



**WORLD BIOENERGY  
ASSOCIATION**

# Annual report 2018



[www.worldbioenergy.org](http://www.worldbioenergy.org)

# ANNUAL REPORT FOR THE FINANCIAL YEAR 2018

The Board presents the following annual report.

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### World Bioenergy Association

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## INTRODUCTION BY THE PRESIDENT

Dear Members,

It is my pleasure to introduce this concentrate of knowledge and data of the activity of our Global organization, which stands for the development of Bioenergy worldwide and better utilization of renewable, carbon neutral, very often – local energy resource. Development of biomass procurement and production of heat, electricity and transport fuels out of it leads forward entire industrial sector, creating need for research and development, giving chances to small and medium enterprises start playing in the market and guaranteeing additional income to millions of people in the world. How bioenergy became such an important, actually - the largest renewable energy source?

The world is going through the period of huge challenges. Continuously increasing population, rising demand for food, global mobility of people, civilization achievements and the associated growing demand for energy has fell a huge burden on our planet Earth. Around 14 billion tons of oil equivalent fuel is consumed every year in order to deal with the energy supply. More than 40 billion tons of CO<sub>2</sub> and other greenhouse gases are emitted annually from fossil fuel consumption, which causes tremendous damage to the atmosphere, sometimes causing even physical problems of human survival, but definitely influencing our climate and raising a sharp question whether humanity will be able to stop global warming with the help of new technologies or should we start considering adaptation to it. Increasing weather extremes, namely, unusual heat and cold waves, especially strong winds and hurricanes, heavy rains and droughts, but above all—melting ice caps, mountain glaciers and rising global sea levels still show that the easiest way would be to combat the climate change moving away from fossil fuel and developing renewable energy sources, rather than trying to control the raging nature provoked by ourselves.

World Biomass Energy Association, being a Global organization that brings together business, science, civic initiatives and having the opportunity to get acquainted with the situation in all the regions of the world, may state that climate change is a key factor encouraging the expansion of renewable energy including biomass energy development. Moreover, some countries, where biomass resources are large and inexpensive, find it more beneficial, profitable and clean to use biomass instead of the fossil fuels like oil, gas and coal. For some countries it becomes an opportunity to solve the issue of the energy dependence: local renewable energy sources allow them to abstain from imports of fossil fuel from hostile countries and avoid the influence coming from those countries. In any case, the domestic biomass always improves the country's import-export balance, because the money remains inside the country. This also has a positive impact on job creation and regional development of the country, as biomass is grown and processed in the rural areas, where, as a rule, job demand is higher than in urban areas. Paying taxes positively influences municipal budgets. In some places biomass energy (especially in the production of biogas or otherwise using waste for energy or fuel production) allows to solve environmental problems, whereas about additional opportunities in the fight against climate change it has already been mentioned.

In 2018 we have had number of events where the voice of the WBA was sound and activities visible. We have improved our cooperation with IRENA, International Renewable Energy Agency, offering them a number of possible projects and services, where WBA could play a role with its expertise and knowledge. We joined “Coalition for Action Working Group on 100% Renewable Energy” in order to show the adequate role of Bioenergy in the mix of all renewable energy sources. We used possibilities to address audience at different conferences in different part of the World, bringing from country to country best practices and success stories. We organized study tours and exchange mission trips for business delegations and decision makers, showing the practical implementation of bioenergy technologies and excellent results of such a performance. We used possibility

to reach every interested person or company by organizing global webinars with important topics in agenda and the best international speakers. For the first time in our history we organized our “Global Bioenergy Forum” alongside with COP- 24 events in Katowice, Poland, the country which needs a rapid transition from coal to renewable energy. And everywhere, cooperating on bilateral or international level we promoted “Fossils fuel exit strategy”, as only solution to reach the targets of Paris agreement, and “Carbon tax”, as most clear and effective instrument in order guarantee this rapid transition from fossil to renewable energy.

I would like to thank all and everyone of our more than 250 members from more than 60 countries for their input and activity. Special thanks to the sponsors and supporters of our organization – “Enerstena group”, “Agrana” and “Lantmännen”. The active participation of our Senior consultants and reviewers of different factsheets and Statistical report guaranteed the quality of data and right evaluation of the processes of bioenergy development all over the world. This is the way, how we prove the role of Bioenergy globally.

Let's continue this work together!

*Remigijus Lapinskas,  
President, World Bioenergy Association*



Remigijus Lapinskas  
President, World Bioenergy  
Association

## SUMMARY OF ACTIVITIES

World Bioenergy Association had a good year in 2018. We continued our mission of promoting sustainable bioenergy globally and to support the business environment for bioenergy.

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 by setting up branch offices around the world. We ended the year with a note of optimism based on our strong membership base and the focused work plan on promoting bioenergy.

The following sections detail the specific activities of the association throughout the year 2018.

### Membership and supporters

Membership forms the foundation of any association and WBA has been fortunate to have a good basis via our membership.

By the end of 2018, we can report that our membership has reached 261 with 34 full members (associations), 83 associated members (companies) and 144 individual members (individuals). Most of the members are based in Europe while we have good presence in other parts of the world as well including Asia, Europe, Oceania and Africa. Overall, the membership base represents more than 60 countries from all the continents.

WBA appreciates the strong membership support. Our special appreciation to our support members:

- Enerstena Group of Companies (Lithuania) as Official Supporter
- Agrana (Austria) and Lantmännen (Sweden) as silver supporters of the WBA.

#### WBA membership in 2018

	Full members	Associated members	Individual members	Total
Africa	6	3	22	31
America	4	6	24	34
Asia	3	7	34	44
Europe	20	66	59	145
Oceania	1	1	5	7
Total	34	83	144	261

An overview of the various membership schemes and benefits is presented. We have members from a wide variety of organizations: companies, associations, research institutes, individuals etc. Our membership also covers all sectors of bioenergy including equipment manufacturers, biofuel producers, pellet producers, research institutions, national and regional associations in bioenergy and renewable energy, and individuals from all sectors of bioenergy.

The membership table below sets a guideline on the annual membership fee.

#### Membership types and characterization

Type	Category of members	Membership Fees
Full	National and Regional Bioenergy and related associations	300 - 5 000 Euros/year
Associated	Companies, consulancies, energy agencies, research institutions etc.	300 - 5 000 Euros/year
Individual	Individual persons	50 Euros/year

### Secretariat

The secretariat of WBA is responsible for executing the activities of the organization and is located in Stockholm, Sweden.

The secretariat is headed by the Executive Director and is supported by Project Assistants, Interns, Advisors and Consultants. The secretariat works closely and reports the activities to the Board Members and the President on a regular basis. The current office location is as follows:

World Bioenergy Association  
Kammakargatan 22, 111 60  
Stockholm, Sweden  
+46 8 441 70 84

The office hours are usually from 8.00 till 17.00 hours. WBA welcomes all our members and non members working in the bioenergy sector to come and visit us in our office for a Swedish fika (Coffee and Snacks) anytime.

## Communication Activities

### Website

WBA has a website available at: **[www.worldbioenergy.org](http://www.worldbioenergy.org)**. Updates about WBA publications, events, news, reports, photos etc. are posted on the website on a regular basis.

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 which is currently under development. Finally, we have a section dedicated to our existing members which also includes information for potential new members.

### Social media

WBA has social media accounts in Facebook, LinkedIn, Twitter and a new YouTube Channel and these accounts are followed by many followers who would like to keep updated about WBA activities. Any information posted on the website is also followed by a post on our relevant social media channels.

- **Facebook** (2 638 followers): <https://www.facebook.com/World-Bioenergy-Association-102103226497174/>
- **Twitter** (1 122 followers): [https://twitter.com/World\\_Bioenergy](https://twitter.com/World_Bioenergy)
- **LinkedIn (Group)** – 1 304 members): <https://www.linkedin.com/groups/4154386>
- **LinkedIn (Company)** – 121 followers): <https://www.linkedin.com/company/world-bioenergy-association>
- **YouTube** (3 subscribers): <https://www.youtube.com/channel/UCLiobHKWzRYFnV77YPYKdDQ>

### Member letters

WBA publishes 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. Request for articles is sent out at the start of the month to all members.

The member letters can be accessed via logging into the member section. For members who do not remember your login, please drop in a mail to [info@worldbioenergy.org](mailto:info@worldbioenergy.org).

### Press release

Press releases are one of the primary modes of communication for WBA. The press releases follow various WBA activities including publications and event information or important bioenergy developments. These are posted on our website and sent through our online communication

platforms.

Following is a list of all press releases we issued in 2018.

- 25<sup>th</sup> January: WBA promotes sustainable development of bioenergy in Abu Dhabi
- 22<sup>nd</sup> February: WBA joins IRENA Coalition for Action
- 01<sup>st</sup> March: WBA signs agreement to promote bioenergy in Croatia
- 21<sup>st</sup> March: Annual Meetings 2019
- 03<sup>rd</sup> April: WBA to host delegation from China
- 12<sup>th</sup> April: WBA and IRENA discuss collaboration opportunities in Bioenergy
- 24<sup>th</sup> April: Annual Meetings 2018 held in Stockholm
- 27<sup>th</sup> April: WBA Steering Committee elects a new Board 2018
- 17<sup>th</sup> May: New Webinar on Carbonised (Torrefied) Biomass
- 18<sup>th</sup> June: Bioenergy to contribute towards regional cooperation
- 19<sup>th</sup> June: Socio Economic Benefits Webinar
- 27<sup>th</sup> June: Efficient Supply Chinas will unlock immense biomass potential
- 29<sup>th</sup> June: Lithuania adopts new energy strategy
- 08<sup>th</sup> August: Be a Superhero for Sustainable and 100% Renewable Energy
- 10<sup>th</sup> October: Sweden Ukraine Bioenergy Cooperation Forum
- 15<sup>th</sup> October: WBA publishes Bioenergy Magazine Issue nr. 6
- 25<sup>th</sup> October: WBA organizes study trip for high level Ukrainian delegation
- 19<sup>th</sup> November: WBA elected to REN21 Steering Committee
- 21<sup>st</sup> November: China Study Mission 2018
- 23<sup>rd</sup> November: World Bioenergy Forum 2018
- 04<sup>th</sup> December: Study Mission Trip – Changchun, China
- 04<sup>th</sup> December: WBA at COP24 in Katowice
- 05<sup>th</sup> December: International Bioenergy Conference organized in Poland
- 19<sup>th</sup> December: WBA welcomes the finalization of Paris rulebook
- 19<sup>th</sup> December: Invitation Annual Meetings 2019

## Publications

### Factsheets

WBA publishes factsheets on various bioenergy technologies and processes. The aim of the factsheets is to increase awareness about bioenergy and bring rational arguments in support of sustainable development of bioenergy by spreading fact-based information.

These factsheets are produced by a lead author chosen by WBA. The lead author in collaboration with an expert group including researchers, private sector, governmental agencies, civil society etc. develops the factsheet.



Once designed, the factsheet is published on the website and then sent out through our online communication channels to an estimated global mailing list of 50 000 +. These factsheets form the basis of WBA opinion on these particular sectors.

In 2018, WBA published an important factsheet on the 'Biomass Supply Chains – Harvesting & Collection, Pre-Treatment and Upgrading, Storage, Transportation and Handling':

#### Biomass Supply Chains

Bioenergy plays a key role in mitigating climate change in all sectors of energy supply and the supply chains of biomass are crucial in order to realize the full potential of bioenergy. The technology offers a unique degree of flexibility compared to other renewable energy sources not only in the variety of feedstock, but also the various production pathways, end products and its use in end energy sectors of heating, cooling, electricity and transportation. The efficient operation of all components of supply chains including harvesting and collection, pre-treatment, upgrading, storage, transportation and handling is important to ensure a stable supply and reduce overall costs of the technology. This factsheet focusses on supply chains of feedstock sectors including forestry and agriculture.

The first step in the biomass supply chains is the harvesting and collection of feedstocks in the forest or the agriculture field which are described in the factsheet. In forestry, the system of felling trees with related machinery can be divided into two categories: Cut to length and tree length systems - each offering its own set of pros and cons. During harvesting of biomass from forest in conventional systems, it is important to leave out impurities to get higher energy content of the final feedstock. This will avoid challenges in the rest of the supply chain. For agricultural biomass, harvesting is usually done in easily accessible areas, but highly dependent on the seasonal variation of the agriculture sector.

Once the biomass is harvested and collected, pre-treatment is done to ensure a high standard of fuel which include drying and/ or densification to pellets etc. Such processes ensure proper specifications of biomass including higher energy content and lower moisture content so as to facilitate ease of transportation and storage of the fuel. Various modes of transportation including road, rail and sea are used depending on the feedstock volumes and cost of the transportation.

Feedstock costs associated with supply chains form the major share of the total cost of the technology. The overall cost is highly case dependent and the successful management of the supply chains is critical for the success of any investment. Thus, improving the supply chains in terms of efficient harvesting, collection, pre treatment, storage, transport and handling will unlock the immense potential of the technology source.

## Global Bioenergy Statistics

The flagship publication of WBA is the Global Bioenergy Statistics (GBS). The GBS reports have garnered widespread support providing comprehensive overview of the global bioenergy sector. The reports present a fact based overview of all relevant energy sectors including wood pellets, biopower, bioheat, liquid biofuels, wood chips, biogas, charcoal, renewable energy etc.

The GBS reports are published online on our website and are usually downloaded (for free) by a diverse group of stakeholders including investors, research community, policy makers, private sector and civil society. The printed copies of the report are distributed at major international bioenergy and renewable energy conferences.

In 2018, WBA published the 4<sup>th</sup> edition of the Global Bioenergy Statistics report.

#### Global Bioenergy Statistics 2018

The global energy system depends on fossil fuels. In 2016, Coal, Oil and Natural Gas constituted 81% of the total primary energy supply of the world. Renewables accounted for only 14% and have seen an increase of 1% share since 2000.

The Total Primary Energy Supply of energy sources is the highest in Asia due to the large energy supply and use in China, India and other rapidly developing emerging economies in the region. However, in terms of the share of renewables, African continent has the highest share in their energy supply. Almost 50% of the energy supply in Africa comes from renewables - predominantly from biomass-based sources. In comparison, 10.5% of the energy supply in Europe is renewables.

The key indicator for the progress of renewables globally is the share of renewable energy sources in the gross final energy consumption. In 2016, renewables accounted for 17.9% of the global energy consumption. Since 2000, renewable energy share has increased only by 0.3% even though almost 20 EJ of renewable energy consumption was added to the global energy mix.

Bioenergy is the largest renewable energy source globally. In 2016, Total Primary Energy Supply of biomass resources was 56.5 EJ - constituting 70% of the share among all renewable energy sources. Hydropower share was at 18% globally. In continents, the role of biomass is very prominent. In Africa, more than 90% of the total primary energy supply of renewable energy sources is from biomass. In every other continent, biomass is the largest renewable energy source in terms of supply and accounting from between 40% (Oceania) to almost 96% in Africa.

Electricity from hydropower is the largest renewable electricity source globally. In 2016, 6 119 TWh of electricity was produced globally from hydropower - constituting 68% of the overall renewable share. Biopower or electricity from biomass is the 3rd largest renewable electricity generation source. In 2016, 571 TWh of electricity was produced from biomass sources. The electricity sector has numerous renewable energy options for renewable electricity.

The derived heat sector (Heat produced in power plants)

is limited in terms of its capacities to decarbonize from fossil fuels. In the limited options available, biomass is the most prominent choice. 1.05 EJ of bioheat was produced in 2016 followed by 0.04 EJ of geothermal heat and 0.01 EJ of solar thermal. In 2016, 96% of the derived renewable heat was from biomass and waste sources.

The other end use of heating sector is direct heat, i.e. direct consumption of energy sources in the end use sectors of agriculture, residential (also includes cooking), commercial etc. and excluding the transport sector. Renewables consumption in direct heating is dominated again by biomass as was the case with derived heating. The use of biomass for direct heating amounted to 42.4 EJ in 2016. To compare, the total energy supply of biomass in 2016 was 56 EJ.

The direct use of biomass for heating and cooking etc. is the largest part of the bioenergy end use. In effect, more than 80% of the biomass supply is used for direct heating and cooking - predominantly in Asia and African continents.

Electrification in the transport sector is making considerable progress. Apart from electrification using renewable electricity, biofuels are the only sustainable alternative to decarbonizing the transportation sector. In 2016, 3.43 EJ of biofuels was used in the transport sector accounting for 3% of the share in the total energy use in transport sector. The use of electricity in transport was 1%. During 2000 - 2016, the consumption of biofuels in transport increased from 1% to 3% while electricity use in transport has remained at 1%.

Biomass supply comes from a variety of feedstock - wood fuel, forestry residues, charcoal, pellets, agriculture crops and residues, municipal and industrial waste, biogas, biofuels etc. Broadly, the supply can be classified into three main sectors - forestry, agriculture and waste. In 2016, the total primary energy supply of biomass was 56.5 EJ. 87% of the supply was in the form of solid biomass - wood chips, wood pellets, fuel wood etc. 5% of the supply is from waste sources - both municipal and industrial waste. Biofuels and biogas shares are at 6% and 2%.

Electricity from biomass (Biopower) is the 3rd largest renewable electricity source globally after hydropower and wind. In 2016, 571 TWh of biopower was generated globally - 65% from solid biomass sources like wood chips and wood pellets, 19% from municipal and industrial waste followed by 15% from biogas - mainly in Europe.

Heat generation from biomass is obtained either via derived heat or direct heat. Derived heat is heat generated in heat only and combined heat and power plants. In 2016, 1.05 EJ of derived heat was generated from biomass-based sources - predominantly solid biomass.

Liquid Biofuels are the leading renewable solution for the transport sector. They have experienced sustained growth over the past 16 years. Since 2000 - 2017, biofuel production has increased 10 times from 16 billion litres to 143 billion litres. Bioethanol is the largest biofuel and hence, the largest renewable fuel in the global transport sector. Biodiesel is also quite significant in production while advanced/other

biofuels are gaining prominence recently. USA and Brazil are the largest biofuel and bioethanol producers globally with a production share of 87% whereas biodiesel production share is evenly distributed between Asia, Americas and Europe.

Biogas is gaseous fuel produced from biomass using the process of anaerobic digestion of organic matter. The gas basically consists of methane and carbon dioxide. 61 billion m<sup>3</sup> of biogas was produced globally in 2016. Europe produces more than half of the biogas produced globally while Asia share is 30%.

Pellets are a solid biomass fuel, mainly produced from wood residues but also from agricultural by-products such as straw. Pellets are used for residential heating in pellet stoves and pellet boilers, for the generation of heat, steam and electricity in the service industry, manufacturing and power generation. 31.2 million tonnes of pellets were produced globally in 2017. Europe is the world leader in pellet production at 57% followed mainly by Americas (e.g. USA) at 31%.

Charcoal is produced via the partial burning of biomass. The residue consists mainly of carbon and other residues. Charcoal sector is a highly underestimated sector due to its largely informal trade of the product. Unlike pellets and liquid biofuels, charcoal is produced and consumed locally. Moreover, the process of conversion is highly inefficient process. In 2017, 44 million tonnes of charcoal were produced - mainly in Africa.

Renewable energy creates jobs. In 2017, 10.4 million people were employed in the renewable energy industry globally. Vast majority of them are in the solar energy industry and bioenergy industry. Bioenergy is the 2nd largest job creator among renewables with more than 3.07 million people working in the sector. The largest job creator in the bioenergy sector is the sugarcane industry in Brazil for production of bioethanol and biopower which employs close to 1 million people.

## Bioenergy Magazine

The bioenergy business needs a voice on the international arena. During the launch of the World Bioenergy Association in Jönköping, Sweden at the World Bioenergy Conference, a magazine was released with the objective of spreading the message on the need for a global association of bioenergy. Five magazines have been released since 2008 keeping track on the development of WBA as an organization along with developments in the bioenergy field.

WBA is pleased to announce a new series of magazines focussing on the latest trends and developments in the bioenergy sector. WBA will publish the Magazine twice every year in September/October and March/April.

### Magazine #6

We are pleased to announce the publication of our latest 'Bioenergy' Magazine. The latest issue (Nr. 6) deals with the trends and developments in the bioenergy sector globally.

Feature articles deal with the machinery and equipment used currently for the bioenergy sector. The various myths



and misconceptions about bioenergy from native forests to agricultural residues (e.g. straw) are answered with facts and physical evidence. One of the fastest growing bioenergy sectors is pellets and the world trade in biomass leaps forward as shown in the magazine. Sustainable biomass supply has to be increased to meet climate and energy goals and a feature article shows how to efficiently manage biomass supply globally.

## Mission Reports

WBA publishes mission reports regularly based on the study trips organized by WBA around the world. These reports showcase the latest bioenergy developments in regions visited by WBA and are member exclusive. They are not published on the website, but only in the member section of the website accessible via username and password.

In 2018, WBA published the latest Mission Report Japan based on our visits to Tokyo and Nagano in the previous year.

### Mission Report Japan

The World Bioenergy Association in partnership with Renewable Energy Institute (REI), Japan conducted a successful Bioenergy Mission Trip to Japan during 22<sup>nd</sup> – 25<sup>th</sup> May 2017. The Bioenergy Mission trip included two international conferences in Tokyo and Nagano, Study visits in Nagano and WBA Annual meetings in Nagano. The main purpose of such study missions is to gather information about the latest development in bioenergy sector in Japan and to establish partnerships with local stakeholders and the wider WBA community.

Japan is a highly-developed country with increasing focus on renewable energy technologies. Post Fukushima nuclear accident, the country is moving towards alternative energy technologies including increasing utilization of biomass for energy. The bioenergy sector – especially electricity from biomass – appears poised to show rapid growth. However, it should be important for the local industry to understand the sustainable development of biomass and learn from the lessons of bioenergy development from other parts of the world.

## Events

### January

#### 8<sup>th</sup> General Assembly, IRENA, Abu Dhabi

The International Renewable Energy Agency (IRENA) organized its 8th Annual General Assembly in Abu Dhabi during 13 – 14 January 2018. The Assembly is the supreme decision-making body and brings representatives from private sector, civil society and other international organizations to reaffirm the global agenda for accelerating the global energy transition. The Assembly also decides on the Work Programme and Budget for 2018 – 2019. World Bioenergy Association (WBA) is an observer organization and participated in the session. In WBA opinion, such global meetings are

the perfect place for various stakeholders to exchange views and share information in order to encourage the states, governments and societies to react adequately to the challenge of global warming and ensure the best performance for renewable energy technologies around the world.



### February

#### International Wood Energy Conference, Zagreb

On invitation from WBA Member, CROBIOM (Croatian Biomass Association), we visited the 8th International Wood Energy Conference. The main objective of the conference was to identify trends, introduce new technologies and innovations, but also the responsibility for implementing the existing ones and adopting new legal frameworks to ultimately increase the use of renewable energy sources. WBA President presided over a session and gave a speech on global development of bioenergy. We also signed an agreement with CROBIOM on promoting sustainable bioenergy development.



### April

#### Annual Meetings 2018, Stockholm

The World Bioenergy Association (WBA) annual meetings 2018 were held in Stockholm on the 24th of April 2018. The meetings were attended by members and board members from different parts of the world including Sweden, Lithuania, Poland, Hungary, Mexico, Singapore, Indonesia, Belgium, Germany and Turkey. The annual meetings were an ideal opportunity for the WBA network to meet and discuss the work of the organization.

The annual meetings were followed by a study visit to Lantmännen Agroetanol plant located in Norrköping, Sweden on April 25<sup>th</sup>.



China Study Mission Delegation, Scandinavia

WBA hosted a delegation from China comprising of energy companies and institutions - in close cooperation with our associations and companies from Finland and Denmark. The delegation was led by our Board member Hong Hao, Chairman, Great Resources new Energy.

The aim of the biomass mission was to understand the successful development of biomass to energy in Scandinavia (Sweden, Finland and Denmark). China has ambitious plans for the increasing the utilization of biomass to energy. The knowledge on best practices in terms of efficient biomass conversion in combined heat and power plants (CHP), logistics of forestry harvesting and transport, case studies of utilizing agricultural residues (e.g. straw) to energy are important for the delegation to understand from Scandinavia.



May

#### Torrefied (Carbonised) Biomass webinar

In collaboration with the International Biomass Torrefaction Council (IBTC), WBA organized a successful webinar on the status of Carbonised (Torrefied) Biomass sector worldwide on May 30, 2018. It featured presentations from leading experts working at the frontier of carbonized innova-

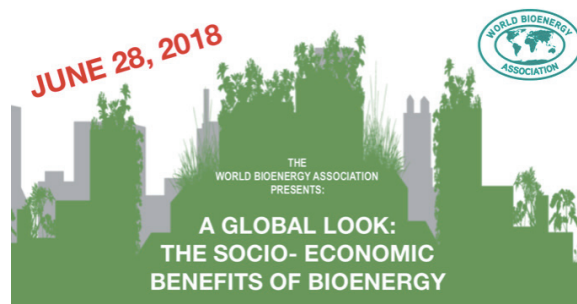
tions. The webinar was made free for WBA members.



## June

### Socio Economic Benefits Webinar

A new and exciting webinar on the social and economic benefits of bioenergy development was organized on June 28, 2018. Expert speakers from across the globe provided illuminating regional insights to highlight bioenergy's direct and peripheral advantages in the socio- economic realm. Those who were not able to attend the event can still access the presentations and video files.



## September

### GCAS Affiliate Event, San Francisco

WBA was a partner along with 6 leading international organizations on a 1-day forum 'Be a Superhero for Sustainable and 100% Renewable Energy' on September 11th in San Francisco, California. This one-day forum imagined a 100% renewable energy future that will allow us to meet climate goals.



## October

### Ukrainian Delegation Visit, Stockholm

A high-level Ukrainian delegation comprising policy makers, investors, civil society and city officials visited Stockholm on invitation from World Bioenergy Association for



a 2-day study trip during October 23 - 24, 2018. The study trip included a 1-day event on 'Sweden Ukraine Bioenergy Cooperation Forum' followed by site visits to bioenergy installations. The forum was organized in cooperation with the Embassy of Ukraine in Sweden and Swedish Bioenergy Association.



## November

### Study Mission Trip - Changchun, China

World Bioenergy Association (WBA) in collaboration with Branch Office China, organized a study trip for international delegates to Changchun, Jilin Province during November 26 – 28, 2018. The study trip included site visits to large biomass CHP and liquid biofuel installations, 1st international bio-based economy forum along with meetings with provincial policy makers to promote bioenergy development in the region. A WBA Board Meeting was also organized for board members on November 26th, 2018.



## December

### International Bioenergy Conference organized in Poland

On December 5, 2018 in Katowice, in close proximity to the 24th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP24), the World Bioenergy Association in cooperation with the Polish Chamber of Biofuels (KIB) and the Polish Chamber of Commerce for Renewable and Distributed Energy (PIGEOR) organized an international conference “World Bioenergy Forum 2018”. The event was devoted to the role of bioenergy as the largest source of renewable energy, which plays a significant role directly in achieving the international energy and climate goals.



### COP24, Katowice

WBA along with our board and members was active in informing and advocating for bioenergy to civil society, researchers, businesses and policymakers at COP24:

- We organized a press conference on the role of bioenergy in a 1.5 deg scenario
- A side event along with our REN Alliance partners focussed on the role of renewables working together.
- We were present in pavilions around COP with speeches & interviews on bioenergy.
- WBA had a stand at the exhibition hall informing delegates about bioenergy
- We organized the World Bioenergy Forum 2018 along the sidelines of COP24



## Projects

### BioED

Last year, the BioED platform was visualized to all existing users. After developments by the IT department according to the feedback received from the companies, WBA is currently on the lookout for personnel in web design and sales for attracting more companies to the database.

### Branch Offices

WBA successfully opened a branch office in China couple of years back. We have great cooperation with our the personnel at the branch office which has led to the realization of delegation exchanges between China and Sweden/Nordic countries in the past year. We received two delegations last year and organized a study tour in Changchun late November 2018. We are now able to gather and disseminate useful information about bioenergy technologies and policies.

The 2<sup>nd</sup> branch office was registered in the province of Surabaya in Indonesia. We are awaiting more regulatory approvals and developing an action plan for setting up a successful branch office in the region. WBA is now planning on opening more such branch offices and we received requests from Canada, Mexico, Brazil and Turkey.

### NGO Outreach

WBA considered options of arranging meetings with pragmatic NGO's in order to discuss the role of bioenergy in the global energy future. The initial meetings will focus on introductions while certain themes (e.g. carbon neutrality, food and fuel etc.) will be discussed in subsequent meetings. In 2018, five leading international civil society organizations were contacted and initial discussions were positive. WBA was requested to attend meetings with two of the leading organizations but unfortunately due to scheduling issues from the organizations, we had to postpone indefinitely the meetings. WBA is now planning on reviving the contacts in 2019 and organize 1 - 2 meetings before the end of the year.

### Biofuels Working Group

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 was 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 degree 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 interest.

## 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 2018 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 2018, WBA assumed the role of leadership of the REN Alliance. We regularly organized conference call and physical meetings to discuss and debate the role of renewables and strengthening cooperation among the individual organizations. One of the main outcomes of the cooperation was a joint side event organized at COP24 in Katowice, Poland.

### REN21

REN21 is a policy network promoting renewables in the 21st century. Our association regularly cooperates with REN21 by contributing with expert reviews on documents related to bioenergy, for e.g. Global Status Reports. We contributed to REN21 GSR 2018. We are pleased to report that WBA has been re-elected to the Steering Committee of REN21 - the highest decision making body in the organization.

To increase cooperation, WBA agreed to participate in the International Advisory Committee (IAC) of Korea International Renewable Energy Conference (KIREC) - an event being jointly hosted by REN21, Korean federal ministry and Seoul Municipality in October 2019.

### IRENA

IRENA is the leading governmental organization promoting renewable energies globally. We regularly contribute with reviews on their reports on bioenergy. In 2018, WBA met with IRENA representatives in Bonn to discuss projects on NGO Outreach, Statistics and factsheets.

WBA also applied to join the IRENA Coalition for Action. The Coalition forms a key international network to discuss industry trends, share knowledge and exchange best practices for the global energy transformation. In 2018, the Coalition for Action has 77 members (Link) including private companies, industry associations, civil society, research institutes and international organisations. WBA also participated in the Working Group: Towards 100% Renewable Energy. With this collaboration, WBA plans on increasing the prominence of bioenergy in the wider renewable energy community.

Other partnerships include Go100%, 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 2018, we organized 2 meetings via conference calls and 2 physically in Sweden and China.

- 22nd February: BM41 via conference call
- 24th April: BM42 in Stockholm, Sweden
- 25th June: BM43 via conference call
- 26th November: BM44 in Changchun, China

### Board members

1. Remigijus Lapinskas, World Bioenergy Association (Lithuania)
2. Werner Sitzmann, Amandus Kahl (Germany)
3. Dawn Lambe, Biomass North Development Centre (Canada)
4. Adrian Suharto, Neste (Singapore)
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 Kajiya, 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, Lantmännen (Sweden)
18. Kelvin Hong, Great Resources (China)
19. Ben Moxham, Enviva (UK)

### Nominating Committee

- Gustav Melin, Svebio, Sweden (Convenor)

### Secretariat

- Remigijus Lapinskas, President, Lithuania
- Bharadwaj V Kummamuru, Executive Director, Sweden/India
- Karin Haara, Senior Advisor, Sweden
- Viktorija Kazlauskaitė, Project Assistant, Lithuania (On Maternity Leave)
- Heinz Kopetz, Senior Consultant, Austria
- Douglas Bradley, Senior Consultant, Canada
- Andrew Lang, Senior Consultant, Australia

### Members of Honour

- » Kent Nystrom, 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, Polish Chamber of Biofuels, Indian Bioenergy Association, Hungarian Bioethanol Association, International Biochar Institute

### 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, Bronswerk Heat Transfer BV, Herz Energietechnik GmbH, En-



ergie 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, Bioendev, Mine Biomass Synergies, Renewable Energy Institute, Alterna Verde Corporation, Expand med Oss, Lithuanian Energy Institute, Enviva, Ekotrend Sp., Biomass Ventures Pte Ltd

#### Individual members

Individual Members are not listed and are available upon request.

#### 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
- UAB Klassmann Deilman

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

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**Stockholm 2019 - 02 - 25**

Board members below have signed the Annual Report for 2018

Remigijus Lapinskas

Christoph Pfemeter

Werner Sitzmann

Wan Asma Ibrahim

Dawn Lambe

Mika Ohbayashi

Adrian Suharto

Hisashi Kajiyama

Benard Muok

Hazir Farouk

Tanay Sidki Uyar

Jörgen Sandström

Laercio Couto

Alarik Sandrup

Jean Marc Jossart

Kelvin Hong

Saku Rantanen

Ben Moxham

Geraldine Kutas

The WBA Audit Report 2018 has been submitted and signed on 2019 - 03 - 20

**ÖHRLINGS PRICEWATERHOUSECOOPERS**

**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!**

OFFICIAL SUPPORTER OF WBA 2018:



SILVER SUPPORTER OF WBA:

