



CLIMATE CHANGE AND SOCIAL JUSTICE

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Sustainability is about intergenerational solidarity; that is to say it is about framing our socio-environmental policies in terms of the welfare and wellbeing of future generations. Solidarity and social justice are the core values of socialism and have been the guiding principles and values for the development of the policies of social democratic and socialist parties since their foundation. Our concern has always been to work for social justice and against the deep unfairness of social inequalities in society. Overcoming the problem of global climate change is very much an intergenerational issue which involves analysing, planning and policy making for a period which will take us to the end of this century. It is also about social and environmental justice, given that climate change will have particularly negative impacts of the most socially vulnerable communities.

Climate change manifested by atmospheric warming and the “greenhouse” effect is probably the clearest and most dramatic representation of the globalisation of environmental risks and of what some have chosen to call the “risk society”. It contains all the ingredients of what we are known as “new environmental risks” and which have spread globally since the first half of the last century; climate change is on a planetary scale; it has much to do with accelerated techno-economic change at the level of production and consumption; it is difficult to detect, measure and control; it impacts on all social groups, but most importantly it accumulates and hits the most socially and economically vulnerable groups in our society; future scenarios for climate change and the outcomes in the medium and long term are uncertainty (even the scientific community doesn’t agree about the range and depth of climate change impacts on the planet) and above all, in large part, the causes of current climate change are related to human action.

All these notoriously complex elements have generated concern and a sense of insecurity, especially, but not exclusively in the most economically developed societies with the highest living standards, the societies which have precisely contributed most to the causes of climate change through processes of rapid industrialisation and mass consumption patterns largely initiated in the first half of the 19th Century in Western Europe and United States of America. Public anxiety and concern has been endorsed and represented by the mass media and in part this has contributed in situating climate change at the centre of the international political debate and on the agendas of governments and intergovernmental institutions. The political and social responses and the involvement of society particularly through the intense activities of NGOs has resulted in the articulation of policy proposals for mitigating climate change which necessarily involve all nations – nations which are highly differentiated from one another in terms of social and economic structure and wealth and which

have very different priorities and political agendas. These structural differences, which have a great deal to do with the now very tense and strained international negotiations on global climate change where the issues of social justice, inequalities and vulnerability have begun to play centre stage.

Before addressing the question of social justice and inequalities in the context of climate change it is necessary to clarify how global climate change has been analysed and how it has evolved. The first and very important point to make is that climate change is not new, indeed it is inevitably part and parcel of being a planet orbiting a star (our Sun) in the so-called “habitable zone” (where life as we know it is possible). Planetary atmospheres and climates evolve and change and the causes of such changes, very often taking place over millions of years, are the result of a multiplicity of “natural” causes. The origins of such changes can be related to the variation of solar activity or intensity solar radiation; volcanism; asteroid impacts; the variation of the Earth’s orbit around the sun; the production of “greenhouse” gases by living organisms....

Our closest planetary neighbours in the solar system, namely Venus and Mars have undergone considerable climatic and atmospheric changes due to natural non biological factors. In the very distant past (we are talking of billions of years) Mars had a much denser, wetter and warmer atmosphere where liquid water was present in the form of rivers and lakes and possibly seas and oceans with evidence of precipitation in the form of rain and water. Today, with its extremely tenuous atmosphere and with no trace of liquid water on its surface (there is ice), Mars is an intensely arid and a very cold planet. Venus, is a very different story where it probably evolved from being a relatively temperate planet but one which today has temperatures on the surface which would melt lead and is due to a “runaway” greenhouse effect related to the strong presence of greenhouse gases (probably produced by volcanism and aided by Venus’s closer orbit to the sun (compared with the Earth). What is so strikingly different and new about recent climatic change on the planet Earth is the speed of such change which has largely been induced by human activity. We are talking about changes which have taken place at the most over 200 years – which is no more than a “blink” of an eye in terms of planetary evolution. Such accelerated climate changes are extremely unusual, although these have occurred in the past due to natural causes, as was the case of the impact of a large asteroid which probably resulted in the extinction of the dinosaurs about 56 million years ago.

Our knowledge about the climate of the Earth and its continents and regions is the product of the accumulation of meteorological data over an extended period of time. This data includes precipitation, temperature, wind, atmospheric pressure etc. This allows us to create a profile and main characteristics and of “normality” in terms of the expected weather during a year in a given region. On this basis we can classify types of climates according to a set of shared and compact climatological characteristics. In this way we are able to talk about, for example the “Mediterranean climate” which exists not only in most of the Mediterranean basin but also in much of California, Central Chile and parts of South Africa, New Zealand and Australia where these regions have in common summer droughts with high temperatures and rainy mild winters. Data analysis allows us to draw maps of the distribution of average precipitation and temperatures of the whole globe and allows to have an idea of normal climate conditions and to identify deviations from the norm over time. Particularly significant is our capacity to study global climate variability not only from the time when scientists could take measurements with modern and reliable equipment (this is very recent). Paleoclimatology has developed sophisticated techniques which allow us to identify periods of rapid climate change in the recent and remote past. The study of geological formations, sediments and biological indicators such as pollen and plant and animal fossils have allowed us to develop models of the evolution of Earth’s temperatures of periods of many millions of years.

An example abrupt climate change in the relatively recent past (in geological terms) is the last glacial period which began more or less 70 000 years ago with the glaciations and the presence of very extensive ice sheets which covered large parts of North America and Eurasia and which retreated to their more or less present positions only 10 000 years ago. In fact this glaciation formed part of the most recent “ice age” which began about 2.7 million years ago and which consisted of a series of glacial and interglacial periods which involved oscillations between cold and warm periods. One of the most significant impacts glaciations was the lowering of sea-levels while de-glaciation produced rising sea-levels - a particularly worrying subject given that the loss of mass of the Antarctic and Greenland ice-sheets would have on rising sea-levels and the flooding of densely populated coastal regions and low-lying islands. If we don’t take into account anthropogenic (that is to say man-made) effects it is expected that the next glacial period will begin in about 50 000 years time. One of the explanations for these glaciations in are changes in the Earth’s orbit around the Sun.

In order to understand the dynamics and implications of present day and recent climate change it is necessary to take into account anthropogenic factors without losing sight of the natural influencing

factors mentioned above. It is worth mentioning that some scientist warned of the effects of human activity on climate well over a century ago and that it was very plausible to postulate the idea increasing global temperatures because of very rapid industrialisation based on the intensive use of fossil fuels as its principle energy source which represented the origin of much higher carbon dioxide emissions. The best known of the early warnings was made by the Swedish Nobel laureate Svante Arrhenius in 1896 in his article “On the influences of Carbonic Acid in the Air upon the Temperature of the Ground” in which he made the conjecture that as CO₂ increased geometrically (2, 4, 8, 16, 32...) in the air, temperatures at sea-level would increase arithmetically (2, 4, 6, 8, 10...). It is worth noting that his predictions do not differ very substantially from those of the IPCC (Intergovernmental Panel on Climate Change). However he felt that the contribution of CO₂ to the atmosphere as a result of industrialisation would be positive because it would allay the effects of a coming period of glaciation. The socialist writer, scientist, and essayist H. G. Wells not averse to making extrapolations about future scientific and societal changes writing in 1922 opted for a prudent approach to climate change arguing that it was necessary for more scientific data and empirical evidence before a clear statement could be made:

“But we do not know sufficient of the causes of climatic change at present to forecast the possible fluctuations of climatic conditions that lie before us... we lack sufficient science.”

The scientific evidence was soon to emerge. Systematic measurements of atmospheric CO₂ taken at Mauna Loa, Hawaii beginning in the 1950s demonstrated a clear increase of these greenhouse gases and which seemed to be related to the rapidly growing use of fossil fuels for a whole host of industrial, domestic and other activities giving rise to the hypothesis of the “greenhouse effect”. Little by Little during the 1960s and 70s the premise about the relationship between industrialisation and global warming became consolidated in scientific circles in the context of increasing public concern about globalising environmental hazards so eloquently denounced in Rachel Carson’s “bestseller” *Silent Spring* published in 1962 (we shall come back to Carson shortly).

The response by international organisations as a result of initiatives and pressures from the World Meteorological Organisation and the United Nations Environment Programme was to eventually (“better late than never”) create the Intergovernmental Panel on Climate Change (IPCC) in 1988 coinciding with the hottest year of the XXth Century (up until that year). The IPCC published its first report two years later. The objectives of this and later reports were to:

Assess periodically the science, impacts and socio-economics of climate change and of adaptation and mitigation options The long-term nature and uncertainty of its driving forces require scenarios that extend to the end of the 21st Century ...scenarios cover a wide-range of main driving forces for future emissions, from demographics to technological and economic developments.

Socio-economic issues were being addressed as was the sensitive and complex issue of economic development. The reports clearly vindicated the notion of human induced climate change while admitting that there were many uncertainties in making forecasts. The reports were to also provide a tool for policy makers to propose and formulate responses to global climate change. The logic and urgency of this situation resulted in the creation of a dynamic of international conferences to tackle global climate change under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The first convention, the so-called “Earth Summit” was held in Rio de Janeiro in 1992 and was followed as of 1995 by a series of “Conferences of the Parties” (COP) on a yearly basis and includes the Kyoto COP 3 meeting held in 1997 when the Kyoto Protocol was signed. A watershed was last year’s COP 15 held in Copenhagen to which this session of our conference is devoted as it is to the upcoming meetings in Cancún Mexico (November – December 2010 and South Africa 2011).

While it has often been the case, there have been concerted attempts to depoliticise climate change by trying to remove or avoid some of the sensitive social issues involved, it is also fair to say that the critical issues of inequalities, social justice and vulnerability have become increasingly addressed and in many ways came to a head during the Copenhagen Convention largely as a result of the efforts of the group of developing nations. It is at this point that it is relevant to discuss the question of environment, inequalities and health which might help to clarify why for socialists and progressives climate change should be discussed synonymously with social justice.

The discussion on inequalities and health has recurred in modern society, although it has been particularly associated with the analysis of industrialisation and urbanisation. The literature on this subject is vast and spans well over a century, focusing on the social and environmental determinants of health in the new European industrial cities. The variables examined to explain the ill health and high mortality of the working class and the socially vulnerable included: air and water pollution,

housing conditions, migratory processes, population density, diet and income. Classical indicators such as mortality were used to emphasize the massive differences in health between deprived and advantaged communities in the cities. Descriptions of the physical and environmental conditions, lifestyles, and work within the new, dirty, polluted, overcrowded and unhealthy cities found their way into fiction. Charles Dickens described in 1854 the environment of a fictional, yet very real city named Coke Town:

It was a town of red brick, or brick that would have been red if the smoke and ashes had allowed... it was a town of machinery and tall chimneys, out of which interminable serpents trailed themselves for ever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye.

Most accounts, whether analytical or fictional, agreed that the environmental degradation of specific areas of the city mainly affected the already socially vulnerable and economically weak groups. In other words, urban environmental conditions inflicted the most harm on working-class neighbourhoods and communities. Other social classes were, in general, more fortunate. These unacceptable inequities in health, based as they were largely on the socio-economic and environmental circumstances of different groups and classes in society was denounced as a flagrant case of social injustice which should be remedied. It is more than ironical that the industrial revolution, made possible through the gross exploitation and pillaging of colonies through the imperial system would also result in the effective exploitation of the new working class at home and begin a process of massive environmental degradation which would severely impact on the most vulnerable communities while at the same time spark off global climate change which more than a century down the line we are today having to confront with urgency. The burden and impact of these environmental processes have in the past and will in the future be born by the socio-economically most vulnerable and is a dramatic example of social and environmental injustice.

It is often forgotten, that in the face of problems created through the environmental aggressions caused by the industrial revolution that there were organised efforts to reverse the trend by trying to regulate and diminish the sources of industrial pollution. Progressive forces, including socialists and the trade unions would call for the intervention of the state to regulate, control and redress the manifest inequities. However the whole notion of state intervention was anathema to the conservative right which was articulating its arguments against state intervention at the turn of the

century on the basis of the crudest form of pseudoscientific social Darwinism and biological reductionism. For these ideologues (often disguised as scientists), men and women could not escape their their biological destinies. It was considered positively dangerous to attempt to do so because tampering with natural selection (by protecting so-called weak individuals, groups or classes and institutions would inevitably lead to decadence and decline. Inequity was natural!! In applying Darwinian evolutionary theory to the social world, it was argued that all that implied state planning was inherently dangerous because it went against nature and could lead to the weakening of the nation and in particular, humanity as a whole. Every act of government intervention that fomented social assistance effectively supported the weak (who were to blame for their condition) and whose undesirable and unfit characteristics would normally be selected out of existence. Herbert Spencer in his *Man versus the State* was all too clear in his regressive views (shared by neo cons today)and radical opposition to state interference:

If the benefits received by each individual were proportionate to its inferiority Progressive degradation would result

Socialists take a totally opposing view, regarding the role of intervention as a key to the policy for achieving social justice, combating inequalities, redressing wrongs and to support the socially vulnerable. The Welfare state has been the corner-stone of social-democracy and socialism in the effort to reduce health inequalities through universal health-care for all and has represented one of the great achievements of the reform era immediately following the Second World War. The objective was precisely to undo the manifest injustice of health inequalities, especially in relation to the most vulnerable groups which were frequently excluded from access to health care because of a lack of income. It was also a corner-stone of Barak Obama’s presidential campaign for social justice. A direct parallel can be drawn between the struggle to reduce health inequalities and the fight against environmental and social injustice generated by global climate change. While all humans are in the same boat with regards to climate change, not everybody is equally affected by it, indeed it is the socially vulnerable groups which will bear the burden of this process created initially as a result of the rapid industrialisation of the developed countries. The notion of the “democratisation of risk” – that is to say that all classes are subject to environmental risks paints a false picture of what is really happening in the context of climate change. The democratisation of risk is a half-truth and as such not only depoliticises global climate change it also covers up the fact that that this profound socio-environmental process exacerbates inequalities and injustices.

As we have already pointed out, environmental degradation during the industrial revolution hit working class communities the hardest and in that sense it discriminated against the most vulnerable group affect in particular the quality of their lives and especially their health. As we move into the 20th Century, the dynamics of environmental degradation began to change in important ways. It was the American biologist and writer Rachel Carson in her brilliant and hugely influential “bestseller” *Silent Spring*, published in 1962 who first pointed out the way in which new pollutants could contaminate the whole biosphere. The globalising environmental hazards which she described were very different from the much more localised impacts of environmental problems of the industrial revolution which affected most directly the new working class. In the chapter, “Elixirs o Death” she tells us:

For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death. In less than two decades of their use, the synthetic pesticides have been so thoroughly distributed throughout the animate and inanimate world that trthey occur virtually everywhere... They have been found in remote mountain lakes, in earthworms burrowing in the soil, in the eggs of birds – and in man himself. For these chemicals are now stored in the bodies of the vast majority of human beings regardless of age. They occur in the mothers’ milk and probably in the tissues of the unborn child.

She presented a bleak picture of our future environment – the environment of all men, women and children regardless of their social position in society. No one would escape the consequences of the “ecological disaster being perpetrated by the use of synthetic chemicals such as DDT. The book was published as a paperback and was a bestseller for months – it had entered the living rooms and discussions of middle class America and was soon to do the same in Western Europe.

These new environmental hazards which Rachel Carson mentioned, were not visible in the dramatic form of the smogs of the industrial revolution, but appeared to be more insidious and potentially more destructive and dangerous. Furthermore, because of their tendency to accumulate and spread throughout an ecosystem and up the food chain, they were capable of affecting groups which hitherto had come out relatively unscathed from the worst environmental effects of industrialisation. These new groups, and especially the middle class began to feel vulnerable and insecure in the face

of the qualitative changes taking place in the environment. This new awareness and feeling of insecurity had a lot to do with the emergence of environmental movements of the late 60s and during the 70s, which were very much lead and inspired by middle class activism.

Carson's message was important and it was certainly true that new industrial processes and practices were leading to the globalisation of environmental problems. However, it was easily misinterpreted and changed into a half-truth; All humans are indeed now subject to the dangers of environmental degradation regardless of class, ethnicity or gender. While this is clearly the case, it does not mean that we are all affected in the same way or to the same degree. The epidemiological evidence of the health impacts of environmental pollution are overwhelmingly clear – lower socio-economic status implies greater negative impacts. While many environmental risks affect us all, they continue to accumulate more on the most socially vulnerable. This is also the case for the most paradigmatic form of globalising environmental problems; climate change. It has been argued in some (conservative quarters) that if we are all in the same boat and are all affected by climate change then we should “all row together” in an attempt to overcome this profound challenge – there is apparently a shared responsibility for the current state of affairs and we should all share the burden - this is not solidarity nor does it represent social justice, quite the opposite. It would also mean the rich would stay rich and poor remain poor. As we have already shown the origins of climate change lie fairly and squarely on the rich developed and industrialised countries – countries which continue to provide the bulk of carbon emissions worldwide.

Global environmental change in the context of the greenhouse effect have considerable implications for our planetary future in the medium (now soon to become short) and long term - the impacts will be felt most in specific and socially and geographically vulnerable parts of the world and felt by very concrete collectives and communities. While scientists debate about the details of climate change scenarios there is consensus that there will be an increase in “extreme climate events” as ocean temperatures gradually rise (along with sea-level). Oceans are reservoirs of energy and as there will be more energy in the ocean/atmosphere system, then more frequent and violent meteorological phenomena will occur in the form of torrential rain, hurricanes and droughts with the resulting damage to those communities affected. It is very well documented the differential impact of extreme climate events in terms of how these effect societies according to their socio-economic status; death and destruction are infinitely more devastating in poorer regions compared with rich and developed ones. Rising sea levels and droughts will generate environmental migrations as they have in the past in the face of ecological change/disasters (take for example the migrations from the Aral Sea area in

Central Asia - a sea which almost disappeared as a result of the thoughtless and gigantic irrigation policies and programmes of the former Soviet Union).

It should not be forgotten, of course, that within even the most economically developed countries great social inequalities exist. While the USA has a huge GDP, it also has huge inequalities. The USA, the society which consumes 20% of the world's fossil fuels with its resulting emissions and contribution to global warming will not be left unharmed by climate change, however it will be precisely the result of social inequalities that climate change will inflict greatest damage the socially vulnerable areas and people of the United States. Western Europe will also not be unscathed and again largely because of the many different dimensions of inequality which exist in the continent. We already have a great deal of documentation on, for example the impacts of flooding and heat-waves in Europe (both of which are expected to increase as a consequence of climate change). There are no great surprises here in terms of the discriminatory nature of these impacts; vulnerability being the key word

A long and depressing list of natural hazards and impacts resulting from climate change could be included here, however in this short essay it is neither possible nor relevant to be exhaustive in the description of the innumerable climate related social and economic problems which will emerge from climate change. The idea here is not to preach "gloom and doom", but to point to the important precedents for improving the wellbeing of people through the kind of politics of social justice and solidarity which gave us the welfare state and, for example universal health care. A similar approach must be taken towards climate change. Responsibilities lie with the rich industrialised countries to support socially just strategies for tackling climate change including not just the control of emissions and measures to move us away from a carbon based economy, but also through capacity-building for more resilient communities. The Copenhagen summit failed, perhaps precisely because of the difficulties in addressing the key issue of social justice in framework of climate change. A special role lies with progressive forces which have always underlined the centrality of solidarity and social justice as the route to fairer, more equitable and sustainable societies.

About the author

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