

## **Blue Sustainable Sky**

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Today is Wednesday, the 8<sup>th</sup> of May, 2030. I look at my watch; it's almost 1.30 in the afternoon - time to start walking back to the lecture halls. I exhale. Lunch is never long enough. My next class is Environmental Resource Management. I'm an undergraduate student at Universiti Sains Malaysia and my major is in Food Engineering. As a result of the new policies that were set by the Ministry of Higher Education 6 years ago, all courses offered at public and private universities around the country must incorporate sustainability themed or related topics as a minor or core subject regardless of the students' major. Mine is Environmental Resource Management. It's very interesting really - we learn about resource management and utilization, the necessity of conserving our natural resources and about land use which include topics like insecticide use, cash crops, water cycles, agricultural welfare and so on. This course is being taught by Prof. Holst, a visiting professor from the University of Humboldt, Germany. The class though, will be held at the 'video conference' education hall. The reason for this is as a result of the oil crisis, by which I mean depletion and the high taxation now placed on airplane fuel (almost 400%), visiting professors now no longer actually 'visit' but hold 'video-conference based distance education' classes from their countries of origin. Students are given the course outline beforehand and can communicate with their instructors via the video conferencing sessions.

Realizing that I was running a little late I rushed into class - only to bump into Anna drinking her bottled grape juice and in doing so, cause her to spill purple juice on her shirt. As I start apologizing to her, she smiles and says that similar to me, she is wearing a 'samelia' shirt and that stains wash off easily. As she walks away, I think about what she has just said; almost all students these days seem to be wearing 'samelia' clothes. A Vietnamese invention that was publicized in 2010 and made from the fibers of the 'samelia' plant, the 'samelia attire' phenomenon has become global in nature within 20 years with retail and even high end companies mass producing 'samelia attire'.

The use of the 'samelia' plant for clothing purposes had been discovered hundreds of years earlier and was part of the 'local knowledge' of the indigenous people of Vietnam but was not publicized until much later. The material feels like a cross between silk and cotton and because it is a naturally soft material, there is no need for the use of fabric softeners. Furthermore the material is also naturally fungus and bacteria resistant and because the 'samelia' plant releases nitrogen via its roots into the ground and grows so quickly, it improves soil quality and prevents erosion which has further increased its popularity. 'Samelia' plantations have now replaced cotton as cash crops and once harvested, still leave the soil in fertile condition to enable the growing of other crops.

As we sit in class waiting for the video conference to start, I get a little hungry and start eating the egg sandwich I made myself earlier. Like almost every other food item available today, my sandwich contains ingredients that are genetically modified or GM. When my parents were university students, GM foods had already started appearing on supermarket shelves and back then there were many opposed to it, primarily because people back then thought that the mixing of genes was unethical and a threat to biodiversity integrity. Opponents also argued that the technology was hardly being utilized for the benefit of the technologically disadvantaged Third World countries and was just churning out unnecessary 'luxury' products for the Western market. Today however, due to the passing of laws prohibiting the mixing between animal and plant genes in GM products (thus safeguarding religious requirements) as well as agreements by companies conducting GM research to contribute 50% of their research to addressing the alleviation of marginal agriculture in the Third World thus contributing to the fight against world hunger, the GM phenomenon has become fairly widespread and a lot more acceptable. True to their word, GM companies have consistently been contributing half of all GM research and output to dealing with the mitigation of world hunger issues. I had read in an edition of Time magazine yesterday that hunger issues has significantly decreased as the number of people worldwide who were malnourished fell from the 1 billion 20 years ago to 350 million today – with steady decreases in world hunger being continuously reported.

Prof. Holst commences his video conference and the class goes on for approximately an hour. While Prof. Holst was concluding his video conferencing class I receive a call on my 'volumetric wrist-cell' - better known as the VMC. It was Siaw Akrittok. Toki (as I call her) is an Inuit girl and also my best friend who lives in Canada's Yukon province. Her name Akrittok means 'mother goddess of childbirth' in the Inuit language and I met her at a cultural diversity celebration in Vancouver last year while I was there on an

exchange program. I would not usually answer a call in the middle of class but seeing as Toki was calling from so far away I quickly left the lecture hall and went outside to take the call but the vibrating stopped as soon as I stepped out. Knowing that she will call again I decided to wait outside the lecture hall. I glanced at the VMC. The device was invented by a Malaysian company a few years ago and while basically just a cell phone it is revolutionarily different in its ability to project a holographic volumetric display of the caller when she or he calls. Basically meaning, that the receiver could receive a call from anywhere – local or global and watch the caller in ‘real time’ projected from a microscopic projector fixed on the unit. While I was contemplating how technology has truly revolutionized world communication, Toki calls again. After exchanging greetings and asking the other how they were doing, Toki tells me her reason for calling.

Breathless with excitement she tells me about how the Inuit people have decided to accept the agreement to cease all whaling activity following the availability of commercial whale meat grown from stem cells harvested from laboratory-cultivated whale eggs. The availability of commercial whale meat, she tells me, has revolutionized the way people view whaling. Although ‘cultivated’ whale meat has been available for some 10 years now, the Inuit were reluctant to give up their traditional way of life, citing that it was the activity of whaling itself that was of cultural significance. It comes as a breakthrough then, that Inuit cultures from across the Arctic regions came together yesterday, in what was a highly publicized meeting of Inuit elders to finally reach an agreement to end the practice. She tells me she is happy with the outcome of the meeting and that though there are opponents to the memorandum, the vast majority of Inuit people are in favor of it. I smile as I listen to her because I knew how much she opposed the practice. Countries that traditionally carried out whaling had ceased to conduct whaling following the availability of ‘cultivated’ whale meat and had signed an agreement 10 years ago to outlaw whaling in their respective countries but the Inuit were reluctant to ratify the agreement. I tell her that this is wonderful news and a real cause for celebration. Whaling is now finally, a thing of the past.

Promising to call her back as soon as I got home, I rushed back into class to find that Prof. Holst had already signed out and that class was over. Our assignment this week was for each of us to analyze articles obtained from the university’s archives that were written by students in the year 2010 (20 years ago) on their projection of what life and university education would be like in 2030. We were to analyze and compare how accurate and what differences there were between these projections and our lives as actual students in the

year 2030. After getting my copy of the article and gathering my things I head out to catch the 3.15 train back home. As I was making my way into the station, the NGV advertisement that hung at the entrance of the station caught my eye. It proudly proclaimed that all trains operating in Malaysia were now operating as Natural Gas Vehicles. All available motorized public transportation facilities in Malaysia such as trains, buses and even taxis have been required by law to switch to NGVs. NGV is also increasingly being utilized by private motorized vehicles in the country. Based on a study I read that was conducted by the Ministry of Transportation last year, 75% of private motorized vehicles in the country were now running on compressed natural gas (CNG). Once the obvious problems of fuel storage and delivery infrastructure were resolved, the switch to natural gas had seemed a natural step for Malaysia's environmentally concerned government. The fact that natural gas has the highest energy/carbon ratio of all existing fossil fuels thus minimizing carbon foot printing was an added incentive to endorse the switch.

The train arrives and I'm home by 3.45. Thinking that a nap might be useful before I attempt to read the article I flop into bed and set the alarm for 9 p.m. Approximately 5 hours later I wake up to the sound of my alarm buzzing. Deciding that I should start working on my assignment, I turn on the lights and reach for the article. I pause momentarily and look at the article in my hands – it was strange to imagine that 20 years ago a student just like me wrote this article. The name of the student is Aziz Damak Doost and his article was split up into 3 subtopics. They are i) What Would University Education be like in the Year 2030? ii) What Needs to Happen to make this Vision Come True? And iii) What will the Future look like in Actuality?

The article reads as follows:

#### "What Would University Education be like in the Year 2030?"

Education in the year 2030 will play a pivotal role in continuing to inculcate the importance of sustainable development in terms of personal and global development. All three areas of formal, non-formal and informal education would be addressed to enable comprehensive sustainability instruction.

As the ideology of sustainable development's importance and concepts are in tandem with the welfare of human development and the preservation of our natural resources, it is recognized in its pertinence of application across global communities. Academic institutions will thus consider it vital and relevant to incorporate elements of sustainability into

academia. Institutions of higher learning will revamp and perform major overhauls in the manner in which academia and their respective institutions devise and carry out their teaching practice. Consequently, the education of the sustainability generation will allow for not only a generation of sustainable graduates, but also a generation that is better equipped to ensure that sustainability practices form the core of their personal and work ethics.

In the area of formal education, sustainable development will not just be seen as a 'subject' to be incorporated whenever possible or convenient but will form the core of varying disciplines. Institutions of higher education will reorient existing courses to enable the incorporation of sustainability topics thus ensuring relevance between courses offered and the concept of sustainability. In an effort to ensure greater sustainability comprehensiveness, universities will also have executed wide-ranging analyses of offered courses and identified existing 'gap' areas in which sustainability disciplines and/or principles are integrated in the form of new courses. This then ensures that various degree programs offer a coherent treatment of selected thematic priorities in sustainability which guarantees sustainability relevancy.

Non-formal educational requirements will include workshops, in-service as well as community training with a main thrust in the sustainability agenda. This training will be paired with hands-on activities that are relevant to local communities such as water and sanitation, waste management, adequate nutrition, etc. and will be conducted in a consistent and sustainable manner. Such activities will also whenever possible, be carried out in cooperation with other institutions around the world on selected projects to ensure global relevance and an active and positive exchange of ideas. The factoring in of sustainability themes therefore, will form an integral part of trainings and workshops.

Informal education as the third integral component of the education system will include the availability of seminars, debates/discussions as well as the accessibility to resources such as sustainability pamphlets, brochures, newsletters and the mass media for instance student radio stations. The university community will therefore be exposed to these informal educational approaches and further allow the building of awareness on sustainability issues in the campus community. This would then permit sustainability to be the underlying focus of most media releases, seminars and light as well as chance education at universities.

The teaching of subjects as varied as medicine and art, engineering and farming, law and literature will all start with a solid foundation on sustainability. Thus when future graduates commence working life, they

embark on their respective professions with an understanding on the importance of integrating sustainability practices into their daily worklife. This is crucial, as an adequate understanding of the importance of sustainability and sustainable practices will influence the decisions they make as an architect, engineer, doctor, teacher or agriculturist.

In addition to the focus given to academia, as institutions of higher learning that impart sustainability education, universities will also undergo a process of 'corporate greening' with an active promotion of corporate greening at the institutional level thus addressing areas of importance such as policies, infrastructure, finances and staffing work ethics. The goal will be to improve the efficiency of corporate services and to 'green' corporate functions including utilities, logistics, etc, thus creating an institutional culture of sustainability.

### What Needs to Happen to Make This Vision Come True?

The path to a sustainable future lies in everyone's hands. The family unit, communities, corporate and academic institutions, policy makers and governments, stakeholders and countries all have to play a part in making a sustainable future a reality and not just a theoretical possibility.

As a species, Homo sapiens have evolved to focus on the immediate present. Our need to feed, clothe and find shelter has traditionally been the generator of our actions and decisions. The time has come however, for us to look ahead and consider the world that we are handing down to our progeny. We think of making quick profits at the expense of our environment. Rampant and unplanned deforestation for purposes of coal-production, grazing lands and timber; overfishing and marine degradation as well as marsh and marine land reclamation are among few of the unsustainable practices being carried out today. These activities can however be done in a sustainable manner, provided everyone is willing to play their part. It is imperative therefore that our production and consumption of goods and services as well as the consequent impact they have not exceed the carrying capacity of the environment. As with most initiatives, change has to start with society's way of thinking. It is vital therefore that societies are aware of the crucial importance of living sustainably.

Communities must realize that they can no longer just consume the world's resources indiscriminately without planning for the future. This brings us to a factor that goes hand-in-hand with societal intervention – education, or in the sustainability context, education for sustainable development (ESD). The best way to have people understand the magnitude of current

unsustainable living is to illustrate to them the extent to which unsustainable development has affected the world and the way it will affect the lives of their children and future generations. Because the current generation is unable to quite comprehend the severity of unsustainable development other than the odd news report on global warming and deforestation, they may not be able to gauge the importance of sustainable development.

Efforts must be made therefore, to educate societies on how an unsustainable world will directly affect them and future generations and of how there are alternate ways by which to attain progress and fulfill human needs. Extensive campaigns and educational materials should be made widely accessible to further the cause of sustainable development among members of society. Thus when a society is enlightened to the cause and able to envision a better, more sustainable future, they are then empowered and subsequently able to influence policy makers and stakeholders to move in the right direction – a sustainable direction. In the words of Kofi Annan, “Our biggest challenge in this new century is to take an idea that sounds abstract – sustainable development and turn it into reality for the world’s people.” Furthermore, because trade, poverty, the environment and development are all intrinsically linked, sustainable development can and should balance out the environment, the economy and the needs of the society; thus turning the rhetoric of sustainable development into practice.

Analysts say that the world’s current primary energy source - oil, will run out in the next 50 years or so. Corporate institutions and stakeholders must realize that it is in their best interest to help and play a part in the search for sustainable energy sources. Research on renewable energy requires funding and companies must be willing to finance such research not only for their own well-being, but the well-being of their consumers. This is where ‘company accountability’ comes in as well. Gone are the days when a company’s only motive was to make a quick buck. Companies today must be educated on the need to ‘give back’ to society; which is to say that their responsibility no longer lies in just generating income but also in ensuring the well-being of the communities they are located in. We are seeing a growing awareness of the importance of Corporate Social Responsibility (CSR) among these companies. They now realize that it is in their best interest to ‘give back’ to the well being of their society, a society that now chooses to take/do their businesses with corporations that are active players in the area of sustainability.

Corporations must also urgently address production challenges such as cleaner technologies, eco-design and efficiency and technology transfers

that will contribute to an improvement in materials as well as energy efficiency coupled with a minimization in waste. These goals are not impossible to attain. Substitutes to fossil fuel – collectively placed under the umbrella of 'alternative energies' are increasingly being utilized by countries around the world. And while the countries that utilize these alternate energies are sometimes also the biggest consumers of current resources, they are proof that alternative energy sources are a real solution to conventional fossil fuel use. Wind turbines, hydroelectric dams, geothermal power stations and tidal mills are all a few examples of how clean, renewable energy can be harnessed and utilized for industrial use; and while the preliminary cost of setting up these facilities may amount in the millions, the returns they yield in terms of 'free' energy and virtually minimal carbon output is surely worth the cost. The corporate sector therefore, has an important role to play in the area of industrial waste management as an extension of their responsibilities in order to contribute to the global efforts in sustainable development.

As a society becomes more proficient in sustainability matters and realizes the importance of the issue, they may be able to influence the policies in their home country via their policy makers. Policy makers could be the product of a voting system (lawmaker), a think tank or a business entity. As it is in their interest to maintain a favorable standing in the society they are located in, policy makers would be more willing to listen to the voice of their society– especially if that society projects a strong voice in favor of a particular issue, in this case, sustainable development. And because policy makers enable the setting up of policies which may in turn guide the outcome of a government's stand towards an issue, policy makers play a crucial role in the pursuit of sustainability development. Although policies are not the equivalent of laws, they nonetheless pave the way for desired outcomes thereby increasing the possibility that the policy's subject may be achieved. Given time, a policy may even shape up to become the law or a set of laws. In a society that is concerned with sustainable development as their form of growth, pressure from a majority in society may well influence the policy makers who will eventually introduce policies and subsequently laws that will safeguard sustainability efforts thus allowing for a society governed by the rules of sustainable development. Following which, companies and the corporate sector will have to reorient the way they conduct their businesses i.e. corporate greening. Policy makers may also make it more conducive for companies to 'go green' by providing incentives and subsidies as well as tax cuts for companies or institutions that have proven to cut down on their carbon emissions and 'gone green'.

As societies are increasingly exposed to their crucial role in the path to sustainability, they are able to pressure their policy makers and governments into adopting and implementing 'greener' ways of not only running corporations, but countries as well. Foreign and local policies are changing in tandem with the Millennium Development Goals (MDGs) as set by the United Nations. In short, although the role of education, society, stakeholders and policy makers are all quite separate, their combined contribution is quite necessary in achieving the goal of sustainability. In addition to this, a close degree of cooperation is essential to ensure the feasibility of these endeavors given that these sectors are mutually enforcing. The challenge of incorporating sustainable development into these areas therefore, is a challenge that faces individuals and sectors from a diverse spectrum of backgrounds.

### What Will the Future Look Like in Actuality?

The world today is on a path towards a sustainable future. The sustainability movement is increasingly gaining momentum and it is quite evident today that more and more large multinational corporations, universities as well as governments from countries around the world are beginning to see the necessity of going 'green' and of utilizing their resources wisely while simultaneously attempting to run their institutions in a more sustainable manner. Institutions of education; elementary, secondary or tertiary – particularly tertiary, have by way of their administrative staff recognized the importance and relevance of educating their students on the aspect of sustainability and are increasingly implementing sustainability themes into their syllabus. Traditional courses such as Masters in Business Administration (MBA), Management as well as Journalism are now being offered with specializations such as an MBA in Sustainable Development, Natural Resource Management and Environmental Journalism. This is confirmation that universities are aware that in order to remain relevant and in order to produce graduates with the 'know-how' in sustainability, they will need to reorient and revamp the courses being offered at their institutions. The changes made to courses and the university syllabus will thus be a positive one - as is the principle of sustainability itself, therefore allowing for the integration of sustainability into virtually any academic discipline or field and producing graduates in engineering, medicine, technological industry, business and many other diverse areas with a keen perception of sustainability practices and principles and its application in their respective areas of expertise.

From the aspect of university administration, universities in the probable future will have developed a realization that the inclusion of the sustainability factor is fundamental to the integrity, relativity and success of their institutions. This being said, while certain universities have for a substantial number of years recognized the necessity of active participation in the field of sustainable development, a large number of universities around the world have only just started in recent years, to recognize and incorporate sustainability into their decision-making processes. They have started to form memorandums and outreach programs with other institutions of higher learning that already have an existing platform for sustainability and are tapping into the resources these established universities provide. This action of 'capacity-building' between sustainability-established universities and 'learning' universities is accomplished in the form of technical cooperation and outsourcing of academic programs and materials. In years to come, this exchange of capacities will prove integral as universities that are attempting to become sustainability universities are given an opportunity to build up the expertise and aptitude they need that are essential to enable a university to gain proficiency in the area of sustainability thus producing university graduates that are well-versed in the language of sustainability and its practices. This is the direction that more and more universities will be seen taking in the future as sustainability becomes the only way for civilization to continue moving forward. Taking into consideration the thrust of sustainability being adopted today, this may very well be the model of academia development that institutions of higher learning across the world incorporate as common practice.

As a university is also considered a public institution, its engagement with the community it is located in is also of paramount importance. Therefore a sustainability university in the future will also be responsible to connect with its community in the sustainability effort. They will play key functions in evaluating government policies and development projects to gauge their level of sustainability while working closely with their governments in order to promote sustainability policies and projects therefore forming an integral part of government policy making. By providing such technical services in the areas of multilateral agreements and negotiations, universities of the future will build a reputation as key sustainability players in both their local and central governments. Additionally, future sustainability universities will enter partnerships with Non-Governmental Organizations (NGOs) in order to establish their roles in actively promoting the sustainability cause at the community level thus strengthening networks and enhancing the effectiveness of sustainability projects carried out at the community level.

In conclusion, I think that sustainability will affect virtually every aspect of student life in the year 2030. From the food they eat to the clothes they wear. From the way education is conducted to the way they travel. Forming an integral part of their everyday existence, sustainability will be a part of the very fabric of student, familial, societal, communal, national and international life. There will be great strides made in the alleviation of the world's problems. Hunger and malnutrition will be a thing of the past with the advancement of new technologies in the food producing industry. With this advancement, central goals as highlighted in the MDGs such as Infant Mortality, Maternal Health, Poverty and Hunger, Environmental Sustainability, etc. will all be addressed accordingly. University students will be students of a different caliber. They will be agents of change, knowledgeable in the area of sustainability and capable of influencing not only the policies of their workplace, but as future leaders - the policies of the nation; all for the noble cause of flying the flag of sustainability and creating a world that is respectful of its resources and its inhabitants."

As I finish the article I muse on whether Aziz Damak Doost knew at the time just how accurate his prediction of a sustainable future was going to be. I wondered where he was and what he was doing at the moment, and how happy he must feel to see that the world has made great strides in the area of sustainability. I take a deep breath and walk to my window to get some fresh air. It's 10 p.m. and I find myself wondering about our earth - its myriad ecosystems, civilizations both past and present and everything in between. When you sit back and think about it, everything that has ever happened, all our great civilizations and scientific achievements, all our mighty monuments and grand structures and perhaps on a personal level, all our happiness and grief and the everyday things we take for granted, all happens in one place - earth. As a species capable of manipulating our surroundings and its resources, we have done so, albeit in a historically unsustainable way. Perhaps our ancestors did not concern themselves with issues such as sustainable land or water use or with the conservation of our planet; perhaps they just did not know any better. Whatever the reason, the responsibility now lies with us and we have to take up this responsibility not because we do not have a choice; but on the contrary, because we do. We now know better and have an opportunity to change the course of humanity and the world we inhabit. Hopefully, one day, as future generations go about their human endeavors, creating great future civilizations that will one day replace ours and building a legacy for their own progeny, that they will do so - under a blue, sustainable sky.

