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EDITORIAL

Looking 25 Years Forwards at Risks and Opportunities

By Walter R. Stahel*

In the editorial of the Risk Management newsletter of May 2013, I was looking back at 25 years of Risk Management Research of The Geneva Association. Today, this editorial and newsletter will look at some specific risks of the next 25 years.

The first feature article looks at the potential implications of solar storms for the insurance market and specifically at how a high impact solar storm could manifest in claims. The second article examines perceptions of nanotechnology and nanomaterials risks—adding the dimension of risk perception to technological risks. Our final article, entitled “Disaster Risk Reduction—How and what can Private Insurance Contribute” focuses on how risk—the known-known risk—can be mitigated by understanding the lessons from the past.

Learning the lessons of past events was also at the heart of The Geneva Association’s 5th CR+I Seminar, organised at the end of October 2013 jointly with the Tokio Marine & Nichido Fire Company in Sendai. The city was at the centre of the north-eastern Japanese earthquake and tsunami on 11 March 2011.

If we first look back 25 years, to 1988, the PC had just been invented, Internet was still an internal network at the site of its invention the CERN in Geneva, cars were driven by people and mobile phones weighed five kilos and cost \$5000, to give but a few technical examples. Dying forests, air pollution and retreating glaciers were the main environmental topics in the news, unemployment and sovereign debt were high on the agenda of politicians—some topics change, others remain.

Looking forward to 2039, the impacts of climate change will have amplified: invasive species—both plants such as ambrosia and animals such as the tiger mosquito—will have advanced further northward in Europe, while intensive agriculture in Scotland and Scandinavia will have become the norm—the European Union (EU) expects a 75 per cent increase in agricultural yields in these regions.

Other topics, such as bacteria which are resistant to antibiotics, represent a formidable challenge both as an opportunity for science and a risk to society. The European Commission estimates that today, 25,000 people die annually as a result of an infection with multi-drug-resistant bacteria.

The ageing population is another major opportunity and risk in the hands of policymakers, a topic which The Geneva Association started analysing more than 25 years ago. Yet the multiple benefits of continued activity by the elderly—such as lower health costs—are only starting to be recognised by politicians. And most companies, organisations and administrations are still extremely hesitant to keep able employees beyond the legal age of retirement.

No easy predictions can be made on the outcome of societal changes. Trends such as a shift from science-based policymaking to policy-based science, from evidence-based advocacy to advocacy-based evidence and from fault-based liability to need-based compensation could lead society onto down the wrong path, which may be irreversible.

By 2038, globalisation will have lost its lustre, not least because of growing resistance from emerging economies to extend the trade of goods (ruled by the World Trade Organization-WTO) to trading services, knowledge and intellectual property. Industrialised countries have moved to a post-industrial economy based on the knowledge

* Dr h.c. Walter R. Stahel, Editor. Editor; Head of Research – Extreme Events and Climate Risk, The Geneva Association.

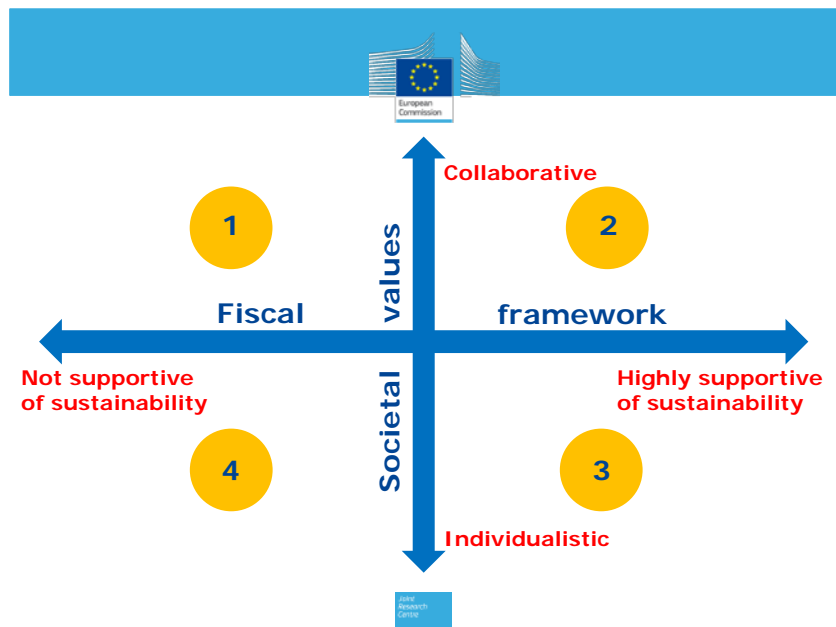


society, but developing countries refuse to pay for ideas and knowledge. The U.S., initially champion of the globalisation, have been changing their strategy to bilateral and regional free trade agreements since 2010.

Scenarios are a smart approach to glance into the future. In early 2013, the EU’s Directorate General of Joint Research Centres launched a project to determine “The potential of eco-innovation for jobs, economic growth and sustainable development in the EU eco-industries 2035”. Yours truly was part of a group of 20 experts invited to develop, in five, two-day workshops, a number of scenarios.

The study takes a systemic approach to eco-industries by looking at those that set greater sustainability and resource efficiency as their business objectives—the enablers—that “can optimise service delivery per unit of input and design for resource efficiency”. By identifying key drivers of change, trends and opportunities, and developing possible scenarios linked to eco-industries, the study will make recommendations for EU policies and research to bring about the vision policymakers will choose for eco-industries in 2035.

The report, to be published in mid- 2014, uses the following scenario logic to define four possible alternative futures:



The vertical extremes—collaborative and individualistic—can also be translated as global governance or top–down, versus decentralised or bottom–up. As both dynamic changes (start-up companies) and building resilience (decentralised production) are bottom–up, but global governance by the UN, IAIS and other non-elected bodies is top–down, the scenarios open dynamic, contradictory approaches.

The horizontal extremes of fiscal framework—highly supportive of sustainability or not—can be translated as taxing non-renewable resources instead of renewable ones including labour (highly supportive of sustainability) versus today’s fiscal framework conditions of subsidising fossil fuels¹ and heavily taxing income from work, again opening dynamic opposites.

Looking into the future, the role of governments as an obstacle to societal progress may be one of the most overlooked factors. The risk analysis of the impacts of solar storms on terrestrial infrastructure has shown the vulnerability of national electricity grids as a centralised structure: the economy of scale completely dominates the related dis-economy of risk. In North America and Europe, the alternative of decentralised power production, enabling electricity autonomy of buildings and even municipalities, has emerged as an option for building societal

¹ Subsidies for the production and consumption of fossil fuels in the EU amount to €56 billion per annum, and US\$ 540 trillion worldwide, according to the latest OECD and IEA figures.

resilience. However, when I recently suggested this idea in a sustainability discussion at the Assemblée Nationale in Paris, I was immediately stopped—Electricité de France (EdF) a French majority state-owned enterprise has a monopoly on electricity production in France. Similar rules exist in some U.S. states.²

Germany has no such regulation; Spain changed the legislation in October 2013 from a free market to a monopoly. Small companies which invested in photo-voltaic systems to become independent from future cost increases of electricity from the grid now have to pay a fee to the grid for not consuming its electricity. Yet the European Union explicitly grants to right to choose one's power provider.

What is the role of insurance?

In the risk management discussion, the focus has shifted from mitigating specific risks to building resilient communities. This opens a huge opportunity for insurers to show approaches through which insurance can contribute to achieve this new objective and to increase the quality of life for people.³ But as the power monopoly issue above shows, this could turn increasingly into insurers participating in political dialogues.

Governments have a role and duty to mitigate risks and reduce their impact. The events of March 2011 in Japan—a geo-risk event—showed that authorities had acted successfully with regard to building codes to reduce earthquake impacts. In the case of global climate risks, such as warming oceans and sea level rise, which are aggravated by subsidence caused by locally pumping gas and water from underground natural reservoirs in coastal zones, governments have failed. COP19 in Warsaw has shown yet again that a reduction of GHG emissions is not a priority of governments. Michael Butt, Co-Chair of the Extreme Events and Climate Risk (EE+CR) project of The Geneva Association (previously named Climate Risk and Insurance), has stated repeatedly that insurers should put more pressure on governments to reduce climate change risk by mitigation. Is the insurance industry willing to pick up this challenge?

This issue of the Risk Management newsletter mentions some of the topics that we propose to study more closely in the future—the future of risk management will be lively and interesting.

² Private conversation with Lindene Patton, ZIG USA

³ The Geneva Report no 7 May 2013 '*Insurers' contribution to disaster reduction—a series of case studies*', edited by Meghan Orie and Walter R. Stahel, was a first step in this direction by The Geneva Association, in collaboration with UNISDR.