

## **The Skin of Earth**

**By Mario Calderón Rivera**

Angeles Barceló, the famous Spanish journalist, gathered for her program that reaches all corners of the world, Hora Global 25, three recognized world leaders to discuss the energy model and its relation to climate change. The debate was attended by the former president of Chile, now UN Special Envoy for Climate Change, Manuel Marin, chief architect of Spain's entry into the European Community and now in the middle of a global work on clean energy and Paolo Lugari Castrillon, founder and director of Centro Las Gaviotas, a pioneer in research and application of renewable energy and biofuels.

As expected, the exchange of ideas was particularly illustrative. However, it was clear the contrast between the perspective within which they moved, with their unquestionable authority but also with Lagos and Marin undeniable dogmatic accent. All this against the advanced view from pre-Socratic lineage, that Paolo Lugari surprised the academic world questioning the reductionist approach which aims to address climate change. After more than forty years of pioneering leadership in renewable energy and technological innovation, the Gaviotas case has come to move the most unlikely global thinking Societies. Something that made Paolo Lugari earn an honorary doctorate in Sciences from Carnegie Mellon University, the core of the university elite in U.S.

Clearly the three panelists agreed that one of the keys of the new model is to achieve greater energy efficiency of existing energy sources and, of course, to continue growing strongly advanced search technology to maximize alternative sources clean energy. For any citizen of this world begins to be obvious. However, in the center of this search is, of course, the huge challenge of changing consumer habits in an industrial world dominated by the hyper- and overflow use of commodities and simultaneous destruction of biomass and terrestrial biodiversity.

For Paolo Lugari, there is a fundamental flaw in the analysis models applied so far to the global warming phenomenon and scaling in the levels of pollution with greenhouse gases. According to his repeatedly thesis, all approaches to the problem have consistently ignored

the interdependence between the unavoidable atmospheric chemical balance, which makes the current proliferation and persistence of life on earth and the amount of biomass that, through evolution, has made viable the existence of all species. The breaking of this balance as the primary outcome of human action is expressed, in his own words, "The unstoppable Earth's loss of skin including the oceans." That could well be compared with skin cancer in humans caused by ultraviolet rays. Within its organic vision of Mother Earth, Paolo Lugari concludes that the main way to counteract the greenhouse effect is to attack the "bald earth" by planting more. Because it depends on the fundamental chemical and its pattern of behavior, which, in his view, in passing, solves the great fallacy of the dominant approaches that emphasize almost exclusively on "extract energy" and not "sow".

Paolo Lugari warns that although this interaction between biomass and the chemical balance of atmosphere is undeniable, there is no scientific measurement of the minimum amount of biomass required by the existing living forms so that we do know when due to uncontrollable loss of biomass life won't be possible. "There is a fundamental chemistry on Earth. If it is altered, we would be risking the key of life itself in an atmosphere that does not make human life viable. We have no thermostat to control the weather, but long ago we begun to destabilize it. Thus we have to recover the original skin infrastructure on Earth and reforest it, to avoid chemical instability in the atmosphere. This step would slow the greenhouse effect which is the leading cause of global warming. "

To Paolo Lugari is not use to rest on the myth of the Amazon playing the lungs of the world, because even in the case to keep as it is now, a United Nations and the IDB's report its almost perfect balance between oxygen production and carbon sequestration, this does not increase biomass. However, the additional crucial role this mega ecosystem fulfills is that of being the largest gene bank on earth.

In his responses to Ángeles Barceló, Paolo Lugari clearly took by surprise the other two distinguished panelists with the revelation that only in tropical America, there are about 300 million hectares of savannah with vocation for "planting power", but also simultaneously for contributing to the recovery of lost biomass and avert the danger of crossing the border

to begin a sixth extinction, dragging the viability of human life on the planet, and all that without affecting food production or making a deforestation and spoiling the generation of biofuels.

To Director of Gaviotas, the protection of terrestrial biochemistry should be declared as a central objective in the formulation of strategies for an energy model capable of neutralizing the climate change. In this perspective, the treatment of "bald earth" must act alike to recover as much as vegetal life in the oceans. His conclusion is a call to individual and collective consciousness: "We cannot lethally altering the matrix of life and its cycles, and keeping alive and driving by the energy of solar radiation and for the miracle of photosynthesis to produce biomass ".