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Inside this Issue...

The Geopolitics of Energy—It's Time for a Lifeboat Drill *Napier Collyns and Vic Henny*

Page 2

Two recent articles¹ by Vic Henny of the Global Solutions Initiative (GSI), published in *Geopolitics of Energy*, have outlined the GSI's views on the various efforts to address climate change and other risks to the global community arising from increasingly unsustainable development. Dr. Henny concludes that efforts made so far have almost universally failed to improve the situation and that time is running short to attempt to reverse the damage done. Therefore, he recommends a "lifeboat drill"² – a draconian program of remedial action spearheaded by elements of a group of scientists, business leaders, and other specialists known as an "epistemic community".³ GoE Editorial Committee member Napier Collyns has worked with Dr. Henny to refine these views for this month's issue, bringing them up to date through new material that has emerged.

¹Henny, V. (2012). "Geopolitics of Sustainability" *Geopolitics of Energy* 34(12). December; and Henny, V. (2013). "Geopolitics of Sustainability: Further Glimmers of Hope". *Geopolitics of Energy* 35(4), April.

²Henny, V. (2013). Appendix 1.

³Henny, V. (2013). Appendix 4.

The Geopolitics of Energy—It’s Time for a Lifeboat Drill

by Napier Collyns* and Vic Henny**

Introduction The timeliness for a Lifeboat Drill can be seen from the convergence of a number of aspects that are highlighting an increasingly unsustainable development and inadequate remedial action.

Dennis Meadows, co-author of the groundbreaking 1972 book “The Limits to Growth” has warned¹ that it is no longer possible to envisage a sustainable development that allows the developed world to “get to keep what its already got” (and) “the poor to come up to its level (and) to go on doing what it is doing, though with less impact on the environment”.

Meadows’ colleague Jorgen Randers points out how impractical it has become to proceed much further while holding to democratic debate and decision-taking.

Unfortunately, such development models almost overwhelmingly continue to be pursued, causing environmental havoc throughout the world. While the models are implemented with an aim to improve matters, and often achieve limited results, they are not succeeding in:

- bringing natural resource consumption down to levels within the earth’s bio-regenerative capacity,
- reducing greenhouse gas emissions to levels within the absorptive capacity of land and oceans and the concentration of these gases in the atmosphere down toward pre-industrial levels,
- ensuring the sufficiency of eco-system services and bio-diversity,
- preventing further increases in ocean acidity,
- avoiding inappropriate population increases.

Something new and draconian along the lines of the GSI Lifeboat Drill, in addition to what is currently underway, is going to be necessary in order for these shortcomings to be dealt with appropriately.

Kevin Anderson of Tyndall (and others) has demonstrated the clear necessity of ensuring that CO₂ emissions peak no later than 2020 and thereafter decrease by an unprecedented 7 to 10 percent annually if there is to be any hope for preventing global temperature increase from reaching 2°C above pre-industrial levels. He then goes on to show that market theory does not address large (non-marginal) rates of change such as the above clearly represents.² Anderson’s latest work,³ which shows that there are no longer any plausible non-radical options available, is giving rise to a forthcoming (Dec 10-11) conference on “Radical Emissions Reduction” at the Royal Society in London.

A very recent (17/9/2013) conference on the launch of the EFL and Grantham study on the technologies and costs of halving global CO₂ emissions by 2050 has shown that fresh resources

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**Vic Henny, the other co-founder of GSI, was industrial director at the Institut Francais du Petrole (IFP) for 23 years, has worked extensively in oil, gas and energy issues, and technical and economic development at all levels in many parts of the world. He can be reached at Vhenny@aol.com

in excess of \$2 trillion/year⁴ are likely to be required. But where will the funding come from and what will be the vehicle(s) for disbursing these resources? To quote the opinion of the UNFCCC's Director of Implementation Strategy, Halldor Thorgeirsson, "I don't think that an international treaty will ever be the primary driver for the difficult decisions to be made. It's the problem itself that will be the primary driver – and the consequences of that problem."

Current principal approaches to sustainable development all suffer from significant lacunae:

- an "Action Agenda for Sustainable Development" of 6/6/2013 submitted to the Secretary General by the Leadership Council of the UN Sustainable Development Solutions Network:⁵ a top-down approach covering a nexus too extensive to represent anything other than aspirational rather than operational objectives,
- the "Future Earth" international research initiative,⁶ which has the same shortcoming.
- the very promising bottom up approach of "350.org/Bill McKibben," which, however, remains confined to a very limited range of objectives,
- even the forthcoming "Radical Emissions Reduction" is confining itself to academics and practitioners working on a number of specific topics, rather than on the effect these would have on sustainable development.

This is not to say that more sustainable models cannot be envisaged. The world in general however, and the sustainable development movement in particular, have failed to present a credible view of a prosperous future within appropriate boundaries. They have also failed to create a vision that can credibly promise the things which people care about – jobs, security, social cohesion, improved living standards – while simultaneously working towards mitigating climate change and environmental degradation. Today much of the developed world sees environmental values as being opposite to the other – mostly economic – values mentioned above. The challenge is to convince the public in these countries that economic growth of an appropriate type is not in conflict with environmental values.

Just as there has not been a political movement or leader capable of inspiring a new environmentalism, the corporate world has also failed to promote any agenda of change. Corporations being integral to the functioning of economies should be at the vanguard of sustainable development efforts, rather than being frozen in fear at presenting an attractive alternative narrative. They are more inclined to offer tidy arguments that the world will be fine if only current business practices can be made more efficient, or that if they focus on iterative baby steps, they can use their PR machines to transform these steps into giant leaps.

A case in point is Shell's "New Lens" scenarios, developed to explore how economic, political and social forces might shape the global energy system and environment over the 21st century. The scenarios in their original form ignored the need to meet the Copenhagen 2° C guardrail, paid little attention to the Carbon Tracker Initiative,⁷ and covered climatic uncertainties with "caveats" sprinkled throughout the report. Though the company has rectified this to a degree in David Hone's Shell blogs "Carbon Bubble Reality Check" and "Redrawing the Energy Climate map", the original approach did not adequately address many of the major environmental problems that the world is facing now, and will continue to face in the coming decades.

Corporations are not alone in failing to meet the challenges of sustainable development. Very few decision-makers in international institutions, national governments, civil society or academia are prepared for or able to consider meaningful remedial action such as the ideas put forward by Tim Jackson⁸ and GSI.

At present the activities of two nation-states – China and the US – encompass nearly half of these difficulties, making their active participation in any remedial efforts essential. Unfortunately as elegantly pointed out by Orville Schell in an interview with Peter Leyden, neither is currently in a position that would make this possible.⁹

There are two plausible environmental scenarios that the global community will face soon. Scenario 1 accepts the apparent slowing-down (hiatus) in average global temperature increase being considered in the forthcoming IPCC fifth assessment report and by others. Under this scenario, the slowdown continues for a further 15 years or more, providing the additional time required for mobilizing carbon capture and sequestration, advanced nuclear power, other renewable energies including the “Desertec” concept, potential energy efficiencies, and perhaps even the dream of artificial photosynthesis through living software for energy production and CO₂ removal from the atmosphere.

Such a scenario might be plausible if the climate turns out to be less sensitive to carbon emissions, the oceans (especially at great depths) absorb more heat, and aerosols from volcanic eruptions have a greater cooling effect.

Scenario 2 (which seems to reflect current market views) posits no controls to be placed on burning fossil fuels; there will be little impact from current on-going increases in consumption and population; there will be no “carbon bubble” until global warming breaks through the 2° C threshold – a limit which can trigger off natural feedback to carry the world inexorably through a global warming of more than 5° C, despite this implying mass-deaths and possible civilization-collapse.

Scenario 2 is at least as probable as Scenario 1, would lead to globally intolerable impacts (GIs) on the planet and its inhabitants, and is one for which the global community is still absolutely unprepared – as pointed out in Gwynne Dyer’s “The Third Option”.¹⁰

Discussion

We can, however, take some comfort from the growing realism now being exhibited in certain quarters. For example, the evolution of the four INET (Institute for New Economic Thinking) world conferences – especially the fourth one held in Hong Kong. These can now be seen to be converging toward the aforesaid Kevin Anderson’s views. For example: George Soros declared “the concept of efficient markets and rational choice is fundamentally flawed”, and “economics has been unsuccessfully trying to develop universal laws and different approaches – making it high time to explore new ideas and different approaches”. Robert Johnson similarly stated that “left to themselves, markets probably won’t make the right choices”; Adair Turner – a featured speaker at all four conferences, made the point that “while market-economy/capitalism may be the best mechanism we have for delivering prosperity, it entails such major problems as extreme increases in inequity Capitalism left to itself is damaging the environment”.

Arising out of these conferences has been further cooperation between the associates of Soros and Jeremy Grantham, reflected in the simultaneous participation in the section on New Economics, Climate Change, and New Models of Growth at the third (Berlin) INET conference and the subsequent working paper “Prosperity with Growth: economic growth, climate change and environmental limits”. Another noteworthy development is the relationship building between the International Union for the Conservation of Nature (IUCN) and other organizations with links to global environmental change programs such as Diversitas, the Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES), and the Earth System Science Partnership (ESSP).

What these and other efforts demonstrate is the beginning of a convergence of environmental realists towards constructive action along the lines of the “Lifeboat Drill”.

There is, unfortunately, much less comfort to be taken from the disturbingly rapid disappearance/thinning out of Arctic sea ice, the recent extraordinary heat waves that have been occurring in certain parts of western US states, and possible links between the two.

Even less solace is to be found in the recent calling into question of the sufficiency of the 2° C guardrail by Steinacher et al. over the scale at which renewable energy can be effective,¹¹ or in Michael Klare’s doubts over the scale at which renewable energy can be effective,¹² or indeed

in the way global food supplies continue to be threatened, as explained by Lester Brown in “Peak Water: What Happens When the Wells Go Dry?”¹³

There is considerable discomfort to be felt from the current lukewarm reception for the IPCC’s fifth assessment report (AR5), from the UK’s George Osborne’s abandonment of Cameron’s pledge to lead the “greenest government ever”, and from Tony Abbott’s plan to scrap the price on carbon emissions in Australia.

All in all, we can now see that while most existing efforts can, must, and will continue, for the foreseeable future, the ideological, commercial and human interests opposing coherent action on climate change and maintenance of sustainability can be expected to sustain their present position in the ascendant and continue to prevent any deviation from a current and ongoing pursuit of maximum economic development/growth for all of a similar conventional material kind. So long as this continues – and there is no globally intolerable impact of sufficient severity – no existing entity/institution is likely to be ready, willing, or able to cope with the outcome, and no existing or new grass-roots effort will be able to cover the necessary nexus of issues.

It is also becoming clear that no country is yet prepared to restrict consumption to the extent necessary; no business is prepared to tell its customers and consumers that they will need to use less of their products and services, and none are yet ready to cooperate to pre-empt and find fresh solutions to future climate issues; and no NGO is yet capable of understanding and covering the interactions of an appropriate nexus.

We can also see that any “spearhead” of the type referred to in the first two articles could be fully appropriate without the active participation of one or more particularly well qualified Chinese experts (three possible names come up frequently – Pan Jihua of CASS, Zhou Dadi of the Energy Research Institute, and Lan Xue of Tsinghua University).

We can also see that the realities of sustainability, sustainable development, and their interaction with global warming/climate change will continue to be dominated by national governments, international institutions, and the transnational capitalist class,¹⁴ and that our institutions and approaches which may have been appropriate for the 20th century are no longer fit for the purpose of addressing the global issues of the 21st.

Conclusions

It would seem to be far too hazardous to continue solely along current unsatisfactory lines by following Scenario 1 which assumes the current “hiatus” in global temperature increase would continue for a further 15 years or so – and then assume that this grace period would be used for implementing appropriate remedial action. Other issues would remain, as well. Ocean acidification, for example, would still likely give rise to the GIs referred to in the penultimate lines of the Introduction.

It would, however, seem equally hazardous to follow Scenario 2, and expect that when the 2° C guardrail were breached and GIs seen to be imminent, that a consensus among the competing interests could then be achieved and implemented within the shorter – possibly much shorter – time still available.

With neither of these two plausible scenarios being either safe or satisfactory, the global community now finds itself in a stark quandary:

- large numbers of current climate skeptics and deniers are preventing any radical actions by international institutions, national governments, business, or civil society,
- this is preventing the mobilization of the vast resources that are clearly going to be needed for sustainable development to be achieved,
- there are now over 190 nation-states involved in global climate negotiations, each with its own situation and objectives, and the two most important of these (China and the US)

constituting nearly half of all issues, are unable, so far, to cooperate officially with each other,

- there are now many hundreds of thousands of specialists of all types, varying competencies, and separate views involved in the numerous approaches/solutions under consideration, including what to do about equity issues,
- so far there are no appropriate sets of coherent specific objectives, and there are significant obstacles to democratic decision-taking and/or reliance on market forces,
- once a GII has occurred, it is unlikely that any form of consensus on remedial action could be achieved within any relevant time-scale.

Fortunately the growing convergence of environmental realists can be expected to offer improved chances for deploying GSI's Lifeboat Drill to deal more successfully with this quandary from a solid base. It is in many ways similar to the "One Degree War Plan" of Randers and Gilding,¹⁵ extended to cover sustainable development as well as global warming, and including institutions more specific than the "Climate War Command" and "Climate Sustainability Commission" that Randers and Gilding propose.

It is draconian, and would need to be initiated by a "Spearhead"¹⁶ of specially qualified outstanding individuals of suitable distinction, in a position to appreciate the aforesaid quandary, and the difficulty of finding other ways for coping with Scenario 2 or the failure of Scenario 1.

It starts from a number of simplifications which include:

- obtaining as large a consensus as possible based on an "Epistemic Community"¹⁷ of individuals and entities already well on their way to something like a "Lifeboat Drill", and then expanding outwards to start building up a sufficiently powerful constituency,
- establishing a set of specific objectives for the initial consensus such as: reducing global emissions of CO₂ by at least 50 percent over the next five years; preparing for reducing material consumption by at least one third so as to return within the earth's bio-regenerative capacity; mobilization of fresh resources so as to make at least \$5 trillion/year available through levies, sustainability bonds, taxes on wealth, income, and carbon,
- limiting initial consideration to a core group of some 20 nation-states¹⁸ encompassing between them well over half of all current and anticipated global CO₂ emissions, populations, wealth and income; and who are knowledgeable in the fields of sustainability,
- dealing with equity issues initially in two ways: first, by ensuring reliable access for all to the 7 basic human (economic) rights,¹⁹ regardless of ability to pay; secondly by adopting the proposals of James Hanson²⁰ for booking a gradually rising price on carbon, through a fee on top of energy prices to be collected from fossil fuel companies at source – domestic, mine-head or port of entry, which after collection is returned 100 percent to all legal residents in equal amounts (with a half share each for up to two children), starting say at \$10 per ton, but increasing year on year. This could have the further merit of being able to serve as the initial objective for starting official cooperation between China and the US.

It then proceeds by deploying elements of compulsion, making it possible to:

- restrict consumption through the introduction of sumptuary legislation and/or rationing of transportation/travel by land, sea and air; of domestic fossil fuel use; of various food-stuffs – particularly meat; of family-size,
- direct labour towards: energy (including "smart grids"), water, agriculture, and raw material efficiencies (recycling, waste avoidance, circular economy); replacement of as much coal-firing as possible, use of gas and biomass firing; installation of as much carbon capture and sequestration as possible on all major users of fossil fuels – along with suppression of "black carbon"; installation of as much renewable energy and nuclear

- power as possible; halting all further deforestation while encouraging afforestation, soil improvement and other adaptation,
- improve care for the elderly infirm and disabled,
- encourage R&D in fields such as “living software” and energy storage.

Finally it would be necessary to work out the nature of the Command and Control institutions that will be needed for successful implementations.

This would enable the global community, without engaging much in the way of fresh resources, to greatly accelerate effective remedial action against the likely event of either plausible Scenario 1 failing, or plausible Scenario 2 coming to pass.

Endnotes

¹March 2012 Conference marking the 40th anniversary of the publication of *Limits to Growth*. Available at <http://www.clubofrome.org/?p=3392>

²Anderson, Kevin. “Why carbon prices can’t deliver the 2 C target”. Available at: <http://kevinanderson.info/blog/why-carbon-prices-cant-deliver-the-2c-target/>

³“Real Clothes for the Emperor” www.youtube.com/watch?v=B-EIPuchOw

⁴Coherent with the \$5 trillion/year set out in appendix 2 of Henny (2013). See also “In the balance: Can we halve global CO₂ emissions by 2050 ?”

⁵See: <http://unsdsn.org/2013/06/06/action-agenda-sustainable-development-report/>

⁶explained by Robert Watson in his 26/2/2013 presentation at the 2013 STEPS Centre symposium on “Credibility across Cultures.”

⁷<http://www.carbontracker.org/wastedcapital>

⁸see Jackson video “Where is the Green Economy ?” <http://steps-centre.org/2012/blog/tim-jackson-where-is-the-green-economy/>

⁹<http://www.youtube.com/watch?v=x3DMklevARo>

¹⁰Dyer, Gwynne. (2012). “Global Civilisation: The Options”. <http://gwynnedyer.com/2012/global-civilisation-the-options/>

¹¹<http://Climatetoday.org/?p=4173>

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¹³Brown, Lester. (2013). “Peak Water: What Happens When the Wells Go Dry?” Earth Policy Institute. July 9. http://www.earth-policy.org/plan_b_updates/2013/update115

¹⁴Marshall, Andrew Gavin. “Introducing the Global Power Project” <http://www.occupy.com/article/introducing-global-power-project>

¹⁵Gilding, Paul. “Time to Prepare for the One Degree War”. <http://paulgilding.com/cockatoo-chronicles/cc20091106-odw-launch.html>

¹⁶See Henny, V. (2013).

¹⁷see Henny, V. (2013). Appendices 4 & 5; Henny, V. (2012). Appendix.

¹⁸see appendix 3 of article 2

¹⁹basic water, food, energy, shelter, health, education, and family planning

²⁰Lohan, Tara. (2013). “Could a carbon fee save us from climate change?” April 25. http://www.salon.com/2013/04/25/could_a_carbon_fee_save_us_from_climate_change_partner/

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