



# Revolution in the offing

By Ayswarya Murthy

**Professor Thomas Stocker is one of the five contenders for the Chair of the Intergovernmental Panel on Climate Change (IPCC). The elections are scheduled for October, and if he should win, he will be leading the Nobel Prize winning-organisation during the all-important COP21 in Paris and the tough years beyond that. He talks exclusively to *Qatar Today* during his recent visit to Doha.**

It was a rather cozy gathering at the residence of the Ambassador of Switzerland to Qatar. That evening His Excellency Martin Aeschbacher was hosting his countryman Thomas Stocker, who was on a whirlwind tour of the region, meeting government officials and delegates to put forth his candidacy for the upcoming elections for IPCC chair. The morning was spent on meetings in the Ministry of Environment and with senior officials in the Ministry of Foreign Affairs. "I wanted to visit these countries to present myself and my experience; building trust that I would do a good, responsible job in the IPCC for the next seven years. More importantly, I want to listen to their concerns and expectations from the IPCC," he says. "Doha is an important country in the Arabian Peninsula which has shown leadership in this field with the hosting of COP18 in 2012, which produced critical results regarding ocean damage. So this was a good opportunity to listen to the concerns of a country that is exposed to the dangers of climate change in multiple ways – expanding drought, increased sea levels, acidification of the ocean and exposure to extreme events like summer heat."

The meetings in the evening were probably a lot less formal in comparison; a friendly gathering of academics, journalists, think-tank analysts and representatives from Qatar's clean energy sector. The ensuing discussion was enlightening but unfortunately off-the-record; but we did manage to get Professor Stocker to sit down with us for an interview at the end of the evening during which he pointed out the Middle East governments' "declared awareness" about the problem of climate change. "The challenges are on the table and governments and policymakers are joining the table to seek solutions from a global

point of view. Certainly many countries in this region are developing and require further development. And currently, often this development is linked to the consumption of fossil fuels. The challenge would be to leapfrog their development and decouple it from the classical way of obtaining energy." He said that despite the region's heavy reliance on fossil fuels, they are "in every way just as dependent as other non-hydrocarbon producing countries".

#### **Paris and 2C**

"In Europe we have started decarbonising, but are still far away from where we and an increased level of ambition are needed if we are serious about the 2C target," he notes. We spoke a lot about the 2C target in our last issue (August, 2013), about 2C in relation to the carbon bubble. Many analysts believe that this target is arbitrary, too high and, worse still, not realistic. Stocker clarifies this point. "It's not arbitrary in the complete sense. Sure, it's not a scientifically obtained limit of warning; it's also not a limit where we say everything is good below and only total global catastrophe above. However, it's sufficiently ambitious, politically acceptable and science indicates that below this level, some of the serious risks associated with climate change – disastrous and extreme events, their increase in intensity and frequency, change in water cycle, change in ecosystem and their services – are still manageable to the extent that you can adapt to it in most regions. Beyond 2C, the number of regions where you will have reached the limitation of your adaptation capacity will increase rapidly. So while there is some sense in the 2C target, it's not a magic barrier," he says. "And we are more than halfway towards crossing 2C. The global mean temperature increase is in the order of 0.85 C. There is

**"This was a good opportunity to listen to the concerns of a country that is exposed to the dangers of climate change in multiple ways – expanding drought, increased sea levels, acidification of the ocean and exposure to extreme events like summer heat."**



HE the Minister of Environment Ahmed bin Amer Al Humaidi met with Dr Thomas Stocker and HE Ambassador Martin Aeschbacher to discuss dealing with climate change issues and the State of Qatar's efforts in this direction, as well as its cooperation with relevant regional and international bodies. The meeting was also attended by the director of the climate change department within the Ministry of Environment, Abdulhadi Nasser Al Marri.

**“What we are seeing here is a huge challenge, but also a huge opportunity. Probably the biggest ever for humankind. Decarbonisation in the long term will be revolutionary.”**

another 0.6 C that is committed warming i.e., warming that will arrive even if we keep the concentration of greenhouse gases in the atmosphere constant because the system is slowly approaching equilibrium. So we are basically at a committed 1.4-1.5 C and that is another indicator of the urgency to act.”

On the face of it, Professor Stocker's optimism is difficult to understand. Here he is, willingly contesting to be at helm of the world's premier authority on climate change, during a watershed moment in history that could potentially decide the fate of humanity. Dramatic as it sounds, it does feel like we are gaining momentum as we head towards the precipice, and no one seems willing to apply the brakes. But Stocker probably has a different view of things from where he is standing. “I am personally optimistic about the Paris conference,” he says. For three reasons: “First, never before have the policymakers had so much scientific knowledge about the problem, the impact and solutions. Second, for the first time I am hearing global businesses engage in a serious discussion about the threat of climate change to their business models and the willingness to discuss measures such as a global carbon pricing. That was not the case even six years ago when many people believed that carbon pricing will collapse economies. Thirdly, the establishment of a new process in the framework convention called Intended Nationally Determined Contributions (INDC) to greenhouse gas emissions, which has completely changed the dynamics

of how countries confront the problem. Rather than a top-down approach like the Kyoto Protocol, we now additionally have a bottom-up process that has already resulted in good progress. So there is a new dynamic in these negotiations that has neither been seen before nor was expected,” he says.

But despite the enormous pressure on COP21 to produce results, Professor Stocker says no one is under the illusion that Paris will once and forever solve the problem. “It's but the first step towards the solution. Many conferences will have to follow that talk about a potential schedule of reductions, methods to increase ambition of contributions, and even talk about contingency plans if specific targets can no longer be reached, which is a possible reality.”

#### **Sights on the long term**

Our consumer culture has made “sacrifice” and “moderation” lesser ideals. We'd loathe roadblocks in our quest to live as large as possible today and short-term gratification is hard-wired in all of us. This explains the hesitation to throw one's weight behind what will undoubtedly be a brutal decarbonisation process. There simply doesn't seem to be a painless roadmap for the same. But Stocker shakes his head. “Pain is a very relative notion. Is it painful to reduce the size of your car or take public transport? Some people might regard that as a pain, others might not. It has to do with our personal perceptions and lifestyle. I would argue that in the future we'll all have to readjust our value system.” So more

important than getting from A to B in the fastest, most comfortable fashion, will be getting from A to B in the smartest and most intelligent way that is fully compatible with decarbonisation.

Under the present price regime, decarbonisation is likely more difficult for developing and less-developed economies, Stocker concedes. "But we have to think of ways to accelerate development and not make the mistake of locking ourselves into an infrastructure, particularly in developing countries, that commits us to use that old energy in 20 years' time when it perhaps will have become too expensive. When I talk to colleagues in Africa, in some of the poorest nations in the world, they are very much aware of the risks of these lock-in investments; investing heavily in old technology, that may be good for today, but ultimately incompatible with decarbonisation."

One sector that obviously is downplaying decarbonisation is the energy sector, made up of carbon companies "largely motivated by short-termism and a view of the business model for the next 5-10 years". In their view, the status quo is unlikely to change (too fast) and they are simply businesses addressing the growth in demand that is clearly seen in the charts. But this "is certainly incompatible with a view of the next 20, 50 or 100 years", according to Stocker, "which is the view we have to take when talking about the well-being of the society, continuing delivery of ecosystem services to feed up to 11 billion people in the coming years. So when we start talking about resources, we will open up our time horizon of planning. And here I am convinced that a sensible person would also look at the option where an old business model doesn't provide any income anymore," he says pointedly.

### **IPCC in the coming years**

Professor Stocker has served in one capacity or another on the IPCC for 17 years and has been a climate scientist for longer than that. We ask him whether it is frustrating that, after these long years in studying and reporting on climate science, he is still having to deal with climate skeptics. "There is some frustration in that, yes, but I am surprised how few of them are left. With the last report (IPCC's Fifth Assessment Report), we have reached a level of clarity in our message that even the most stubborn voices have gone quite. While I appreciate a healthy skepticism, which is the blood and life of science, skepticism of established

fact is ignorance," he says.

This is all the more reason why, he believes, that climate scientists have to be "extremely careful in our communication to separate established facts, which are many and increasing in number, from the areas where there are still uncertainties. Uncertainties that reflect the effect of unknown processes and assumptions that are the normal business of the scientific activities. Since the beginning of IPCC, all the reports are always accompanied by declarations of uncertainty and confidence."

What will the role of IPCC be when this diminishing voice of climate skeptics is finally extinguished? "It's going to be more important than ever," he says. "The questions will shift to the specifics and regional and will revolve around the statistics of extreme events that hurt resources and cost money. So instead of asking general global questions like 'how warm will the planet be', we'll ask, 'how many dry days will this specific country face' or 'What are the maximum temperatures over three weeks in this country'. So physical science and that part of IPCC will attempt to answer these sorts of questions in the future. Of course with IPCC's comprehensive view of things, we will also look at risks and the impact of socio-economic processes. That part of the report will see increasing attention among the public and policymakers," he says. Professor Stocker hopes that he will see the involvement of scientists from every country, in one function or another, working together to bring out consistently superior assessment reports.

For those that are currently part of the process, specifically those attending COP21, he has a special message. "What we are seeing here is a huge challenge, but also a huge opportunity," he says. "Probably the biggest ever for humankind. Decarbonisation in the long term will be revolutionary. Each of the three industrial revolutions so far – mechanisation, electrification and digitalization – have affected the entire human population, brought new jobs, new wealth, created prosperity and a better life. So there is no reason for me not to believe that this will be the case for the fourth industrial revolution. We will no longer be dependent on finite resources that is polluting our environment and increasing risks for humans and ecosystems. Yes, it is ambitious because the scale of the task is such. It's not a little change here and there but a revolution!" ■



**“COP21 is but the first step towards the solution. Many conferences will have to follow that talk; about potential schedule of reductions, methods to increase ambition of contributions, and even talk about contingency plans if specific targets can no longer be reached, which is a possible reality.”**

**DR THOMAS STOCKER**  
Professor of Climate and Environment  
Physics, Physics Institute  
University of Bern  
Co-Chair of Working Group 1, IPCC