

## R20AWS Contribution to the UN TALANOA-DIALOGUE

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### Introduction

Over the last decade, regions, states and cities around the world have shown that their contribution is crucial to accelerating our transition to a sustainable future. R20 Regions of Climate Action is the initiative of Arnold Schwarzenegger and aims to realise projects and solutions for climate protection. Therefore, R20 has strong partnerships with the United Nations, international financing institutions (World Bank, European Investment Bank, etc.) and with networks of regions and business sectors. R20 Austria & EU is the local R20-hub in Austria and organizer of the annual R20 AUSTRIAN WORLD SUMMIT, a long-term initiative to create a network platform that supports regions, states and cities in implementing the UN Sustainable Development Goals and to meet the global climate targets outlined in the Paris Agreement. The annual event is held under the patronage of Austrian Federal President Alexander Van der Bellen and with the support of Sebastian Kurz, Federal Chancellor of Austria, and Elisabeth Köstinger, Austrian Minister of Sustainability and Tourism. As part of a global network of partners, we give visibility to climate action solutions and improve the instruments and measures by addressing obstacles and defining opportunities.

2015 was a historic year in which international decisions and pledges were made to protect humanity and improve conditions for our common future. Not only was the decision of the Paris Agreement in December 2015 a milestone in environmental politics, but also the Agreement of the General Assembly of the United Nations on the 2030 Agenda for Sustainable Development which changes the approach of nearly all policies on multilateral, national and sub-national levels. Nevertheless, it is clear that the implementation of the required transformation process is not on track yet.

The UN-Talanoa Dialogue provides an essential opportunity to close the gap between the ambitious aspiration of the UN Paris Agreement and the current reality of climate action. To bridge this gap new approaches are required in terms of strategies, instruments and governance to make our transition to a carbon neutral economy and climate resilient society possible. However, we also wish to highlight the social and communication aspects of the transition process and would therefore like to acknowledge our gratitude to the UN for this initiative, allowing the participation of a wide range of stakeholders and experts and stimulating new ideas to solve the knots at COP 24 in Katowice and in the following process.

Our contribution to the UN Talanoa Dialogue summarizes the key outcomes of the 2018 R20 AUSTRIAN WORLD SUMMIT, held on May 15<sup>th</sup> in Vienna, which gathered many high-level participants from all over the world, including UN General Secretary António Guterres. It is a call for more and better climate leadership and to emphasize the leading role of regions and cities in holding a decisive role in achieving the Paris Agreement objectives because local communities are where the action takes place and can be the drivers of change. By building bridges between decision makers, investors, financial institutions and enablers on sub-national level, we can shape a world which is healthier and less polluted, create jobs and boost the economy towards more sustainability.

## WHERE ARE WE?

With the IPCC Special Report on Global Warming of 1.5°C, released on October 8<sup>th</sup> this year, it is clear that the limiting of global warming to 1.5°C requires rapid and unprecedented changes across all aspects of society. Annual GHG emissions need to be almost half the current levels by 2030 in order to limit warming to 1.5°C and avoid the devastating consequences of global warming. Global average temperatures are already higher by around 1°C compared to pre-industrial times (average 1850-1900). A further warming of 1.5°C will see weather extremes become more prevalent across the world. Increases in hot temperature extremes are projected to be largest in central and eastern North America, central and southern Europe, the Mediterranean region, western and central Asia, and southern Africa. Compared to a 2°C increase, keeping warming to 1.5°C will protect an estimated 420 million people from frequent exposure to extreme heatwaves. The challenge is enormous: CO<sub>2</sub> emissions will need to be reduced to net-zero by the middle of this century. Making this monumental shift will require substantial new investments in low-carbon technologies and efficiency. Rather than questioning the abundance of evidence for man-made climate change, the future debate has to shift towards how we are going to protect people from the impact it will have. The R20 AUSTRIAN WORLD SUMMIT identified some key areas where the current status is far from where we need to be:

**Buildings and construction** now account for 39% of energy related global CO<sub>2</sub> emissions, with 28% resulting from energy use in buildings and 11% emitted by the construction industry. Therefore, the decarbonisation of buildings is key to fulfilling the Paris Agreement. Over half of new buildings expected by 2060 will be constructed in the next 20 years, with two thirds of these in Africa and Asia. Around three quarters of global greenhouse gas emissions are produced in urban areas. The nature of urban-rural linkages will have a significant bearing on prospects for environmentally and socially sustainable development.

**Energy supply:** With current global energy consumption depending on an 80% share of fossil energy sources, a profound transformation of the entire sector is urgently needed. Renewable energy provided an estimated 18.2% of global final energy consumption in 2016. In 2017, renewables accounted for 70% of net additions to global power generation capacity (160 GW) and covered 26.5% of global electricity demand. The development of renewable energy technologies is impressive. However, the current rate of installation is not enough to reach SDGs and the Paris Agreement goals.

**The transportation sector** is of highest relevance for global energy demand and CO<sub>2</sub>-emissions. Globally, transportation is responsible for approximately 15% of greenhouse gas (GHG) emissions with an increase of around 40% between 1990 and 2015. Given the expected growth rate, the technological, structural and cultural shift to sustainable transport models and services will be crucial to finding a path towards decarbonization.

**Finance sector:** With equities and bonds standing at \$160 trillion, the financial services industry oversees the global economy. An increasing number of asset owners and investors have already decided to implement strategies related to climate change. Although many positive activities and pioneering examples are paving the way for a more sustainable sector, the overall finance sector remains short of the numbers needed to enable the transition to a low-carbon economy and fulfil the Paris Agreement.

**A spotlight on specific industries and areas:** Attention must be directed towards various business sectors and areas that need to be discussed more widely in public debate and more heavily regulated e.g. by government institutions. Industries such as the textile industry, agriculture, food production, shipping, and waste disposal will play enormous roles. The pressure has to be taken off our natural resources. Biodiversity and the protection of our oceans go hand in hand with tackling climate change.

**Environmental protection is a powerful lever to improve human health** on a global scale. In 2015, an estimated nine million deaths worldwide were a direct cause of pollution. Air pollution is by far the largest contributor to premature mortality according to a report by The Lancet Commission on Pollution and Health. Tackling pollution is a key driver in phasing out coal power plants and promoting renewable energy systems and energy efficiency.

**Multidimensional and systemic nature of climate change:** The lack of understanding regarding systemic risk needs to be addressed by policy makers. Security implications, as well as social issues, are closely connected to climate change and environmental factors.

Such issues share links with the resilience and transformational power of cities, regions and communities. Many solutions have been implemented and observed in recent years. Therefore, there is hope that drivers of change can succeed in leading this vital transformation into a more sustainable world. Existing commitments of regions, cities, and private initiatives can effectively contribute to a prosperous future. Nevertheless, ambitious targets on multilateral and national levels alongside the implementation of instruments will be decisive in the level of success for all of our futures.

## WHERE DO WE WANT TO GO?

As outlined in "Where we are", the world currently remains far from the essential path of decarbonization and carbon neutral societies. However, it is not an impossible task. As a new report titled "Global Climate Action from Cities, Regions, and Businesses" by Data Driven Yale, NewClimate Institute, PBL Environmental Assessment Agency, has demonstrated, both individual commitments made by regions, states, cities and businesses, as well as international cooperative initiatives, have the potential to reduce global greenhouse gas emissions significantly further than current national policies can achieve alone. Implementation of individual city, region and business commitments would bring the world closer to a global pathway compatible with the full implementation of Nationally Determined Contributions (NDCs), which were submitted as part of the Paris Agreement.

The R20 AUSTRIAN WORLD SUMMIT outlined some key strategies to fulfill the paradigm shift needed to reach net zero emissions in 2050:

**Avoiding carbon lock-in effects** and considering the embodied energy in buildings will be a crucial challenge to policy makers, builders, planners and investors. The barriers to transforming the building sector are largely financial, with higher up-front investment costs (and lower running costs), whereby new incentive models and regulatory support are required.

**New business models in focus:** The world needs to accelerate and enable energy efficiency in all sectors. New industrial solutions and disruptive technologies change the ecosystem. Carbon taxing and a clear target on net-zero emissions can transform the playing field and create a thriving market for new models, whilst boosting the demand for improved technologies.

**The solutions are available – we need better sharing:** Cities and regions can and will make a difference with the keys they already hold. We should now be learning from each other, sharing information on best practices, as well as learning from mistakes.

**Improved regulatory and institutional framework:** It is not by chance that pioneers have become leaders. Different sets of policies and goals might serve as potential models. We can learn from each other globally on successful policy and institutional frameworks, which remain incapable of addressing the challenge in a sufficient way.

**New partnerships and engaging communities:** Strategic programs to engage local communities and stakeholders turn out to be successful. Bottom-up approaches go hand-in-hand with

decentralized energies. Partnerships and collaborations are a key element to moving forward. One example is that Europe and Africa have many opportunities for better cooperation. Public and private partnerships need a better understanding of risk and their reduction by the government.

**Access to energy with no one left behind:** Access to energy, as well as affordable and reliable methods of energy supply, is a parallel focus to decarbonization. With the era of (centralized) fossil energy supply having left many people in the dark, the renewable energy transition brings with it the chance to include everybody.

**Activate and innovate the finance sector - closing the investment gap:** The finance sector still remains conservative in regard to new energy systems. A fundamental reorientation of energy investments into renewables and energy efficiency, as well as low carbon industrial processes, is necessary to achieve the Paris Agreement targets. We have to create critical mass and reduce transaction costs. New blended finance mechanisms will help to engage public and private capital. Decentralized structures favor smaller projects.

**Sustainable agriculture revolution** is needed to produce healthy, locally sourced food, but also to protect water, air and land resources, whilst creating additional jobs for the growing population, improving income, way of life and positively impacting the whole value chain. We need to rethinking the usage of natural materials (e.g. wood) to minimize the environmental impact

**Need for systemic change:** we have to think in terms of environmental systems that are interrelated and build up business models to support this with financial incentives.

## HOW DO WE GET THERE?

By focussing on climate action solutions and instruments for the subnational level, several aspects are brought into discussion that highlight some of the key elements to making sustainable transformation possible:

### A New Mindset – and New Rules

**Better communication:** Psychological barriers are preventing transformation. Emotional support and genuine enthusiasm need to be generated and reach citizens and consumers. Addressing non-environmental benefits of sustainable development and empowering people to have a good life without damaging the planet will be a specific focus: from health to economic aspects alongside social advantages through better eco-friendly options.

**The right to clean air and environmental protection:** Citizens and NGOs have the right to demand clean air and have already successfully fought for it in court. National courts have begun stepping in when local governments fail to protect their people from air pollution.

**By better collaboration and the strengthening of networks,** such as ICLEI, R20, C40 and many others, we can do better. Many models are easy to adopt and put into practice.

**Strengthening and mobilization of civil society:** The convening power of Non-Profits and Universities should be used to encourage dialogue and provide links between different groups and varying issues. A major challenge is to provide investment to areas where governments are unable to act. An objective is to shift finance to regions where a sufficient amount of capital is not flowing.

**Raise awareness for systemic risks:** Climate change, as well as deforestation and the loss of biodiversity, is a systemic risk. The links between a changing climate and agricultural land becoming non-productive, a rise in food prices, income loss, migration, security and political volatility, need to be more widely understood.

## Closing the Finance Gap

From now until the middle of the century there is a need for 29-trillion dollars in investment to tackle climate change. Although transition of energy production is capital-intensive, it results in a multitude of benefits. Innovative funding mechanisms will be a critical component in our efforts to address climate change.

**Requirement to integrate climate risks (physical, transition) into standard financial risk measures** and provide risk assessment and applicable tools for all agents in the financial markets.

**Better data is needed:** Lack of information is a major risk to investors. Reliable information about the effect of climate change on holdings, supply chains and customers is required.

**Create a clear methodology and unified taxonomy** for measuring sustainability and climate aspects in portfolios. Avoiding green washing, especially in rapidly growing markets such as Green Bonds. Trust and credibility are major assets.

**Improved metrics** need stronger collaboration of policy makers and the private sector. Integrating climate consideration into the financial system will be part of daily decision making.

**Enhancing transparency** in corporate reporting.

**Address the subnational level in climate finance instruments:** Without involving the private sector and subnational authorities, it will be impossible to speed up the implementation of green projects.

**Sharing best practices and capacity building:** The role that regions play should be taken into account. Raising awareness and capacities is necessary to redirect financial flows on all levels. Divesting from fossil fuels is a successful strategy for the private, institutional and public sectors.

**De-risking strategies help to establish and accelerate climate finance:** leverage of transparent instruments to affordable costs and provision of risk management tools, especially to the poorest countries (e.g. for minimizing currency risks).

## Shaping the New Energy World

**End fossil fuel subsidies and privileges:** We call for a minimum carbon floor price influencing the energy market and termination of the privileges currently given to coal and many carbon-intensive, fossil energy sectors.

**Heating and cooling in focus:** The thermal economy requires more attention. Currently, the political focus falls primarily on electricity, with issues of heating/cooling often ignored. Particularly for regional and local energy supply, heating and cooling are even more important.

**Breakthrough technologies and the transformation of energy management:** We need a radical technological change. Energy-intensive industries in particular will have to adopt breakthrough technologies and navigate economic challenges. Besides R&D, a fundamental transformation of energy management (including generation, supply and distribution) and better-coordinated policies on all levels will be necessary to enable a dramatic shift to decarbonized technologies.

**Investing in capacity building, training and skill development.** The transformation of energy supply also represents a societal change. Skill-development, training, defining clear responsibilities and providing social infrastructure are all key elements and need to be part of the finance mechanism. The public sector has to take a leading position.

## Building the Energy and Transport Infrastructure for the Future

The transformation of mobility can be far more than simply switching propulsion systems and energy sources. It provides the added opportunity to enable transport system structures and our culture of mobility to become fit for the future. Adequate and high-quality public infrastructure is essential to providing services for urban inhabitants. Urban design and the interaction with rural areas will be crucial in avoiding carbon-intensive structures and become the basis for efficient solutions.

**Modern transport needs modern regulation:** Much of the technologies utilized today in transport (and energy) systems are outdated and inefficient. Modern regulations have to create a need for further innovation and create a level playing field. Smart policies can gradually raise the level of ambition towards change.

**Taxation system and incentives:** A simple principle within society is to tax things that are unwanted (such as heavy polluting cars) and support what is wanted. A price on carbon and other emissions provides a major instrument in supporting the shift to a climate friendly transport system. Ambitious targets can guide political strategies. Most notably in the beginning and early phases of adopting and transferring to renewable energy and sustainable models (including initiatives such as introducing complimentary EV charging infrastructure; providing affordable public transport, such as the Vienna €365 annual ticket model, support by public authorities is required to penetrate the market and increase public acceptance.

**New model based on multimodality and better infrastructure:** Public transport is an integral part of any future transport system. Multimodality needs easy access for passengers and consumers. Digitalisation can certainly help to facilitate this, but economic incentives and a sustainable infrastructure concept will be key to successful implementation. We need to re-evaluate the space we use and provide better infrastructure for bicycles and pedestrians, not only in cities, but also with suitable connections to surrounding areas.

**Passenger cars are not the only issue:** We need to bring freight transport, shipping and aviation increasingly into focus. Besides railway electrification, a fully electric ferry service has become operational in Norway, whilst the aviation industry is showing the first steps towards electric innovation. However, structural changes and issues of efficiency need become a major focus.

**Industry has to accept the challenge:** The car manufacturing industry is one of the most significant sectors in many parts of the world, especially in Europe. The electric vehicle revolution needs innovative industrial solutions. The availability of cars, buses and cargo vehicles, as well as new battery technologies will play increasingly important roles in the coming years. The future of mobility has to be renewable and electric, but batteries will not provide the only solution, with alternative options such as hydrogen set to emerge.

**Sustainable urban design to win citizens hearts and minds:** Cities of the future will require more than merely new technologies. The idea of dense cities as vibrant places is integral to questions concerning the kinds of cities we want to live in. With sustainable urban design and by avoiding urban sprawl, the foundations are laid for lower energy demands. Green areas will play a significant role in making cities more prosperous, healthy and sustainable.

**Integrated energy and urban planning:** The integration of energy planning within urban designing is crucial to avoiding carbon lock-in effects. Networked structures and zero-emission districts and quarters will become the norm by aligning energy production and distribution to the location and demands of the energy consumer.

**Energy active and flexible buildings as part of the energy system:** Due to the renewable energy revolution and improved energy efficiency, as well as new storage technologies, the roles of buildings change.

## Sources

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