



**Laurent de Morelos**

Green Deal Group

*Founder & Director*

Mr. de Morelos is a reputable expert in business development in a variety of industrial activity sectors. He has gained a wealth of experience as a business ambassador during his long career in the United States, Europe and the Middle East. After over fifteen years of operations in Dubai, United Arab Emirates, Mr. de Morelos is known today as a leader of international industrial projects with, in the past ten years, a special emphasis on innovative renewable energy projects. Early in his career, Mr. de Morelos was given an opportunity to test his professional skills at Sotheby's International Realty in Washington, DC, USA. Awarded "the Best Sales Broker of the Year" in 1987. Subsequently in 1990, he joined IMPAC Inc. one of the largest international industrial consultancy audit firm of its kind and, in a consulting capacity, contributed to a significant and duly recognized productivity improvement of energy giant EDF/GDF.

As International Director of MiceKraftwork, a leading regional and international commercial based in Dubai and serving the hospitality, retail, private and public government offices, as well as the exhibitions industry, Mr. de Morelos was responsible for business development and project management for regional and international markets. In 2006, Mr. de Morelos was awarded the largest single Middle East region hospitality fitout contract for "the Atlantis the Palm Hotel Resort" development project from the renown South African Kerzner Hospitality Group.

In 2009, when Mr. de Morelos Founded Equilibre FZ Ltd in Dubai, his initial intent was to create a branded waste-to-energy project management and development company. Equilibre was structured by him to implement turn-key alternative, cost effective and clean energy solutions for governments and nations. Driven by a visionary perspective, this career evolution assisted by his natural team building skills, irresistibly prompted him to develop a biomass conversion project in the Republic of Mauritius as a 'showcase' and natural gateway to the colossal African market. Mr. de Morelos has been spearheading the development of the arundo biomass to energy project in Mauritius and internationally, committed to pioneer into a globally recognized sectorial market leader over the next decade.

On the 25/07/2020, the Japanese bulk carrier Wakashio ran aground on a reef in Mauritius leaking between 800 and 1,200 tonnes of fuel oil, causing an unprecedented ecological National disaster. In response, Mr. de Morelos brought forward an environmentally sustainable oil spillage absorption solution that was initially retained by the United Nations disaster intervention team. The solution presented under the title: "lignocellulosic biomass fibres for natural remediation of oil spillage including restoration of coastal/marine environment and reuse of the waste oil-contaminated biomass for energy production" was subsequently developed into a white paper with the collaborative participation of the University of Mauritius and Mr. de Morelos honorably received a grant award from the Mauritius Research Innovative Council (MRIC) on February 21, 2021. The research and development of the advanced solution was completed after two years with a validation of its feasibility and viability through a final report submitted to the MRIC in April 2023. (a copy of this report is available)



Ministry of Information Technology, Communication and Innovation



Mauritius Research and Innovation Council

## CERTIFICATE OF AWARD

to

*Equilibre Bioenergy Production Ltd*

for the grant awarded to the project

Assessment of locally available processed lignocellulosic biomass fibres for natural remediation of oil spillage including restoration of coastal/marine environment and reuse of the waste oil-contaminated biomass for energy production

led by

*Laurent de Morelos*

under the Special Call for Proposals – “Building Blue Resilience through Innovation”

The Hon. D Balgobin  
Minister of Information Technology,  
Communication and Innovation

Prof T Bahorun  
Executive Director  
Mauritius Research and Innovation Council

22 February 2021

### Project Title:

Assessment of locally available processed lignocellulosic biomass fibres for natural remediation of oil spillage including restoration of coastal/marine environment and reuse of the waste oil-contaminated biomass for energy production.

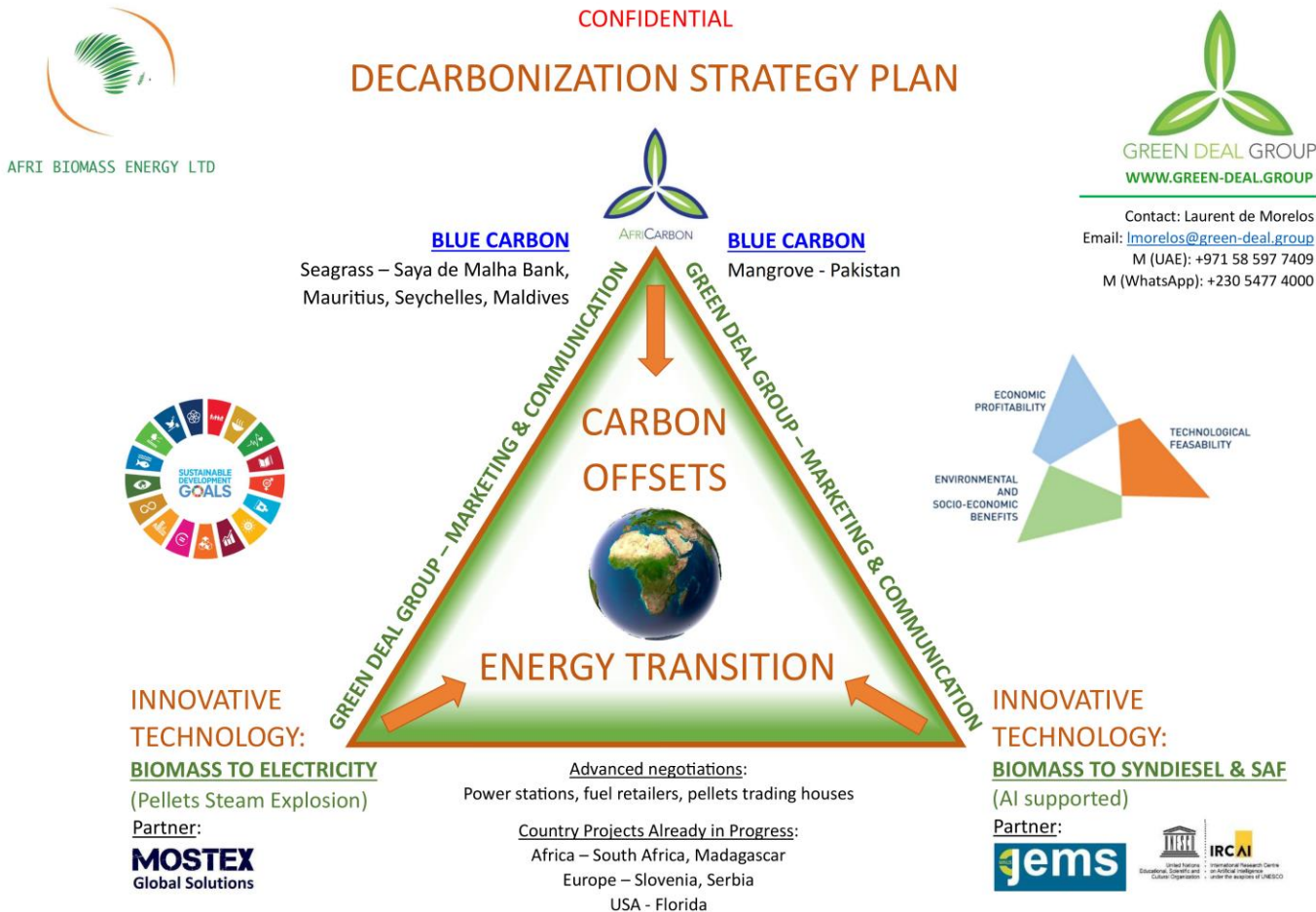
### Project Description:

“Bio-based absorbent materials have recently been given focused attention for oil spill recovery application as cheap eco-friendly and effective resources compared to the use of non-biodegradable expensive oil-based synthetic polymers and less efficient mineral materials. The overriding aim of this study is thus to assess the application of selected locally available lignocellulosic biomass fibres (Arundo Donax/Fatak compared to Sugarcane Agricultural Residues and bamboo) for absorption of oil and its contaminants in oil spilled areas/waters. The potential application of such natural remediation technique would prospectively restore the marine environment and habitats in the oil spilled areas, while the waste oil-contaminated biomass can be suitably collected and reused for energy/electricity generation as a cheap economic means for its proper end-use disposal.

Following the MV Wakashio oil spill in Mauritius, a preliminary oil spill absorption test undertaken with Arundo Donax fibres (prepared biomass and bagged) at Vieux Grand Port (Figures 1-6) gave a promising empirical outcome of 3 kg oil sorption capacity per kg of biomass, while literature indicates that the oil sorption capacity can be as high as 5-6 kg/kg biomass with such fibres. This study is thus geared towards investigating and suitably preparing the biomass fibres (size, moisture and porous microstructures) including the biomass holding bags (or ‘pillows’) and determining the retention time in light-to-heavy contaminated oil areas for optimal oil sorption and its contaminants. The reuse of the waste biomass, enriched with the

absorbed carbon from the oil, would be assessed for its energy/electricity generation potential as a simple and easy disposal cheap option at the end of the biomass lifetime.”

In May 2023, Mr. de Morelos was privileged to present the Green Deal Group / ABEL Decarbonization and Carbon Offsets Global Business Model to the Dubai COP28 Climate Envoy Office Partnerships team reviewers with objective that it be retained for platforming participation at the UN Climate Conference in November 2023.



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Mr. de Morelos holds an International Baccalaureate from the United World College in the United Kingdom and a double Bachelor’s of Arts degree, in Business and Economics, from Austin College, Texas. A citizen of France and a permanent resident of Mauritius, divorced with two children, Mr. de Morelos is fluent in English, French and has a working knowledge of German and Spanish. Founder Member of the Dubai Capital Club, Dubai International Finance City since 2008.