy, membership details, WBA activities and a list of conferences on bioenergy supported by WBA. The member letters can be accessed via logging into the member section. For members, if you do not remember your login, please drop in a mail to info@worldbioenergy.org

Press release

- 19th January: The role of bioenergy in Europe after COP 21 Paris: Graz Declaration
- 25th January: WBA urges for global bioenergy development
- 24th February: WBA publishes Bioenergy Mission Report: Lithuania
- 1st March: Welcome to the new and improved website!
- 15th March: Misleading report on wood-based bioenergy misinterprets facts
- 5th April: E-Learning SERIES: Large Pockets of Sustainable Biomass Revealed!
- 10th April: Lithuanian Bioenergy experts visit Sweden
- 2nd June: Biomass development in Japan: A key sector with rapid growth potential
- 6th June: President of World Bioenergy Association becomes a co-chairman of the International Conference “BIOMASS FOR ENERGY 2017”

- 12th June: Bioenergy continues as the largest renewable energy source globally
- 03rd July: Meeting with Minister- Counsellor from Embassy of the Republic of Kazakhstan to the Kingdom of Sweden
- 10th July: World Bioenergy Association has a new Executive Director
- 11th July: World Bioenergy Association was pleased to welcome the following members to the organization
- 12th July: Energy recovery from Waste to be a major sector in future
- 24th August: Global Renewable Energy Solutions Showcase obtains status as “COP23 Endorsed Event”
- 02nd September: World Bioenergy Association strengthens collaboration with Jilin Province, China
- 05th September: 3-in-1 Bioenergy Flex Time Webinar by WBA
- 15th September: Kazakhstan has potential for increasing biomass use for energy
- 20th September: A change of focus in energy policy needed to promote bioenergy worldwide
- 06th October: Biomass technology is making important progress in China
- 11th October: Lithuanian’s Bioenergy Day
- 20th October: WBA welcomes new members
- 23rd October: Renewables working together - Side event at COP23
- 15th November: WBA Feedback: Webinars 2018
- 23rd November: Global bioenergy experts gather in Brussels to inform on markets and opportunities
- 29th November: The success story of biomass CHP in Sweden and the case for Japan
- 21st December: Lantmännen joins World Bioenergy Association as Silver Supporter

Publications

Factsheets

Factsheets are concise overview of natural science-based facts of various bioenergy technologies and processes. These are drafted by an expert individual or organization or company in that particular sector and are then reviewed by a team of experts. Once designed, the factsheet is published on the website and then sent out through our online communication channels to an estimated global mailing lists of 50 000 +. These factsheets form the basis of WBA opinion on these particular sectors.

Energy Recovery from Waste

Waste management is a fast-growing environmental business in the world today. One of the many solutions of dealing with the huge amount of waste is to create energy from it. Energy is recovered from the waste either in the form of electricity and/or heat, biogas and other transportation fuels after the primary treatment of waste. There are different

methods to produce energy in a waste to energy plant (WtE) but it is dominated by combustion processes. The feedstock for WtE plants is mostly comprised of municipal solid waste (MSW) collected from the residential and commercial sector. The annual global waste generation accounts for 7-10 billion tonnes in total, out of which approximately 2 billion tonnes are categorized as MSW. Hence, there is a dire need to take care of this increasing problem. Advantages of using an energy recovery from waste system are:

- It reduces the volume of waste upto 96%.
- Production of heat and electricity along with solid waste management.
- Better sanitation, lower risk of contamination and diseases.
- WtE facilities are designed for high emission control.
- It has climate change impact as producing energy from waste avoids potential emissions from landfilling.

Global Bioenergy Statistics

WBA launched the Global Bioenergy Statistics 2017 report in June 2017 at a press conference along the side-lines of European Biomass Conference and Exhibition, Stockholm, Sweden. The report provides an overview of data on the supply and consumption of all sectors of bioenergy and information is structured according to global, continental and country levels.

Renewable supply globally increased to 18.6% in 2014 - a 0.3% increase over the previous year. The growth is prominent in Asian and African continents which together accounted for half of the renewable energy supply while Europe accounted for 10%. In consumption, renewables share increased to 18.6% - a 0.2% increase over the previous year. Asia consumes almost half of the renewable energy consumption globally.

The global renewable electricity generation increased to 5 469 TWh accounting for 23% of the global electricity generation. Biomass is the 3rd largest renewable electricity generating source with generation of 493 TWh. However, solar and wind electricity are the fastest growing sectors with annual growth rates of 45.1% and 25.1%.

Derived heat (heat produced in power plants) and Direct Heat (heat directly consumed in end sectors) are dominated by biomass. The renewables share is 7.1% in derived heat and 27.7% in direct heat. In both sectors, biomass contribution is more than 95%.

The total supply of biomass in 2014 was 59.2 EJ accounting for 10.3% of the global energy supply. The growth is at 2.3% annually. The forestry sector is key for biomass development. Fuelwood accounts for 67% of the biomass feedstock share followed by 7% from charcoal, 6% from recovered wood and 5% from wood industry residues. The

forestry sector as a whole account for 87% of the supply of biomass. More information is available in the report available online.

WBA Response to Chatham House Report

WBA strongly opposed the Chatham House Report: "Woody biomass for power and heat: Impacts on the Global Climate". There are a number of conclusions and recommendations from the report which were not based on facts and current level of understanding of climate and energy issues. WBA emphasized certain key points to dispel the findings of the report:

- Fossil fuel use is the leading cause of climate change
- Biomass is carbon neutral
- Narrow boundaries of time and forest area leads to misleading results
- Forest based biomass is not all bioenergy
- Sustainable forest management is key for healthy forests
- Bioenergy sector has many socio-economic benefits

Mission Report Lithuania

World Bioenergy Association (WBA) undertook three study tours in Lithuania during the year 2016. The results of these missions are highlighted in the WBA Mission Report Lithuania. The main purpose of this mission report is to tell the story about the successful bioenergy development in Lithuania. The report covers the recent developments through the study visits focusing on policy, socio economic development and technology. The aim of the study visits was to establish future connections between World Bioenergy Association (WBA) and the Lithuanian Bioenergy community. The report is member exclusive and can be accessed by logging in to the website member page.

Mission Report China

China has ambitious renewable energy targets with biomass expected to play an important role in the future energy mix. The country is already leading in the installation of renewable power plants globally. For biomass, the country plans to have 30 GW of installed biomass capacity by the year 2020. Regions are already making good progress in converting fossil fuels to biomass and it was an important time for World Bioenergy Association to be present in Jilin Province, China for a bioenergy mission trip. WBA published a report on our findings and it is member exclusive. Members can access the full report by logging into the member page.

Mission Report Mexico

Between 11th and 13th September 2017, the International Renewable Energy Conference (MEXIREC) took place in Mexico City, organized by REN 21 and the government of Mexico. MEXIREC offered an excellent opportunity to compare the global development of the energy transition with the targets defined by COP 21 climate conference held

in Paris in 2015. During the MEXIREC conference, several speakers coming from Mexico informed about the unused potential of biomass in Mexico. In many other countries of Latin America, the situation is similar. The better use of this potential is essential in Latin America to comply with the targets of Paris agreement. A more detailed report is available for members only.

Events

January

5th Central European Bioenergy Conference

With more than 1000 registered delegates and speakers from 30 nations, the 5th Central European Bioenergy Conference (CEBC) continued its tradition as the leading bioenergy event in the region. The event included many bioenergy companies showcasing technologies, equipment and innovation. As always, World Bioenergy Association was present at the event promoting bioenergy.

WBA conducted the World Bioenergy Day on 18th January 2017 at CEBC. The session was a global gathering of bioenergy experts worldwide. The session was opened by President of Austrian Biomass Conference Mr. Josef Plank. The agreement throughout the event was that bioenergy will play a vital role in the future energy mix if the targets for global energy and climate are to be met.

On the occasion of 5th CEBC, the biomass associations (World Bioenergy Association, European Biomass Association, Austrian Biomass Association, Italian Agriforestry Energy Association, Croatian Biomass Association, Fäbverband der Holzenergie) signed a declaration as a guideline for the development of bioenergy in Europe towards 2030.

Pyrolysis Oil Webinar

WBA successfully organized the pyrolysis oil webinar on January 31st, 2017. The webinar had 31 registrants: 17 people from 10 European countries, 11 from Canada, 2 from Australia/New Zealand, and 1 from Korea. The webinar and presentations are available for viewing. If you are interested, please inform WBA at info@worldbioenergy.org

March

WBA at Nordic Baltic Bioenergy, Helsinki

The Nordic Baltic Bioenergy Conference was organized by Svebio and Bioenergia. WBA President Remigijus Lapinskas gave a speech at the conference while our former Executive Director Karin Haara moderated the concluding session which gathered together the heads of various national bioenergy associations in Europe.

April

Mission from Lithuania

World Bioenergy Association (WBA) was pleased to wel-

come an expert delegation from the Scientific and Technical Council, Lithuania to Sweden. The council was founded by the Lithuanian Biomass Energy Association (LITBIOMA). The aim of the study trip was to understand the best practices in Sweden on bioenergy topics like short rotation forestry, district heating systems, ash management and utilization of bioenergy in electricity and transport. The delegation included company representatives from WBA official supporter – Enerstena Group of Companies. It also included representatives from companies, research institutes on agriculture and forestry, universities, confederation of renewable sources, and associations.

May

WBA Mission to Malaysia

WBA was invited to the Annual Board Meeting of the Asia Pacific Biogas Alliance 2017 on the 16th May 2017, in Kuala Lumpur, Malaysia and to present a speech titled 'Global Development of bioenergy' at the conference between 17th – 18th June. The annual meeting and the conference discussed the challenges for biogas development in South East Asia. High tariffs for electricity from production of biogas from palm oil mills is driver but only 30% of the mills in Malaysia were situated near the Grid. On the last day, the delegates had an opportunity of a study tour to a Palm Oil Mill Biogas Plant. During the biogas forum also a meeting with Prof Wan Asma Ibrahim, WBA board member active in the area was performed as well as a discussion about coming fact sheet on Oil Palm as she is an expert in this area of interest.

WBA Webinar: Sustainable Biomass

WBA organized a flex-time webinar on opportunities for sustainable biomass development (forest harvest residues, bark/ sawdust piles, palm empty fruit bunches, acacia thorn bush, etc.). Featured speakers included bioenergy experts from China, Australia, Russia, New Zealand, Canada, Namibia, Brazil, Argentina and Central America. The webinar is still available for download for members at a discount.

WBA Mission to Japan

WBA conducted a Bioenergy mission trip to Japan in partnership with Renewable Energy Institute (REI), Japan during 22nd – 25th May 2017. The mission trip included two conferences, a study trip and annual meetings. The purpose of the mission trip was to understand the rapid growth of the bioenergy sector in the country and to connect with relevant stakeholders in the region.

On May 22nd, WBA visited the office of Renewable Energy Institute and held interesting discussions on development of bioenergy in Japan. In the afternoon, WBA and REI co – organized an international symposium: 'Bioenergy as a strategy for a decarbonized economy – latest findings from the European trends'. The day ended with a reception held at the Swedish Embassy in Japan.

On May 23rd, in the morning session, WBA attended a meeting with delegates from Liberal Democratic Party in Tokyo to give presentations about successful biomass development to members of parliament. WBA also visited two locations utilizing biomass: Saku General Hospital: A new biomass heating system was installed in a general hospital in Saku City, 70 km south east of Nagano City.

Ilzuna Biomass plant: The biomass power plant in the midst of a mountain close to Nagano City has two boilers with capacities of 1.3 MW and 1.5 MW producing electricity using wood chips. They also produce pellets from grasses as fuel for the power plant. The heat is partially utilized for room heating and drying of biomass feedstock.

On May 24th, as part of the International Wood Fair (IWF), Nagano City, WBA co – organized a conference: ‘Woody biomass transforming the local energy system – learning from global experience’ while the next day (May 25th), WBA held its annual meetings – General Assembly, Steering Committee and Board Meeting nr. 38. A new board was elected during the day with two new board members: Ben Moxham (Enviva, UK) and Alarik Sandrup (Lantman-nen, Sweden) joining us.

The whole event was successful largely due to the excellent organization capabilities of REI. Japan has significant forest potential in woody biomass. With high FiT, biomass to electricity sector is increasing. Based on the discussions during the study tour and the conferences two issues have emerged: Biomass for electricity generation and the improvement of the forest management. These issues will be elaborated in the official WBA Bioenergy Mission Report.

June

WBA Mission to Brazil

WBA was invited by UNICA to present a key note speech on the opening of the conference and be a part of a panel discussion about the role of biofuels for the Paris agreement. The conference was held during the 26 – 27 of June held in Sao Paulo.

Brazil is a leader in bioethanol development and it was an interesting event that drew +1000 delegates active in plenary discussion meetings as well as organised discussions on 6 panels ongoing at the same time in the same room. Audience was equipped with earphones to be able to listen to their own sessions. To get an understanding of the state of the art following was on the agenda: Biofuels and the future of mobility, the role of biofuels to mitigate climate change, biofuels future markets etc. The Minister of mines and energy, Fernand Coelho Filho presented the government programme RenovaBio, an initiative that aims to draw long-term policies for the biofuels sector to be able to increase its production. To be able to meet Paris agreement the industry have to nearly double their production of ethanol up to 53

billion litres to 2030. Other important themes were the bio-fuels and future mobility and other markets. Here, the electrical car was discussed, and Toyota Vice president of Brazil foresees a good future of hybrid cars.

WBA was able to shortly inform about WBA Biofuels working Group 2035 to interest companies in Brazil and to invite them to join our initiative. WBA delegates were also able to do a study tour hosted by UNICA to Raizen’s 2nd generation biofuel plant Costa Pinto in PIRACICABA (SP). In 2016, Raizen in partnership with Novozymes produced 7 million litres of cellulosic ethanol.

The visit to Cosan bagasse & straw pellet production plant in Jau (SP) gave us new insights in straw and bagasse pellets where they had established two production lines for each of the resources. This is a cooperation between Cosan and Sumitomo. The main topic of the meeting was new markets for their products.

WBA at Oleofuels 2017 Conference

WBA was invited by ACI to present a speech titled ‘Global overview of the biofuels sector’ at the 10th Oleofuels conference held in Krakow during 27th – 29th June. The conference aimed at gathering stakeholders from companies, investors and associations to discuss the challenges and opportunities for biodiesel development in Europe predominantly. The preceding day, the delegates had an opportunity to visit LOTOS Biodiesel plant.

WBA AEBIOM Webinar

WBA in collaboration with AEBIOM and the Africa-EU Renewable Energy Cooperation Programme (RECP), organized a webinar on biomass residues and waste in Southern Africa. Presentations included local perspectives as well as those of European companies already active in the region. Concrete business opportunities were presented, alongside the RECP’s Finance Catalyst, which provided crucial advice to bankable projects. The recorded version is still available and contact us if you are still interested.

EUBCE, Stockholm

WBA President, Mr. Remigijus Lapinskas, inaugurated the conference during the opening session. WBA also launched the Global Bioenergy Statistics 2017 report and WBA hosted an exhibition stand together with Stockholm city at the EUBCE in Stockholm, Sweden.

September

WBA Mission to China

The purpose of the mission was to attend the opening of the 1st ever WBA branch office in Changchun, Jilin province, China. This was an important milestone in WBA becoming a truly global organization. During the mission, 3

MoU's were signed with Department of Industry and Information Technology, Jilin Province Biomass Heating Association and China New Energy Chamber of Commerce. The mission also included study visits to two biomass installations and a biomass testing facility.

WBA was invited to the 11th North East China Expo – an annual event organized in the North-East Province of Jilin. The invitation was on behalf of the Department of Industry and Information Technology of Jilin Province and facilitated by Great Resources (Jilin) Co. Ltd. As part of the expo, WBA also participated in an international forum titled 'The International Cooperation Forum for Comprehensive Utilization of Biomass Resources and Development of Whole Industrial Chain'.

The result of the mission was very positive in all aspects. China has ambitious renewable energy targets with biomass expected to play an important role in the future energy mix. The country is already leading in the installation of renewable power plants globally. For biomass, the country plans to have 30 GW of installed biomass capacity by the year 2020. Regions are already making good progress in converting fossil fuels to biomass and it was an important time for World Bioenergy Association to be present in Jilin Province, China for a bioenergy mission trip. A detailed report on the mission will be available on the WBA members page soon.

WBA mission to Kazakhstan

World Bioenergy Association was invited to attend the XI KAZENERGY Eurasian Forum held during 7 – 8 September 2017 in Astana, Kazakhstan. The forum is a key event for the region which facilitates discussion of world energy companies on issues related to sustainable utilization of resources, energy access, climate change and alternative energy. The topic of the current forum was 'Securing the future of energy'.

The key sectors for bioenergy development include co-firing coal with biomass, use of biomass for production of heat in district heating sector and industry and the use of excess residues for liquid biofuels production. WBA is working on cooperation with the local stakeholders in increasing the utilization of biomass in the region.

October

WBA in Ukraine

World Bioenergy Association attended two important events in Ukraine – UABIO Biomass for Energy 2017 conference and Sustainable Energy Forum 2017 – both held in Kiev. Ukraine has immense potential for development of bioenergy by utilizing mainly the agricultural sector. There are certain challenges for e.g. political instability that hinders the development of bioenergy sector. WBA is closely discussing with our member UABIO and is exploring a possible delegate visit from Ukraine to Scandinavia.

November

WBA 3 in 1 Webinar

29 video presentations on transportable biomass and global biomass supply were made available for viewing for interested people in the bioenergy sector. The webinars included the compilation of videos and presentations from three successful WBA webinars:

- Torrefied Biomass "New Markets, New Direction, New World"
- Pyrolysis Oil "Markets and Growth in Global Supply"
- Sustainable Biomass "Worldwide Development Opportunities"

COP23

WBA attended the UN Climate Change Conference COP23 in Bonn, Germany during 06th – 17th November 2017. During the event, WBA aim was to share information on the bioenergy sector and its role along with other renewable energy sources in the global energy mix:

- WBA had an exhibition stand during the 1st week (06th – 17th November) of the event where we met government delegates, companies and researchers interested in bioenergy.
- WBA organized a press conference on the important contribution of BIOENERGY in achieving global energy and climate goals on November 7th 2017. Speakers included Remigijus Lapinskas (WBA), Heinz Kopetz (WBA), Kjell Andersson (Svebio) and Dagmar Honsbein (N-BiG) and was moderated by Bharadwaj Kummamuru (WBA).
- WBA along with REN Alliance partners held an official COP23 side event on 6th November 2017 on the renewables working together: Staying below 1.5°C with Renewable Energy.
- WBA has partnered with REN Alliance partners for the GRESS showcase event held during 07th – 08th November 2017.

Overall, it was a very successful event. WBA was able to get some members, develop contacts and generate ideas for new projects. The next COP will be held in December 2018 in Katowice, Poland.

European Bioenergy Future (EBF) conference at Brussels

The European Bioenergy Future (EBF) conference was organized by European Biomass Association (AEBIOM) in Brussels during 21 – 22 November 2017. More than 300 delegates in the bioenergy sector participated in the event.

On the 22nd November 2017, World Bioenergy Association (WBA) organized a session on: 'Exporting Bioenergy Globally: Foreign Demand for European Technology'. Bioenergy is going global. The aim of the session was to gather bioenergy experts from non-EU countries to inform the audience about the bioenergy development focussing on the

potential of European biomass technologies in their respective regions.

WBA Mission in Stockholm

During November 23rd – 24th November 2017, World Bioenergy Association (WBA) organized a study trip for a delegate from Renewable Energy Institute, Japan. The study trip was organized in Stockholm and the aim was to understand the successful development of biomass energy in Sweden. The participants of the study mission trip included World Bioenergy Association, Renewable Energy Institute (Japan), Söderenergi, Svebio, Skogsindustrierna and E.ON.

Projects

BioED

In 2017, the BioED platform was visualized to all existing users (39 companies). IT developers then started adjusting and improving the platform according to the feedback from the companies and WBA needs. It is still under development and the directory currently has 44 companies in the list. WBA will continue contacting companies and recruit them on a trial basis. Once a critical mass of 100 companies is reached, WBA will work out a financing strategy for invoicing the companies.

Branch Offices

WBA successfully opened a branch office in China. The employee is currently responsible for organizing study visits, translations and information exchange with the WBA head office. A proposed study tour in November 2017 of Chinese delegates didn't occur and was postponed to April 2018.

WBA Board Member, Saku Rantanen has initiated plans for setting up a branch office in Indonesia by employing a part time person to register the association in Indonesia and organize logistics, for e.g. bank accounts. WBA is working now on developing a guide on setting up such bioenergy hubs worldwide. The proposals of branch offices in Australia, Canada/USA, Mexico, Brazil and Turkey.

NGO Outreach

WBA considered options of arranging meetings with pragmatic NGO's. The plan was to include 5 annual meetings with business and industry involved in meetings. The initial meetings will focus on introductions while certain themes (e.g. carbon neutrality, food and fuel etc.) should be the main focus in rest of the meetings. The current project will be implemented in 2018.

Biofuels Working Group

World Bioenergy Association (WBA) proposed to organize and host a Working Group of the Biofuels Industry (BWG) to formulate a biofuels strategy towards 2035 as seen

by the biofuel industry. The aim is to develop a strategy paper for the global development of biofuels towards 2035. The document would take into account the ambitious targets of limiting global warming to well below 2 °C as agreed in the Paris Climate Agreement. The expected role of biofuels to meet these targets will be explained. It will serve as a guideline for policy makers from the global biofuel industry. All the companies in the biofuels supply chain are invited to send in their interest via email to WBA

Collaborations

In the mission to promote sustainable bioenergy development in the overall context of a renewable energy, it is important to work with like-minded partners. WBA works with many international organizations in varying capacities and 2017 saw the following developments:

REN Alliance

WBA works closely with REN Alliance comprising of leading renewable energy organizations including ISES (International Solar Energy Society), IHA (International Hydro-power Association), WWEA (World Wind Energy Association) and IGA (International Geothermal Association). We regularly participate in meetings and co-organize events at COP climate conferences. In 2017, we participated in a REN Alliance side event at COP23 in Bonn, Germany. In 2018, WBA assumes the role of leadership of the REN Alliance.

REN21

REN21 is a policy network promoting renewables in the 21st century. Our association associates with REN21 by contributing with expert reviews on documents related to bioenergy, for e.g. Global Status Reports. We contributed to REN21 GSR 2017 and also participated in their Steering Committee meetings.

IRENA

IRENA is the leading governmental organization promoting renewable energies globally. WBA already has a letter of cooperation in the statistics project. We regularly contribute with reviews on their reports on bioenergy. In 2017, we participated in various IRENA events at EUBCE conference and COP23 focussing on promoting sustainable bioenergy development.

Go100%

WBA is the founding member of the Go100% campaign. The campaign has now become a legal entity based in Bonn, Germany. WBA participated in the General Assembly meeting during the COP23 in Bonn in November.

Other partnerships include IEA (International Energy Agency), FAO (Food and Agricultural Organization), ISO (International Standards Organization), WEC (World Energy Council) and GCF (Green Climate Fund).

Organization

WBA meetings

WBA organizes various meetings throughout the year. These include board meetings, office meetings and attendance in international events:

Board meetings

As per statutes, WBA organizes 4 – 5 board meetings annually. In 2017, we organized 2 meetings via conference calls and 3 physically in Japan, Austria and Belgium:

- 17.01: BM36 in Graz, Austria
- 28.02: BM37 via conference call
- 25.05: BM38 in Nagano, Japan
- 25.09: BM39 via conference call
- 22.11: BM40 in Brussels, Belgium

Conference attendance

January

- 18.01 – 20.01: Central European Biomass Conference, Graz, Austria
- 31.01: Pyrolysis Oil Webinar

March

- 06.03 – 07.03: Baltic Sea Future, Stockholm, Sweden
- 29.03 – 31.03: Nordic Baltic Bioenergy, Helsinki, Finland

April

- 05.04: Svebio Annual Meetings, Stockholm, Sweden
- 06.04 – 07.04: Lithuania Delegation Visit, Stockholm, Sweden

May

- 18.05: Advanced Biofuels Conference, Gothenburg, Sweden
- 19.05 – 25.05: WBA Annual Meetings, Tokyo/Nagano, Japan

June

- 12.06 – 15.06: 25th European Bioenergy Conference and Exhibition, Stockholm, Sweden
- 12.06 – 13.06: Argus Biofuels Asia 2017, Singapore
- 14.06 – 15.06: Argus Biomass Asia 2017, Singapore
- 28.06 – 29.06: UNICA Ethanol Summit, Sao Paolo, Brazil
- 28.06 – 29.06: Oleofuels 2017, Krakow, Poland

August

- 01.08 – 02.08: 11th China New Energy International Forum, Beijing, China
- 14.08 – 15.08: 6th Asia Pacific Biomass Exhibition, Guangzhou, China
- 31.08: 11th North East China Expo, Changchun, China

September

- 01.09 – 02.09: 11th North East China Expo, Changchun, China
- 07.09 – 08.09: KAZENERGY Forum, Astana, Kazakhstan
- 11.09 – 13.09: MEXIREC Conference, Mexico City, Mexico
- 19.09 – 20.09: UABIO Biomass for Energy Conference, Kiev, Ukraine
- 26.08 – 28.08: Expo Biomassa, Valladolid, Spain

October

- 04.10 – 05.10: Bioenergy Insight 2017 Conference and Expo, Edinburgh, Scotland
- 11.10: Sustainable Energy Forum, Kiev, Ukraine

November

- 06.11 – 17.11: COP23, Bonn, Germany
- 07.11 – 08.11: Global Renewables Energy Showcase Event, Bonn, Germany
- 08.11 – 09.11: European Biomass to Power 2017
- 14.11 – 15.11: World Climate Summit 2017, Bonn, Germany
- 21.11 – 22.11: European Bioenergy Future, Brussels, Belgium

Board members

1. Remigijus Lapinskas, World Bioenergy Association (Lithuania)
2. Werner Sitzmann, Amandus Kahl (Germany)
3. Douglas Bradley, Climate Change Solutions (Canada)
4. Andrew Lang, World Bioenergy Association (Australia)
5. Benard Muok, Jaramogi Odinga Odinga University of Science and Technology (Kenya)
6. Tanay Sidki Uyar, Eurosolar Turkey and Bioenergy Association of Turkey (Turkey)
7. Laercio Couto, Renabio (Brazil)
8. Jean Marc Jossart, European Biomass Association (Belgium)
9. Saku Rantanen, Tasma Bioenergy (Singapore)
10. Geraldine Kutas, UNICA (Brazil)
11. Christoph Pfemeter, Austrian Biomass Association (Austria)
12. Wan Asma Ibrahim, Forest Research Institute (Malaysia)
13. Mika Ohbayashi, Japan Renewable Energy Institute (Japan)

14. Hisashi Kajiyama, Bioenergy Research and Investment Inc. (Japan)
15. Hazir Farouk, Sudan University of Science and Technology (Sudan)
16. Jörgen Sandström, Addax Bioenergy (Switzerland)
17. Alarik Sandrup, Lantmannen (Sweden)
18. Kelvin Hong, Great Resources (China)
19. Ben Moxham, Enviva (UK)

Nominating Committee

- Gustav Melin, Svebio, Sweden (Convenor)
- Ralph Sims, Massey University, New Zealand
- Kent Nyström, Former President of WBA, Sweden

Secretariat

- Remigijus Lapinskas, President, Lithuania
- Bharadwaj V Kumamuru, Project Officer, Sweden/India (1/7 - Present)
- Karin Haara, Senior Advisor, Sweden (1/7 - Present, Formerly ED)
- Heinz Kopetz, Senior Consultant, Austria
- Viktorija Kazlauskaitė, Project Assistant, Sweden/Lithuania (1/10 - Maternity Leave)

Members of Honour

- » Kent Nyström, Stockholm

Full members

Spanish Bioenergy Association, Swedish Bioenergy Association, European Biomass Association, proPellets, Energy Farm International Foundation, CZ Biom - Czech Bioenergy Association, Eurosolar Turkey, German BioEnergy Association, African Bioenergy Association, Austrian Biomass Association, Norsk Bioenergiföreningen, Fachverband Biogas e.V, Bioenergy Association of New Zealand, New World Hope, Advanced Biofuels Association, Bioenergy Association of Turkey, Lithuanian biomass energy association, Swedish Peat Producers Ass., Bioenergy 2.0 Association, the Bioenergy Association of Finland, Biomass Energy Efficient Technologies Association, Bioenergy Association of Ukraine, UABio, Central Africa Network for Renewable Energies, Namibia Biomass Industry Association, Cluster VALBIOM Maroc, ePure, Croatian Biomass Association

Associated members

First Bioenergy, Elmia AB, Scandinavian Forestry & Engineering, Firefly AB, CPM Europe BV, C.F. Nielsen A/S, W.Kunz Dry Tec AG (Swiss Combi), Ekman & Co AB, Bron-

swerk Heat Transfer BV, Herz Energietechnik GmbH, Energie Steiermark AG, Agrana Group, Ingenieurbüro Riebenbauer, Forstbetrieb Regnier-Helenkow, Sunbird Bioenergy Ltd, BDI - BioEnergy International AG, Sveaskog Förvaltnings AB, Lund University Biofuels, Bioenergie Wärmeservice GmbH, Södra Skogsägarna ek. för., Probstdorfer Saatzucht GmbH & Co Kg, nahwaerme.at Energiecontracting GmbH, nahwaerme.at Energiecontracting GmbH, nahwaerme.at Energiecontracting GmbH, HSH Nahwärme & Photovoltaik GmbH, Bioenergie Tirol Nahwärme GmbH, TB Harald Kaufmann GmbH, Meva Energy, MAB Powertec Oy, Siemens Industrial turbomachinery AB, WSP Sverige AB, World Thermal Service AB, ENERSTENA Group, Mongolian Federation of Engineering organizations, Amandus Kahl GmbH & Co.KG, Pragati, Koraput, Imperiya Agro, Syn-craft, Henriksson Salix AB, Repotec GmbH & Co KG, ANER, ENOIL Bioenergies SA, GEXCON UK Ltd., MANTEX AB, Reliance Industries Ltd., Investancia Paraguay SA, Pellet Mexico Bioenergia S.A., Lantmännen Energi AB

Individual members

Dirk Volkmann, Anders Rydåker, Laercio Couto, Bruce A. Brewer, Manny Deol, Kes McCormick, Jean-Marc Jossart, Dan Asplund, Kulluru Krishan, H.E. Martina Martinez, Lucy Kabura Wangai, Niels Madsen, Heinz Kopetz, Benard Muok, Karin Haara, Koike Koichiro, Ernst Scheiber, Douglas Bradley, Hubert Grienberger, Ohno Kosuke, Noel Carrillo Avila, Klemens Unger, Pär Oscarsson, Rudolf Strasser, Harry Stokes, Matthias Grill, Hermann Wieser, Tico Cohen, Vijaya Kumar Garlapati, Omer Adam Bakheit, Kendal Bradburn, Bharadwaj Kumamuru Venkata, Hubert Hausenauer, Nasr Eldin Mohammed Elhussein, Christiane Loidl, Abdelaziz Emad Atabani, P. Abdul Salam, Abiodun Agoro, Autilig Cheong, Mwape Chikonkolo Mwewa, Saku Rantanen, Wang Hui, Radhika Singh, Andrew Lang, Elyas Medeiros, Hironao Matsubara, Elton Fábio Busarello, Hazir Farouk, Christian Eduardo Hernandez Mendoza, Rainer Janssen, Remigijus Lapinskas, Mauro Prestipino, Hanisom Abdullah, Dilip Khatiwada, Parlindungan Purba, Teshale Woldeamanuel Habebo, Bill Adams, Louis-Philipp Schulte, Lucio de Moura Netto, Gilson Vicente Borin, Luiz Olinto Monteggia, Luiz A Horta Nogueira, Ellyas Alga Nainggolan, Stephen van Schaik, Chris Jorgensen, Umesh Chandra, Leia McIntyre, Vicky Skoulpu, Richard Sulman, Sawasan Sanhory, Gleison Augusto dos Santos, Werner Sitzmann, Géraldine Kutas, Rogier Buker, Henrik Lundberg, Thomas Digby, Heini Glauser, Kassi Bagaman, Rune Brusletto, Esa Vakkilainen, Per Löfberg, Marijan Kavran, Hannu Ikavalko, Kent Nyström, Vandit Vijay, Moritz Fecker, Panaite Cristian, Mohammed Khalid Khair, Dagmar Honsbein, Seppo Huurinainen, Vivekanand Vivekanand

Official supporter

- **Enerstena Group of companies**

Silver supporter

- Agrana
- **Lantmännen**

4. FUNDING

WBA is grateful for the funding we receive from our membership. The companies, associations and individuals comprising our member base support us immensely. Apart from the core membership, we are also thankful for the support

of our supporter members as well as the support from the Austrian Government. Finally, we are thankful for the support we get via sales of our publications.

- Enerstena Group of Companies, Lithuania
- AGRANA AG, Austria
- Lantmännen Energi AB, Sweden
- City of Stockholm
- Business Region Stockholm

Detailed analysis of WBA financing is available in the authority version and will be available upon request. Please send your request info@worldbioenergy.org

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OFFICIAL SUPPORTER OF WBA 2017:



SILVER SUPPORTER OF WBA:



Stockholm 2017- 02 - 22

Board members below have signed the Annual Report for 2017:

Remigijus Lapinskas, President

Werner Sitzmann

Christoph Pfemeter

Douglas Bradley

Wan Asma Ibrahim

Andrew Lang

Mika Ohbayashi

Benard Muok

Hisashi Kajiyama

Tanay Sidki Uyar

Hazir Farouk

Laercio Couto

Jörgen Sandström

Jean Marc Jossart

William Strauss

Saku Rantanen

Kelvin Hong

Geraldin Kutas

Kes McCormick

My audit report has been submitted and signed 2017

Maria Wigenfeldt, Authorized public accountant



World Bioenergy Association

– the GLOBAL VOICE OF BIOENERGY

Mission:

To promote the use of sustainable Bioenergy globally & support the business environment for bioenergy.

Together with our members

- We work for an increased use of biomass in the global energy system in the markets for heat, electricity and mobility
- We follow the principles of sustainable, efficient and economic biomass development
- We influence and inform the public opinion in favor of sustainable biomass solutions worldwide and in individual countries
- We promote bioenergy as an important player in the global climate mitigation policy
- We cooperate with global institutions such as UNEP, UNFCCC, IPCC, IEA, IEA Bioenergy, IRENA, REN Alliance, FAO, REN 21 etc. towards the target of 100% Renewable

How we work

- **Office** in Stockholm, Sweden
- **Our board:** 19 members from 5 continents
- **Our members:** Companies, associations, individuals from all over the world
- **Main areas:** Biomass potential, sustainability of biomass, pellets, small scale heat with biomass, combined heat and power, conventional & advanced biofuels, biogas, carbon neutrality of biomass, bioenergy statistics, biomass trade, bioenergy policy, traditional biomass
- **Main activities:** Fact sheets, statistics, position papers, policy reports, workshops, equipment directory press-releases, networking, presentations in conferences & exhibitions

What kind of membership is possible

Full members

Bioenergy associations on regional, national or international level, (fee between 300 and 5 000 Euro annually, depending on situation and size)

Associated members

Companies, energy agencies, research institutes, consultants working in the field of bioenergy (fee between 300 and 5 000 Euro annually, depending on situation and size)

Individual members

Individuals, interested in the global development of bioenergy as sustainable and renewable energy source (fee 50 Euro annually)

Benefits of WBA membership

- Strengthen of the lobbying in favor of biomass on a global scale
- Exchange of information and experience between the bioenergy sector worldwide
- Possible cooperation in working groups and projects
- Access to new global studies and information about bioenergy

We invite you: join WBA!