

#### **IASS Event**

# Developing a Sustainable Energy Supply for Africa: Opportunities for Investment and Economic Transformation



### Developing a Sustainable Energy Supply for Africa: Opportunities for Investment and Economic Transformation

At COP 21 in Paris, African leaders launched the Africa Renewable Energy Initiative aimed at boosting renewable energy development to improve energy access and power economic expansion on the continent. With backing from the G7 and the international donor community, the initiative seeks to deliver 10GW of new renewable energy capacity by 2020 and mobilize Africa's potential to generate at least 300GW of capacity by 2030.

This proposal can build on a number of promising trends. Average economic growth has been at 5 percent since the turn of the century, and renewable energy investments have begun to take-off in recent years. Framework conditions for private sector engagement in the energy sector have improved markedly in a number of countries. Market-driven expansion of decentralized energy services has been particularly dynamic, enabled by local entrepreneurship and innovation in the digital economy. At the same time, the overall expansion of renewables in Africa remains moderate and mainly concentrated in a few selected countries. Despite a large number of international initiatives, harnessing large-scale investment in the energy sector in general and the field of renewables in particular remains a critical challenge.

This conference will take stock of these trends and how to build on these developments to unlock investment and entrepreneurship in Africa's low-carbon economy. The workshop will focus particular attention on innovative models to enable investments in renewable energy and the potential of decentralized renewable energy systems for driving local value creation and access to modern energy services. On this basis, options for international cooperation and opportunities for engagement by European businesses will be explored.

## Conference Program

Wednesday, September 28th 2016

9:00-9:30	Welcome and introduction to the conference Ortwin Renn, Scientific Director, IASS and Rainer Quitzow, Project Coordinator, IASS
<b>Key Note Speech</b> 9:30 - 10:30	Harnessing Renewable Energy for Economic Development in Africa: The Way Forward Youba Sokona, Head of interim Independent Delivery Unit of the Africa Renewable Energy Initiative  with comments by:  Katrin Enting, Special Unit "Climate" - Climate Policy and Climate Financing, Federal Ministry for Economic Cooperation and Development  Daniel Schultz, Investment Director & Partner, Frontier Investment Management  Moderation: Rainer Quitzow
10:30 - 11:00	Coffee break
Session 1 11:00 - 12:45	Derisking of Investment in Renewable Energy: Lessons Learned Moderation: Christoph Henrich, Sustainable Energy Finance Specialist, UNDP  Presentations:  Lessons Learned from Morocco's Experience in Solar Energy Basma Bentaher, Project Structuring Manager, MASEN  Lessons Learned from Uganda's GET FiT Program Silvia Kreibiehl, Head of Centre, Frankfurt School-UNEP Collaborating Centre for Climate and Sustainable Energy Finance  Lessons Learned from the Global Energy Efficiency and Renewable Energy Fund Gunther Fischer, Senior Investment Manager, European Investment Bank  The (Future) Role of the African financial Sector in Renewable Energy Yofi Grant, Director, Grant-Dupuis Investment Management
12:45 - 13:45	Lunch
<b>Key Note Speech</b> 13:45 - 14:30	The Role of Market-Creating Innovations as Sources of Economic Growth Bryan Mezue, Founder, Banyi Group Moderation: Sybille Röhrkasten

Session 2 14:30 - 15:45	<ul> <li>Market Creation in Africa: The Potential of Decentralized Energy Solutions for Innovation and Economic Development         Moderation: Noara Kebir, Managing Director, MicroEnergy International     </li> <li>Presentations:         <ul> <li>Role of Business Model Innovation and Synergies with other Innovation Trends in Africa</li></ul></li></ul>
15:45 - 16:15	Coffee break
16:15 - 18:00	Opportunities and Challenges for Investment and Economic Transformation in the Sustainable Energy Sector in Africa: The Role of International Cooperation Moderation: Manfred Konukiewitz, Senior Fellow, IASS  Presentation by Rainer Quitzow, Project Coordinator, IASS & Jens Marquardt, Research Associate, Environmental Policy Research Centre, Freie Universität Berlin  with comments by: Joseph Mithika Mwenda, Secretary General, Panafrican Climate Justice Alliance Benjamin Mugisha, Resident Underwriter, African Trade Insurance Agency
18:00 - 19:30	Reception

### Speakers



**Basma Bentaher**Project Structuring Manager, MASEN

Basma Bentaher is Project Manager within the Structuring Department of the Moroccan Agency for Solar Energy (MASEN), which is in charge of managing the international tender process related to the selection of developers for the design, financing, construction, operation and maintenance of large-scale solar power plants projects in Morocco. As such, Basma has acted as project co-leader for the overall tender process of NOOR Ouarzazate II and NOOR Ouarzazate III CSP projects. Basma is currently acting as project leader for the tender process of the first photovoltaic phase of the NOOR Moroccan Solar Plan.

Before joining Masen, Basma worked in the field of investment banking, mainly on mergers and acquisitions, equity investing and debt raising, bonds issuance and privatizations.

She holds an MSc Degree with Highest Honors from the French Business School ESCP Europe, Paris Campus, with a major in finance.



**Thomas Duveau**Head of Business Development, Mobisol

Thomas Duveau joined Mobisol as Head of Business Development in June 2013. With his team, he is responsible for market entry strategies and strategic partnerships.

Thomas worked as an officer for renewable energies for WWF Germany from 2008 to 2013. Prior to that, he served as Vice President at Global Capital Finance (Investment with a focus on infrastructure and renewable energies) 2005 to 2008. From 1997 to 2004 he worked in the Corporate Strategy Department of REUTERS in Germany, UK and USA.

Thomas graduated in Economics, Econometrics and environmental management.



#### **Katrin Enting**

Special Unit "Climate" - Climate Policy and Climate Financing, Federal Ministry of Economic Cooperation and Development (BMZ)

Katrin Enting, economist by training, works as senior policy officer at the Special Climate Unit at the German Federal Ministry for Economic Cooperation and Development (BMZ) where she focuses on renewable energy in Africa and private climate finance. Before joining BMZ she was with KfW Development Bank as project manager for renewable energy and energy efficiency and as sector economist for climate finance. Previous to that Katrin worked in research and civil society, always on the topic of climate finance



#### **Gunter Fischer**

Senior Investment Manager, European Investment Bank

Gunter Fischer is Senior Investment Officer with the European Investment Bank focusing on the Global Renewable Energy and Energy Efficiency Fund (GEEREF). In this context he is responsible for the sourcing, origination, assessment, negotiation and monitoring of renewable energy and energy efficiency investments in emerging markets and developing countries.

He has more than 15 years of fund experience incl. from managing the European Investment Fund's first external mandate Fund of Funds, targeting venture capital and private equity investments in Germany. In this context he gained in depth knowledge of the due diligence and structuring of fund investments. Prior to EIF, Gunter Fischer was with the corporate finance practice of Arthur D. Little in Berlin. There he provided corporate finance advisory to a number of industries. Gunter Fischer holds degrees in business administration and law from Reims Management School and the University of St. Gallen and a PhD in finance from the European University in Frankfurt, Germany.



**Yofi Grant**Director, Grant-Dupuis Investment Management

Yofi Grant is a partner of Grant Dupuis Investment Ltd, an advisory and consulting firm in Ghana. Grant Dupuis is a joint venture with an European investment and asset management group called Dupuis Asset Management in Berlin, Germany. The company focuses on investment opportunities on the African continent. Additionally, Yofi Grant is also a member of the investment advisory committee of Tangible Assets Partners, a Luxembourg registered investment vehicle looking at high growth investment opportunities. Yofi is a private sector board member of the Continental Business Network of the AU-NEPAD which advises African presidents on infrastructure developments on the African continent with a significant focus on energy and power.

Prior to that Yofi was a partner in Databank, one of the largest investment banking firms in West Africa. He has had significant corporate finance and advisory as well as corporate banking experience in Africa, leading a number of ground breaking transactions in Ghana. Yofi is a non-executive Director of Databank Brokerage of which he was chairman from 2003 to 2009. He is also a director of Databank Private Equity Ltd and Databank Financial Services Ltd. He is currently Chairman of Lincoln Advisors, a financial and investment advisory firm focusing on energy and real estate in Ghana.

Yofi is a fellow of the Aspen Global leadership Network of the Aspen Institute, Aspen Colorado. He is blessed with a set of triplets.



**Christoph Henrich** 

Sustainable Energy Finance Specialist, United Nations Development Programme

Mr. Henrich is part of UNDP's Energy Team, responsible for developing and applying UNDP's innovative de-risking renewable energy investment (DREI) methodology. The DREI framework, developed in cooperation with the ETH Zurich, assists developing countries to cost-effectively promote and attract private sector financing for renewable energy technologies. The framework systematically identifies the barriers and associated risks which can hold back private sector investment in renewable energy. It then assists policymakers to identify and implement packages of targeted and most cost-effective public derisking instruments to either address ("policy derisking") or transfer ("financial derisking") these risks. The DREI methodology is currently applied in several UNDP development projects worldwide. As part of a team of ETH and UNDP experts, Mr. Henrich is also involved in expanding the original DREI methodology, which focuses on utility scale renewable energy technologies, to small-scale renewable energy technologies such as solar home systems and mini-grids. Mr. Henrich has authored and contributed to several papers and documents related to investment in renewable energy. Mr. Henrich holds a M.Sc. in Business Administration with focus on Corporate Finance and Econometrics from Humboldt University Berlin.



**Noara Kebir**Managing Director, MicroEnergy International

Noara Kebir is CEO of MicroEnergy International, a consultancy and incubation platform for green and inclusive businesses in the Global South. Noara is a passionate advocate for the hybridization of scientific research and social business. This is a main reason why she initiated in 2005 the Scientific Research Group Microenergy Systems at the University of Technology in Berlin. This group was a pioneer in developing entrepreneurship oriented educational programs at the University and to implement them in Master and PhD programs.

Noara's educational background is in industrial mechanics, energy & process engineering and product design. She is a senior consultant with 20+ years of experience. She spent the first years of her professional life with Bosch Siemens Household Appliances. Since 2002, she followed her passion for inclusive finance and renewable energy and became an entrepreneur. Today, her strongest vision is a world where energy is no longer a power monopolizer but a good that is fairly shared among people and nature.



#### **Manfred Konukiewitz**

Senior Fellow, Institute for Advanced Sustainability Studies

Manfred Konukiewitz is currently Senior Fellow at the Institute for Advanced Sustainability Studies, Potsdam. He recently retired from the position of Co-Chair of the Board of the Green Climate Fund, the new global fund launched by the Climate Change Convention. Until 2013, he was Deputy Director General at the German Federal Ministry for Economic Cooperation and Development where he led the directorate for global and sectoral policies in development cooperation and was concurrently Director for Latin America. He has extensive experience as an international negotiator for Germany and the European Union in matters of development finance, climate and sustainable development. In 2004, he had a key role in organizing the first International Conference for Renewable Energies in Bonn and in starting the international renewable energy network REN21.

Previously, Mr. Konukiewitz was seconded to the United Nations Environment Programme (UNEP), Nairobi, appointed as Senior Advisor to Under-Secretary-General Klaus Töpfer. He started his civil service career in the German Federal Ministry for Building, Urban Development and Regional Planning.

Mr. Konukiewitz received his academic training at Freie Universität Berlin and Indiana University, USA. He holds a PhD in Political Science from Freie Universität Berlin.



#### Silvia Kreibiehl

Head of Centre, Frankfurt School-UNEP Collaborating Centre for Climate and Sustainable Energy Finance

Silvie Kreibiehl is Head of the Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance, a strategic cooperation between the United Nations Environment Programme and the Frankfurt School of Finance & Management, supported by the German Federal Ministry for the Environment. Set up as a think-and-do tank, the Centre combines practice-oriented research and policy advice with implementation expertise in developing and emerging countries. Ms. Kreibiehl's work focuses in particular on innovative financing schemes and regulatory frameworks unlocking international and local private sector investments. Before joining the Centre Ms. Kreibiehl had worked for Deutsche Bank for 17 years, with 10 years in corporate finance, in particular in the renewable energy sector. She was also responsible for DB's shareholding in the Desertec Industrial Initiative and was the lead analyst for the design of the GET FiT programme. Ms. Kreibiehl has been a contributing author to the Fifth Assessment Report (AR5) prepared by the Intergovernmental Panel on Climate Change (IPCC). She serves as a member of the C3E International Ambassador Corps since 2016 and was nominated to serve as a member of the Independent Technical Advisory Panel of the Green Climate Fund in July 2015.



#### **Abhishek Malhotra**

Research Associate, Energy Politics Group, ETH Zürich

Abhishek Malhotra is a PhD candidate and research associate at the Energy Politics Group at ETH Zurich. He holds a Master's degree in Energy Science and Technology from ETH Zurich and a Bachelor of Technology in mechanical engineering from the Indian Institute of Technology Delhi. He has worked as a consultant for the United Nations Development Programme (UNDP), where he is working on a project on "Derisking Small-Scale Renewable Energy Investment". Prior to this, he has worked as an intern for the International Renewable Energy Agency (IRENA) in Bonn, at the Division on Technology and Logistics of the United Nations Conference on Trade and Development (UNCTAD) in Geneva, and with GE Aviation at the John F. Welch Technology Center in Bangalore. His research interest is on technological innovation and diffusion of renewable energy technologies, with a focus on village grids for energy access.



**Jens Marquardt**Research Associate, Environmental Policy Research Centre,
Freie Universität Berlin

Jens Marquardt is a Post-Doctoral Researcher and Lecturer at the University of Halle-Wittenberg and a Research Associate with the Environmental Policy Research Centre at the Freie Universität Berlin. His research interests include the links between social sciences and environmental technologies, the role of power and coordination in complex governance arrangements, development theory and sustainability transitions. Jens is particularly interested in the political dimension of energy transitions in developing countries. He was previously employed at the Centre for Sustainability Management in Lüneburg and worked for the German donor agency GIZ in Southeast Asia.



**Bryan Mezue** Founder, Banyi Group

Bryan is the founder and Managing Director of Banyi Group, an investment and advisory firm that promotes market-creating innovations in Africa. Banyi Group advises key decision-makers on how disruptive innovations can drive development and also partners with world-class operators to build disruptive companies in Africa.

Prior to founding Banyi, Bryan was a research fellow at the Forum for Growth and Innovation, where he collaborated closely with Professor Clay Christensen to pioneer research on the relationship between disruptive innovations and economic development. Their work explored how governments, investors and entrepreneurs can super-charge development outcomes by embracing the principles of market-creating disruptions (simple, scalable solutions targeted at non-consumption). Featured in publications such as Foreign Affairs and Harvard Business Review, their work has proved a hallmark for many emerging market leaders and continues to spur further research.

Bryan was also a Manager at Bain & Company, where he was a founding member of the firm's Lagos office and led multiple public and private sector projects across Africa. He is a co-founder and Board Member of WAVE Academies, a vocational education social enterprise focused on addressing youth unemployment.

Bryan received an MBA from Harvard Business School and completed his undergraduate degree in Warwick University.



**Benjamin Mugisha**Senior Underwriter, African Trade Insurance Agency

Benjamin is currently a Senior Underwriter at the African Trade Insurance Agency (ATI), based at the Head Office in Nairobi. He manages ATI's portfolio of international financial partners and offers specialist skills for underwriting political and credit risk insurance, with a special focus on energy projects. Since joining ATI in 2010, he has been involved in underwriting transactions in the infrastructure, mining, telecommunications and manufacturing sectors for banks, investors and contractors. Prior to joining ATI, Benjamin worked at the East African Development Bank where he advanced to the position of Senior Project Officer responsible for investment promotion, business development, project appraisal, risk analysis and project restructuring. Mr. Mugisha holds a Bachelor of Science Degree in Civil Engineering; a Master of Science Degree in Construction Management; a Masters Degree in Business Administration and a Post Graduate Certificate in Project Planning and Finance.



**Joseph Mithika Mwenda** Secretary General, Panafrican Climate Justice Alliance

Mithika Mwenda is currently the Head of Pan African Climate Justice Alliance (PACJA). Before leading PACJA as a formidable movement on climate justice across the African continent, Mwenda was working with All African Conference of Churches (AACC) where his mandate was to help faith communities to understand the moral imperatives of climate crisis. Previously, he was actively involved in the pro-Democracy and Governance movement that was agitating for expanded democracy in his country, which engineered the promulgation of one of the most celebrated people-driven constitutions in the world in 2010. He studied in Moi University where he was a student Leader, before joining Jomo Kenyatta University of Agriculture and Technology for post-graduate studies in Public Policy Analysis. At Kwa Zulu Natal University, he is undertaking a Masters of Research focused on the quest for climate justice on the African content. In 2016, the influential Pan African Magazine, Le Afrique, named him among the top 50 African Intellectuals due to his contribution to climate policy discourses in the continent. This was followed by his election to the Participants Committee of the Forest Carbon Partnership Facility of the World Bank as African civil society representative. He also represents civil society in the Steering Committee of Africa's flagship climate policy and practice coordination platform, CliMDEV Africa.



#### **Rainer Quitzow**

Project Coordinator, Institute for Advanced Sustainability Studies

Rainer Quitzow is a Project Coordinator at the Institute for Advanced Sustainability Studies, where he co-leads the Global Energy Transition work area, as well as Senior Lecturer at the Chair of Innovation Economics, Technische Universität Berlin. His research focuses on sustainable innovation and industrial policy and governance of the energy transition in Germany and beyond. In particular, he has focused on the internationalization of emerging renewable energy industries and the changing role of emerging and developing economies in this context. He regularly engages in policy-oriented advisory work for both German and international clients. Before his career as a researcher, Rainer Quitzow worked in the field of international development with a focus on governance, environmental and trade policy. At the World Bank in Washington, DC he conducted governance and policy impact analysis for the preparation of development programs in Latin America and Africa. He holds a PhD in Political Science from Freie Universität Berlin.



#### Ortwin Renn

Scientific Director, Institute for Advanced Sustainability Studies

Ortwin Renn is scientific director at the International Institute for Advanced Sustainability Studies (IASS) in Potsdam (Germany) since February, 1, 2016. He continues to serve as acting chair of the Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies at the University of Stuttgart (ZIRIUS) and as scientific director of the non-profit company DIALOGIK, a research institute for the investigation of communication and participation processes. Renn is Adjunct Professor for "Integrated Risk Analysis" at Stavanger University (Norway) and Affiliate Professor for "Risk Governance" at Beijing Normal University.

Ortwin Renn has a doctoral degree in social psychology from the University of Cologne. His career included teaching and research positions at Clark University (Worcester, USA), the Swiss Institute of Technology (Zuerich) and the Center of Technology Assessment (Stuttgart). His honours include the National Cross of Merit Order, an honorary doctorate from the Swiss Institute of Technology, an honorary professorship at the Technical University Munich and the "Distinguished Achievement Award" of the Society for Risk Analysis (SRA)



**Sybille Röhrkasten**Project Coordinator, Institute for Advanced Sustainability Studies

Sybille Roehrkasten is Project Coordinator at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany, where she co-leads the Global Energy Transition work area. In her research, she focuses on international policy and governance to expand the worldwide deployment of renewables. Before joining the IASS, Sybille engaged in foreign policy consultancy on energy and climate issues at the German Institute for International and Security Affairs (SWP) in Berlin. Sybille holds master degrees in International Economics and Political Science from the University of Tübingen, as well as a PhD from the Freie Universität Berlin of Berlin.



**Daniel Schultz**Investment Director & Partner, Frontier Investment Management

In his work at Frontier, Daniel has been responsible for sourcing, negotiating and implementing a number of renewable energy investments in Sub-Saharan Africa. Daniel's primary focus has been to lead several transactions and subsequent development of several small hydropower projects in Kenya, Uganda, and Rwanda. However, Daniel has also been involved in several other projects in Frontier including geothermal, wind, biomass and solar. Prior to co-founding Frontier Investment Management, Daniel worked for DI International Business Development for 7 years, the last 2 years as Manager and Partner. Daniel has sourced, developed and implemented investment projects in a wide range of frontier markets and industries. During his career he has specialized in project financing, energy efficiency financing, investment guarantees and export credit facilities, internationalstrategy development, and the carbon credit market. He holds a B.Sc. International Business from Copenhagen Business School and M.Sc. Finance from the London School of Economics.



**Youba Sokona**Head of the interim Independent Delivery Unit, Africa Renewable Energy Initiative

Youba Sokona is currently Head of the interim Independent Delivery Unit of the Africa Renewable Energy Initiative and Special Advisor for Sustainable Development at the South Centre. With over 35 years of experience addressing energy, environment and sustainable development in Africa, Youba Sokona is a well-known, leading global figure. Reflecting his status, Youba Sokona was elected Vice-Chair of the Intergovernmental Panel on Climate Change (IPCC) in October 2015. Prior to this, Youba Sokona was Co-Chair of IPCC Working Group III on the mitigation of climate change for the Fifth Assessment Report after serving as a Lead Author since 1990. In addition to these achievements, Youba Sokona has a proven track record of organisational leadership and management, for example as Coordinator of the African Climate Policy Centre (ACPC) and as Executive Secretary of the Sahara and the Sahel Observatory (OSS). Youba Sokona's advice is affiliated with numerous boards and organisations, including as a Member of the Board for the Institute of Development Studies, as a Visiting Professor at the University of Surrey, an Honorary Professor at the University College London (UCL), and as a Special Advisor to the African Energy Leaders Group. In short, Youba Sokona is a global figure, with deep technical knowledge, extensive policy experience and an unreserved personal commitment to African led development.



**Lucy Stevens**Senior Policy and Practice Adviser, Practical Action

Lucy Stevens is Senior Policy and Practice Adviser for Energy Access at Practical Action. She leads the organisation's work to generate evidence-based lessons, establish policy positions and develop global strategies to influence policy and practice. She heads the team preparing the organisation's flagship Poor People's Energy Outlook Report and associated briefing series. She is a social scientist by training, with a PhD from the School of Geography at Oxford University, focusing on the broad livelihoods impacts of the South African government's slum upgrading programme. Lucy has worked for Practical Action since 2002, beginning with 10 years as a programme co-ordinator in the access to services programme. In this role she worked intensively on urban slum upgrading initiatives, and managed some of the organisation's largest multi-country projects.

### Notes

#### **Conference Organizers**

Rainer Quitzow, IASS and Jens Marquardt, Freie Universität Berlin

#### Contact

#### **Rainer Quitzow**

Project Coordinator, Global Energy Transition

Phone +49(0) 331-28822-374

E-mail rainer.quitzow@iass-potsdam.de

Web www.iass-potsdam.de/en/people/dr-rainer-quitzow

#### Address:

Institute for Advanced Sustainability Studies e. V. (IASS) Berliner Strasse 130 14467 Potsdam Germany

www.iass-potsdam.de

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