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Veerabhadran Ramanathan and Martin Ravallion, winners in the Climate Change and Development Cooperation categories respectively, call for stronger global institutions to deal with the refugee crisis

Ramanathan and Ravallion: the tools are there to mitigate poverty and climate change, but we also need other kinds of policies designed on a global scale

- The refugee crisis provoked by conflicts in Syria and Iraq may slow the pace of poverty reduction in the years to come, warns the Australian economist
- The climatologist has sought the support of spiritual leaders, in view of their transformational role in changing public opinion towards the need to protect nature
- The BBVA Foundation Frontiers of Knowledge Awards were presented yesterday at a ceremony in the Marqués de Salamanca Palace, Madrid headquarters of the BBVA Foundation

Madrid, June 22, 2016.- Climate change and poverty are two increasingly interrelated global challenges. This was the message conveyed at a press conference this morning by climatologist Veerabhadran Ramanathan and economist Martin Ravallion, BBVA Foundation Frontiers of Knowledge laureates in Climate Change and Development Cooperation respectively. "Thirty years ago, when I started studying poverty, environmental factors were not a priority; now they are, and that is quite alarming," said Ravallion, who won the award for defining a global threshold to measure extreme poverty.

Both experts emphasized the need for global policies that take account of this linkage, and that place the accent on technological change. Ramanathan stressed the importance of promoting clean energies; Ravallion explained that only the right policies can offer solid progress against poverty and climate change.

Ramanathan was blunt about the required course of action: "I see the climate change problem in very simple terms: fossil fuels have become an entirely

obsolete technology that we must now leave behind." An urgent technological change which, he says, should not be confined to the developed countries, but should also reach the 3 billion people with fewest resources who undoubtedly stand to lose most from the effects of an altered climate: "The challenge is to provide clean-energy access to the world's poorest communities."

Ravallion admitted that the issue was a complex one, and that we must accept the fact that, generally speaking, increased development brings a short-term increase in CO₂ emissions. But "this is not fixed," he insists. "It is important to stress that with the right policies and the right technology, the trade-off can be changed," so economic growth does not translate as more environmental damage.

Climate refugees

The two experts also referred with concern to the growing number of climate refugees – a result of severe droughts and the melting of glaciers, "which will never be reversed," Ramanathan points out. "We are seeing how hard it is for Europe to cope with the arrival of a million refugees. What will we do when their numbers multiply?" asks the climatologist, who called for a global strategy to address the problem, including the creation of new institutions and a collaborative effort across different scientific disciplines.

In the view of economist Martin Ravallion, "climate refugees are a global problem, and collective action is required," though this is unlikely to occur because "we do not have a collective government."

Dealing with the consequences of climate refugee flows, says Ravallion, "demands international cooperation, but the institutions are just not there." International organizations like the United Nations or the World Bank could theoretically take on the task, but "national governments have not given them the mandate. The first imperative, therefore, is to strengthen global institutions and give them the role that they deserve."

Photovoltaic, electric or wind power (for transportation too); using hydrogen as fuel along with the biogas generated from food waste and waste water treatment; providing clean energy to the three billion people living in villages; reforestation and the avoidance of energy wastage by making buildings more efficient... These are the remaining items on Ramanathan's action list for mitigating climate change. He turns to Spain as an example: "With the sun the country has, it could turn itself into a global energy power, comparable to today's big oil-producing nations." He admits that there are still some technological obstacles in the way of fully efficient renewable energies, but these, he believes, can be overcome with the right mindset.

Ramanathan also urged a concerted effort to "reduce emissions of short-lived climate pollutants, like those from black carbon (soot), methane, HFCs and ozone-producing pollutants like nitrogen oxides (NO_x)."

It was Ramanathan precisely who discovered that these short-lived gases (persisting for far less time in the atmosphere than CO₂, but 25 to 4,000 times more potent warmers) are responsible for 45% of the greenhouse effect ascribable to human action. This quantitative understanding is vital, said the Frontiers jury, "for assessing strategies being proposed to meet the goals of the Paris Agreement to limit global warming from human activities." The United States and China have taken an important step in this direction with this month's agreement (7/6/2016) to curb emissions of HFCs.

Ramanathan: science and spirituality allied to raise awareness

The climatologist is one of the foremost authorities on climate change, not just for his research but also his initiatives to improve the living conditions of village communities. One such is Project Surya (which his daughters are involved in), whose first goal is to replace inefficient stoves (burning dung) in rural communities across India. As well as reducing emissions of contaminant gases, this measure promises improvement in people's health.

Ramanathan is a member of the Pontifical Academy of Sciences, and his conclusions can be read in the encyclical on global environmental deterioration which Pope Francis last summer addressed to the world's 1.2 billion Catholics. The climatologist, who has also met and debated the question with the Dalai Lama and other spiritual leaders, is convinced that "they can play a transformative role in raising awareness and informing people of their responsibility to protect nature."

All voices are welcomed to the cause, and Veerabhadran Ramanathan applauds the activism of personalities like actor Leonardo di Caprio, who spoke at the United Nations last April before the Paris Agreement for Climate Change Signing.

Ravallion: The refugee crisis will set back the fight against poverty

Our deteriorating climate hits especially hard at the world's poor, taking a toll in both health and standards of living. Martin Ravallion agrees that "the targets for greenhouse gas emission set by the Paris Agreement are an important step," but remains adamant that "the big policy challenge is to find ways to achieve those targets that do not come at a cost to progress against poverty."

"Even with success in reaching the emission targets," Ravallion continues, "development efforts will almost certainly be needed to help many people in the developing world who will be adversely affected by climate change. The agreement, he adds, did not ignore this issue, but "financing remains unclear."

Another major worry is the refugee crisis. "The flows of refugees reflect in part the poverty and vulnerabilities created by the conflicts in Syria and Iraq," Ravallion relates. "Some rich countries are helping absorb the refugees, though the bulk of the burden has fallen on neighboring middle-income countries which have less capacity to help. This is likely to slow poverty reduction in those countries in the years ahead."

Martin Ravallion was a pioneer in the measurement of poverty using internationally applicable standards. In 1991, he was the first author of a paper that set one dollar a day as the extreme poverty line below which survival could not be assured, later updated to 1.9 dollars. His research, said the jury, "has allowed the definition of precisely calculated poverty lines that are comparable across countries and has also influenced the strategies of many international organizations, NGOs and development agencies, including the Millennium Development Goals."

"With the right policies, progress against poverty can be maintained"

Ravallion is optimistic about the future path of poverty reduction. A report from 2008, when he was at the helm of the World Bank's Development Research Group, estimated that the number of people in extreme poverty had dropped from 1.9 billion in 1981 to 1.4 billion in 2005, while UN estimates put the 2015 total at 836 million. This large decrease drew heavily on improvement in the agricultural sectors of China and India.

Might the current slowdown in the Chinese economy have a negative impact on poverty? Ravallion rejects this hypothesis on the grounds that "even the lower growth rates that most forecasters anticipate (5-6% per year) are high by the standards of most other countries."

Where he does see a danger is in the possibility that "lower growth rates in China will spillover to other countries, including in Africa, where a number of countries export commodities to China." But even in this scenario, the economist is cautiously optimistic: "With the right policies, progress against poverty can be maintained. "

Bio notes:

Veerabhadran Ramanathan (Madras, India, 1944) has held a professorship at the Scripps Institution of Oceanography (University of California, San Diego) since 1990. After studying at New York University in the early 1970s, he took up a postdoctoral research post at NASA. In 1975, he discovered that CFCs were powerful greenhouse agents. When working at the University of Chicago, from 1986 to 1990, he predicted that global warming would probably have catastrophic consequences. In 1999, he published a paper on the role of atmospheric brown clouds (the pollutant haze covering large parts of Asia). In 2004, Pope John Paul II invited him to join the Pontifical Academy of Sciences. Member of the UN's Intergovernmental Expert Group on Climate Change (2007).

Martin Ravallion (1952, Australia) holds a PhD in economics from the London School of Economics. After a research fellowship at the University of Oxford, he joined the World Bank in 1988 where he came to head the Development Research Group. Since 2013, he has occupied the D. Villani Chair of Economics at Georgetown University (Washington DC, United States). The focus of his work for the past 30 years has been poverty and policies to fight it, on which he has

advised a long list of governments and international institutions. He is President of the Society for the Study of Economic Inequality and a Research Associate of the National Bureau of Economic Research. In January 2016, he published the book *The Economics of Poverty: History, Measurement and Policy*.

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