



Global Forum on Sustainable Energy

Activity Report, August 2014 – July 2016

Imprint

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Published and produced by: Global Forum on Sustainable Energy, c.o. Österreichische Energieagentur – Austrian Energy Agency

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Layout: Austrian Energy Agency

Produced and published in Vienna

Reprint allowed in parts and with detailed reference only. Printed on non-chlorine bleached paper.

Foreword by the GFSE President

In September 2015 the international community adopted the Sustainable Development Goals – including goal 7 on sustainable energy for all - and a few weeks later, in December 2015, reached consensus on how to move forward together with a view of stabilizing the global climate.

Furthermore, in 2015 the global economy grew – for the second year in a row – without a parallel increase in green house gas emissions. REN21 Global Status Report stated that in 2015 the greatest ever increase in renewable energy installed capacity occurred and investments in so-called developing countries topped investments in so-called developed countries.

At SAIREC (Southern African International Renewable Energy Conference) in October 2015 in Cape Town the African continent propelled itself into more coordinated action to overcome energy poverty and to decarbonize existing energy systems. I was privileged to work with conference stake-holders to prepare the SAIREC Declaration to be adopted by acclamation.

Under the new leadership of Rachel Kyte, Sustainable Energy for All, the initiative of SG Ban Ki-Moon, regrouped and re-focused adopting the institutional shape of a not-for-profit international NGO with a strong institutional link to the U.N. GFSE was accepted as a member of the UN's Sustainable Development Solutions Network.

Against this new and hopeful reference framework, GFSE's mission continues to be of outmost relevance since the challenge of the day is to implement existing agreements. GFSE can mobilize national and international networks and build multi-stake-holder consensus on how to move forward.

Ambassador Irene Giner-Reichl

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1 Introduction

The Global Forum on Sustainable Energy (GFSE) is a neutral multi-stakeholder platform facilitating international dialogue on energy for sustainable development by taking into account the special interests and challenges of developing countries. GFSE aims at the establishment of a sustainable world energy system from a social, economic and environmental perspective.

GFSE contributes to both international discourse and information dissemination on sustainable energy. The multi-stakeholder platform plays a crucial role in facilitating sustainable energy projects by bringing together donors, investors and project developers. Their interaction creates new opportunities and enhances existing initiatives in the field of sustainable energy.

GFSE operates at the intersection of international energy discourse and diplomacy. Conferences and regional fora or workshops are the visible peak of the GFSE activities. GFSE activities can be grouped into three categories, namely networking, dissemination of information and facilitation of project initiatives.

1. GFSE is a networking agent

The Global Forum on Sustainable Energy interacts and networks with other energy initiatives and organizations in the energy field and thereby enhances synergies and complementarities. GFSE has been playing an active role in bringing together several energy-related initiatives, launched at the World Summit on Sustainable Development in 2002 in Johannesburg. GFSE works as an information provider and networking agent for multitude of stakeholders, including the Sustainable Energy for All initiative (SE4ALL) of the United Nations.

2. GFSE informs on sustainable energy

GFSE prepares and initiates events devoted to the promotion of and dissemination of energy technologies in the renewable energy and energy efficiency fields in the context of sustainable development, and to showcasing and discussing inclusive solutions for the transition towards a sustainable energy system.

3. GFSE facilitates project initiatives

GFSE fosters partnerships and facilitates energy for sustainable development initiatives. It supports private-public partnerships by presenting opportunities and identifying investment and partnership possibilities.

History of GFSE Activities

Since its establishment in 1999, the Global Forum on Sustainable Energy has engaged in numerous activities and has significantly contributed to shape the national and international debate on sustainable energy and development.

The Vienna Energy Forum (VEF) developed out of a series of international and regional GFSE Meetings, which addressed different aspects of energy for sustainable development.

Detailed records of these GFSE Meetings, including presentations and main outcomes, can be found on our website www.gfse.at and in the GFSE Activity Report 2012-2014.

More recent activities and publications of the Global Forum on Sustainable Energy are described in this report.

2 Vienna Energy Forum 2015

The Vienna Energy Forum (VEF) 2015 brought together more than 1,700 policy makers, country delegations, experts and representatives from the civil society and the private sector from over 80 countries to discuss pathways after Rio +20. The numerous debates were led by about 110 high-level speakers in ministerial gatherings, high-level panels, plenary and parallel discussions.

The VEF 2015 focused on “Sustainable Energy for Inclusive Development” with an emphasis on the multiple benefits of the Post-2015 Development and the Climate Agenda, and on showcasing best practices and actions on the ground. Organized by the United Nations Industrial Development Organization (UNIDO), the Austrian Federal Ministry for Europe, Integration and Foreign Affairs (BMEIA), the Austrian Development Agency (ADA), the International Institute for Applied Systems Analysis (IIASA) and the UN Sustainable Energy for All Initiative (SE4ALL), the outcomes of the Forum contributed to anchoring sustainable energy for inclusive development in the Post-2015 Development Agenda, in particular the Sustainable Development Goal 7 (SDG7) “Ensure access to affordable, reliable, sustainable and modern energy for all” and to the successful conclusion of the Paris Climate Agreement in December 2015.

The Vienna Energy Forum reaffirmed that sustainable energy is the golden thread that connects the Post-2015 Development Agenda and Climate Action. The Forum culminated in the following key messages:

1. The Forum recommended the adoption of the SDGs at the UN General Assembly in September 2015 and a major scaling up of action on the ground as a key to success.
2. Advantages should be taken of the synergies between climate action and sustainable development, that need to be supported by strong leadership, facilitated action on the ground and scaled up investment.
3. Effective policies and measures are needed to allow an acceleration of necessary action and investments in order to tap the energy efficiency potential. Transport and cities offer great opportunities for targeted action on energy efficiency.
4. To meet the EE and RE potential, scaled up action and investments are needed in targeted areas such as cities, and in high impact sectors like industry, transport, power generation, lighting and buildings.
5. The nexus between energy, climate, transport, food, water and health is inseparable and an essential contributor to social progress and human well-being. This will require integrated strategies and solutions to meet multiple objectives simultaneously. A future VEF should focus on this nexus, addressing linkages among key SDGs and their contribution to the development and climate agendas, with an emphasis on better analysis and urgently needed policy and institutional reforms.
6. Synergies between the three goals of SE4ALL: access, energy efficiency and renewable energy, have to be strengthened. More research and documentation will be needed to improve understanding, facilitate action and assist policy makers.
7. Regional approaches, such as Regional Centres and Initiatives on RE and EE and cohesive policy actions, are required to lower transactional costs and promote economies of scale for regional markets and investments. There needs to be a

greater focus on vertical integration – national and subnational – as a key component for local, regional and global impact.

8. Sustainable energy and women's empowerment are mutually reinforcing goals. The empowerment of women to become agents of sustainable energy will be key to achieving truly inclusive and sustainable development. More financing and enhanced policy action are required to accelerate gender mainstreaming and women's empowerment, and gender disaggregated indicators will be needed to monitor and evaluate sustainable energy initiatives.

Find more information about the Vienna Energy Forum 2015, its organisers and outcomes on the official website www.viennaenergyforum.org.

The Global Forum on Sustainable Energy participated in the Vienna Energy Forum and helped further discussions on green buildings through a side event on "Green Building Concepts and Policies".

2.1 Side Event "Green Building Concepts and Policies"

The Global Forum on Sustainable Energy (GFSE) in cooperation with the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), the Austrian Development Agency (ADA), and the Austrian Energy Agency (AEA) organized a Side Event on "Green Building Concepts and Policies" during the Vienna Energy Forum 2015.

This event took place in the afternoon of 19 June 2015 and helped build bridges between the technical and political level in order to contribute to the sustainable development of the building sector. Developing countries are currently being confronted with problems of rapid urbanization, population growth and rising energy demand. These issues need to be taken into consideration in order to develop comprehensive solutions for sustainable housing.

Ms. Elfriede Anna More, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, Head of Department I/9., International Environmental Affairs, provided the welcome address, before giving the floor to the two keynote speakers, who spoke about the technical/architectural as well as the policy challenges for greening the building sector.

Mr. Jakob Schleger from Schöberl & Pöll GmbH presented architectural and design concepts for green buildings by drawing on the example of the first certified passive house office building in Zhouhzou, China, which was awarded with the Austrian Green Building Star Award.



Figure 1: Passive House Office Building, Zhouzhou, China (Source: Schöberl & Pöll GmbH)



Figure 2: Passive House Requirements (Source: Schöberl & Pöll GmbH)

Following these speeches, the five panelists exchanged experiences and discussed requirements and framework conditions for comprehensive solutions. The panel session was moderated by Ms. Irene Giner-Reichl, Austrian Ambassador to the People's Republic of China and Mongolia, President of GFSE and Vice-Chair of REN21. The event further highlighted the substantial opportunities available in developing countries for actors to become involved in the green building sector and the benefits regional building policies can bring to an area. In this context, West Africa and the activities of the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) were presented as a prominent example.

The ECOWAS Region has a high potential for energy efficiency measures in buildings. As it was shown by Mr. Mahama Kappiah, Executive Director of ECREEE, energy savings of 13,955 GWh could be achieved through energy efficiency measures in the regional building

sector by 2030. These could translate into power savings of about 4,934 MW in the building sector and an annual value of savings of 1,816 million EUR in 2030.

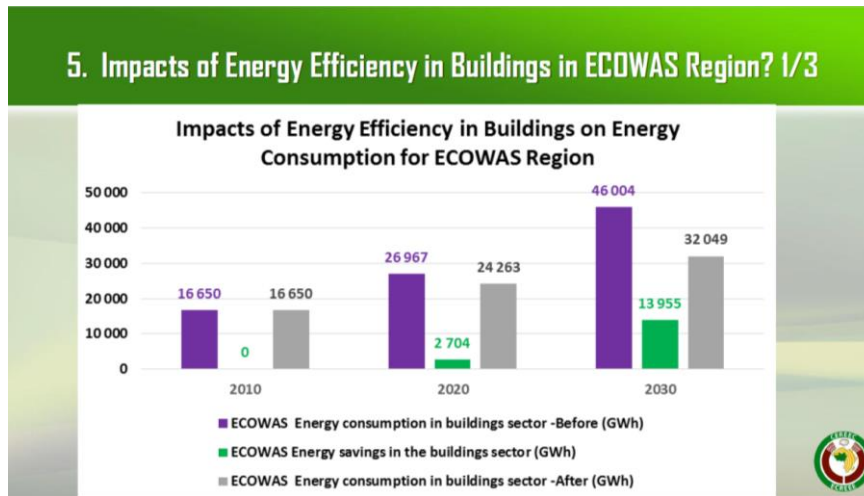


Figure 3: Impacts of EE in Buildings in ECOWAS Region: Energy Savings (Source: ECREEE)

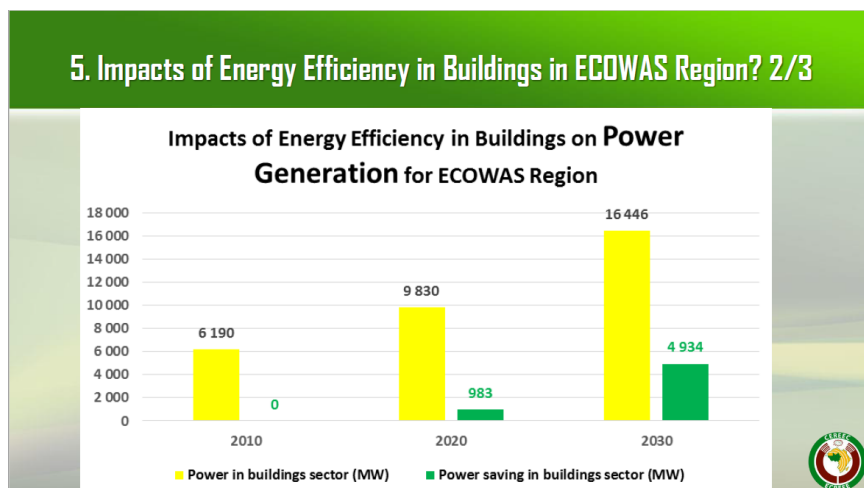


Figure 4: Impacts of EE in Buildings in ECOWAS Region: Power Savings (Source: ECREEE)

5. Impacts of Energy Efficiency in Buildings in ECOWAS Region? 3/3

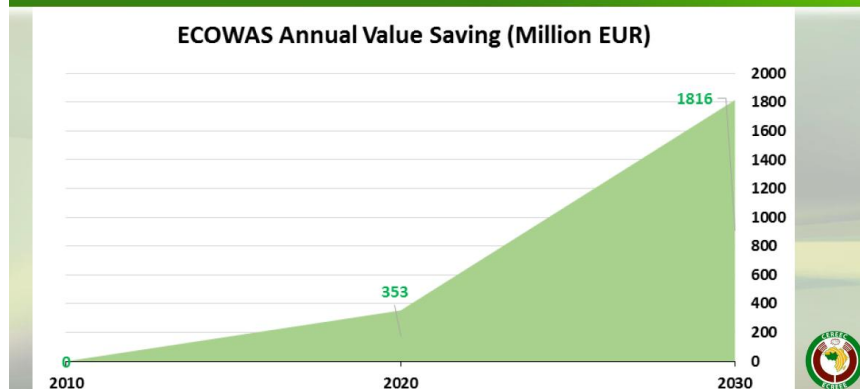


Figure 5: Impacts of EE in Buildings in the ECOWAS Region: Annual Value of Savings (Source: ECREEE)

Additionally, panelists emphasized how in many cases, strong national policies have not had the desired effect due to the lack of local capabilities and the existence of weak enforcement mechanisms. The SE4All Building Accelerator can help open up a dialogue between governments and technical experts in order to facilitate the development of sustainable housing in developing countries. Furthermore, it was pointed out that the use of local materials in energy-efficient buildings should be promoted and that a long-term program of academic exchange is needed to build capacities and ensure lasting change.

Panelists:

- Mr. Mahama Kappiah, Executive Director of the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)
- Mr. Reid Detchon, UN Foundation
- Mr. Jakob Schleger, Schöberl & Pöll GmbH
- Mr. Werner Weiss, AEE Intec
- Mr. Fritz Oettl, Pos Sustainable Architecture

More information on the event, agenda and presentations can be found on the [GFSE website \(Activities 2015\)](#).

2.2 Vienna Energy Forum 2015: Side Event “Energizing the SAMOA Pathway”

On 19 June 2015, the Energy Branch of the United Nations Industrial Development Organization (UNIDO), the SIDS Sustainable Energy and Climate Resilience Initiative (SIDS DOCK), the Global Forum on Sustainable Energy (GFSE), the Secretariat of the Pacific Community (SPC) and the Caribbean Community (CARICOM) organized a Side Event to the Vienna Energy Forum on "Energizing the SAMOA Pathway - Launch of the SE4All Network of Regional Sustainable Energy Centres for Small Island Developing States (SIDS)".

The side event was moderated by Ms. Irene Giner-Reichl, Austrian Ambassador to the People's Republic of China and Mongolia, President of GFSE and Vice-Chair of REN21. The event provided a status update of the SIDS DOCK process and the network of regional sustainable energy centres for Small Island Developing States (SIDS). The event highlighted the importance of regional sustainable energy centres, which help coordinate national strategies, reduce transaction costs, minimize overlap and maximize impact. They will address existing barriers and strengthen drivers through regional methodologies and tools, and will complement and strengthen national activities in the areas of policy and capacity development, knowledge management and awareness raising, as well as investment and business promotion. Such centres also provide the perfect hub for knowledge dissemination, because they target many countries at once. Panelists also discussed the potential role of the south-south triangular partnership in the context of the Decade of Sustainable Energy For All (SE4All) and the post-2015 environmental and developmental challenges.

The “**Island Women Sustainable Energy and Climate Resilience Network**” was launched as a first flagship initiative at the Forum. The initiative acknowledges the crucial role of women to achieve the transition to sustainable energy for all and to fulfil the SIDS DOCK goals: to improve energy efficiency by 25% (2005 baseline), to generate at least 50% of electric power from renewable sources and to decrease conventional transportation fuel use by 25% by 2033 (“Island Energy for Island Life 25-50-25 by 2033”). Across the islands, women face similar barriers to take advantage of sustainable energy services, investment and business opportunities.

As an outcome of the event, the **Vienna Declaration on the SE4ALL Network of Regional Sustainable Energy Centres for SIDS in Africa, Caribbean, Indian Ocean and Pacific** was agreed by the Members of the SIDS DOCK Steering Committee.

The Declaration reaffirmed the urgent need to address energy security, energy affordability and climate change resilience in SIDS simultaneously and in an integrated way, and confirmed the important role of UNIDO to contribute to the cross-cutting area of SDG7 on sustainable energy and SDG9 on inclusive and sustainable industrial development in SIDS. It further called for innovative SIDS-SIDS partnerships to implement the “SIDS Accelerated Modalities of Action (SAMOA) Pathway” and welcomed support to establish SIDS DOCK as an international organization and strengthen implementation capacities through the global network of regional sustainable energy centres. The centres will play a key role to mobilize resources for integrated SIDS-SIDS sustainable energy programs, will strengthen capacities to implement the SIDS DOCK project pipeline and coordinate implementation of the SE4ALL Initiative.

The side event provided inputs to the High-Level Political Forum on Sustainable Development (HLPF) from 26 June to 8 July 2015, and the post-2015 intergovernmental negotiations.

Keynote speakers:

- Mr. Pradeep Monga, Director of the Energy Branch, UNIDO
- H.E. Vince Henderson, Permanent Representative of Commonwealth of Dominica to the UN, Chair of the SIDS DOCK Steering Committee

Panelists:

- H.E. Darcy W. Boyce, Minister in the Office of the Prime Minister, Energy, Immigration, Telecommunications and Invest Barbados
- Mr. Devon Gardner, Director of the Energy Unit of the Caribbean Community (CARICOM)
- Mr. Solomone Fifita, Deputy Director (Energy), Economic Development Division, Secretariat of the Pacific Community (SPC)
- Mr. Roberto Ridolfi, Director, Sustainable Growth and Development, Directorate General for International Cooperation and Development, European Commission
- Mr. Mahama Kappiah, Executive Director of the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)

All information about the event can be found at the [GFSE Website](#) (Activities 2015) .

3 Dialogue for Climate Action - GFSE Side Event “Uniting for a Green Building Future”

The conference “Dialogue for Climate Action” was organized by the World Bank Group on 24-25 May 2016 in Vienna to bring together 250 climate industry leaders and policymakers to address opportunities in emerging economies within the new climate framework.

The World Bank Group and partners published a set of “Voluntary Principles for Catalyzing Climate Action through Dialogue” to promote effective dialogue between the government and the private sector. The six principles for dialogue on climate action promote inclusion, urgency, awareness, efficiency, transparency and accountability. Twelve organizations endorsed the principles and agreed to include them in climate action implementation plans¹.

Side Event “Uniting for a Green Building Future”

The Global Forum on Sustainable Energy (GFSE) in cooperation with the Austrian Economic Chamber and the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) recently organized a side event on “Uniting for a Green Building Future”. The event took place back to back with the World Bank Conference “Dialogue for Climate Action” on May 24-25, 2016, which brought together CEOs, industries, policy makers and civil society to promote climate competitive industries.

“Uniting for a Green Building Future” took place in the morning of 25 May 2016 and helped build bridges between representatives from international organisations and representatives from the Austrian private sector.

Irene Giner-Reichl, Austrian Ambassador to the People's Republic of China and Mongolia, President of GFSE and Vice-Chair of REN21, together with Franz Bachleitner, Head of the Department for NPI and Export Finance, Austrian Economic Chamber, provided the welcome address, where they emphasized the need to mobilize private finance to facilitate sustainable development in developing as well as developed countries.

Following these speeches, the panelists exchanged experiences and discussed methods to engage Austrian building experts in international initiatives and markets. The panel session was moderated by Ambassador Irene Giner-Reichl.

The event highlighted that a number of international initiatives, like the Sustainable Energy for All (SE4All) Initiative through its Energy Efficiency Accelerator Platform, the Climate Technology Centre & Network (CTCN) or the Private Finance Advisory Network (PFAN), already actively support private sector engagement and provide opportunities to participate in a global network of expertise. Panelists from SE4All and CTCN emphasized the tremendous potential in the green building sector and invited Austrian experts to become more

¹ <http://www.worldbank.org/en/topic/competitiveness/publication/dialogue-for-climate-action-voluntary-principles-for-catalyzing-climate-action-through-dialogue>

active on the international arena. Monika Weber-Fahr, COO of SE4ALL, explained that initiatives like the SE4ALL Energy Efficiency Accelerator Platform can act as market openers by working together with governments to adapt legal and regulatory framework conditions to meet international standards and also attract foreign actors. During the course of the discussions, participants came to the conclusion that businesses need to start positioning their interests in emerging markets early on in order to fully utilize the business and development potentials. Patrick Nussbaumer from UNIDO highlighted that as a result of its well-established network of consultants, CTCN is able to single out what has worked, bring together the necessary stakeholders and include inputs/lessons learned from previous initiatives in order to maximize project success. The CTCN can help pair up promising projects in developing countries with expertise and financing options from the developed world.

It was further pointed out that international initiatives need to mobilize more finance and strive to interact with representatives from various interlinked sectors. Experts from the Austrian building sector acknowledged the need to become more active on the international arena, but also highlighted some of the related challenges: Particularly small consulting firms face difficulties in bringing specialized knowledge to foreign markets, as tendering requirements often favour bigger players. It was also stated that many firms are already established in neighbouring markets, but lack “business savvy” about markets located further away. Engagement in emerging markets requires some pre-investment and the build-up of long-term relationships is a lengthy procedure that often entails substantial business risk. Some of these risks and challenges can be mitigated by engaging in an international network, and the Austrian building sector has a lot to offer.

Austria has long been a forerunner in green buildings, which is further encouraged by dedicated support programmes like klimaaktiv, the Austrian climate protection initiative. Robert Lechner stressed that the buildings component comprises criteria for energy efficient buildings and a comprehensive database of good practice examples. Initiatives like the Austrian Sustainable Building Council and the newly created Global Alliance for Buildings and Construction provide a number of supporting tools, guidelines and concerted action to further improve the building sector. Stefan Geier from the City of Vienna further noted that a green building future will also have to be addressed from an urban planning perspective and that Vienna can act as a test bed for innovative solutions. Building energy use and the overall sustainability of building construction will also be decided on an urban scale, which the City of Vienna addresses for instance in its Smart City Framework Strategy.



In conclusion, panelists stated the need for urgency in the fight against climate change and emphasized that the scale of investments needed to trigger long-lasting, widespread change is rather small. Innovative solutions are needed to bridge the gap between often small-scale financing that is required for green building solutions, and the activities of International Financial Institutions focusing more on bigger investment volumes. Sustainable cities are expected to play an increasing role on the international agenda, which also puts green buildings solutions at the center of discussion. Innovative approaches can also support private sector engagement in emerging and developing markets like cooperation with the Austrian diaspora or the certification system Austrian Green Building Star, a certificate granted to energy efficient and sustainable buildings abroad which are constructed with Austrian participation.

Welcome Note:

- Irene Giner-Reichl, Austrian Ambassador to the People's Republic of China and Mongolia, President of GFSE and Vice-Chair of REN21
- Franz Bachleitner, Head of the Department for NPI and Export Finance, Austrian Economic Chamber

Panelists:

- Monika Weber-Fahr, COO, Sustainable Energy for All
- Patrick Nussbaumer, Industrial Development Expert, UNIDO- CTCN
- Roman Weigl, President, Association of Consulting Engineers
- Robert Lechner, CEO, Austrian Institute for Ecology and Austrian Sustainable Building Council
- Stefan Geier, MA 20, City of Vienna

Find all information about the event on [our website](#) (Activities 2016).

4 High-Level Seminar “Accelerating Sustainable Energy for All in LLDCs through Innovative Partnerships”

Based on the outcomes of the second UN Conference on Landlocked Developing Countries (LLDCs) in November 2014, the UN Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS) together with the Government of Austria (Austrian Ministry for Europe, Integration and Foreign Affairs and Austrian Development Agency) and in cooperation with UNIDO and Sustainable Energy for All (SE4ALL) will organise a high-level seminar on LLDCs on 24-25 October 2016. The overall objective of the seminar is to take stock of the achievements made by LLDCs in achieving sustainable energy for all, identify existing drivers and remaining barriers for the scaling-up of renewable energy and energy efficiency markets, industries and innovation. Discussions will also focus on reviewing the effectiveness of the current regional and international support and partnership frameworks and suggest priority actions and practical solutions to strengthen implementation capacities of LLDCs. The high-level seminar will provide a platform to exchange best practices and develop adapted solutions to overcome remaining barriers, and will focus on ways how multi-stakeholder partnerships could support LLDCs in tackling these barriers in achieving sustainable energy for all.

The Global Forum on Sustainable Energy provided expert input to the priority areas of the Vienna Programme of Action and to the challenges and priorities as communicated in the Nationally Determined Contributions (NDCs) of LLDCs. Overall, it can be seen that:

- International support for financing and technology transfer is a key demand in submitted NDCs of landlocked developing countries.
- Concrete projects, to a large degree supported by international finance, technical assistance and technology, will be required for the full implementation of the NDCs.
- Capacity building and stronger cooperation in research and development will be needed in the focal areas for climate change mitigation and adaptation.
- The vast majority of LLDCs foresee mitigation policies and measures in the energy, agriculture and LULUCF sectors, which shows the critical importance of these areas for a sustainable development pathway.
- Enhancing adaptive capacity and resilience to the adverse effects of climate change is particularly important in the water, agriculture and energy sectors of LLDCs.
- Cross-sectoral, holistic approaches linked to the development priorities of LLDCs will be needed to take account of existing interdependencies (e.g. the water-energy-food security nexus) and tap the potential for environmental and development co-benefits.
- A strengthening and diversification of economic activities in LLDCs, based on the efficient use of sustainable energy sources, are needed to reduce dependencies and transaction costs.
- Stronger regional cooperation and capacities can mitigate barriers to e.g. renewable energy and energy efficiency investment, markets and industries. Knowledge networks and regional centres of excellence can substantially enhance the existing knowledge base and support the development of innovative solutions and technologies.

- Innovative and cross-sectoral partnerships, as well as multi-level and holistic solutions will be needed to simultaneously address the climate, energy and development challenges.

5 GFSE Policy Briefs

The Global Forum on Sustainable Energy develops policy briefs on particular topics of global relevance in the context of sustainable energy and development, which serve as tools to aid the interaction and knowledge exchange between private and public stakeholders on all levels, policy makers and technical experts.

All policy briefs are available on the [GFSE website \(Services > Policy Briefs\)](#).

5.1 Policy Brief #1: Green Building Concepts and Policies

The global building sector is one of the main causes for fossil fuel consumption and GHG emissions: According to the IPCC, in 2010, 19% of total GHG emissions were attributable to the building sector. Considering the embodied energy of construction materials as well would render the building sector the prime emitter of greenhouse gases. Fossil fuel consumption in the building sector is much higher in developed countries (roughly 40%), whereas the majority of the energy consumed in the building sector of developing countries is biomass (mainly for cooking purposes). This will change substantially in the future with the expected increase in energy consumption overall, which is due to the rapid and continuing urbanization driven by population growth and rural to urban migration, the anticipated improvement in living conditions of developing countries and the anticipated shift from biomass to fossil fuels.

Building design and construction, including the use of sustainable construction materials, will therefore play a significant role to avoid a lock-in effect and to meet the global target of 2°C temperature increase.

Challenges for developed and developing countries in delivering on sustainable buildings will differ. Developing countries will have to focus on new buildings to meet rising demand for energy and housing and to prevent the lock-in effect in unsustainable structures, whereas most developed countries will more strongly target the refurbishment of the existing building stock. Cities will have to address tensions between urban growth, climate change, poverty alleviation, the provision of affordable housing, access to quality residential services, clean energy and environmental conditions, which will have to be solved to ensure a more sustainable development of the building sector. The need for living in more comfortable spaces has to be satisfied, which is often negatively influenced by inappropriate architecture but also by the wrong thermal approach to comfort, such as over-cooled commercial buildings.

This makes clear that the challenge not only relates to sustainable building design, but also to behavioural change. The IPCC 5th Assessment report acknowledges that technological options, design practices and behavioural changes can achieve large reductions in building energy use (50-90% in new buildings, 50-75% in existing buildings). These measures can also yield economic co-benefits like the creation of jobs and business opportunities, and enhanced energy security. Social co-benefits may include a higher capacity of low-income households to pay their energy bills, increased access to energy services, improved indoor and outdoor air quality and increased comfort and health.

Holistic approaches will be necessary to find suitable solutions for the built environment, and the energy system of cities will have to adapt to the new conditionalities: stronger use of renewable energy, a growing number of small-scale interconnected energy production and consumption units and a “smarter” urban network. The design of inclusive policies and strategies will also require the involvement of all stakeholders of the building sector during all stages of a building’s lifecycle.

The GFSE Policy Brief discusses green building design principles and different policy options, that could be implemented to enhance markets for building efficiency by overcoming barriers, and that could align interests of all actors to implement cost-effective and energy efficient options at each stage of a building’s lifecycle.

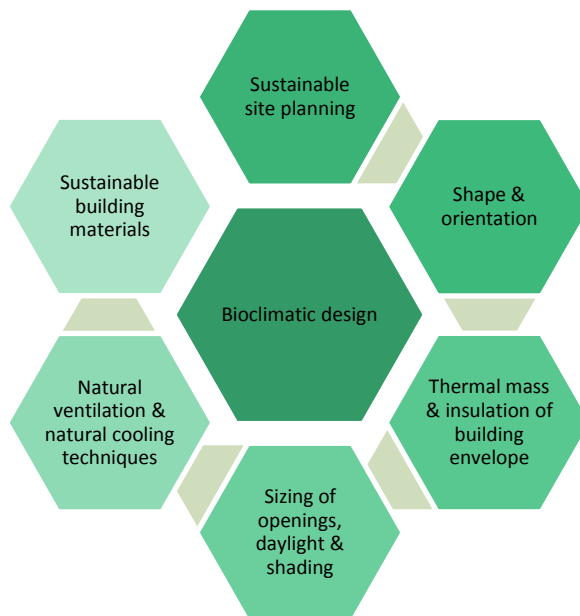


Figure 6: Elements of Bioclimatic Building Design

The policy brief concludes that collaborative action between decision makers, architects and building efficiency experts will be needed to ensure a holistic and sustainable development of the building sector and to create an effective energy efficiency policy for the built environment.

Opportunities for collaboration include the design of an energy efficiency policy for the built environment, including nationally appropriate mitigation actions (NAMAs) or intended nationally determined contributions (INDCs) and low-carbon development strategies, performance tracking, policy interventions to incentivize integrated building design, and new forms of engagement with the investor community to design scalable, replicable financing models with particular attention to developing and emerging economies.

5.2 Policy Brief #2: Private Sector Involvement in Sustainable Development – Green Buildings

The adoption of the 2030 Agenda for Sustainable Development in September 2015 and the 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, ensure affordable and clean energy and tackle climate change by 2030 marked a paradigm shift in international efforts for sustainable development.

These SDGs target developing and developed countries alike and address all pillars of sustainable development: social, economic and environmental. Agenda 2030 clearly recognizes the important contribution of the private sector to achieving the goals, and calls on “all businesses to apply their creativity and innovation to solving sustainable development challenges”. Private business activity, investment and innovation are major drivers of productivity, inclusive economic growth and job creation. A global partnership is sought to implement the SDGs and its 169 targets, encompassing governments, the private sector, civil society, the UN system and other actors.

Apart from the SDGs, an increasing number of global initiatives are actively trying to involve the private sector in the sustainable development agenda. Through the creation of effective Public Private Partnerships (PPPs) and new forms of cooperation, the private sector can be engaged in developing innovative solutions for key areas, lending expertise and mobilising financial resources. Many companies have already realized the importance of including sustainability aspects in their business models and engaging in initiatives that expand local capacities and support development in sectors and areas where they operate.

The building sector is of particular importance to sustainable development: Buildings currently account for about one third of global CO₂ emissions. Rapid population growth, urbanisation and the need for new infrastructure can aggravate the situation and create lock-in effects in unsustainable long-lived infrastructure. Green buildings offer a cost-effective way to reduce building energy consumption, provide comfortable living space and tackle climate change. Developing and emerging economies, however, face a number of barriers for the deployment of renewable energy and energy efficiency technologies and services. The challenges in the building sector include the lack of energy conservation building codes (ECBCs) and effective legal mechanisms to implement these, administrative hurdles such as inadequate capacities, resources and unclear responsibilities, a general lack of knowledge on sustainable buildings, tools and best practice examples in the sector, and financial challenges. The lack of compliance mechanisms, non-availability of information on sustainable building materials, available expertise and the benefits of green buildings also complicate the implementation of green building solutions. Private companies can contribute to the greening of the building sector by offering expertise in sustainable building design and construction, innovative technical concepts, sustainable building materials or financial resources.

Austria has been a benchmark country for energy efficient, sustainable buildings in Europe for more than 20 years, a development which started back in the 1970s and was supported through extensive research activities, support mechanisms and initiatives. Austrian compa-

nies in the environmental and energy technology and services industry are well known for their innovative and future-oriented technology and holistic approach. Especially enterprises in the building sector have an attractive portfolio of products and services to offer. These are described in more detail in the policy brief.



Figure 7: Schachinger Logistik Company Building Hörsching; State Prize for Architecture & Sustainability 2014 (Source: Kurt Hoerbst, www.klimaaktiv.at)



Figure 8: "Wohnprojekt Wien" Block of Flats, Vienna; State Prize for Architecture & Sustainability 2014 (Source: Kurt Hoerbst, www.klimaaktiv.at)

Private sector engagement in sustainable development might follow profit-related or non-profit motivation, or both. For-profit engagement is often complicated by insufficient market information, an unstable investment climate, weak protection of intellectual property rights and low expected rates of return, leading to a generally high risk perception. Profit orientation does not have to exclude business activity from contributing to beneficial development outcomes, but special business and partnership models might be necessary to

achieve both objectives simultaneously. Cooperation with local public partners through private-public partnerships (PPPs) and with international partners through a wider initiative or programme may mitigate uncertainty and risk, create a favourable investment climate and thereby open up new markets.

A number of international organizations and initiatives actively seek to involve the private sector in their development efforts, and Austria has a lot to offer – both in terms of expertise and support instruments for enterprises – as well.

Initiatives and programmes discussed in the policy brief include:

- SE4ALL Global Energy Efficiency Accelerator Platform, particularly the Building Accelerator
- Climate Technology Centre and Network (CTCN)
- World Green Building Council (WorldGBC) and the “Better Build Green” campaign
- Global Alliance for Buildings and Construction (GABC)
- Energy Sector Management Assistance Program (ESMAP)
- UN Habitat programmes
- WKO go international
- BMLFUW and WKO: Export Initiative
- Austrian Development Agency's Business Partnerships
- Austrian Green Building Star

The policy brief concludes that cooperation within an international initiative can help mitigate some of the hurdles for private sector engagement in the green buildings sector in developing and emerging economies. To realise the full potential of private sector activities abroad and in the context of sustainable development endeavours, coordinated action by Austrian stakeholders increases the prospects of success. Support mechanisms play an important role for exporting Austrian expertise and products, and should be complemented with soft measures like regular exchanges between Austrian actors, awareness raising on the international level on the high-quality expertise, products and services of the Austrian building sector and on the national level on the opportunities for international activities.

The Global Forum on Sustainable Energy (GFSE) wants to build upon the momentum created by the Sustainable Development Goals and the COP 21 climate conference to bring national and international stakeholders together, to present opportunities for the Austrian private sector and to create win-win solutions. GFSE will act as a knowledge and information broker by organising networking events and informing various stakeholders on the latest developments and opportunities in cooperation with strong partners. In fulfilling this role, the GFSE and partners have already successfully organised a side event on “Uniting for a Green Building Future” at the World Bank Group's Dialogue for Climate Action in May 2016.

5.3 Policy Brief #3: Implications of the Paris Climate Agreement



Figure 9: Celebrating the landmark Paris Climate Agreement at the closure of COP21 in Paris, 13th December 2015 (source: IISD.org)

The GFSE Policy Brief #3 explores the main provisions of the 2015 Paris Agreement, the needed commitment to climate action on all levels, what the agreement means for sustainable energy development, the role of climate finance and markets, and available climate instruments (Nationally Appropriate Mitigation Actions NAMAs and (Intended) Nationally Determined Contributions (I)NDCs).

The Paris Agreement stipulates the scientifically based target of 2°C global temperature increase and is both a universal and dynamic agreement, committing industrialised and developing countries alike and ensuring that the ambitions communicated in (I)NDCs are increased every five years. Efforts shall be pursued to even limit global warming to 1.5°C above pre-industrial levels, and the Intergovernmental Panel on Climate Change (IPCC) was mandated to develop a report by 2018 on how to reach this goal.

The climate objectives and measures contained in the countries' climate action plans, or (intended) nationally determined contributions, (I)NDCs, are voluntary in nature, but a number of legal requirements are contained in the new climate deal:

- Signatories will have to enhance ambition every five years starting in 2020, with updated plans that tighten their emission cuts
- Starting in 2023, signatories shall take stock every five years to publicly report on their progress in curbing emissions compared to their plans. This means that they are legally required to monitor and report on their emission levels and reductions, using a universal accounting system.

This so-called **ambition mechanism** foresees that updated NDCs shall be no less ambitious than existing ones. Collective achievements of the Parties to the Paris Agreement will first be assessed in a **global stocktake in 2023**. To achieve the jointly agreed goal, climate action of the signatory states will have to be supplemented by initiatives of sub-national and regional actors, businesses and investors as well as the civil society. A Global Alliance on Buildings and Construction was launched with the aim to divert construction finance to green buildings and to develop and implement a comprehensive action programme.

Climate finance needs to be scaled up to reach the 100 billion dollar target by 2020 and go beyond thereafter. A balance between mitigation and adaptation finance is needed, and more investment has to flow into research & development of new, clean and innovative technologies and cross-border initiatives. The GCF and the GEF will ensure efficient access to climate finance and take specific needs of particularly vulnerable parties into account.

The Paris Agreement demonstrates universal ambition for climate protection, which will now have to be translated into concrete action to decarbonise the world economy and ensure a sustainable global development pathway.

As of 29 June 2016, 19 Parties have ratified the Paris Agreement, accounting for 0.18% of global GHG emissions. Information about the status of ratification can be found on the [UNFCCC website](http://unfccc.int).

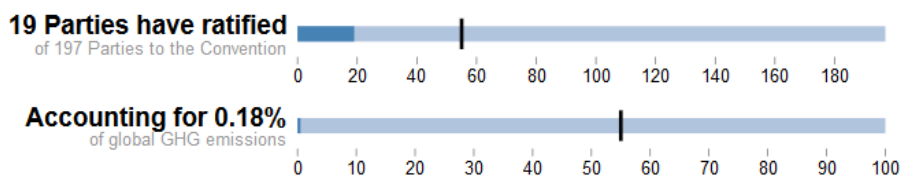


Figure 10: Status of Ratification of the Paris Agreement, 29th June 2016 (Source: unfccc.int)

6 Cooperation with Sustainable Energy for All (SE4ALL)

The Sustainable Energy for All (SE4ALL) Initiative creates new opportunities for cooperation between international organizations, public institutions, academia, the private sector and civil society initiatives. GFSE actively supports the SE4ALL Initiative acting as an information broker and networking agent between international and national stakeholders, and thereby enabling future cooperation and experience exchange processes.

GFSE is in regular contact with representatives of SE4ALL and pinpoints current possibilities for cooperation. In May 2016, Ms. Weber-Fahr, COO of SE4ALL participated in the GFSE event to bring together Austrian building expertise with international initiatives and markets. On 29 June 2016, the President of GFSE met with UNSG-SR and CEO Rachel Kyte in the margins of the G-20 Energy Ministers Meeting in Beijing to discuss future cooperation possibilities.

GFSE acts as an information broker for Austrian stakeholders and enterprises in the energy and related sectors about ongoing campaigns and programmes of SE4ALL. Drawing on its extensive network of energy professionals, the GFSE has, for instance, informed numerous companies that are interested in climate action and energy efficiency measures, about the “WE COMMIT” campaign in the run-up to the 21st Conference of the Parties to the UNFCCC in Paris in December 2015. In this campaign, private companies were invited to participate in the SE4ALL initiative and to gain international recognition of their sustainability endeavors.

7 Public Relations

To enhance its visibility in international events and show the field of work and added value of the Global Forum on Sustainability at a glance, public relation materials were developed in the second half of 2014.

The professionally layouted first GFSE Activity Report is available on the GFSE website, presenting the comprehensive work of GFSE from its start in 1999 until July 2014 together with profound background information about the topics covered.

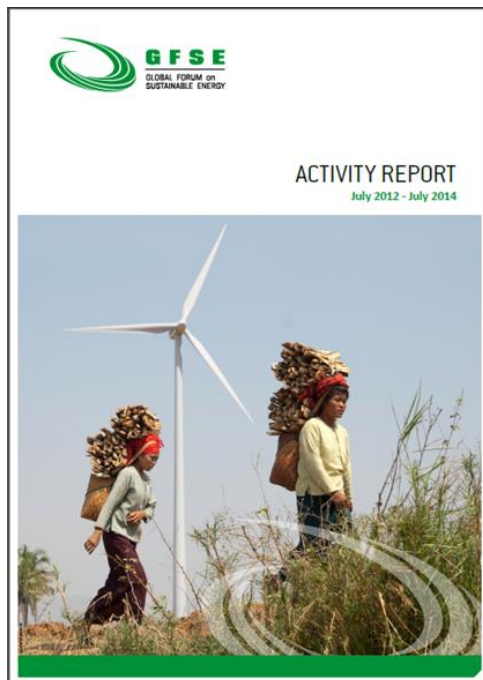


Figure 11: Cover of the GFSE Activity Report

Other PR materials include a flyer presenting the structure and working areas of GFSE and a GFSE roll-up. Both were successfully used to promote the GFSE at prominent international events and fora, such as the Vienna Energy Forum 2015, the South African International Renewable Energy Conference 2015 and the Dialogue for Climate Action 2016.





Figure 12: GFSE Flyer



Figure 13: GFSE Roll-up "Partnering for Sustainable Energy and Development"

8 Information and Dissemination Activities

The website of the Global Forum on Sustainability (www.gfse.at) serves to inform national and international stakeholders about latest developments, initiatives and events regarding the global efforts to develop a sustainable energy system and ensure universal energy access, about activities of GFSE and important publications. Important news, such as the adoption of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals, the outcomes of the COP21 in Paris in December 2015 or the inauguration of the Eastern African Centre for Renewable Energy and Energy Efficiency in June 2016, are regularly published on the cover page in the form of newsbuttons.

The GFSE website features top news on its cover page, an introduction to GFSE, its main activities over the years, and a service section. With its bi-annual newsletter, GFSE updates interested followers on recent events, policy developments and other topics ranking high on the development agenda. Furthermore, the website provides the possibility to institutions and organisations to promote their own sustainable energy events, which are incorporated into the event calendar. A selection of relevant links displays the global network of GFSE and might act as a starting point for research on sustainable energy topics or potential partner institutions.



Figure 14: Homepage Snapshot of the Global Forum on Sustainable Energy

All [GFSE news](#) and [newsletters](#) are available on our website.

9 Additional GFSE Networking and Outreach Activities

Since late 2012, GFSE is a member of the global network REN 21 as a non-governmental organisations, and GFSE-President Irene Giner-Reichl has been acting as one of the REN 21 vice-chairs since January 2013. GFSE actively participates in networking and outreach activities of REN21, notably through supporting the launch of the Global Status Report through various PR-activities and by providing inputs to the regular REN21 newsletters.

In her capacity as GFSE-President and Vice-President of REN21, Irene Giner-Reichl dedicates herself to promoting the three goals of Sustainable Energy for all. She i.a. facilitated outreach meetings at the Austrian Embassy in Beijing

- on 11 November 2014 of Mahama Kappiah, Executive Director, ECOWAS Regional Center for Renewable Energy and Energy Efficiency, with Beijing- based Ambassadors and other representatives of African nations on the occasion of the China launch of the ECOWAS Renewable Energy and Energy Efficiency Status Report prepared by REN21;
- On 14 July 2015 with Fatih Birol, (then designated) IEA Executive Director, on the occasion of the China Launch of the World Energy Outlook 2015 in the China Hall of Science;
- On 4 May 2016 with representatives of the Chinese Renewable Energy Industry Association.

Irene Giner-Reichl was a featured speaker at the Energy Africa Conference in Colorado in November 2014. She organized the China launch of the 2015 REN21 Global Status Report 2015 on 24 June 2015 together with senior representatives of the Chinese National Energy Administration and the Chinese Renewable Energy Industry Association for Chinese and international energy experts and media representatives in Beijing and also during the Ecoforum Guiyang 2015 at which the Secretary General of REN21, Christine Lins, addressed the Forum.

She co-moderated the Declaration that was adopted by acclamation at the South African International Renewable Energy Conference (SAIREC) in Cape Town in October 2015.

In March 2016, she was a speaker and panelist at the International Forum on Energy Transitions in Suzhou.

At the ECO Forum Guiyang in July 2016, she made a media launch of the REN21 Global Status Report 2016 which was attended by some 50 Chinese media representatives and initiated a cooperation with the Chinese Renewable Energy Industry Association regarding the anticipated amendment of the Chinese Law on Renewable Energy.

Her article “Renewable Energy in International and Regional Governance: Propelling Development in Africa” was published in the peer-reviewed journal Energy Research and Social Science 5 (2015).

Rudolf Hüpfl, active member of the Global Forum on Sustainable Energy, participated in several international meetings and workshops on behalf of the association. These included

the UNIDO meeting of the Consultative Group on Renewable Energy for Inclusive and Sustainable Development and an event of the non-profit organisation “Jugend Eine Welt – Don Bosco Aktion Austria”. He also participated in a peer review for a report of the International Centre for Small Hydropower on the potential for expanding small-scale hydropower in the Gambia, and presented the potentials for further exploitation of hydropower in Guinea Bissau at a workshop organised by UNIDO, ECREEE and the government of Guinea Bissau.

10 Outlook on Future GFSE Activities

The Global Forum on Sustainable Energy will continue its successful cooperation with Sustainable Energy for All Initiative (SE4ALL) and undertakes to inform and broker between international and national stakeholders and thereby to prepare the ground for future cooperation and experience exchange.

Austrian stakeholders in the energy and related sectors like environmental technology, construction or infrastructure, and in development cooperation have a lot to offer: comprehensive and internationally demanded specialised know-how, innovative concepts and products, and market leadership in a number of environmental technologies. As a seat of international organisations and initiatives focusing on energy, like UNIDO, SE4ALL, REEEP, Energy Community Secretariat and others, Vienna has advanced to an international energy hub over the past years. Some of these actively strive to engage the private sector and civil society organisations in their programmes and initiatives, but a better coordination and stronger exchange of information between all actors would be required for successful cooperation. International institutions based in Vienna, and the Vienna Energy Forum as a high-level global multi-stakeholder platform to explore 21st century developmental challenges from the perspective of sustainable energy and to discuss practical solutions could strongly benefit from a better coordination and stronger involvement of Austrian stakeholders in the Forum. The GFSE will assume this role to coordinate relevant Austrian stakeholders with a view to the Vienna Energy Forum 2017 and to support a targeted design of the Forum in terms of topics, the planning of panels and side events and the visibility of Austrian stakeholders and expertise. This is expected to lead to more concerted planning efforts in order to realise a clearly focused event with strong outcomes that will shape future discussions on sustainable energy and development.

Next to these activities, targeted research and development of policy briefs and background papers about pivotal topics can complement and enrich this dialogue and provide a good basis for decision making. Thereby, the GFSE can support the closing of gaps in the conception and implementation of sustainable energy solutions in policy as well as in practice.

