



Annual Activity Report

2014



REGIONS OF CLIMATE ACTION



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R20 – Regions of Climate Action has made excellent progress throughout the year 2014. Having transitioned from R20 1.0 to 2.0, the organization further expanded its collaborative links with its member regions and its technical and financial partners, while its affiliate offices around the world pressed forward with project implementation. R20 believes that the transition to the green economy goes through building low-carbon infrastructure projects, especially in the fields of renewable energy, energy security, energy efficiency, waste management, etc.

In 2014, R20 was able to demonstrate this by implementing a number of large-scale projects, including the 1.5 million LED street lights initiative in Brazil, the 50 MW solar PV project in Mali, and the waste management project in Algeria. In addition, special attention was given community-based projects, like the solar bakery in Burundi and the biogas digester and clean-water project in Nigeria. In carrying out its activities, R20's distinctive signature is the ability to bring all stakeholders together around a common project. R20 plays the role of facilitator and broker, helping to identify, design, structure, and make projects bankable to potential public and private investors. R20 removes barriers to project implementation by reducing the perceived political, industrial, and financial risks, which is especially important when working on the green economy in emerging and developing countries.

Throughout 2014, R20 put considerable effort into developing an ecosystem of blended financing, and on building a value chain for project identification, development, and implementation. This value chain is based on:

- Political engineering to identify and evaluate project opportunities, through R20's philanthropic funds and contracts with national and sub-national governments (regions and cities).
- Technical engineering to conduct project pre-feasibility studies, through R20's extensive network of technology partners and developers, in order to deliver high quality projects. R20's technical expertise intervenes "upstream", to minimize risks and ensure projects' bankability according to criteria and conditions required by investors (public and private).
- Financial engineering to make projects attractive to investors, both private (equities) and public (liabilities). R20 facilitates investments in low-carbon projects through its robust network of investors, the Green Finance Network (GFN), which centralizes critical project information and opportunities for investors. In parallel, R20 works on building a Pre-Investment Facility (PIF) for pre-feasibility studies, funded by bilateral and multilateral institutions, where success fees will make the PIF a revolving sustainable fund.

This value chain, combining different sources of funding at different stages of project maturation, allows for significant leverage to make projects investor-ready. R20 demonstrates that a philanthropic grant or pre-investment of USD 1 can leverage a 50-100% equity and loan financing. In addition, R20's financial strategy seeks to demonstrate that funding from private

sources can reach equivalent or higher levels as compared with pledges made by countries to multilateral funds (i.e. UN Green Fund).

In 2014, R20 has also considerably advanced its profile in the international climate change arena. In terms of increasing visibility and strengthening its political base, R20 has had an unprecedented opportunity to distinguish itself by organizing the World Summit of Regions for Climate in Paris (October 10 & 11, 2014). The Summit of Regions mobilized the international community around joint action by regions, cities, businesses and investors to contribute to a global climate agreement in Paris in 2015. R20 believes this action-driven “bottom-up” approach to be fully complementary to the UNFCCC’s normative intergovernmental negotiations.

Ahead of the Paris Climate Conference 2015, the French Government strives to promote a “Positive Solutions’ Agenda” to tackling climate change. With its Summit of Regions, R20 successfully demonstrated that sub-nationals and their private partners are powerful drivers of the green economy, generating new green jobs, appropriate technological development, greater energy security, a preserved environment and improved health for populations.

With its Summit, R20 earned recognition for being the champion of the bottom-up movement towards COP21. This approach took the form of a declaration of commitments, called the Paris Declaration, signed by the major networks of cities and regions in the field of climate change (AER, ORU-Fogar, The Climate Group, NEAR, AIRF, Mexico City Pact, ICLEI and FMDV, representing some 2,945 regions and cities encompassing a total of 700 million people). This same declaration was signed by business leaders and financial institutions.

R20’s bottom-up dynamic was presented by R20’s Founding Chair Governor Arnold Schwarzenegger to the French President François Hollande, as complementary to the UNFCCC negotiations. As a result, it was agreed that in order to encourage the Parties to adopt the Solutions’ Agenda and help agree on a new climate regime, the French Government would work with R20 on a diplomatic, operational, and financial strategy to effectively contribute to COP21.

This strategy will become part of the Road to Paris 2015, federating all forces at the sub-national level, including political figures, business, and financial leaders. These should form a strong global movement capable of evidencing concrete sub-national achievements and advocating for the adoption of a new international climate agreement in December 2015. In addition, R20 and other networks of regions have been collecting evidence of real projects and commitments taken at the sub-national level, to be presented at COP21 and demonstrating that cities and regions play a major role in complementing national efforts.

Ahead of COP21, R20 will work closely with ICLEI (the focal point of local authorities in the UN negotiations) on a common approach to mobilizing all associations of cities and regions. Concretely, R20 and ICLEI propose to

present 100 major initiatives, which will be duly assessed for carbon emissions and expected to have reached the implementation phase. R20 and ICLEI's coordinated approach towards COP21 will also involve the logistics for organizing sub-nationals' participation in the conference venue at Le Bourget in Paris.

In conclusion, the year 2014 represented an important milestone in R20's development and a propitious time for R20 to firmly establish both its technical expertise and political legitimacy. The organization was able to broaden its actions across the five continents, fully playing its role of impartial intermediary between actors in the public sphere (supranational, national, and sub-national) and stakeholders in the private domain (operational and financial sectors).

By the end of 2014, R20 had not only demonstrated its capacity to develop and finance a number of low-carbon infrastructure projects, but it reached new political status in the international climate change debate. In conducting its activities worldwide, R20 became a pragmatic, highly reactive and efficient organization, working through a coherent ecosystem of policy, technology, and finance tools – constantly pushing the agenda of a new green deal flow.

Algeria



Activities related to the creation and implementation of R20 MED

In January 2014, the R20 action plan for the Wilaya of Oran was approved by the Algerian Government. With regards to the promotion and involvement of R20 MED at the national level, as well as to making public the partnership agreement between the Ministry of Territorial Planning and Environment and R20, a number of measures were taken:

- Consultation and ongoing dialogue with national institutions;
- Preparation and participation in the parliamentary day, organized on January 12th, 2014 in Algiers;
- Participation in the round table discussions on the subject of waste recovery, which was held on January 23rd, 2014 in Algiers by the National Union of Algerian Investors;
- Preparation and participation in a meeting held on February 5th, 2014 with local actors in the Wilaya of Oran;
- Pursuing a network of contacts with local actors in the Wilaya of Oran, such as with members of press, MPs and civil society;
- Meetings with Oran's associations in order to train local actors for the commencement of the waste management operations;
- Promotion of eco-construction at multiple meetings with the Maghreb's Network of Enterprises for the Environment (REME);
- Promotion of R20 to actors in the field of energy management, under the agenda of the International Conference on Energy and Management (ICEM);
- Gathering contacts from the support network that promotes entrepreneurship in Oran.

Thereafter, R20 USA and R20 Geneva worked together to implement the green economy programme for the Wilaya of Oran. To achieve this goal several projects were launched in parallel, including: the reduction and recycling of waste, LED street lighting, mapping and GIS, renewable energies, and energy efficiency in buildings.

At the end of June 2014, R20 completed one year of activities since signing the cooperation agreement with Algeria. This prompted the submission of the first year report to the Algerian Ministry of Planning and Environment. Throughout 2014, R20's activities in Algeria included the following:

Technical and political visits

R20 organized a technology tour and high-level visits for the Wali of Oran in France and Switzerland. The tour took place in Paris, Lyon, Nice, Geneva and Vevey. It was an opportunity to share best practices and technologies between Algeria and European regions.

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Algeria

Waste management

Following the technical visit held in the USA, and the feasibility studies undertaken by R20 and ZeroWaste Global, the local authorities decided to implement a pilot project on household waste sorting. In collaboration with the national authorities, R20 organized a training session on waste management (20, 21, 22 May) for Algerian local decision makers. The three day national training on waste management brought together 30 Algerian participants and discussed the topic of waste management within the framework of national policy and regulation, as well as technical practices and finance. The objective of the training was to present a profitable approach to waste management, based on a rational management of resources. The training sessions demonstrated, through concrete examples, that waste can be a source of revenue and can create jobs in Algeria.

The R20 “management and waste recovery” programme has mobilized the most of resources this year. The priority actions for improving the management of waste in the Wilaya of Oran are: waste sorting, the establishment of a center for waste sorting, composting of organic waste, and the management of construction waste. Following the studies, R20 initiated two pilot projects that will consult and form partnerships with the concerned stakeholders. The first project identified the selective sorting of household waste sources (at local citizen level). A district of Oran (AADL district) was selected to start this pilot project waste sorting system. The second project deals with composting on the C.E.T site of Hassi Bounif. To carry out this project, complete technical studies were conducted in July 2014.

LED Street Lighting

The R20 LED street lighting programme was designed in line with the City of Oran’s process of modernization by improving lighting quality while reducing energy consumption. A feasibility study and consultations with operators of the area were presented by R20 to the Wali of Oran, who organized a gathering with all the industry players to discuss R20’s proposal. In addition, during a visit of the Wali of Oran to Lyon, France, the latest LED street lighting technology was presented. The studies, briefing/training, and consultation work provided the foundation for a consensus endorsed by the Wali of Oran. The pilot project includes LED retrofits in a boulevard of Oran’s city center and illumination of monuments (Santa Cruz, Oran City Hall, and the city’s theaters).

Mapping

The mapping project in Oran started in May 2014, with a first mission of an international expert to support the local teams and to collect the data for waste, lighting and energy. Thereafter, the work in the area of geographic information system (GIS) continued over a long period of consultation with public authorities and various local institutions, such as: EPIC waste management, the operators of public lighting, and man-



Algeria



agers of water and electricity networks. This phase provided contextual information concerning the possible opportunities and constraints that may emerge alongside such a project, as well as information on the pertinent needs in the area. In addition, a data collection mission and appropriate training were organized. A contract was signed and a partnership formed with an Algerian company to properly handle the technical side of this project.

Renewable energy

In June 2014, R20 organized a training session on renewable energy in collaboration with Global Sustainable Electricity Partnership (GSEP). The training session focused on concrete steps regarding the implementation of renewable energy projects at the local level. The GSEP is an international organization composed of the most important companies in power distribution around the world (Duke Energy, USA; Hydro Quebec, Canada; RWE, Germany; EDF, France; ENI, Italy; ELETROBRAS, Brazil; ESKOM, South Africa; Kansai, Japan, etc). GSEP's expertise in the production and distribution of electricity is recognized worldwide. This workshop gathered 30 Sub-Saharan and Mediterranean participants and had a great impact for R20's credibility in the renewable energy sector.

Energy efficiency of buildings

The program for energy efficiency in buildings was also initiated in 2014. R20 MED identified local actors to help in the development of pilot projects, and has already organized a workshop on green building to explore partnership opportunities.

Technoparc and green economy opportunities

The Technoparc project in Oran is an opportunity for R20 MED, of particular concern to the active Algerian companies focused on the environment. Following the visit by the Wali of Oran to the Technopole (hub) in Nice, R20 organized a meeting in Oran, on June 12 & 13, with the Director of Nobel Sustainability Trust, Mr. Kofoed, and a representative of Team Nice Côte d'Azur, Mr. Perez. The arrival of Mr. Kofoed and Mr. Perez brought together for the first time the stakeholders involved in the future Technoparc of Oran, and, developed the idea of a steering committee to ensure the creation of an ecosystem conducive to the success of the Technoparc.

To be noted that the Academic and Research Sector and the Chamber of Commerce and Industry of Oran (IMPAC) expressed their interest in playing an active role in the implementation of the technological hub, which they hope will mirror the technology park of Sophia Antipolis (Côte d'Azur). In addition, R20 suggested to the authorities of the Wilaya of Oran that the future Technoparc will act as a platform for the furthering of R20's thematic areas, under the partnership agreement with the Algerian government. The thematic areas include: management and waste recycling, energy efficiency and renewable energy. Cooperative interaction between the two initiatives may allow the Wilaya of Oran to

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take a leading position in matters concerning the Mediterranean basin.

Algeria “New Cities” Project

R20 has also been involved with UNITAR and the Algerian Ministry of Habitat regarding the topic of new sustainable cities in Algeria. Following very promising bilateral discussions with R20 experts and the Ministry, UNITAR and R20 submitted a proposal for a three-year action plan.

Oran Conference

On 21 and 22 February 2014 in Oran, Algeria hosted the African High-Level Conference on the Green Economy in preparation for COP21. The conference demonstrated the relevance of green growth promoted by R20, and was an opportunity to engage in a conversation about the paradigm shift shaping development and the climate. Some 40 representatives of African States at the ministerial level and their delegations, international organizations, business representatives, the financial sector, and civil society, attended the conference. The conference presented best practices and proposals to address climate change in Africa, as well as new opportunities for development through green growth.

The Conference was opened by Prime Minister Abdelmalek Sellal. The Algerian Minister of Environment and Planning Ms. Dalila Boudjemaa stressed the ambitious national targets and commitments driving Algeria at the forefront of sustainability in North Africa and the Mediterranean basin. Other high-level attendees were Nicolas Hulot, the French President’s Special Envoy, and the UNEP Executive Director, Achim Steiner. R20’s Founding Chair Arnold Schwarzenegger gave a keynote address encouraging other African nations to join efforts launched by Algeria to build a green economy. “It is critical that the work being done in Algeria be shared across the world,” Schwarzenegger said. “We must support African countries on the path to green development and growth – encouraging their efforts to build stronger economies, take control of their energy resources, and become more resilient to climate change, create jobs, and provide better health to their citizens.”

Algeria



LA CONFÉRENCE AFRICAINE
DE HAUT NIVEAU SUR



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Bahrain



R20 USA has also been working closely with government officials in Bahrain on a “Zero Waste Implementation Roadmap”. Starting in January 2014, R20 USA worked on an Implementation Roadmap for an “R20-UNIDO/ITPO (Bahrain) Southern Governorate Sustainability Action Plan.”

The goal of the Roadmap is to set forth the steps to implementing the large-scale pilot program based on a balance of expediency, costs, physical limitations, stakeholder needs, and environmental impacts while making the most optimal use of waste streams. Any overarching strategy for Bahrain’s waste going forward requires short-term actions with immediate impact, combined with a long-term vision that takes into account the numerous waste issues. The parties refined the project timeline and budgets, and identified project technology and finance participants. .



At the close of the 2nd quarter, R20 Strategic Advisor Terry Tamminen traveled to Bahrain to discuss next steps. Mr. Tamminen met with the Economic Development Board and other government ministries and discussed the best path to a strategy that uses 100% of solid waste as beneficial feedstock for industries and products (the world’s first truly “zero waste” nation). R20 USA has continued to work closely with various government officials in Bahrain on a “Zero Waste Implementation Roadmap.” The roadmap was drafted and discussions were held to determine the best strategy to use 100% of solid waste as beneficial feedstock for industries and products. If they are successful, Bahrain will be the world’s first truly “zero waste” nation.

Saudi Arabia

Shortly after R20’s first mission to Saudi Arabia in December 2013, Prince Khaled Governor of the Makkah Almokarramah Region stepped down; Prince Mishaal Bin Abdullah Bin Abdulaziz Al-Saud succeeded him. R20 Director for Saudi Arabia & Middle East, Dr Majdah Aburas, met with the new Governor, who was willing to support the initiative.

In Late January 2014, R20 conducted a second mission to Saudi Arabia to prepare a more detailed proposal to present to Prince Mishaal’s team. To this end, meetings were held with Dr. Majdah Aburas and the Mayor of Jeddah. Based on the proposal, Prince Mishaal’s team made a formal request for approval from the central government in Riyadh. A follow-up of these actions has been undertaken throughout the year, with concrete results expected in 2015.

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Europe

Austria & EU



One of the first major activities of R20 Austria & EU was a joint Conference with the Austrian Ministry for Environment and the Central European Initiative (www.cei.int). The conference, held in Vienna on the 9th and 10th of October 2014, concentrated on best practice examples for implementing renewable energy at regional level. Our focus was to see regions as the driving forces for concrete solutions, and action against climate change. In parallel, R20 Austria & EU started to work with regions in Central Asia, especially in Kazakhstan. Kazakhstan recently began to implement a Green Bridge Partnership and is in a leading position to develop renewable energy production in this part of the world. In 2017, Astana, Kazakhstan will host an exhibit about Future Energy.

The focus of the conference was on the development of a low carbon economy through the implementation of concrete projects at the local level in the following areas: renewable energies, energy efficiency, smart technologies, sustainable agriculture, and other related economic sectors. The conference intended to show practical and exciting sub-national, bottom-up actions from around the globe. R20 hopes to establish a platform in Austria for high ranking politicians, business leaders, and experts to discuss in detail successful best practice examples from different parts of the world. Doing so will help create a “Center of Communication and Networking” for leaders in energy and climate. Discussions with the Austrian government regarding a possible budget are underway, and R20 hopes to launch this project at COP21.

Green Cities – Green Regions

A new project received funding from the Swiss-Romanian Cooperation Programme. R20 is partnering with the Romanian Municipalities Association and the Foundation TERRA Mileniul III on the project, called Green Cities – Green Regions. The program aims to foster partnerships between Romanian and Swiss partners to move towards a green economy. Romania lacks concrete plans to combat climate change at the sub-national level. The need to improve knowledge and awareness of best practices and tools in developing effective climate solutions is significant, especially at a sub-national level. The objectives of the project include increasing: Romanian local authorities' level of understanding about the green economy and expertise on low-carbon urban development, local authorities' capacity building towards development and implementation of climate friendly local policies, and levels of cooperation between Swiss and Romanian green municipalities and regions. The program will target local decision makers, public servants and employees under local administration at utility companies.

Transforming a city in Romania into a regional model of sustainable and ecological development

In 2014, R20 followed up on the contract passed with the Romanian Ministry of Environment, to obtain payment for the work accomplished by R20 in the last quarter of 2013. The issue has been brought to the attention of Mr. Andrae Rupprechter, Minister of Environment of Austria and Mr. Miguel Arias Cañete, EU Commissioner for Climate Action and Energy. Despite all efforts, however, the Romanian Government has not yet honoured its contractual obligations.

The sequence of events regarding this project is the following:

1. On October 4th 2013, a consortium formed by R20, Brainbows (Austria) and TERRA Mileniul III (Romania) received an official communication from the Ministry of Environment and Climate Change of Romania, informing that it had won the call for tenders on Transforming a city in Romania in a regional model of sustainable and ecological development. This has been granted following the publication of this call by the Ministry on www.e-licitatie.ro and submission of our offer on September 17th 2013.
2. The R20 immediately informed and thanked the former Minister of Environment Rovana Plumb. The consortium then prepared a fact finding mission to the selected city of Târgu Jiu. During this mission, experts from R20, Brainbows and TERRA (as well as the consortium subcontractors CAP2100/France and Energy8/Switzerland) did extensive field research to collect the necessary data for the four studies required in the call.

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3. The work on the four studies has been accomplished with high professionalism, under extremely tight deadlines and in consultation with the Târgu Jiu local authorities. The municipality of Târgu Jiu has been heavily involved and put a lot of hope in the projects for which we undertook pre-feasibility studies (waste management, photovoltaic plant, micro-hydro, public transportation and LED street lighting).
4. On December 10th 2013, the final studies were submitted at the Ministry of Environment Registry. This was followed by the submission of the final invoice by our Romanian Partner, TERRA.
5. On December 23rd 2013 the Ministry informed TERRA, that the contract has been cancelled. No further explanation was given, and only the invoice returned to TERRA. No other official communication was provided.
6. In March 2014 the same call for tender was re-published under number 149716/11.03.2014. Following the Ministry of Environment and Climate Change instructions, our consortium re-submitted the offer. However this call was cancelled on 23 July 2014 due to "errors and omissions in the terms of reference". No further information was provided since this date.
7. The result of this 18-month process is that, despite the correct completion of all legal formalities, and despite the work accomplished and submitted on time, our consortium did not receive the fee negotiated under the contract, in total 1.613.779 RON.
8. The entire process described here can be tracked back step-by-step and legal proof can be provided, with all required supporting documents.

Some administrative procedures slowed down the process but solutions will be found in 2015 to unlock the project.



Burundi



The Gitega Solar Bakery Project

The initial objective of this Solar Bakery project is to help underprivileged rural communities in the post-conflict Burundian province of Gitega, by installing two solar on an existing successful wood-fired bakery, and turn it into a social enterprise called Solar Bakery. The main immediate and long-term beneficiaries and target groups are women, and other marginalized / vulnerable groups in Rutegama (widows, ethnic minorities, persons living with HIV/AIDS, disabled people, street children, etc.). The project expected outputs are:

1. 100 vulnerable villagers, including women, trained on solar bakery management;
2. 100 jobs created (direct and indirect) at the end of the 24 months of project duration;
3. Create female entrepreneurs;
4. Enhance social inclusion for vulnerable groups through education and technological training;
5. A feasibility assessment for project scale-up;
6. A project financier's leaflet; and
7. A technical case study.

In 2014, the R20 conducted several missions to Burundi to achieve the following deliverables, as agreed in the funding contract with the Energy and Environment Partnership (EEP):

- Appointment of a Local Project Manager
- Gold Standard Stakeholder Consultation report
- List of 100 interested individuals for upcoming technical training

In addition, investors and financiers met for a discussion. The objective of the Stakeholder Consultation workshop was to have a conversation regarding the benefits of having a solar bakery project, and also give stakeholders the opportunity to share their concerns about the local environment.

Following the completion of the 2nd phase of the micro solar project, R20 reviewed the replies to the invitation to tender for solar ovens and selected the company SUN OVENS INTERNATIONAL: the ovens to be used are the VILLAGER SUN OVEN. In addition, the local NGO CIRID (Centre Indépendant de Recherche et d'Initiative pour le Dialogue) set up a local team to support the next phases on the ground for the micro project. R20 and the local CIRID team provided support the next steps, conducted in the second half of 2014:

- Delivery of the ovens to Burundi
- Technical workshop on how to use the solar oven
- Inauguration of the Solar Bakery with local authorities
- Business Plan workshop with local project stakeholders
- Inception Mission to identify other low-carbon and climate-resilient pilot projects in the area of Gitega City



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Africa

Burundi



On December 10th, 2014, to mark the 4th phase of the project, R20 and its local partner CIRID hosted an open house ceremony. The ceremony marked the official start of an operational bakery. The local media was also present to do a TV report on the micro project:

<https://www.youtube.com/watch?v=SESmZOvlh1c&feature=youtu.be>.

This project is financed by the Ministry of Foreign Affairs of Finland, the Austrian Development Cooperation and the UK Department for International Development (DFID). The project's implementation is overseen by the Energy and Environment Partnership of Southern and East Africa (EEP S&EA).

Mali

At the beginning of 2014, the R20 Representative for West Africa, Mr. Mamadou Saliou Sow, conducted several missions to Bamako, Mali, with Akuo Energy's Africa Director, Mr Pierre-Yves Berthold, to finalize the negotiations of the concession and purchase agreement for the Kita solar PV power plant. The plant will have a capacity of 50 MW of solar power and will require a capital expenditure (CAPEX) of €80 million.

The project was validated by the Mali National Energy Agency and a 30-year power purchase agreement (PPA) has been settled. A meeting with various ministers, including the Minister of Energy, confirmed Mali's eagerness to advance the project. A timeline for actions was established and approval by the Mali Council of Ministers. This included a technical visit to KITA for the validation of the connection to the grid, based on the observations of the Commission Regulation, as well as a visit to France, including the Malian technical team and R20 on the sites built by Akuo in France. Also it was agreed that the West African Development Bank would take the lead for structuring the senior debt for the project.

Finally, R20's efforts in Mali resulted in the official approval of the KITA photovoltaic solar project by the CREE (Malian Regulatory Commission for Electricity and Water). Out of the total CAPEX of 80m €, 24m € are equity and 56m € are senior debt. Project IRP is 10% while private equity part is 15% over 12 years, making the price of the kW/h at 15cts €. This project is the first of its kind in West and Central Africa, and the scheduled date of construction is mid-2016.

This first success in Mali has allowed R20 to start official discussions to design a 1 GW Solar PV replication and scaling-up project in Western Africa, in cooperation with the Commission de Régulation de l'Électricité et de l'Eau (CREE), the Economic Community of West African States (ECOWAS), the United Nations Office for Project Services (UNOPS) for the Pre-investment Facility and GreenWish Partners for the private equity.

Other Central & West Africa
Updates

A major achievement for R20 in 2014 has been its connections with many countries in Central and West Africa. R20 has been building off of its solar project in Mali to expand into more states in Africa. As of October 2014, R20 has seen interest from Gambia, Senegal, Sierra Leone, Guinea, Chad, Congo, Niger, Burkina Faso, Liberia, Côte d'Ivoire and Equatorial Guinea. Additionally, R20 was recognized by, or is in negotiations with, sub regional organizations such as the Economic Community of West African States (ECOWAS), African Biofuel and Renewable Energy Company (ABREC-SABER), and the NGO Enda Third World. An essential task for R20 moving forward will be continuing to connect these governments and intergovernmental organizations with developers and funding to make the solar power and energy efficiency goals successful.

REGIONS IN ACTION

Africa

Delta State, Nigeria

Delta State Green Economy Commission

R20 Strategic Adviser to the Chairman, Terry Tamminen, R20 Executive Director, Christophe Nuttall and R20 Director for Research & Technical Initiatives, Denise Welch, met with government officials about the development of R20 projects in the region. Based on his expertise in helping to set up the California Environmental Protection Agency, Terry Tamminen, was specifically asked to help guide the discussions based on lessons learned and best practices in California.



In January 2014 an R20 mission participated in a workshop in Asaba, Delta State, Nigeria with key experts to discuss the setting up of a Delta State Green Economy Commission (DSGEC). The workshop brought together legal advisors, state ministers, development practitioners and academics to discuss the purpose, structure, legal authority and budget of DSGEC. The major functions of the future commission could include: research & development, regulatory/policy making, capacity building, project initiation and implementation, and mobilization of finance.



The concept of the DSGEC has been lauded by Delta State Governor Emmanuel Uduaghan and his administration, who have an inspirational vision to create a “Delta beyond oil”. It is common knowledge that oil is the mainstay of the state, which has brought many opportunities, but also some problems. Delta State now aspires to create a future for the state that turns the current environmental problems into opportunities. It is the desire of the Governor to see the Delta State Green Economy Commission set up and work together with existing ministries to continue all consultations on low carbon development issues.

As a follow up to the discussions in Delta State the R20 USA hosted a delegation of government officials from the region at the end of the first quarter in Los Angeles where the delegates (Mr. Paul Odili- Delta State Green Economy Project Lead and David Oladiran- Special Advisor to the Governor) toured a variety of waste reduction facilities and were introduced to a variety of low carbon technology providers. We also advised the state government on the creation of a Green Economy Commission that will facilitate sustainable development projects in the region and is an excellent model for other regional governments to consider.

Delta State, Nigeria

Fact-Finding mission to Delta State for creation of three feasibility studies

In May 2014, R20 staff and technical partners (Zero Waste Global, and Westech) completed a fact-finding mission to Delta State, Nigeria. The studies are part of an on-going program to assist the state with building its green economy.

Solar Photovoltaic (PV) Technology

R20 led the data collection efforts for the Solar PV study. Together with local ministers, an R20 mission visited the Asaba Airport to quantify electricity consumption, identify potential solutions to the airport's energy needs and assess the site's suitability for solar PV technology. They also discussed with the Ministry of Energy and the Nigerian Electricity Regulatory Commission (NERC) about the best possible site for a 50 MW Solar PV Power Plant that would be connected to the national grid.

Solar Thermal Technology

R20 met with several ministers and stakeholder groups to understand and gather information about institutional water heating needs. This included a visit to potential pilot project sites, such as the state hospital in Agbor, where hospital staff wants to lower the consumption of electricity by using solar thermal water heating devices to heat water. Solar water heating would allow the hospital to provide continuous hot water for patient bathing and sterilization of instruments.

Waste Management

R20 also had opportunity to assess the current waste management situation in Delta State. While on the ground, and together with local ministers, the team visited waste dumps, collected data and held discussions with stakeholders about local waste management practices. The next steps are to produce a detailed analysis about the situation, with recommendations for household waste collection, composting, recycling and potential waste-to-energy options.

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Africa

Delta State Community-level Projects

Under the UNDP Territorial Approach to Climate Change (TACC) programme, and the leadership of the Delta State Ministry of Environment, under Permanent Secretary, Mrs. Felicia Adun, R20 was involved in two community-level projects. The first project was a household bio-gas digester at the Delta State Government Guesthouse in Asaba. The 10 cubic meter underground anaerobic tanks generate methane gas for cooking by anaerobically digesting food scraps. The project was designed and implemented by Engineer Mr. Ifeanyi Aghaulor and his company, the Biotec Development Network.

Delta State, Nigeria



The Akugbene Biosand Water Filter Project

The Climate Change Department of the Delta State Ministry of Environment has launched a clean-water initiative in the rural areas of Delta State. This initiative is part of the ongoing UNDP Territorial Approach to Climate Change (TACC) Programme in Delta State, led by the Ministry of Environment. R20 is working with the ministry, the local partner PIND, and Triple Quest USA (the technology provider) to provide the residents of 50 households in the Akugbene Community with cutting-edge water filters. The lack of potable water and the need for reduction of water-borne diseases, which experts predict will be exacerbated by climate change, provided the impetus for this initiative.



The Hydrad BioSand Water Filter is a simple lightweight home size filter, manufactured by Cascade Engineering and distributed by Triple Quest. The filter combats the leading causes of death and disease in the developing world by reducing parasites, bacteria, and viruses found in contaminated water. One filter is designed to deliver safe water for a family for more than 10 years. The filters also increase a family's income by lowering medical costs and eliminating the need to buy bottled water. Environmentally, the Hydrad filter reduces greenhouse gas emissions by decreasing the need to treat water by boiling it. The project in Akugbene Community was officially launched in early November 2014. The partners expect that this project will be the first of many to come in other communities in Delta State.



Brazil



R20 USA made great progress on a number of projects in 2014. A primary focus has been working with R20 Brazil to implement the first sales of LED street lights in Brazil. The LED Street Light initiative now covers 13 cities and 1.5 million streetlights. This will save over 60% of the energy now used for lighting. R20 was able to create the conditions for shifting to LED street lights in Brazilian cities by creating a federal ESCO with the Brazilian Development Bank (BNDES) and ELETROBRAS, which will feed municipal ESCO to secure the CAPEX and pay back of LED installation. The market was made “bankable” thanks to the creation of a joint venture between two industries (American and Brazilian) to develop a chain of LED assembling in Sao Paolo.

In addition, R20 USA traveled to Brazil in early 2014 to conduct further discussions focused not only on streetlights, but also on topics such as recycling of organic waste for power generation and composting, and recycling of waste tires using minimal energy. In addition to creating a Special Purpose Vehicle for financing streetlight retrofits in Brazil, the R20 Green Finance Network team evaluated project plans from 13 sustainable technology companies and provided advice on expanding the use of these technologies and ways to make projects more bankable.

In April 2014, the R20 Founding Chair Arnold Schwarzenegger travelled to Rio de Janeiro to meet with Jorge Machado (R20 Brazil Director), and representatives from the cities of Sao Carlos and Teresina, as well as representatives from Pegasus Capital Advisors, Eletrobras, Tropic, and IDV.

Initial LED streetlight installation in Brazil

On December 15th 2014, in Nova Friburgo, Brazil, the R20, Lighting Science, Pegasus Capital Advisors, and the City Municipality held the first ceremony for the installation of an initial set of 52 LED streetlights. The ceremony, held in the city’s central square was attended by representatives of the 3 partners, the local officials, politicians, business leaders, and hundreds of citizens. Lighting Science’s LED technology and minimalist design is front and center in this display representing the world premiere of the “mini”. Lasting over 10 times longer than traditional lighting, the mini substantially reduces the maintenance costs associated with street lighting and avoids the waste associated with continually replacing most of the components of traditional fixtures. Further, the mini uses 75% less material and is 50% more energy efficient than traditional lighting solutions, saving customers’ money, and significantly reducing the carbon footprint.

Given the budget pressures facing municipalities across the world, the R20 and its financial advisor, Pegasus, knew that a financing solution is needed in order to roll out these installations on a large scale. By building relationships with local financing partners and leveraging Pegasus’ experience in structuring complex transactions, the group is establishing a first-of-its-kind financial structure to make LED adoption as seamless as possible. This is what has led Nova Friburgo and municipalities across Brazil to be so enthusiastic about installing LED street lights.

REGIONS IN ACTION

Latin America

Brazil

World Summit's Initiatives in Brazil

On October 11th at the World Summit of Regions for Climate held in Paris, R20 signed Memoranda of Understanding with the following entities that participated in the Summit:

The State of Rio de Janeiro, Brazil

The State of Rio de Janeiro aims to become a leader in sustainability in order to improve the quality of life and environment for its citizens. To fulfill its commitments to its citizens' well being, R20 and the State of Rio de Janeiro will work together to conduct a study to analyze the viability of utilizing LED technology to upgrade the streetlights in the municipalities of the State of Rio Janeiro. The parties will create a work group in order to deliver the study within three months of signing of the MOU.

Bolsa Verde do Rio de Janeiro (BVRio)

BVRio is an environmental exchange company that promotes market mechanisms to facilitate compliance with environmental laws, and thus the development of a green economy in Brazil. Together, R20 and BVRio will develop a platform to streamline fundraising for energy efficiency, distributed generation and other low-carbon projects to be implemented by R20.

Fundo Brasileiro para a Biodiversidade (Funbio) and Associação Instituto Internacional de Ecologia e Gerenciamento Ambiental (AIIEGA)

R20, Funbio and AIIEGA will work together to develop a project for the reforestation of watersheds and water sources, biodiversity restoration, as well as water quality conservation. The parties will join their efforts to develop and implement a fundraising plan within the next three months to secure financial resources to make project implementation possible.

The Brazilian Biodiversity Fund (FUNBIO) is an association specialized in biodiversity. Through the establishment of an innovative financial mechanism, FUNBIO supports the private sector to mitigate their environmental impacts. AIIEGA specializes in natural resource management and provides training in public policy.

Instituto para o Desenvolvimento do Varejo (IDV)

The Institute for Retail Development (IDV) and R20 signed an MOU to work together to create a turn-key energy efficiency and distributed generation program to be implemented by IDV's members.

The Climate Bond Initiative (CBI)

The collaboration between both entities entails working together to create a work group to study the feasibility of using the Green Bonds as a financial mechanism for R20 projects. This new mechanism could potentially reduce the cost of capital for climate related investments and increase investor confidence, thereby generating more investor support for low-carbon projects. The Climate Bonds Initiative is an international, investor-focused not-for-profit, promoting large-scale investment in the low-carbon economy. It is the only organization in the world focusing on mobilizing the \$100 trillion bond market for climate change solutions.

China



R20 Geneva – Shenzhen Partnership

Shenzhen is one of the most developed and industrialized cities in China. The population in Shenzhen is around 12 million; its GDP reached 1,295 billion yuan (€156 billion) in 2012, an increase of 10% from the last year. The Shenzhen government also plays an active role in low-carbon development. The Shenzhen eco-city is the flagship program under the China-EU Sustainable Urbanization Partnership Framework. In early 2013, Shenzhen launched its Emission Trading Scheme.

Following a year-long communication and interaction with Shenzhen led by R20 HQ Director for Asia, Qiuping Li, a delegation from Shenzhen visited Geneva on 27-28 March 2014. The Shenzhen delegation included:

- Shenzhen Municipal Design & Research Institute Co., Ltd: state-owned design and research company with a specializing in infrastructure design and construction. Their major client is the Shenzhen government and the local authorities in Guangdong province.
- International Academy of Low-Carbon Development (Shenzhen, China): non-profit organization with strong support from the Shenzhen government. Their major tasks are to enhance techniques as well as technology deployment in low-carbon development areas. Currently they are responsible for the strategic design of two low-carbon cities (green-field).

Major R20 - Shenzhen activities and results

On 27 March 2014, a MoU was signed in Geneva between R20 and the International Academy of Low-Carbon Development (Shenzhen, China). The objectives of the MoU include:

- Low-carbon project development and financing in Shenzhen
- Linking Shenzhen with EU
- Linking Shenzhen with Africa
- Building Pre-Investment Facility
- Communication and advocacy
- Promoting Shenzhen to become a member region of R20

Clean tech tour: officials from the Office for the Promotion of Industries and Technologies (OPI) and Geneva accompanied the tour government

TOSA bus—ABB: TOSA is a new generation of sustainable transportation: like all electric transport, there are no local CO2 emissions or other pollutants. The new 15-second charging technology is deployed on a large capacity allowing for services such as electric buses, carrying as many as 134 passengers. This exhibits TOSA as the solution for mass urban transportation; TOSA is a product of ABB.

Vacuum solar roof—SRB: Vacuum solar roof technology is a cutting edge technology developed by scientists at CERN; this technology is

REGIONS IN ACTION

Asia

China

used in the Large Hadron Collider (LHC) at CERN. SRB is a Swiss company under the Spanish group Segura, while production is in Valencia (Spain). The demonstration project is deployed on the roof of the Geneva Airport; it provides cooling during summer and heating during winter. The vacuum solar system can be used both for cooling and heating; its temperature can reach very high levels, around 300°C, where it has competitive advantage.

Waste Management Site—Helvetia Environment: Helvetia Environment is a Swiss company that has been active in waste management for more than 50 years. It provides a comprehensive range of services including waste management services, sorting and recycling, and waste to energy. The waste management site is located not far from Geneva city center. The activities at this site cover: waste collection, sorting and recycling. They deal with both industrial and household waste, but the site we visited deals with industrial waste only.

Waste Management System design—Energy8: The Swiss company Energy8 delivered a tailored presentation for Shenzhen on waste management system design for both green-field and brown-field. The Swiss methodology and concept on waste management system design was well received by the Shenzhen delegation.

After a successful and productive visit from the Shenzhen municipal officials, the city has officially become a member of R20. In mid-June 2014, R20 conducted a mission to Shenzhen to meet with officials from the National Development and Reform Commission (NDRC), the authoritative body that oversees the entire Chinese economy. The meetings coincided with the second annual China National Low-Carbon Day, an excellent and timely backdrop for their discussions about the global climate change agenda and related environmental concerns.

The NDRC officials were especially interested in R20's holistic "bottom-up" approach, its waste-to-energy and energy-efficiency projects in East Africa and Brazil, as well as its innovative financing model. R20's initiatives in China have attracted attention and gained strong support from the Chinese central government, which is also keen to explore opportunities with R20 for South-South cooperation. R20's work with Shenzhen includes conducting a number of feasibility studies, namely in:

- Dapeng New District: clean tech cluster (low carbon infrastructure construction, establishing life science, pharmaceuticals industry etc), LNG heat recovery cooling (ski, ice-skating etc), waste management project in the context of the tourism impact;
- Longgang new industrial district: construction (Xikeng project);
- Shenzhen low carbon city: waste management project.



China

On December 15th, 2014, R20 and Dapeng New District in Shenzhen, signed a contract on optimizing municipal waste management in this region. Dapeng New District is a tourist destination with a land area of 294.18 square km and a coastline of 133.22 km. The total habitants are around 200,000. Each year, Dapeng New District receives more than 8 million tourists, which results a huge burden for the municipal waste management. Under the agreement, R20 and its partners, led by Swiss company Energy8, will design the best solutions in order to optimize the waste management value chain based on maximizing the 'Reduce, Reuse and Recycle' principles. The project is expected to generate significant economic and environmental value as well as green jobs.

Indonesia



In 2014, R20 Asia-Pacific started by establishing partnership for a bio-mass plant that will serve the city of Bandung, with a capacity of 700 tons per day, in a cluster centre. A proposal for a similar project has also been assessed by the administration of the Governor of West Sumatra for Payakumbuh and Padang cities. The government of Indonesia agreed to allow the state oil and gas company, Pertamina, to purchase biofuel from waste conversion.

R20 and the Indonesian Local Governments Association (APKASI) co-hosted a network luncheon on the 4th of March 2014 at the Jakarta Expo in Indonesia. The event gathered four Indonesian ministers (Energy, SME, Agriculture, and Industry), 150 local Indonesian regents, and 50 Ambassadors from countries spanning over ASEA, Africa, Europe and the Middle East. The aim was to urge business leaders and investors to adopt a framework centered on renewable energy.

In an effort to build a strong network of cross-national business and investment partnerships, the APKASI and R20 held the International Local Government Investment and Trade Summit (AITIS 2014) at the Jakarta International Expo in Indonesia, from the 14th to 17th of April 2014. Under the theme of "when buyer meets seller", administrative participants, including several ministers, from all Indonesian regions and provinces, engaged in the summit's agenda to advance the Indonesian economy and develop international business cooperation through the establishment of partnerships within public and private spheres. Over 2.500 participants and 18.000 visitors attended the AITIS 2014, which showcased projects for new and renewable energy, agriculture and agro industry, tourism, and infrastructure.

REGIONS IN ACTION

Asia

Indonesia

The main R20 initiative in Indonesia concerns developing candlenut bio diesel in three areas:

- A Memorandum of Understanding was signed between Director of R20 Indonesia and the Regent of North Nias, North Sumatera Province, about 10,000 ha area candlenut (kemiri sunan) plantation. Starting in early 2015, it is expected to produce about 734,000 barrels per year, or 2050 barrels per day for the next 5 years.
- Developing cooperation for 40,000 ha land candlenut plantation with West Kalimantan Province and Central Kalimantan Province, to be launched early 2015. The project will start with 7,000 ha land, and produce about 2,952,600 barrels per year, or 8,200 barrels per day.
- Developing cooperation for 4,000 ha candlenut plantations with Regent Pring Sewu, Lampung Province in Sumatera, also to start in early 2015. The project will produce 295,000 barrels per year, or 820 barrels per day. The project prediction assumes that every 1 ha of land plantation will produce about 8,800 kg per year.

La Réunion Island

On June 24-26, 2014, La Réunion Island hosted the International Climate-Energy Conference, and launched a plan of action to reinforce the capabilities of Indian Ocean Islands in their transition towards green growth. Attendees included Nicolas Hulot, French President's Special Envoy for the Protection of the Planet; Nico Barito, R20 Director for ASEAN; Francois Fortier, UN Office for Sustainable Development; Jeffrey Skeer, IRENA; actress Melanie Laurent; and film director Cyril Dion.

On this occasion, Mr. Didier Robert, President of La Réunion region launched a new R20 Indian Ocean Renewables Hub, in partnership with The Climate Group and nrg4SD, to serve as a regional centre for innovative clean tech research and development in the region. The R20 Hub will also provide support for green start-ups, organize training sessions focused on renewable and energy efficiency, conduct pre-feasibility studies for the Regional Council of La Réunion and other Indian Ocean countries, and search for potential private investors.

The Hub is especially aimed at effecting real progress towards meeting the emission reduction targets that the 2013 memorandum and the Indian Ocean Islands want to attain. In December 2014, the official (legal) opening of the R20 Indian Ocean Renewables Hub was approved.



Green Faith in Action



R20's Green Faith in Action program aims to encourage action against climate change by discussing and steering action through religion and faith. The program includes partnerships with the Alliance of Religions and Conservation (ARNewC) and the Green Pilgrimage Network (GPN), and is being developed in close collaboration with Nicolas Hulot, President Hollande's Special Envoy for the Protection of the Planet.

On June 4th, 2014, R20 participated in the Conference Tradition for the Future: Culture, Faith and Values for a Sustainable Planet, in Ise, the Capital of Shintoism in Japan. On this occasion, R20 and ARC/GPN signed a MoU to support pilgrim cities. Ms. Maeva Fages was appointed as Director for the Green Faith in Action program. As part of the partnership, the parties identified religious and faith leaders as well as their respective local authorities; and a first batch of six pilgrim cities in Africa, Asia (including China, India and Indonesia), the Middle East, and Europe. These cities will serve as innovative models of spiritual values, environmental care and green economy that are socially, economically and environmentally sustainable.

On November 4th, R20 President, Ms. Michèle Sabban, and R20 Executive Director, Christophe Nuttall, attended a meeting at Hotel de Marigny, Elysée, gathering the representatives of the major religious faiths in France, to discuss the vision and roadmap towards COP21, ensuring that the role of religions is well accounted for in the event.

On November 25th, 2014, Pope Francis delivered a speech to the European Parliament, addressing issues of the environment. Also, the Council of French Bishops has recently decided to request that the Pope prioritize the ethics and values of sustainable development. These recent developments are giving R20 an opportunity to move forward with its green faith in action program.

In December 2014, Nicolas Hulot and the French Ambassador in Rome met with advisors to the Pope to discuss possibilities for a high level Interfaith Declaration. Based on the results of this visit, R20 will organize a high-level meeting in 2015, bringing together the Pope, Nicolas Hulot, Governor Arnold Schwarzenegger and Mary Robinson, to discuss interfaith support to COP21.

NEW INITIATIVES

Global

In October 2014, at the World Summit of Regions for Climate, the French President François Hollande met with former Governor Arnold Schwarzenegger, founder of R20 – Regions of Climate Action. He expressed the wish that a number of high-profile world leaders should help advance an ambitious climate agreement in Paris, at COP21. It is essential that this group of leaders be gender balanced, to ensure that women’s movement for the climate is well taken into account at COP21.

Ms. Reta Jo Lewis, former Special Representative for Global Intergovernmental Affairs at the Department of the State under Secretary of State Hillary Rodham Clinton, was invited to be the R20 Ambassador for women and climate change, leading a campaign of “women leaders” towards COP21. In order to demonstrate the power of women in tackling climate change, and also inspire and scale up actions led by women worldwide, R20 proposed a women’s initiative which highlights the role of women in three main sectors concerned by the transition to the green economy: policy, technology and financing.

As of 2015, R20 will be launching a Women Leading Climate Action initiative, gathering current and/or former environment and energy ministers, sub-national leaders, lady governors and lady mayors, as well as executive women, entrepreneurs and CEOs, women investors, academics, and scientists. Joined by prominent figures like Mary Robinson (UN Special Envoy for Climate Change), this leaders’ group will be joining forces globally to deploy a number of demonstration projects in the run up to COP21. Possible projects to be showcased may include women and innovation in the green economy, women and energy, and/or water and food security, women taking action against food waste, women in social responsibility, sustainability education, etc.

R20’s Women Leaders are also expected to work on a long-term Women’s Climate Action Programme aimed at replicating and scaling up the above projects within the 2020 timeframe. This Action Programme should be especially concerned with integrating the gender approach to the different facets of the green economy; actions to be undertaken should seek concrete and measurable results, to be reported in specific international fora dedicated to women, climate change and sustainability.

Women Leading Climate Action



Michèle Sabban (R20 President), Mary Robinson (UN Special Envoy for Climate Change), Reta Jo Lewis (R20 Ambassador for Women)

1 GW Renewable Energy West & Central Africa



Mamadou Saliou Sow (R20 Director for West & Central Africa), Thierno Bocar Tall (CEO of ABREC), Christophe Nuttall (R20 Executive Director)

In 2014, R20 has been seeking a means to scale up the preparation of solar energy projects in West and Central Africa, building on the success of the Mali 50 Mw project.

R20 seeks up to US\$ 9 million to finance the start-up of a self-financing, project feasibility development team, to service sub-nationals in sub-Saharan Africa. To reach this objective, R20 and UNOPS will first seek US\$ 5.5 million of grant (the operating costs of the first three years) and a further US\$ 3.6 million as an unsecured loan (in total US\$ 9 million, a little over the first five years of operating costs). This financial support will allow the development team to engage immediately with its strong pipeline of projects, and by the end of the third year of operation, to become financially self-sufficient.

Following the Mali model, and a mandate from the African Biofuel and Renewable Energy Company (ABREC-SABER), the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (UEMOA) to prepare feasibility studies for a further 200 MW, the team plans to bring 1GW of renewable energy infrastructure projects to financial close across the West and Central African region. The team is expected to leverage up to US\$ 1.7 billion of private and public investment and support the cumulative avoidance of approximately 6 million tons of carbon dioxide emissions.

R20 has determined to address the energy deficit in Sub-Saharan Africa, particularly in those states considered most 'fragile', by bringing 1GW of renewable energy projects to financial close across the West and Central African region. Projects will be thoroughly 'bankable' to international standards, which will also offer investment terms that are attractive to private and public capital, and will provide electricity at rates that are affordable to users.

R20 has proven its model by bringing to financial close a 50 MW grid-connected solar energy project (monocrystalline solar PV) in Kita, Mali. Offtake and concession agreements have been reached, all feasibility studies have been performed, a developer and operator (Akuo Energy) has been chosen, and investors are lined up to produce energy at €12c/KWh (well under the average grid price of €21c/KWh for oil/coal electricity production). Project and equity returns are expected to be 10% and 15% internal rate of return respectively.

To replicate and scale-up this first success, R20 is creating a seven-person, self-financing project development team based in Dakar (Senegal) that will be supervised from R20's global headquarters in Geneva Switzerland. R20 will take a cost-recovery fee from investors for each successful project that achieves financial 'close' and will reinvest these fees in the development of further projects. After the third year of operations the team is expected to become financially self-sufficient and to generate sufficient returns to expand its operations.

NEW INITIATIVES

Africa

1 GW Renewable Energy West & Central Africa

To deliver global standards in terms of transparency in use of funds, start-up grants and cost-recovery fees will be managed through a revolving 'Trust Fund' managed by UNOPS, the United Nations' agency that specializes in project management, procurement, and trusteeship. R20 expects to attract approximately US\$ 1.7 billion of private and public investment in the projects that it develops, and is expected to avoid cumulative emissions of approximately 6 million tons of carbon dioxide. It is also expected to produce other positive impacts in terms of direct and indirect employment, improved rates of education, increased economic activity and health benefits.

Clean-tech database of replicable technology

Technical solution and access to finance are two driving forces to facilitate local and sub-nationals in the fight against climate change. R20's technology in action programme provides technical solutions for local and sub-national governments. In 2014, R20 compiled 'toolkits' of practical low-carbon technologies and policies, with a clean-tech database covering replicable technology with successful track records that can be implemented at the subnational level. Complementary services including clean-tech tours, on-site technical studies, as well as feasibility studies will assist local and sub-national governments with overall project development until financing. R20 allows local and sub-national governments to easily identify potential solutions and find experts to develop portfolios of bankable projects and contribute to low-carbon development and green growth.

Partner Spotlight: Philips Lighting

The partnership with Philips lighting was very successful in 2014. Philips Lighting helped R20 develop the portfolio of LED streetlights projects in Algeria, Morocco and Senegal and the LED streetlight toolkit has been released. In order to scale-up and explore new opportunities, a meeting involving many business units of Philips, has been organized on the 14th of July in Amsterdam. The meeting focused on the opportunity to create, in partnership with Philips, a Pre-Investment Facility for LED streetlights projects that would allow scaling-up LED projects.

Partner Spotlight: Viscon, USA

R20 partner Viscon has created a clean fuel additive that reduces harmful emissions from internal combustion engines while also reducing the amount of fuel required to perform a unit of work. The Viscon Technology can be used to treat all types of fuel and enhance fuel performance, resulting in considerable cost savings. R20 is working with Viscon to help introduce the technology to R20 member governments. We expect that testing of Viscon projects will be underway in a number of our regions (China, Brazil, Nigeria, Mexico, Algeria, and Bahrain) in the coming months. In Nigeria, a Green Economy Commission has been established and will identify the first demonstration fleet in Nigeria for using Viscon and which will help to reduce pollution and increase fuel economy. For more information on Viscon please visit www.visconusa.com.

TECHNOLOGY IN ACTION

Partner Spotlight: Mills Group

R20 USA is also assisting R20 partner, Mills Group in identifying potential applications for their Solar Shade Structures which are designed to create shaded areas in open area parking lots while generating clean, renewable energy. For example a structure can provide 2kW of production per parking spot when alignment is running east-west (using a 290w module). R20 USA has been reaching out to facilities that have large open parking structures (airport parking, ports, a large ranch that is used for events) to help to deploy the structures.

Databases/Assessments

R20 USA has created a number of tools to better understand potential opportunities and actions we can take to further our efforts. In the 2nd quarter, R20 wrote assessments that looked at opportunities in certain U.S. cities – including streetlights in Detroit, streetlights and waste in Los Angeles, streetlights in New York City and overall opportunities in Chicago. R20 USA also completed a database on Smart Cities that will include information on which cities are emerging as leaders as well as companies and individuals that are working in this landscape. The database will serve to provide an overview of smart cities at large and help us to identify potential opportunities.

In 2014, R20 has developed an innovative model to ensure that projects are developed and successfully financed. With this in mind, R20 developed an innovative financial mechanism that brings together governments, private investors, and non-profit sectors and is designed to produce environmental, social, and economic benefits, as well as attractive financial returns for investors. Its goal is to address urgent energy needs by creating financing instruments that will be deployed in parallel to meet the specific needs of national governments as well as investor groups:

- A 'Pre-Investment Facility' (PIF) in partnership with UNOPS and managed by R20, to finance feasibility studies and prepare projects for investment;
- An Investment Platform, managed by GreenWish Partners, that invests equity in multiple projects to finance their construction once they are fully developed.

Both vehicles are meant to work together, guided by the pre-qualified investment scopes of potential investors (geography, technology, etc.). The PIF will provide funding for preparation of more fully bankable projects in the most efficient and cost-effective manner. Our initial estimates indicate that pre-financing awarded by the facility will attract investments in projects of at least thirty times the amounts initially awarded. The facility is expected to be financially independent after the third year of operations, and its institution within the United Nations framework will ensure complete transparency and best governance.

The investment platform will attract and secure investments to finance the construction of projects that are prepared by the PIF. The independence of the investment platform, and its work with the PIF to ensure that projects meet the risk / return requirements of investors, will help to attract larger amounts of capital of more diverse origin than could otherwise be attracted.

The partnership between R20, UNOPS and GreenWish Partners, in cooperation with African national and subnational governments, has already identified a 1GW pipeline of some 30 potential renewable energy projects across 13 countries in sub-Saharan Africa.

Also, in 2014, R20 USA has been reviewing "Green Bank" structures in numerous countries and states to identify the most effective models that can be shared with other sub-national governments. In addition, we are working with over 100 cities in California to identify financing needs for energy efficiency projects including streetlight retrofits. R20 USA is also doing an annual review of the Green Finance Network database to update the sustainable investment and lending criteria for institutions to continue our work matching projects with capital and we invite investors from all asset classes to participate.

The report [Green Growth in Practice: Lessons from Country Experiences](#) was released on July 1st, 2014. The Green Growth Best Practice initiative is the first comprehensive international assessment of best practices and lessons for the adoption of green growth policies across all levels of government. Lead authors Christophe Nuttall (R20's Executive Director) and Tadashi Matsumoto (OECD Senior Policy Analyst), wrote the chapter on National and Subnational Integration that explores approaches to advancing green growth through coordinated national and subnational programs, and across governments. Several co-authors contributed to this chapter, including Denise Welch (R20's Director of Research & Technical Initiatives).

By assessing more than 60 programs around the world and focusing on those elements commonly used by governments in green growth analysis, planning, implementation, and monitoring, the report provides guidance and examples to policymakers interested in pursuing such policies in their own country, region, and municipality. It is designed to be used by governments, development assistance agencies, researchers, and other stakeholders, to help transition their economies away from fossil fuels in ways that result in sustainable growth. The report is the result of a collaborative partnership between the Climate & Development Knowledge Network (CDKN), the European Climate Foundation (ECF) and the Global Green Growth Institute (GGGI).

In 2014, R20 and ICLEI joined forces to encourage Monitoring, Reporting and Verification at the subnational level. Both ICLEI and R20 are convinced that many aspects of climate change and green growth can effectively be tackled at the sub-national level. One way to ensure that local actions on climate change are acknowledged on a global political scale is through efficient measuring, reporting, and verification (MRV) of these actions, thereby allowing sub-nationals to contribute, for example, to greenhouse gas reduction commitments at national levels.

An upgraded [Carbounn Climate Registry](#) that accepts data from states, provinces and regions, will allow some of R20's most active members to report their data and be recognized, along with other sub-national governments, in important international agreements. To this end, ICLEI and R20 plan to promote results of the upgraded registry at COP21. Both ICLEI and R20 hope to see sub-national reporting lead to long-term benefits on climate change mitigation, adaptation, and green growth.

The first R20 member to take advantage of this partnership is the Ministry of Environment of Delta State in Nigeria, who is reporting on a cross-sectorial climate change assessment, and the Delta State Climate Change Policy. Other R20 Members interested in becoming part of the growing community of local and regional governments reporting on climate change are encouraged to join the Registry.

Mobilizing Regions to Report at COP21

The Paris Climate Conference 2015 (COP21), to be chaired by the French Presidency, will be a crucial milestone in climate negotiations. France is actively promoting a Solutions Agenda that illustrates the compatibility between economic growth and environmental concerns, and the benefits of joint action by all players: sub-national authorities, the private and finance sectors, civil society, and NGOs.

In preparation for COP21, UN Secretary General Ban Ki Moon hosted the UN Climate Summit in September 2014, where the “Compact of States and Regions” was announced. This Compact of States and Regions is an initiative by major global sub-national government climate networks (The Climate Group States & Regions, nrg4SD, R20 and CDP). Through it, the main networks of regions have committed to support the international climate negotiations by providing information on the climate commitments of state and regional governments around the world, and progress achieved towards these. Following this announcement, President François Hollande met with former Governor Arnold Schwarzenegger, and called for a mobilization of sub-national authorities worldwide, to contribute to the success of COP21. The World Summit of Regions for Climate in Paris, last October, and the signature of the Paris Declaration was an important first step towards this objective.

As of December 2014, and until COP21, R20 has partnered with The Climate Group, nrg4SD, CDP, and ICLEI to encourage as many regions as possible worldwide, to support the Compact of States & Regions and provide basic information on their climate targets and actions. To achieve this, a joint letter signed by the partners of the Compact of States & Regions, including R20 and ICLEI, was sent to the following networks of regions: AER, NEAR, ORU-Fogar, CRPM, AIRF, FMDV, Mexico Pact. The letter and the technical questionnaire are being distributed to all member regions of each network, requesting the essential data to be returned to R20. The data will then be compiled in a single registry, which will be presented to the UNFCCC Secretariat, CDP and ICLEI, ahead of COP21 (see [NAZCA portal](#)).

EVENTS

World Climate Ltd.

In the 2nd quarter of 2014, R20 and World Climate Ltd. entered a partnership agreement to be concretized at the World Summit of Regions for Climate in Paris. This partnership will extend over the next 18 months to ensure all level stakeholders mobilization until the Paris Climate Conference in December 2015 (COP21). This process is called “The Road to Paris 2015”, and will be championing the all-inclusive “Paris Declaration” (see hereafter). World Climate Ltd is a global strategic platform for the green economy, working in partnership with leading global organizations, as well as finance and global companies. WCL recently held the fourth annual World Climate Summit in Warsaw, Poland during the United Nations COP19 as well as the World Green Summit during Rio+20, was the event partner of the Global Green Growth Forum (3GF) in Copenhagen Denmark in 2011, 2012 and 2013, co-organizer of the World Green Economy Summit 2014 in Dubai, event partner of the World Summit of Regions for Climate 2014 in Paris, as well as the originator of the Road to Paris initiative.

The Road to Paris 2015

The Road to Paris 2015 is a bottom-up, multi-stakeholder platform of solutions to climate change that will support the signing of a binding global climate change agreement at COP21 in Paris. The initiative kicked off at the World Climate Summit 2013 during COP19 in Warsaw, and came to the World Green Economy Summit (WGES) in Dubai in 2014. The Road however does not stop there, rather it will continue throughout these events and beyond:

- World Summit of Regions for Climate (10-11 October 2014);
- World Climate Summit in Lima (December 2014);
- WGES in Dubai (April 2015);
- COP21 – Paris Climate Conference (December 2015).

The Paris Declaration

The Paris Declaration is a cross-sector initiative founded by R20 and World Climate Ltd. It is a declaration from governments, business and finance to support an international climate deal during the UN COP21 in 2015. At the upcoming World Summit of Regions on Climate (WSRC) in Paris 2014, Arnold Schwarzenegger, the Founder of R20, invited a coalition of governments and businesses to sign it. During the year 2015 the Declaration will travel to pre-COP21 events to collect as many signatures, and finally be presented at COP21 in Paris as the strongest international business platform for climate solutions.

GLOBAL CLIMATE NEGOTIATIONS: LESSONS FROM CALIFORNIA, SACRAMENTO, SEPT 8th 2014

Government officials, business leaders and environmental researchers gathered in Sacramento on September 8th to discuss the state policies and lessons learned from California’s experience at the forefront of addressing climate change. Organized to take place before COP20 in Lima, in December, the symposium featured two of the key figures in turning California into a global leader on the topic: former Gov. Arnold Schwarzenegger and current Gov. Jerry Brown. The event was held at the California EPA headquarters, and co-sponsored by the USC Schwarzenegger Institute for State and Global Policy, the state EPA’s Air Resource Board and the R20 - Regions of Climate Action.

Arnold Schwarzenegger attested to California’s reputation as a leader in energy and climate change, noting that the state is 40 percent more energy efficient than the rest of the country. If the whole of the United States adopted California’s green policies, he said it would allow for the closure of two-thirds of the nation’s coal-fired power plants or the equivalent of taking 188 million cars off the road. The Obama administration already adopted California’s tailpipe emission law as a federal standard in 2009. Terry Tamminen, former Secretary of the California Environmental Protection Agency, headed a panel featuring State Sen. Kevin de Leon, Intergovernmental Panel on Climate Change Chairman R.K. Pachauri and former Long Beach Mayor Bob Foster.

THE CLIMATE SUMMIT – UNITED NATIONS HEADQUARTERS, NEW YORK, 23rd SEPTEMBER 2014

United Nations Secretary-General Ban Ki-moon hosted the Climate Summit at the UN in New York last September, to engage leaders and advance climate action and ambition. The Summit served as a public platform for leaders at the highest level – all UN Member States, as well as finance, business, civil society and local leaders from public and private sectors – to catalyze ambitious action on the ground to reduce emissions, strengthen climate resilience, and mobilize political will for an ambitious global agreement by 2015. The agreement limits the world to a less than 2-degree Celsius rise in global temperature. The Climate Summit discussed actions and solutions that are focused on accelerating progress in areas that can significantly contribute to reducing emissions and strengthening resilience – such as agriculture, cities, energy, financing, forests, pollutants, resilience and transportation.

R20 was represented at the Summit by its President, Michèle Sabban who attended the events held by organizations of businesses and local actors, in particular by World Climate Ltd, ICLEI and The Climate Group. The latter used this opportunity to officially launch The Compact of States & Regions, which aims at providing the first single, global account of greenhouse gas reduction targets made by state and regional governments. Supported by the UN, the Compact of States and Regions is a partnership between The Climate Group, CDP, R20 and nrg4SD.

R20 BOARD MEETING AND GENERAL ASSEMBLY, PARIS, OCTOBER 9th 2014

The R20 Governing Board and General Assembly were jointly organized one day before the World Summit of Regions for Climate, on October 9th 2014 at Palais d'Iéna in Paris. The meeting took stock of the progress made by R20 across its member regions, with presentations of the main R20 activities, including from R20 MED (Oran/Algeria), R20 USA, Brazil and China, and R20 West and Central Africa. Also, the R20 statutory obligations were fulfilled, with the approval by the Board and General Assembly of the 2013 Activity Report and Auditor's Report, as well as of 2014 mid-year Report and Financials.

The R20 Governing Board and General Assembly renewed the positions of the Board that expired in 2014 - with six new members of the Board being officially endorsed by the R20 Board and General Assembly. The General Assembly extended the term of the President of the Board, Ms. Michèle Sabban, by one year in view of the important work to be done by R20, in partnership with the French Government, leading up to the Paris Climate Conference COP21 (Dec. 2015).

REGIONS - THE KEY ACTORS FOR ENERGY TURNAROUND – VIENNA, OCTOBER 9th AND 10th 2014

The R20 Vienna Conference gathered over 300 representatives from regions, NGOs, businesses, governments, universities and the science sector, in six different workshops about topics ranging from energy efficiency to smart cities, agriculture and food supply, as well as energy model regions, and storage technologies. There were 30 working groups lead by well-known experts for each topic. On the second day of the conference, Andrä Rupprechter, Minister of Agriculture, Forestry, Environment & Water Management; Ingmar Höbarth, CEO of Austrian Climate and Energy Fund; and Monika Langthaler, Director of R20 Austria & EU, gave speeches about how the energy transition can be successful. R20 Founder, Arnold Schwarzenegger, sent a video message praising "action heroes" in the local energy transition, and also encouraged everybody to join efforts.

At the session entitled Road to Paris 2015 - The Central Role of Regions, best practice projects on energy transitions from Germany (Hamburg, Alheim) and Austria (Vienna, Upper

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Austria) were showcased. Andrä Rupprechter closed the conference and brought all the results from the workshops to Paris that same day. There he met Arnold Schwarzenegger and Christophe Nuttall from R20, to talk about climate change and necessary steps towards COP 21 in 2015.

WORLD SUMMIT OF REGIONS FOR CLIMATE – PARIS, OCTOBER 10th AND 11th 2014



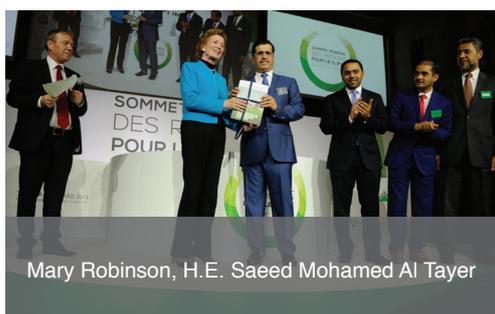
On October 11th 2014, in Paris, Jean-Paul Delevoye, President of CESE, the French Minister of Foreign Affairs and International Development, Laurent Fabius, The Mayor of Paris Anne Hidalgo and R20 Founding Chair Arnold Schwarzenegger, opened the first World Summit of Regions for Climate. Chaired by the R20 President, Ms. Michèle Sabban, the Summit mobilized more than 600 regional and local actors, to illustrate the worldwide “bottom-up” movement ahead of Paris Climate Conference 2015. The Summit was an opportunity for sub-national stakeholders to reaffirm their commitment to:

- Supporting innovative projects initiated at regional and local levels;
- Proposing partnerships between local authorities, corporate and financial actors;
- Signing a joint declaration, the Paris Declaration, that expresses with one voice the commitments of all stakeholders.

A significant outcome of the World Summit of Regions was the meeting between Governor Schwarzenegger, President François Hollande, his Special Envoy Nicolas Hulot, and the French Minister of Foreign Affairs and International Development, Laurent Fabius. The R20 was recognized and given the mandate to lead the ‘bottom-up’ movement of local stakeholders up to the COP21. President Hollande and Governor Schwarzenegger agreed that it was necessary to develop an approach that demonstrates that economic development can be compatible with environment preservation and climate action. Thereafter, Governor Schwarzenegger met with the Mayor of Paris, Anne Hidalgo, at the Paris City Hall, to discuss their common vision and strategy for the Road to Paris and COP21. Mayor Anne Hidalgo also proposed to host the new R20 Paris office within the House of Europe, located in the inner old city of Paris.

Also, during the Summit, His Excellency Saeed Mohamed Al Tayer, the CEO of the Dubai Electricity & Water Authority (DEWA), launched the first report on Dubai’s transition to a green economy - the State of Green Economy Report 2015. His Excellency presented the report to Mary Robinson (UN Special Envoy for Climate Change) and Governor Schwarzenegger, who both praised Dubai’s concrete actions for building a sustainable future (see <http://www.dcce.ae/page/publications.html>).

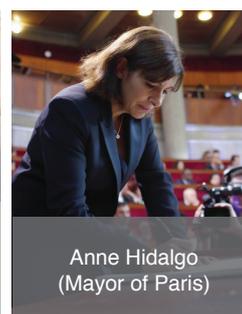
Finally, the Summit adopted the Paris Declaration – a political statement from local governments, businesses, and finance leaders, jointly committing concrete action at the local



Mary Robison, H.E. Saeed Mohamed Al Tayer



Michèle Sabban,
Arnold Schwarzenegger,
Claude Bartolone (President of
the French National Assembly)



Anne Hidalgo
(Mayor of Paris)

level, and a plebiscite for a new international climate deal at COP21. The major networks of local governments attending the Summit were invited to sign the Declaration by Arnold Schwarzenegger.

The Summit closed with a signing ceremony involving six networks of cities and regions, representing collectively over 3,000 local governments: ORU-Fogar, the Assembly of European Regions (AER), ICLEI, the Mexico City Pact, the Association of North East Asia Regional Governments (NEAR), the Climate Group, and the Fonds Mondial pour le Développement des Villes (FMDV).

The Declaration will travel around the world on the “Road to Paris 2015” to events such as the World Green Economy Summit (April 2015) in Dubai, the African Green Economy Summit in Malabo (September 2015), the ORU-Fogar World Summit of Regions (September 2015), and others, to collect signatures from regional and business leaders, and will be presented at COP21 as the strongest global sub-national and business platform for climate solutions. The World Summit of Regions was also the occasion for R20 to launch a number of new partnerships. During the closing ceremony of the Summit, R20 signed agreements with the following entities:

Réunion Region - The Réunion Region is an island territory of France that is situated between Mauritius and Madagascar, and is the only European territory in the Indian Ocean. R20 has partnered with the Reunion Region to set up a new R20 Indian Ocean Renewables Hub, which will serve as a center of technology, training, and financing for projects. This Hub will become a resource for all countries of the Indian Ocean region. The agreement was signed by Didier Robert, President of the Reunion Region.

ABREC - the African Biofuels and Renewable Energy Company, promotes renewable energy and energy efficient technologies in Africa. ABREC and R20 have reached a concrete partnership agreement in which both entities will work together to perform feasibility studies for renewable energy and energy efficiency projects, as well as connecting investments to these projects. ABREC will also be part of the Pre-Investment Facility that R20 has established with UNOPS. Additionally, ABREC has joined R20’s initiative in conjunction with UNOPS and GreenWish Partners to develop 1 GW of solar plants in West and Central Africa.

ADEME - the French Agency for the Environment and Energy, has committed to working with R20 on renewable energy policy, technological training, feasibility studies for infrastructure projects, and bringing together project financing, expertise, and technical assistance. The President of ADEME, Bruno Lechevin, signed the agreement with R20.

Dubai Green Economy Partnership (GEP) - the Dubai Green Economy Partnership strives to promote sustainable and green growth of the Dubai economy and emphasize its importance in the global green economy value chain for green and clean technologies, and sustainable consumption. The Dubai GEP is a recently developed program that was unveiled

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earlier this year. Waleed Salman, Chairman of the Dubai GEP, and Christophe Nuttall, Executive Director of R20, signed a memorandum of understanding to explore opportunities for the establishment of a Regional training center in Dubai, as well as green infrastructure projects for renewable energy, energy efficiency, waste management, and public transport.

World Green Economy Summit (WGES) – the WGES is a gathering designed to encourage solution-oriented thinking on how to provide adequate scale and pace for the global transition to a greener economy. The Summit addresses vital issues regarding the industry such as green policy, green partnerships, green finance, green innovation, and the green economy at large. R20 and the WGES made their partnership official as part of the Road to Paris 2015. The Summit will take place April 22-23, 2015 in Dubai.

CONFERENCE OF MAYORS 2014 (SALON DES MAIRES 2014), PARIS, OCTOBER 25th – 27th 2014: During the Conference of Mayors, held in Paris, R20 was awarded the “Marianne d’Or” for sustainable development. Michèle Sabban, R20’s President, received the award on R20’s behalf. Established in 1984, the prestigious French award is given to cities, villages and regions, as well as organisations, that are active in the environment and sustainable development sectors. R20 was recognized for its championing of local action.

COP20 – LIMA, PERU, 1st to 14th DECEMBER 2014

The Conference of the Parties in Lima (COP20) was attended by R20’s President, Ms. Michele Sabban, who represented R20 in a number of events organised by subnational and local actors. The Climate Group and nrg4SD invited Ms. Sabban to join on December 9th 2014 for a lunch session on the Compact of States and Regions. The Compact of States and Regions was announced in September at the UN Climate Summit 2014. It is a commitment to provide an annual account of the climate targets set by states and regions around the world, and the progress made by governments towards achieving these targets.

Also, during the events organized by ICLEI and World Climate Ltd, Ms. Sabban held meetings with delegations from several regions, including Abruzzo (Italy), Bogota (Colombia), Ontario and Quebec (Canada), as well as Ministers from several African nations. “We are delighted to conclude another successful COP20 and build the strongest platform of solutions on the Road to Paris 2015,” said Ms. Sabban at the World Climate Ltd. event. Ms. Sabban also represented R20 at the dinner hosted by Laurent Fabius (French Minister of Foreign Affairs), on the “Solutions’ Agenda”. Also, Ms. Sabban was invited to speak at a debate organized by Veolia, addressing access to water in poor communities. Finally, Mary Robinson, UN Special Envoy for Climate Change, met with Ms. Sabban to discuss a new initiative by R20 to mobilize influential women from around the world and diverse sectors for climate action.

US-CHINA GREEN INNOVATORS FORUM, USC, LOS ANGELES, 17th DECEMBER 2014

On December 17th at USC, LA, the USC Schwarzenegger Institute and R20 hosted dozens of China’s CEOs and business leaders from industry sectors including real estate and development, energy, automotive, sports and fitness, hotel and hospitality, agriculture, health, media, etc. The workshop explored both opportunities and challenges faced by China’s green innovators, and sought out lessons from California’s leadership and experience. Addressing the important joint announcement by U.S. President Obama and China President Xi Jinping to reduce greenhouse gas emissions 26-28% below 2005 levels by 2025, the point was made that this target is achievable with the actions taking place at the city, regional, provincial, and state levels. The business leaders attending also expressed optimism regarding

the interest of the China business community in joining this important effort. The workshop concluded with Institute Academic Director, Dr. Dan Mazmanian, presenting “California’s Policy Logic: The Case of Climate Change”. This explained the logic behind the many California policies addressing climate change. In closing, Governor Schwarzenegger reminded everyone that we must look at climate change as a “three-legged stool”, understanding its connection to health, national security, and job creation. The collaboration between the USC Schwarzenegger Institute, R20, and China is ongoing, and will be organizing the next forum in China in the spring of 2015.

NEW PARTNERS

[ELETROBRAS](#) is a major Brazilian electric utilities company. It’s also Latin America’s biggest power utility company, and the tenth largest in the world. It is also the fourth largest clean energy company in the world. ELETROBRAS holds stakes in a number of Brazilian electric companies, and it generates about 40% and transmits 69% of Brazil’s electric supply. The company’s generating capacity is about 43,000 MW, mostly in hydroelectric plants. The Brazilian federal government owns 52% stake in ELETROBRAS, rest of shares are traded on BM&F Bovespa. The stock is part of the Ibovespa index. It is also traded on the New York Stock Exchange and on the Madrid Stock Exchange. ELETROBRAS deals with low carbon project development and implementation; Monitoring/Reporting/Verification; climate policy; energy efficiency; LED lighting; renewable energy; research and development; communications and events.

[The Climate Bonds Initiative](#) is an international, investor-focused not-for-profit working to mobilize bond markets for climate change solutions. Climate change solutions involve a rapid transition to a low-carbon and climate resilient economy. The Climate Bonds Initiative aims to reduce the cost of capital for climate related investments, while at the same time seeing the creation of safe and secure investments suitable to the needs of pension and insurance funds. The current value of the bond markets is estimated (by the Bank of International Settlements) worth \$78 trillion at the end of December 2012, aiming to \$1 trillion of investment flowing each year to low-carbon industries.

[Connect4Climate - World Bank Group](#) is a campaign, a coalition, and a community, dedicated to driving global action on climate change, connecting and amplifying climate initiatives and activities, and creating social currency and political capital for climate action. C4C’s goal is to create a participatory, open knowledge platform that engages the global community in climate change conversation to drive action. Since its launch, C4C has built an aggregate online community of half a million fans engaged in climate change dialogue and resource-sharing, and a coalition of about 200 partners committed to climate change communication and action. Current C4C partners include UN organizations, climate-related programs at leading universities, private sector organizations, media organizations, and national and international grassroots NGOs involved in youth and environmental work.

NEW PARTNERS

[Skynotch Energy Africa](#) - Skynotch Energy Africa is a renewable energy solution provider focusing on sustainable energy projects through partnerships and business growth. Its mission is to provide clean energy solution provision in Kenya and Africa through sustainable value chains. Areas of expertise include low carbon project development/implementation, energy efficiency, LED lighting, renewable energy, and waste-to-energy.

Non-Governmental Organizations

[Ghana Bamboo Bikes](#): Leveraging bamboo and fiber technologies, the Ghana Bamboo Bikes designs, develops, and markets bamboo bikes, frames, and related products and services. The initiative addresses four problems: climate change, poverty, rural-urban migration, and high unemployment of youth, by creating employment opportunities and sustainable livelihood job skills for the youth. For example, youth are employed as bamboo bike builders to build high-quality multipurpose bikes that are suitable for high terrains, and purposeful for local needs using native bamboo. They also promote affordable eco-housing and living.

[Triple Quest](#): Triple Quest is a collaborative venture involving Cascade Engineering and The Windquest Group, a West Michigan-based private investment fund. Triple Quest is a sustainable enterprise that provides essential needs products to at-risk families in developing countries by bringing together the resources and objectives of non-governmental organizations, corporations, and other partners. Triple Quest's partners include non-profit groups Safe Water Team, Thirsting to Serve, Global Sustainable Partnerships, Rotary, and Pure Water for the World; socially responsible companies such as Amway, Dow, Bobble and Lighthouse Foods; and the U.S. Navy's Project Handclasp logistics support initiative.

[ECOLABS](#) - Ecolabs is a non-profit organization that supports development and promotes trade products and services in priority areas for development (energy, water, education, health, communication, power supply). Ecolabs has a particular interest in the development and implementation of policies and strategies for the participation and involvement of the Diaspora in the development of the green economy and the objectives of Agenda 2063 of the African Union. In the field of energy, Ecolabs adopts a transversal and multi-player approach that maximizes the impact of access to renewable energy projects on local populations.

NATIONAL AGENCIES

[National Renewable Energy Laboratory \(NREL\)](#) - NREL develops renewable energy and energy efficiency technologies and practices, advances related science and engineering, and transfers knowledge and innovations to address the nation's energy and environmental goals. Areas of expertise include low carbon project development/implementation; climate policy; energy efficiency; renewable energy; waste to energy; biofuels; public health; energy systems integration, vehicle efficiency, building efficiency, and energy analysis.

R20 BOARD MEMBERS

Founding Chair: Mr. Arnold Schwarzenegger, former Governor of California

Strategic Advisor to the Founding Chair: Mr. Terry Tamminen, Founder/President, Seventh Generation Advisors (SGA)

President: Ms. Michèle Sabban, former Vice President, Ile de France (France)

Secretary: Mr. Daniel Esty, Yale University, Director of Centre for Business and the Environment (USA)

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Vice Chair, Sub-Saharan Africa: Dr. Emmanuel Uduaghan, Governor, Delta State (Nigeria)

Vice Chair, North Africa: Mr. Abdelghani Zaalane, Wali of Wilaya of Oran (Algeria)

Vice Chair, North America: Mayor Gregor Robertson, Mayor of Vancouver, Canada

Vice Chair, Mexico and Latin America: Mr. Jose Pedro Goncalves Taques, Governor of Mato Grosso State, Brazil

Vice Chair, Middle East: (vacant)

Vice Chair, Asia-Pacific: (vacant)

Swiss Member: Mr. Alain A.R. Clerc, Founding President of FDMEA, Geneva

Academic Institution Partner Board Member (non-voting): Ms Bonnie Reiss, Director Schwarzenegger Institute, University of South California.

Corporate Partner Board Member (non-voting): Ms. Martine Provost, Executive Director, Global Sustainable Electricity Partnership (GSEP)

Non-Profit Organization Partner Board Member (non-voting): Mr. Mark Watts, CEO, C40 (represented by Cristiana Fragola, Europe Regional Director, C40).

United Nations Partner Board Member (non-voting): Mr Garry Conille, Director for Africa, UNOPS

Financial Institution Partner Board Member (non-voting): Craig Cogut, CEO, Pegasus Private Equity

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