ERMA | ENTERPRISE RISK MANAGEMENT ACADEMY

RISKVIEW

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A PLANET AT RISK: THE RISE OF ENVIRONMENTAL RISKS

RISKVIEW Magazine is a quarterly publication on risk management managed and released by ERMA (Enterprise Risk Management Academy).

riskviewmagazine.com

WHAT THEY SAY

" The Pentagon says that climate change poses immediate risks to our national security. We should act like it."

Barrack Obama
President of the U.S

"Every company, investor, & bank that screens new & existing investments for climate risk is simply being pragmatic"

Jim Yong Kim
President of The World Bank

"People of conscience need to break their ties with corporations financing the injustice of climate change"

Desmond Tutu
Archbishop Emeritus

"Never have we so hurt and mistreated our common home as we have in the last 200 years."

Pope Francis
Pope of The Catholic Church

SNAPSHOT

More than
28 million
people in 48 countries will face scarcity by 2025. By 2050, this will have eached 7 billion. For 40% of people in the world, water is scarce.

Recent studies suggest that the record high temperatures in western Europe in the summer of 2003 were associated with a spike of an estimated
70.000 more deaths
than the equivalent periods in previous years.

By 2050, our current energy consumption is expected to
triple the amount
of energy we currently use.

The atmospheric concentration of carbon dioxide has increased by
more than 30%
since pre-industrial times, trapping more heat in the lower atmosphere

A NEW PERSPECTIVE TOWARD ENVIRONMENTAL RISKS

Colin Adams
ERMA Advisory Board

In this edition, we look at environmental risks to mark World Environment Day on June 5, 2015. As people populate the planet and exploit its natural resources, we experience environmental risk in two ways: we create this risk through our actions, and we experience this risk through the impact of nature upon us.

This edition of RiskView looks at both dimensions, discussing our impact on the environment and also looking at ways we can manage the risk of natural phenomena on our businesses. Companies that best manage these risks in the future will have privileged access to resources, markets, capital and consumers in an environment of both increased pressure on resources and increased stakeholder awareness of what is at stake for us all.

I hope you find the articles presented here stimulating and useful.

IN THIS EDITION

CLIMATE CHANGE: SECURITY RISK TO BUSINESSES AND NATIONS

Climate change appears to be a bigger problem than what most people think. Not only is climate change a risk to many businesses around the world; it is also a threat to nations. That is what President of the United States, Barack Obama, said at his remarks in the United States Coast Guard Academy Commencement, New London, Connecticut, May 2015.

Expressing his urgent commitment to fight climate change, the President emphasized that the action of fighting climate change is a national security imperative; risk management at the national level. The warming process, which is a part of global warming scheme, poses a serious current risk to United States, Obama said. In addition to the environmental damages caused by climate change, the effort is also important to protect public health and also bring benefits to nation's economy and security. Furthermore, Obama stated that climate change will soon impact how the military protects the country. According to the President, some people in Washington refused to join efforts in fighting climate change, saying that the threat is not real and there is no need to worry. Actually, stated Obama, the science is undeniable; that the planet, not only the US but also other nations, are getting warmer and warmer. Today's generation should invent, build, and use the energy-efficient technology to mitigate the risk or damaging effect of developing climate change.

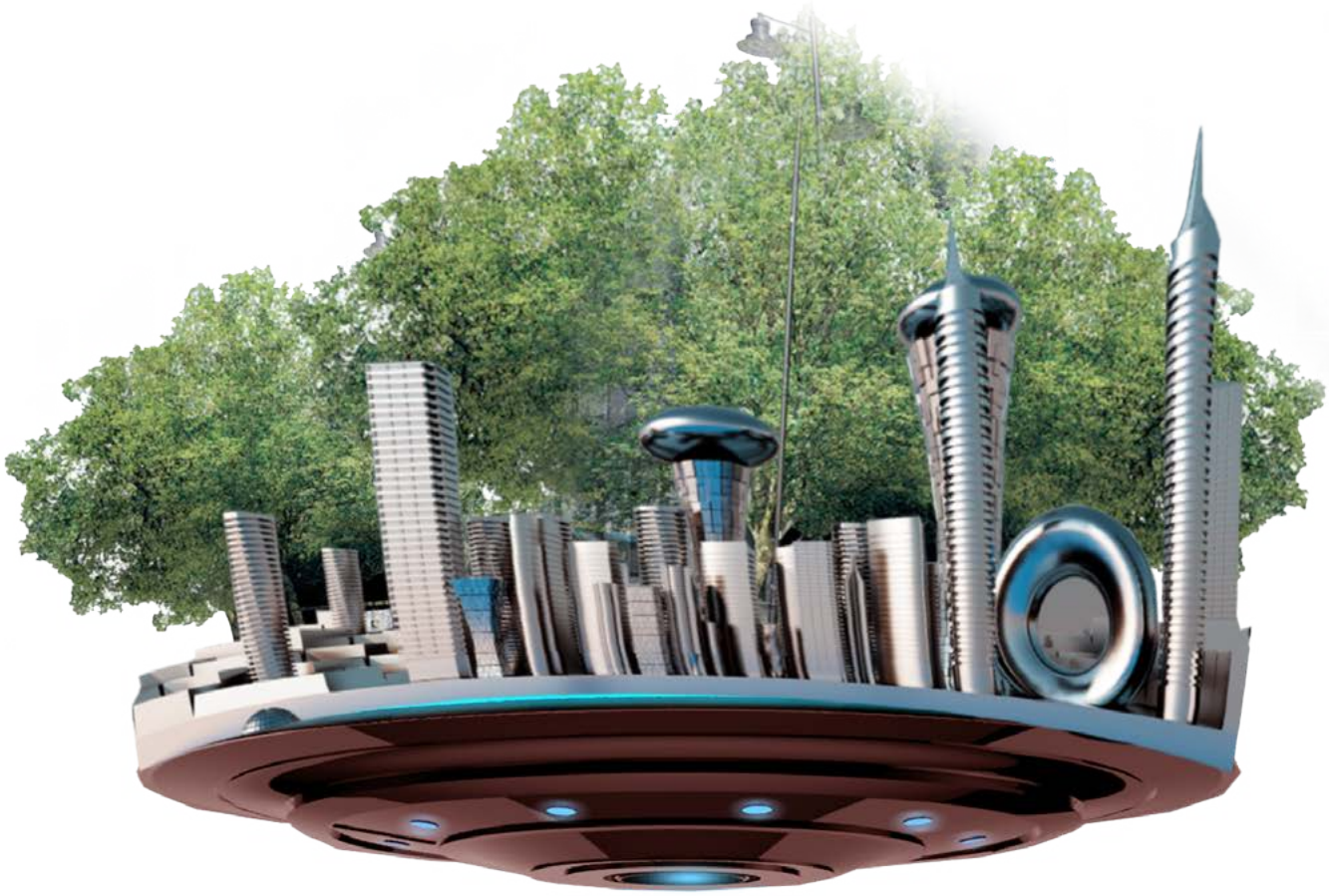
Using energy-efficient and environmental-friendly technology has long been seen as the answer to conventional technologies impact on the environmental. While industry productivity is an important element in a solution, environmental-friendly and energy efficient technology usage is also a must. This clear statement of risk by President Obama highlights that risk management is needed not just for companies, but also at a national level. With a broader scope than risk management in business companies or other organizations, more elements are involved in a nation or country. While companies and organizations are of course parts of a country's risk management, country-level risk

"While industry is needed to be more developed in productivity, environmentally-friendly and energy efficient technology usage is a must."

management involves many more elements and layers. Climate change will do far more than just cause rising temperature or water levels; the flow-on effects of climate change will impact across society.

With nation-level risk management, government is a key actor to draw all the elements in a nation together to support change, including through using regulatory and legal mechanisms as necessary to implement and enforce climate change related policies. Governments acts like Boards in a company to decide what a country should do to fight climate change in order to protect itself from harmful consequences. At the same time, society, organizations, and companies are the agents that are capable of turning regulation into a concrete action on fighting climate change.

Atmospheric concentrations of **CO2 are 37% higher** than they have been at any time during 650,000 years, Ocean water is 25% more acidic since the industrial revolution.
source: WWF



WHAT'S WAITING FOR ENVIRONMENTAL RISK IN THE **FUTURE**?

Often many of us do not realize that the environment plays such an important role in our lives; in fact it holds a crucial key in our continued survival. We often take everything for granted, having pride and arrogance that everything is fine and humans play a key role in the survival of this planet. However, many people do not focus on the real fact: that nature can continue for millions of years, even if human beings are gone from the surface of the Earth. 2030 Water Resources Group released the Global Risks Report in 2009 that support this allegation.

That is why environmental changes have been one of the biggest concerns of economic as well as political security. Many governments have started to realize that we cannot underestimate nature; when the environment changes, the entire balance is disturbed as well. There are some top risks that are considered to be the highlights of environmental risks able to affect not only political conditions but economic stability as well. Water crises have the top spot, while biodiversity loss and climate change adaption are also included within the risk list.

Most countries are worried that climate change problems and water crises will soon happen; even sooner than expected. The report predicted that global water supplies will run out by 2030 as the requirements will exceed the supply by 40%. In fact, it is predicted that water consumption will increase up to 85% by 2035 because the need for water for energy consumption and agriculture will increase. Soon, people will experience changes in their diet and consumption because of the lack of food supply. Some extreme weather has happened in certain regions, causing 'chaos' and changes in food production. Rainfall and weather patterns have changed, resulting in droughts and floods, and causing harvest yields to drop by up to 25% in some places. The lack of supply drives prices to go up and people have to adjust themselves to the conditions.

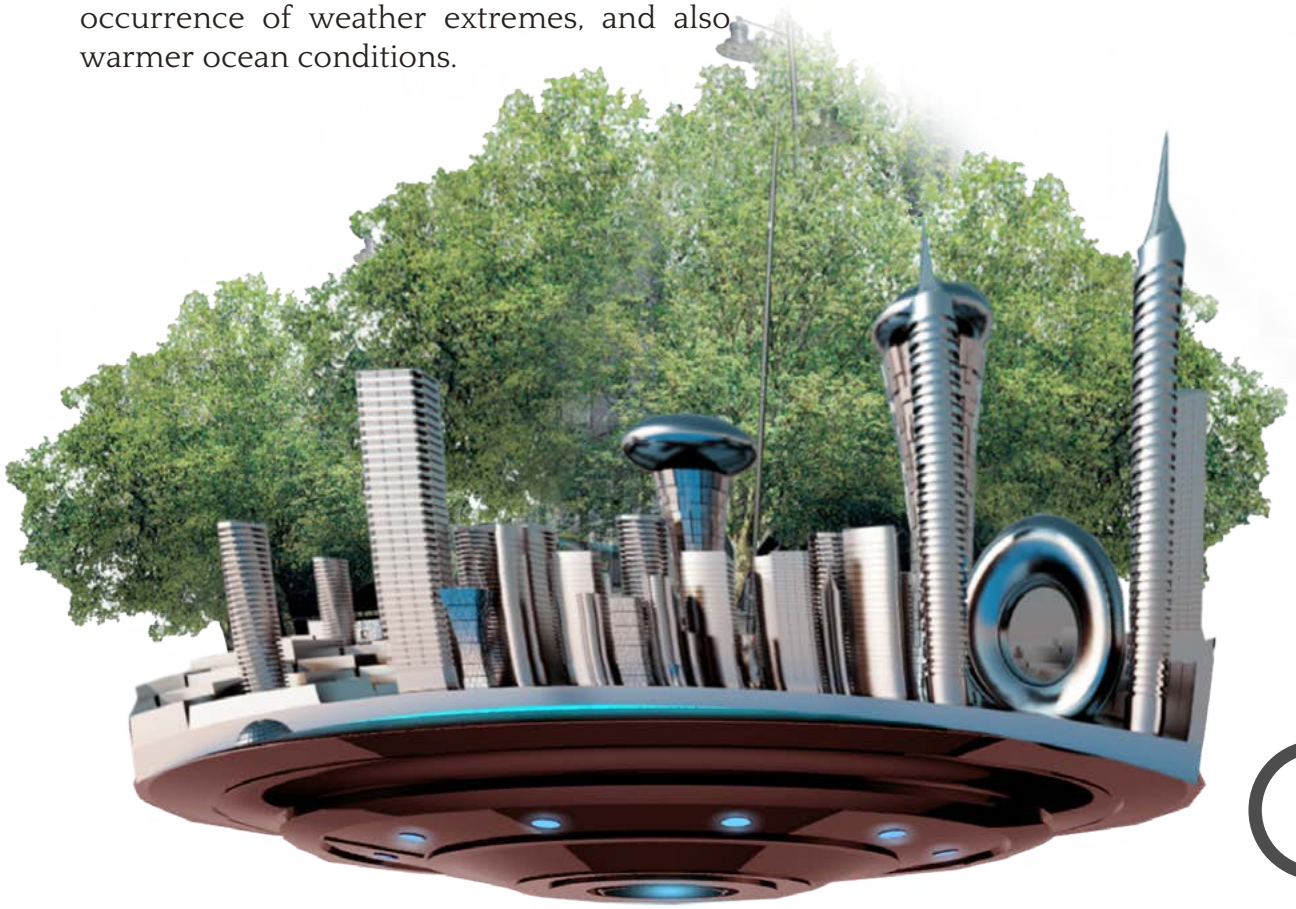
Not many people realize that there are mega trends that will determine the condition of the world by 2030, and the relationship between climate change, energy, water, and food is definitely included within them. Not only will people have to deal with financial, economic, and political hardship, it is also possible that involuntary migration on a large scale is likely to happen. And as if that were not enough, world leaders will have to

By 2035, **energy consumption will increase by 35%**, which will increase **water consumption by 85%**, increasing pressure on finite water resources
source: WWF

make difficult decisions about the important resources that will determine the course of their lives. Not to mention that man-made environmental disasters have increasingly caused more damage and destruction. The environmental impact is obvious and clear, and yet there are people who do not focus too much on them – which is ironic because humans are the biggest threats to nature itself and are the ones that actually creating such destruction.

Quick action should be taken or the environment will suffer from further deterioration. We have seen enough examples so far: deforestation, overfishing, and so on, have created stress and imbalance in our water and food systems. We have experienced major ecosystem collapse, as well as biodiversity loss. Global leaders must understand and realize that biodiversity loss will not only affect food supply and water security, but also economic development and financial stability. After all, the effects of environmental damage and climate change have been real, as we can see from shrinking glaciers, sea levels rising, the frequent occurrence of weather extremes, and also warmer ocean conditions.

It is just too bad that businesses and governments do not seem to fully understand what is going on in the world. Instead of coming up with solid risk management schemes that also include environment threats, most of them are still focusing on the financial and business sectors. They should realize that profits and growth will not be successfully maintained if they fail to manage their natural resources and the environment. How can they expect to make money and be successful when they suffer from major floods or earthquakes that shatter everything? How can they survive and continue when they have to deal with a food or water shortage? People should start realizing that environmental risks should not be underestimated or overlooked. When we delay and are too slow in addressing the main concerns, we have to bear humanitarian, political, social, and also economic consequences.



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Martin Loosemore
Professor at UNSW

"We provide access to ideas and insights from many of the world's thought-leaders in the field of risk management, providing those who graduate with an important advantage in an employment market which increasingly values an ability to combine the subject of risk management with innovation and strategic thinking."

HUMANS: THE BIGGEST PROBLEM OF ENVIRONMENTAL RISK

A shocking fact is that the human population and its behavior are the biggest environmental risk for the Earth. It is not without reason that the human population is the worst risk ever: according to State University of New York (SUNY) College of Environmental Science and Forestry (ESF), human population growth, their inability to understand environmental problems, and the lack of effort to deal with the problems are the main reasons why human population has become the worst environmental risk ever.

The ESF recently conducted a survey to celebrate Earth Day, and asked their faculty members a single question: "What is the world's biggest environmental problem?". The survey revealed a focused answer on population growth, humans' inability to grasp the challenges we face and the lack of a well-informed, well-coordinated effort to address those challenges.

Dr. Jack Manno, from ESF's Department of Environmental Studies, said that the mastermind of all environmental problems we can see today is the human mind. Of course it is not like humans deliberately create all of the environmental problems, but rather our collective behaviors unconsciously destruct the Earth in a heavy manner. While Dr. Thomas Horto, from ESF's Department of Environmental and Forest Biology, added that human perception of nature is not the same their objective place within the Earth's ecosystem. This disconnection is the biggest problem in the relationship between humans and nature. In many cultures, civilization developed without completely understanding that relationship. Humans tend to believe that they are not the same as the rest of the biosphere. This perspective explains why humans are often very abusive without realizing the consequences of their actions.

"However, human is also the key to make environmental risk at its minimum level"

Human population growth and consumption is also pointed out as a big problem by both Dr. Karin Limburg, ESF's Department of Environmental and Forest Biology and Dr. Chuck Kroll from ESF's Department of Environmental Resources Engineering Unfortunately, many people do not want to deal with this due to the implications of various cultural, social, political and religious aspects. What matters the most is how they can live in prosperity today, and they forget that the future must also be secured.

Furthermore, detailed problems like climate change and invasive species are the result of a lack of human responsibility for the environment. Climate change is driven by increasing carbon dioxide in the atmosphere from human activities. The use of transportation, computers, phones, heaters, and many more are the primary contributors to global warming. For Janine DeBaise, ESF's teacher of writing and literature, the problem lies in the disconnection between scientific facts and what is absorbed by the public. The best chance to save the Earth by solving today's environmental risks depends on how to educate, inform, and make the public aware about what people do to the Earth, what the impact is, why people should care, and what they can do to be able to survive. According to Scott Shannon, the Dean of the college's graduate school, climate change cannot be solved only with more knowledge about environmental and technological know-how, but it also requires coordination in applications on a global scale. All the nations must be in the same boat to stop climate change as the

result of global warning all around the world.

Another issue is addressing urban development to integrate human settlement patterns and ecosystem health. This is an important issue to make people contribute something to the ecosystem, human health, and well-being. Moreover, developing a way to meet the need for sustainable resources can help to reduce environmental damage. Today, people's resourcing pattern, which is strongly based toward fossil fuels, comes with negative impacts to the atmosphere, ocean, and climate. If people are able to develop a better, sustainable renewable system to provide for human material and distribution needs, it will let the human civilization advance and continue to prosper and leave behind the fossil fuel age.

ESF has developed a comprehensive list of problem areas. The list also includes the need for creating dialogue about sustainability related to biodiversity and conservation of species, with the dialogue related to sustainable use of natural resources in the manufacture of materials, chemicals, and fuels; ensuring an adequate clean water supply; eliminating barriers to create effective collaboration between lines of politics, culture, and organizations; and also engineer creative solutions to designated problems.

Although humans are indeed the biggest problem for environmental risks, they are also the key to a better environmental risk management and capable of acting as the problem solvers. It is not impossible for humans to prepare a better risk management right now. The longer people are aware of this situation, the harder their effort to recover the Earth. The sickening Earth will soon weaken human civilization, culture, and all aspects of life. It will not be surprising if civilization will fail if this condition continues.

Over 6 Million Tons of marine litter may be entering ocean every year. **More than 260 species** to have been entangled or to have been ingested, marine debris.
source: WWF

MEGACITIES' ROLE IN GLOBAL ENERGY SUPPLY

Energy is as crucial as oxygen in this era of globalization, both for developed countries and developing countries. In April 2015, a study regarding the energy consumption issue titled Energy and Material Flows of Megacities was published in the 112th edition of Proceedings of the National Academy of Sciences.

The study reported that the growth of megacities across the world is affecting global energy consumption. A megacity is a metropolitan area with more than ten million people of total population. Some examples of a megacity are Tokyo, New Delhi, Seoul, Shanghai, Mumbai, Mexico City, Beijing, São Paulo, Jakarta, Moscow and New York. The research team made an assessment of how energy resources pass through the megacities, such as natural gas consumption for heating, electricity consumption for public transit, solid waste and wastewater disposal, and many more items. The objectives of the study were to transform cities, especially megacities, into cleaner, environmentally-friendly, and more sustainable ones; secondly, to assist in understanding the growing complexity of cities.

The growth of megacities is of serious concern to the environment because those urban areas are consuming more resources pro-rata than other areas. Megacities are populated by only 6.7% of the world's population, however they are consuming 9.3% of the global electricity and producing 12.6% of the global waste. Megacities are indeed producing 14.6% of the global GDP, but if the disproportional metabolism of megacities cannot be reduced or slowed down, the environment will be disadvantaged the most.

> "Tokyo, Moscow, Seoul, and London proved that smart urban policies would make a difference."

According to the report, the average New Yorker consumes energy 24 times more compared to a citizen of Kolkata and produces 15 times more solid waste because wealthier people tend to consume and discard more. The geographical factor was initially thought to determine the use of energy - if we look at the colder megacities that need more fuel for heating, such as Moscow and New York, along with their economic activity. However, the geographical factor becomes irrelevant if you compare New York and Tokyo: both of them are wealthy megacities in temperate regions. Somehow, Tokyo has been able to manage its energy consumption; it has an environmentally-friendly city design and a vast network of public transit that reduces its negative environmental impact. Tokyo is also proactively addressing leaky pipes, an environmentally-friendly strategy that has reduced water loss up to 3%. Tokyo's leaky pipes strategy has been successful in embarrassing cities like Rio de Janeiro and Sao Paolo, who top the clean water leakage ranking at over 50% of water lost through leakage. Tokyo is a good example of how smart urban policies can reduce energy resource use in the face of escalating GDP and exploding populations.

The study also revealed that energy consumption and GDP growth in megacities are increasing even faster than the population growth, particularly in China where the combination of high population and high consumption per

capita is potentially harming the planet's resources. One of the researchers of the study, Chris Kennedy, University of Toronto Civil Engineering Professor and Industrial Ecologist stated that there are several cities that are guiltier than others by ignoring the future of energy and the environment, such as New York which dominates energy use compared to other cities. Kennedy also stated that the New York metropolis has 12 million fewer people than Tokyo; however they consume much more energy, the equivalent of one oil supertanker every 1.5 days.

The greedy habit of energy consumption in megacities is not a necessary product of its geographical conditions or how wealthy it is, so every city should use energy in a very efficient way. To create environmentally-friendly megacities, we need long-term policies for infrastructure that shape cities over years or decades. This is not an instant fix; megacities need gradual progress in reducing their previous energy resource use, and smart policy decisions will assist and make a difference. Perhaps the other reason why megacities usually use resources extravagantly and are not concerned about the environment is because a megacity is a commuter-shed, and people who live there have a common labor and housing market and travel throughout the region for daily work or leisure.

Here are some concrete examples of megacities' successful policies around the world. First, in order to create an efficient heating system, Moscow combines heat and power for buildings housing 12 million people for the largest district heating system in the world. Second, in order to increase the efficiency of water use, Seoul has developed a system for reclaiming used wastewater for secondary uses such as flushing toilets. Lastly, as the only megacity that has reduced per capita electricity use as GDP goes up, London has been subject to higher electricity costs and taxes on the disposal of solid waste.

It is not too late to recreate new urban policies, since by the year 2020, it is estimated there will be ten more upcoming megacities. If most of the megacities are careless of their resource use, there will be an inevitable energy crisis on a global scale.

The average american consumes **5 times more** energy than average global citizen
source: World Bank

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The Master Class program is designed for directors and commissioners in a two-board system of a corporation, and executive directors and non-executive directors in a one-tier board system of a corporation. It is also suitable for members of corporate risk oversight committees and/or audit committees in large corporations, either from financial or real sectors.

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HOW CAN WE SOLVE WATER SUPPLY ISSUE?

Population is growing fast these days – which is a good thing because it means that death rate is decreasing – but it presents other new problems, especially related to resource availability. According to a study led by a Research Associate from Duke University, Anthony Parolari, population growth can cause food supply depletion as well as water supply depletion. This study, published in March's edition of WIREs Water, also revealed that it is possible that food and water depletion will happen by the mid 21st century - especially if consumption continues at its current pace. However, according to the study, this is actually a recurring event that has happened several times before in history.

Experts have been using mathematical delayed feedback modeling that is useful in analyzing the historic data so they can predict future trends. It turns out that such recurring patterns of water usage globally are quite common in past centuries. Oftentimes, population growth (as well as other social or demographic changes) goes

"Finding ways to remove salt content from sea water or implementing water recycling are the most logical technology advancement that may happen."

Globally, water scarcity already affects four out of **every 10 people**. A lack of water and poor water quality can compromise hygiene and health.
source: WHO

along with increased water demands, followed by innovative creation or technologies that help in solving the shortages. Based on such findings, researchers are sure that they can predict the same innovation and usage of technology as a way of dealing with global resource risk management planning and implementation.

This modeling is not a new method as scientists have been using such methodologies to predict stock market booms when financial crises happen or earthquakes; but using the same technology to predict water usage is definitely a first. Parolari claims that the new model is very useful and helpful in providing guidance to scientists of how global water supply usage and supply will change; after all, it is all about natural cycles. He is also positive and optimistic about new policies in water usage, where a sustainable water use rate will be encouraged. There is also possibility that new technology advancements will be created so new water sources can be found and used. The possibilities are quite limitless and scientists are hopeful about it.

According to Parolari, the usage of global water currently is quite stagnant and not showing any worrying trend. In fact, usage has been stagnant since the 1980s, mostly caused by the increasing public awareness and efficiency measurements of the importance of water and how to conserve the limited freshwater supply. However, there is always a chance that population growth will continue happen in the future and it is very likely that there will not be enough water left to meet global demand. It is predicted that today's world population of 7 billion people will increase to 9.6 billion in 2050, so it is best not to take risks.

There are many possible ways of how new technology affects the water supply. Finding ways to remove salt content from sea water or implementing water recycling are the most logical technology advancements that may be implemented on larger scales than currently; among other possible technologies that are yet to come.

How the World Bank is Redefining Disaster Risk

On March 24, 2015, the World Bank issued an important announcement related to eligible instruments menu of disaster risk management with their clients. The new eligible instruments menu expands the previous definition of disaster risks to a wider coverage. Now it includes epidemics, pandemics, mortality, longevity, and morbidity, while it used to be only geological and meteorological events coverage.

The instruments also expanded to include mechanisms, such as insurance and re-insurance contracts, and cover some other similar contracts. This is a reason why the World Bank plays significant role in developing the market. Today, disaster risk transfer coverage is worth $1.4 billion. A large proportion of this comes from 18 transactions alone. Judging by the situation, of course, by cooperating with the World Bank, clients will acquire more benefits. They can manage the financial impact natural disasters by raising private sector risk capital. Clients will also have access to technical expertise from the World Bank to gain convening power. Intermediation is also one of World Bank's supporting services in delivering protection to its client countries against the credit risk of its counterparty—usually a private sector entity. All of those benefits are available to eligible clients, including their countries and sub national entities, as well as their organizations—both regional and international organizations.

New UN Report: Is Mother Nature Being Unfair to Some Countries?

Based on the newest report of the Assessment Global Report on Disaster Risk Reduction (GAR), around 42 million people lost their lives annually as a result of disasters occurring between 1980 and 2012, while the economic losses due to disasters are almost US$250 billion a year, on average. For revitalizing the environment after the disasters, it costs US$314 billion a year. If disaster risk were shared evenly among all world populations, the losses would be US$70 for each working age individual.

Regardless, there is an inequality when it comes to disaster risk, as emphasized by the newest UN report. Some countries are tougher in facing disasters and they have more money to deal with the disasters better. As Andrew Maskrey, the lead researcher of the GAR stated, that those who live in Denmark are not the same as those who live in Mauritania.

As much as 80% of disaster victims who lost their lives were from low and middle-income countries.

> "There is an inequality when it comes to disaster risk as emphasized on the newest UN report."

The worst is that annual economic losses of low-income countries are five times higher compared to high-income countries. Low-income households tend to live in the areas where the social protection and infrastructure are non-existent or not sufficient. Due to those glaring facts, the GAR is expected to pay more attention to the inequalities both within the countries and the towns.

According to Mark Walport, UK Chief Government Scientific Advisor, the key to reducing disaster risk is preventing the problems. In this case, the preventive actions are not about how to stop Mother Nature working the way it does, such as stopping hurricanes from hitting certain areas, but to prevent any kind of damages as a result of the disasters. Even avoiding human-caused disasters, such as global warming, is a positive approach to alleviate disaster risks.

Asia Pacific is the most prone region to natural disaster risk

How have natural disasters affected the Asia Pacific region?

More Than 50% of world's natural disasters occurred in 2014

$59,6 Billion economic losses in 2014

80 Million people impacted in 2014

88% Of people affected by natural disasters worldwide between 1970-2014

Source: United Nations Economic and Social Commission for Asia and the Pacific

Source: United Nations Economic and Social Commission for Asia and the Pacific

In loving memories of
Krishnan Rajendran.
A teacher, a companion, a friend.

GROWING DEMAND FOR ENTERPRISE RISK MANAGEMENT PROFESSIONALS

Enterprise Risk Management is becoming established as part of the management of organizations covering the methods and processes used by firms to identify, monitor, evaluate, and manage risks within their business. It also offers competitive advantage to firms practicing it by enabling them to manage not just their capital, but their entire business, more effectively.

Risk management consulting has become a growth industry over the past three to four years, with billions of dollars in consulting revenue. And, the industry is growing daily. These growing industries range from energy to banking and financial services, to securities and asset management, and to any firm that is exposed to the vagaries of risk.

ERM positions are available at all levels of a firm, be it the back office or the middle levels or the senior levels. With the ERM consulting industry taking a growth path, positions are also available as consultants. To occupy these positions, ERM professionals not only need to possess strong functional skills, but they must also possess strong personal, interpersonal and business skills in order to play a value added role in the organization. Toward this end ERM certification programs are being offered to professional who wish to make a career working in this field.

For ERM professionals, certification can help provide a clear, motivating path for career growth, as well as equip them with a set of credentials that will be recognized and accepted globally. Certification also provides them with membership in a community of peers that share the same skills and background, values and standards within the profession.

GLOBAL AGENDA TO CURE DISASTER RISK

Recently, the levels of disaster risk are quite disturbing, not to mention the damage it causes to residential and commercial buildings around the globe. The cost to remedy the damages is $314 billion each year on average and 85% of the cost is borne by the private sector. Meanwhile, a new report from United Nations revealed that the reduction of annual investments in disaster risk as much as $6 billion causes in savings of around $360 billion.

Many business executives who recognize the drastic costs and the potential benefits have attended a UN conference on disaster-risk reduction that held in the Tohoku region, Sendai, Japan, back in March 2015. When the previous conference was held a decade ago, the private sector was hardly represented. The place where the UN conference was held serves as a reminder of how the effect of economic disaster is very alarming. When, four years ago, Japan was hit by the Great East Japan Earthquake and tsunami, the production of automobiles was cut by almost half at a time when the country was also facing a challenging economic situation. Japanese automobile production also fell in India (70%), China (50%), and Thailand (20%) due to the Great East Japan Earthquake and tsunami in 2011.

If companies are able to manage global risks properly, there are great rewards awaiting them. Many major companies, including AXA Group, AECOM, IBM, Swiss Re, AbzeSolar, etc, believe that working with UN experts can improve global strategies when it comes to disaster risk reduction and management.

There are three reasons why this conference was important for companies. The first reason is the need to plan disaster risk reduction; the second reason is investment in this subject improves both climate action and sustainable development; the third reason is the need to help those who are vulnerable to any kinds of disasters. The third reason can be a foundation to establish universal targets when it comes to climate change and development.

For more than a year, the improvement of evacuation plans, weather forecasting, and early-warning systems had saved thousands of people in India, the Philippines, and other disaster-hit areas. To achieve the progress alike in disaster awareness, the improvement of risk reduction and business investments are needed. Taking wise choices is also in order for creating bigger opportunities in the future. In addition, if government, business, and civil society decide to work together to help those who become the victims of disasters, it means they save lives, build up the stability and opportunities that can improve the conditions of the people and markets.

Besides the conference in Sendai, there are other international gatherings this year to discuss many global issues. In July, world leaders are going to attend a conference in Addis Ababa to discuss financial development, while Paris will become the place to discuss the climate change agreement later in December.

"The improvement of early-warning systems had saved thousands of people in disaster areas."

HOW SHOULD GOVERNMENT AND BUSINESSES TEAM UP TOWARD CLIMATE CHANGE?

> "Companies and governments should avoid actions that will only waste time, effort, and money."

The climate change issue is getting real and it is not just about environmental issues. Every life sector will be damaged by climate change and, of course, the business sector will also be impacted. As a response, several companies are starting to calculate how far climate change would affect their businesses and plan a strategy to cope with it. For example, Unilever in 2011 stated that extreme weather has caused them US$210 million worth of damage; Asda claimed that climate change is putting US$390 million at risk; Utility Anglian Water launched a campaign program to save water and develop their own renewable energy; and Thames Water has planned an investment plan by developing a risk assessment process to provide resilience to flood risk and the other natural disasters. Those companies are being proactive because of the great risk they are exposed to.

According to the University of Cambridge Institute for Sustainability Leadership (CISL), climate change is threatening businesses in several ways, such as rising temperatures, rising sea levels, changes in rain patterns, melting glaciers, acidifying oceans, energy supply, and much more. The first step for businesses to get prepared is insurance. CISL works with 30 major insurance companies to avoid the economy turbulence caused by climate change. Investment does have a good return; by taking real action many are advantaged both commercially and socially. The 2014 New Climate Economy report, , released by The Global Commission on the Economy and Climate also estimated that between 50%-90% of the actions required have real benefits that would balance their costs.

Therefore, companies in all industries from all over the world need to work together in combating the climate change and extreme weather issues by responding and managing the risks because this is not just about business risks, but also the earth that we live in. The companies will surely need government assistance; they are highly anticipating the UN climate talks in Paris next December, where there will be discussion about the international situation for investors and businesses based on the future conditions they will be investing into. Previously in Copenhagen 2009, the talk did not generate clear results about a low carbon future. Since businesses require certainty, stability, and direction to plan ahead, a legally binding international agreement on climate change is perhaps the only way to prevent the meltdown and chaos caused by climate change.

According to Eliot Whittington, the deputy director of University of Cambridge, companies should be aware about how they will influence government policies in order to make fair corporate commitments for climate change preparation. Companies and governments should avoid the uncoordinated, inconsistent, and ineffective actions that will only waste everybody's time, effort, and money. Climate change is not about the responsibility of an individual or certain organization; every single action does matter, however: supported by a wide range of sectors, progressive business voices and actions are even stronger and louder.

On the bright side, climate change impacts create other opportunities and markets. Many environmentally friendly companies have been born, huge commercial returns have been gained from energy efficiency efforts such as LED lighting, alternative energy sources, smart electricity metering, and much more.

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Marc Weinberg
SVP Operation and Technology Risk Management Global Strategy of Citigroup

Enterprise Risk Management is now linked to company performance more than ever. An enterprise-wide and thorough risk management process will not only protect a company from whatever threats it is facing, but it can also create a unique competitive advantage to conquer the faced risk and find and optimise opportunities in an uncertain world.

A certified risk professional will help organizations in ensuring that the ERM policies and practices are implemented in the organization in an effective and efficient manner.

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