Over the past six years, the Cairo Climate Talks have brought together Egyptian and German experts as well as an engaged audience to discuss climate, energy and environment related topics of relevance for Egypt and the region. They have spread awareness, created links and synergies and inspired people from different fields to integrate their efforts with regards to climate change mitigation and adaptation measures.

At the beginning of the celebration of the 50th edition of the Cairo Climate Talks, the floor was given to H.E. Julius Georg Luy, the Ambassador of the Federal Republic of Germany, and the Minister of Environment, H.E. Dr. Khaled Fahmy, to reveal the Cairo Climate Talks’ new logo.

"The Cairo Climate Talks have tackled a variety of relevant topics in the light of ongoing climate change since they were first initiated in 2011, and we don’t seem to run out of important topics anytime soon“, opened H.E. Julius Georg Luy, Ambassador of the Federal Republic of Germany to Egypt, the 50th edition of the Cairo Climate Talks at the German Academic Exchange Service (DAAD) on Sunday evening. He further elaborated that since climate change is and will remain one of the most pressing challenges of our time, the Cairo Climate Talks will keep exploring new topics, expanding their outreach and adapting new formats to fill the needs of society. H.E. then highlighted the importance of fresh ideas to solve the climate crisis, acknowledging that “even the biggest projects started off with small, yet brilliant, ideas.” Finally, he stressed the role of young entrepreneurs in particular, stating that "as different as their ideas might be, all innovators have one thing in common: they have chosen to take the challenges of climate change as opportunities for themselves and the development of their communities."

"We are working on controlling our greenhouse gas emissions with a focus on the energy and transportation sectors" announced H.E. Dr. Khaled Fahmy, Egyptian Minister of Environment, in his opening speech. He further explained that "we have raised our renewable energy target to 45% by 2050 instead of 30%. We are also investing in adaptation to natural disasters like the efforts done in Alexandria in 2017 to be prepared for floods." He then directed a message to the audience that "a lot of experts have agreed that around 90% of the funding the world needs to address climate change will come from the private sector". For that reason, he highlighted the value of innovative startups by affirming that "we believe in the ability and creativity of our young generation and we are offering to help."

Aya Ihab, a team member of *Hikers*; a startup that produces flour substitute or compliment from mango kernels, started off the panel by explaining where their idea came from: "Egypt produces 197,000 tons of mangos annually and, at the same time, imports more than 60% of the wheat for consumption. The idea was to find a link that utilizes that waste while addressing food security." Aya then explained how the inside of the kernel is used for producing highly nutritious mango flour that is 100% natural. According to her, the benefits of the mango flour compared to wheat flour are that it is much cheaper that it can be locally produced, making baked goods production and consumption healthier for both humans and the environment.

"90% of wood in Egypt is imported, which accounts to an equivalent of 2 Billion US Dollars, and with Egypt's solvency crisis, we can all see that relying on imports is not a good solution", argued Mohamed Kafafy, Co-founder and CEO of *Agrona*; a Business to Business innovating company that works on making chipboards out of green based composites. Their plant produces particle board from agricultural waste and sells it to wood manufacturers. Not only do their products comply with the European Union standards of wood-based panels, they also have a positive social impact: "We offer job opportunities to our suppliers from local farms; we are planning to expand our network across Egypt. Agrona’s particle board can save up to 850 cubic meters of carbon dioxide emissions per ton of residues.

"Aerospace changed a lot during the last two years. Since nano satellite installation became possible, the price of installation became cheaper", discussed Michael Marszalek, a research assistant at Technische Universität München and the founder of *Orbital-Views*. *Orbital-Views* is a virtual application that utilizes the agricultural process by offering data on the soil, biomass and moisture so that land owners would know what the land needs without having to waste any resources. "Even if you are experienced with weather forecast, you cannot predict the exact amount of water the plant needs, which is what *Orbital-Views* can help you with", elaborated Michael. He then confirmed that the app is user-friendly and that they have computer scientists working on making the human machine interface as clear as possible. "It is possible to save up to 30% of irrigation water use through Orbital-Views solution without any additional installment", he added.

Raphael Tarek Wagensonner, a masters student at Technische Hochschule Deggendorf and a team member of *Aquaba*; a solar desalination project that uses solar distillation technology for fresh water production, brought the impact of climate change on water resources to the table, and how that would affect the water security of many nations. “To fight droughts, there are many ways to desalinate sea water”, he stated. He then compared different desalination technologies together: “The MSD (Multi Stage Distillation) requires 10 liters of natural oil to produce 1000 liters of water.” Since the whole world is de-fossilizing its energy dependence to reduce their greenhouse gas emissions that will eventually impact droughts, and with MSD’s high energy consumption, it makes it an unfavorable approach to get fresh water from Raphael’s point of view. “As for RO (Reverse Osmosis), although it has a great potential, it works best with low salt concentration”, he continued. “Our locally manufactured solar distillation technology works well with high salt concentration and it does not require any energy which makes it the least pollutant of all technologies”, he expressed.

Mahmoud Saied, Founder and CEO of *Happiana*; a startup that produces the smartest solar power bank in the world – SunBank – as rated by Indiegogo, stated that “SunBank can charge your phone wirelessly and in two hours using solar panels.” He added that SunBank has its own mobile application that can update you when your phone’s battery is low, or when you forget your power bank so you would not lose it. “We are the only local manufacturers of solar power banks in Egypt and our prices are competitive. It is 50% higher in efficiency and 80% more cost effective, which gives it a huge potential in the market”, he said.

After the speakers' presentations, the audience was given the chance to direct their questions to the panelists. Audience members were curious about the productivity and efficiency of the presented products and systems, which are all in different stages of development. The innovators showed optimistic since their solutions have so far proven to be highly competitive with their traditional counterparts. One audience member further asked *Agrona* and *Hikers* about their need of a strong waste management system, and wondered about whether business-to-business is going to be their way of supplying the waste. Both innovators confirmed that they are planning to rely on business-to-business models. Dr. Khaled Fahmy asked for the word and then proceeded to offer them the opportunity to work closely with the Ministry of Environment, which could supply them with the necessary waste.