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# **Energy, Environment, Natural Resources and Business Competitiveness**

**The Fragility of Interdependence**

**DIMITRIS N. CHORAFAS**

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# Preface

Philosophers say that every generation leaves both assets and liabilities to the next. Alert people comment that the way we are going we will leave our children and grandchildren with an almost unresolvable challenge of energy supplies, plenty of waste of all sorts polluting the air they breathe and the water they drink, as well as the appalling problem of a huge and uncontrollable explosion in world population that defies rational thinking.

These themes go beyond the narrow definition of energy, but they correlate among themselves and have the broad topic of energy at their core. This book is aimed at those who have a professional, academic or general interest in all or any of seven critical issues:

1. energy sources, their nature, contribution, pollution and other consequences,
2. environmental problems associated with power production and usage,
3. the financing and controlling of energy-related projects and processes,
4. the future direction of agriculture, whose produce is now used as an energy source,
5. complex social and technical issues resulting from lack of family planning – and, therefore, of demands for energy,
6. the impact of both energy and an exploding population on the pollution of air, land and water,
7. truth and hype about the most talked about environmental after-effects of the aforementioned subjects.

Taking the risk of displeasing some readers, this book harbours no taboos and condones no hype. Its contribution is the holistic approach of its contents, including some hitherto unpublished personal opinions from knowledgeable sources – some of whom asked not to be acknowledged, because we no longer live in a time of free expression.

- People at large no longer think of themselves as free to speak their mind without the risk of censorship, condemnation or reprisals, and
- those who still express their opinion and welcome criticism want the latter to be constructive, not a nervous response to something not liked or, even worse, lacking the background and information for a balanced judgement.

Expressing one's factual opinion is important, both to individuals and society because only *free* men and women can do so and moreover, quite literally, one is what one writes. Whether this writing brings good news or bad news is immaterial, and the same is true whether one writes it as a comedy or as a tragedy. In fact, in most human affairs, comedy and tragedy merge into one. Nearly 25 centuries ago, Socrates put it this way: 'Comedy and tragedy are the same thing, and they should be written by the same authors.'

The decision to turn a satirical eye on the climate-change circus, to which we are all overexposed, was not taken lightly. Though this seems to be an issue with dramatic consequences for planet Earth – as well as for *Homo sapiens* and its future on this planet – the current mass response to poorly documented environmental issues, as well as the associated state policies, are also a subject of ridicule. Al Gore's Hollywood extravaganza and the UN's *Fiascopenhague* are two examples.

Underlying all this nonsense is too much wishful thinking and a lot of basic misconceptions. Since the end of World War II, a mere two-thirds of a century ago, humankind has been living with the expectation that growing global demand from a rapidly increasing population seeking higher standards of living will result in greater and greater wealth for everybody. But there are limits to growth, and these were been surpassed long ago.

The ongoing rapid depletion of the earth's resources, and most particularly of fossil fuels, has so far had only a minor effect on people's awareness of future shortages. Although environmental pollution has become a widespread social theme, the scientific documentation of pollution incidents is (at best) wanting, and what has happened so far in terms of environmental conservation is of little practical value. Not only ordinary people, but also politicians and intellectuals are ignoring the fact that the world now faces major *unconventional challenges* which range:

- from runaway birth rates and their disastrous effect on planet Earth,
- to the excesses of consumerism, associated with ever-increasing demands for energy, food and luxuries, such as vacations at the antipodes of the globe.

Most of the case studies included in this book come from the European Union and North America, but there are also examples from other parts of the world. To meet the requirements of its audience, the text examines the positive and negative aspects of current trends and policies, in each one of its themes – and it does so in the light of documented ongoing experiences. Attention is paid to the costs and after-effects of what is happening now, so that valid conclusions can be drawn for the future.

Precisely for this reason, it has been a deliberate choice to consider a wider time horizon than the first decade of this century. Several examples have been taken from the mid-1980s and early 1990s when things started going the wrong way in terms of energy – including spoilage, air pollution, soil poisoning, scarcity of clean water and mountains of man-made waste. Coupled with a wild population explosion (more than half the people living in Iran and Turkey are less than 30 years old, and in Nigeria younger than 15), these abuses may well signal the end of an age.

Carbon dioxide emissions and the greenhouse effect caused by the burning of hydrocarbon fuels have changed the way in which a growing number of people look at the current state of energy supplies, but the study, development and use of alternative energy sources has been proceeding with neither a vision nor a longer-range plan. In addition, experience from the last ten years shows that, to be really effective, new energy solutions must be:

- cunning,
- properly calculated,
- thoroughly tested, and

- sustainable in the long run.

So far, none of these prerequisites has been met in an able manner. We are simply bumping from one alternative energy approach to the next, only to discover that each has a downside which makes questionable the wisdom of employing it. Worse still, there are no energy solutions radical enough and able to fulfil the world's rapidly growing energy consumption requirements.

In fact, the widespread hype about different energy models pays no attention to the notion that coal, oil and gas are not just 'commodities', but the fuel on which almost every country pins its hopes for further development and a higher standard of living. Far from being alien to these near-sighted judgements which conveniently forget the need for conserving energy, the European Union is at the heart of the storm because:

- coal, of which it has plenty of supplies, is characterized by an unacceptable level of carbon dioxide emissions, and
- the European Union's own oil and gas resources are limited, overexploited and on their way to extinction – apart from unconventional gas discoveries.

While biofuels are currently promoted as alternatives to fossil fuels (said by many to be the number one reason for what is – rightly or wrongly – perceived as global warming), as far as Europe is concerned, the advent of biofuels should be seen as a strategic inflection point. For the first time in over 60 years there is a chance of attaining three goals:

- solving a large part of the European energy scarcity problem,
- reducing the effect of fossil fuels on the environment, and
- promoting European agriculture by directing part of it to aims that are attainable, profitable and lasting – as well as sources of employment in the European Union.

The reason why this has not been properly appreciated so far lies in the fact that there is plenty of *misinformation* about energy sources and their usage, as well as about objectives that might bring about an agricultural renaissance. Misinformation has been widespread because of the wrong policy of telling people what they want to hear. As politicians and conquerors have found over the centuries, it is easier to tell a big lie than a small one.

Carbon dioxide emissions are the visible tip of the iceberg of a long list of excesses characterizing the years following World War II. 'The epoch of the masses is the epoch of the colossal,' wrote José Ortega y Gasset. 'We are living ... under the brutal empire of the masses.'<sup>1</sup> In this empire, which has become global, little attention has been paid to a couple of basic truths:

- We cannot negotiate with nature, and
- we cannot ignore it, for in the end it will win.

This is the message that this book brings to the reader, and it explains that the salient reason for the stress on the earth's resources, and its environment, is the ongoing

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<sup>1</sup> José Ortega y Gasset, *The Revolt of the Masses*, W.W. Norton, New York, 1932.

wild reproduction of *Homo sapiens*, coupled with an unprecedented spoilage. The two constitute a furious demonstration of the empire of the masses and they are disquieting, even alarming, because:

- civilization is measured by the quality of its constituents, not by big numbers and the upheaval they produce;
- education makes the difference in culture, but functional illiteracy is gaining ground these days, while educational discipline has taken leave of absence;
- the post-World War II 'green' and 'blue' revolutions promised way beyond what they could deliver and can now be ranked among the big failures of the last few decades; and
- improvements in well-being call for a lot of energy production and for all sorts of consumption, and there is no country which can claim to have a realistic energy policy consistent with environmental values.

While the real reasons for a deteriorating environment on planet Earth are still obscure, because scientific evidence is ambiguous, the effort of confronting environmental degradation depends too heavily on loud demonstrations and useless 'congresses' than on doing basic homework. To make matters worse, in the middle of all that noise, the world's salient problem is not even confronted, let alone solved. *Universal birth control* is the answer – but that's a big taboo.

In 500 BC, when human civilization started to flourish, the estimated total world population was only about 100 million. Today, no more than 25 centuries down the line, which in chronological time is a triviality, there are nearly 7 billion people – a 7,000 per cent increase – and the next milestone is said to be 9 billion.

Niels Bohr, the nuclear physicist, once remarked that we are all actors as well as spectators in the unfolding of the natural order. We cannot separate ourselves from the world around us, no matter how hard we try. Worse still, we find it very difficult to separate ourselves from past habits that make up the status quo, examples being:

- consumerism,
- overuse of all sorts of resources, and
- disregard for family planning and associated widespread pollution.

No how the effort is measured, it will take exceptional people and an unprecedented amount of willpower to turn things around. Advance global planning and constant global training are other basic necessities. The reader should, however, be aware that the moment one leaves the beaten path the enemies of progress unite.

This book challenges current thinking and its effect on policies and practices. Readers accustomed to mainstream books and articles which blame fossil fuels for a deteriorating global environment might like to read a contrary opinion: while fossil and other fuels may play a role, it is the lack of global family planning that has created the current stress. If these matters are left to their own devices, things will become worse, not better.

I am indebted to a long list of knowledgeable people and organizations for their contribution to the research which made this book feasible. I also thank several senior executives and experts for their constructive criticism during the preparation of the

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Dr Dimitris N. Chorafas  
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# *The Pillars of a Realistic Energy Policy*





## 1. Nothing Hurts as Much as the Truth

As an old adage has it, 'Nothing hurts as much as the truth'. The truth is that when we say 'we want to save planet Earth for future generations', we are all liars. When the so-called Greens lament about coal-fired plants and nuclear energy, but in wintertime run around their homes in a T-shirt instead of lowering the central heating and putting on an additional pullover, hypocrisy has a ball.

Human nature is such that everyone wants to have his cake and eat it too. Talk about climate change makes good public relations, particularly when accompanied by grand promises, empty words and pizzazz (see also Hollywood's extravaganza in Chapter 14). The real question, often forgotten in arguments about energy and environmental pollution, is to what degree we are prepared to *forego our comfort* in order to obtain environmental protection outcomes that are:

- satisfactory,
- measurable, and
- commendable.

This is, of course, a tall order because rapid population growth, urbanization and rising consumption are putting immense pressure on the earth's natural resources and its environment (see section 2). With raw materials becoming scarcer because of overconsumption and with global warming a threatening force, politicians say that they are ready to tackle the problem – but they don't really mean it because their talk is not followed by the right decisions and actions.

Many people look at technology as being the solution, but technological advances have unpredictable outcomes. As far as the preservation of energy and the conservation of the environment are concerned, computers and communications are part of the problem. Very few people are aware of how much energy technology consumes, even though this is a real and current issue.

Processing large amounts of data requires a great deal of power. 'In two to three years we will saturate the electric cables running into the building,' suggests Alex Szalay of Johns Hopkins University.<sup>1</sup> In 2006 the US National Security Agency came close to exceeding its power supply, which would have blown out its electrical infrastructure – cryptographic machinery, networks of computers, huge databases and the wizards mining them included.

Information technology companies are aware of the challenge. This is why firms like Microsoft and Google have had to put some of their enormous data centres next to

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1 'Handling the Cornucopia', *The Economist*, 25 February 2010.