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environment edition

CAN WE GROW OUT OF IT ?

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a publication dedicated to social responsibility in the Arab world

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CARBON NEUTRAL
INITIATIVE

Naturally, en.v is going carbon neutral.
We are among the first in the region to do so in our respective field.

It is the only logical step forward for us. After all, we are a group of people who are committed to the environment, always finding creative and efficient ways to reduce our energy use, reuse valuable natural resources, and recycle all kinds of materials, both in and out of the office.

We realize, however, that until technologies can become 'zero carbon', we will always have emissions we cannot reduce. That is why it is now time for us to offset our emissions.

We will do this by investing in carbon mitigation strategies, energy efficiency and renewable energy.

We recognize that climate change is a serious threat to our world. It is our duty, as members of the corporate community, to take responsibility for our impact upon the planet. That is why we have teamed up with a local environmental consultancy in Kuwait to measure, decrease and offset our carbon emissions.

REDUCE REUSE RECYCLE

TREE OF HOPE

The Tree of Hope is dedicated to organizations and individuals who support en.v as we embark on a thought-provoking journey. Log on to envearth.com and download our mediakit to learn more about how you can support en.v's initiatives.

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SIHAM NUSEIBEH

Contributing Editor

Siham earned her undergraduate degree in political journalism from Boston University and a Master of Science in Development Studies from the London School of Economics. Her passion for the environmental cause began with the realization that it is the destitue of the world who are made to suffer due to the wasteful consumerism of the developed world; and that it is these poorest of the poor who must pay the highest price for such extravagances.

HUSSAH AL TAMIMI

Content Coordinator

Hussah Al Tamimi works in Kuwait at the National Council of Culture, Arts, and Letters as a research assistant for the Alam al Marifah book series. In 2006, Hussah earned a Bachelor of Arts in Philosophy and Religion from Boston University. She has always wondered on how one should treat the environment: Should it be a priority, or does it come second to human needs? In the summer of 2007, she discovered the answer while trekking in the Marrakesh Mountains. She littered and karma hit her hard. She fell twice on the way back down, and now knows that she should wait to find a garbage can to get rid of her trash.

SARAH SCHMIDHOFER

Contributor

Sarah Schmidhofer is an aspiring doctor from Pittsburgh, Pennsylvania. She attended the University of California at Berkeley, studying cognitive science (the brain) and discovering the joys of fresh produce. She just finished Columbia University's Post-Baccalaureate pre-Medical program, studying basic science and environmental issues. She continues to live in New York City, currently applying to medical schools. She has been dedicated to the environment since the tender age of 9, when she became a vegetarian and taught her family to recycle.

MINDY SCHULTE

Contributor

Mindy Schulte is a radio producer, environmental educator and web designer. A graduate of the University of California at Berkeley, she is currently pursuing a master's degree in communication at San Francisco State University. Her current projects range from teaching broadcasting workshops for youth with the California-based Teen Environmental Media Network to contributing to radio series including On The Green and the Environmental News Network in the U.S. She is currently attempting to plan her own sustainable wedding (no easy feat!).

SAHAR AL-NASRALLAH

Contributor

Sahar is an Environmental Policy Advisor for National Projects Holding Company. She was part of the "Save the Whales" and "Plant a Tree" clubs as a child, and this passion led her to pursue a degree in Environmental Studies and Public Policy from the University of Colorado in Boulder. She earned a master's degree in Public Administration in Environmental Science and Policy from Columbia University. During that year she co-wrote a report for the United Nations Division for Sustainable Development on the"Progress toward Developing Sustainability Criteria for the Clean Development Mechanism".

Zahed Sultan in Sardegna, Italy.

Dear Reader,

The dust is subsiding and unbearable heat is penetrating into every facet of our lives.

Though temporary, it's during these summer months that we learn to adapt to dramatic changes in climate. What would happen though if these months became extensive and unpredictable?

The world around us is changing. Cities are becoming more condensed and overpopulated. This congestion has equated to greater demands in housing, commercial facilities, commodities and value-add services. On the one hand, opportunities may be arising; on the other, our natural resources continue to be strained and stretched to meet these demands.

In this, our second issue, we tackle the complexities of living in harmony with our natural environment and with the notion of leading a sustainable life.

As we strive to instill a greater sense of social responsibility, and fulfill our role as an eco-conscious organization, it gives me great pleasure to announce that El Boutique Creative Group (our parent company) as well as The en.v Initiative are officially going carbon neutral – the first of local companies in the region to do so in their respective fields.

In so doing, we pledge to review all our corporate operations that are harmful to the environment and do our best to reduce, reuse and recycle. Given the unavoidable obstacles to maintaining a wholly sustainable organization, any damage that we may inflict on the environment will be offset by investing in carbon neutral projects.

On a personal level, I'm excited about the interest being generated by organizations and individuals around the GCC. I am also thrilled by the opportunities we've been presented with to further our objectives and raise awareness. Having signed over 40 distribution agreements with educational establishments and corporations, along with a strong GCC retail presence, we grow confident that people are starting to take notice.

Our commitment to this cause is ever fueled by you, the reader. Thank you for your continued support.

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It seems as though everybody is jumping blindfolded on the recycling bandwagon.

The Argument Against Recycling

Abdulaziz Al Humaidhi

I am quite sure that the majority of those advocating green thinking, eco-conservatism and environmentalism have never stopped to truly understand the implications of some of their actions. Those being that recycling waste – for building or other activities – in fact uses double the energy consumption, and consequently causes twice the pollution of traditional production methods.

Recycling most materials – especially those with energy intensive production methods normally associated with the construction industry – creates as much waste and byproducts as using and producing the initial raw materials. One has to truly understand and scrutinize the chain of events involved in recycling and not only, as the libertarian economist Murray Rothbard put it, "the perceived benefit one receives from performing an action, even if that action leads to an economic loss." Every step in the process of recycling from sorting and binning to transporting and manufacturing the end product involves energy, chemicals, and time – all of which represent an apparent redundancy in processes and expenditure for the sake of self-satisfaction.

Statist do-gooders and obsessive conservationists are the only true benefactors of this process after forcing the cost of recycling onto unsuspecting masses by 'selling recycling as a pseudo-spiritual activity'. Financially, the cost of recycling exceeds its benefits, and thus recycling from a market economy standpoint does not return a financial profit.

Conservationist thinking, on the other hand, postulates the notion of recycling as a solution to waste and landfill problems. However, a close inspection of waste resources and landfill statistics would reveal the opposite. Landfills are not overflowing; and in fact despite many potential landfill spaces, the number of landfills with incoming trash is shrinking. Over the past 10 years, more than half of the 18,500 municipal solid waste landfills in the US that existed in 1979 have closed. Further, once lined and covered, a landfill is not permanently unusable. Parks, golf courses and buildings adorn the surface of some covered landfills. Properly sited and operated, landfills pose little threat either to human health, or to the environment. In fact, a landfill containing the next 1,000 years' worth of the US's garbage would occupy less than one-tenth of 1% of land.
If landfills were filling up and space was harder to come by, then the cost of dumping waste would go up – economically speaking. Only then would recycling cost and incentive be more logical and driven by entrepreneurial calculations, which it has so far not been.
Paper waste recycling is also a time-and energy-intensive procedure. Almost 90% of paper comes from renewable forests, and to say we will someday run out of trees is the same as saying we will some day run out of corn. The US, for example, grows 22 million acres of new forest each year, and harvests 15 million acres for a net annual gain of seven million acres. The United States has almost four times more forested land today, than it did 80 years ago!
The argument that a greener economy, community or even building is the best environmental option is an irrelevant one. This is because environmentally, no building is better than any building. Green building is only slightly less bad; and any sort of building will always consume energy and resources. Following this logic, humanity would have to halt any building activity; and for us, as consumers and producers, it would be better if we didn't do anything at all. This line of reasoning suggests, as one writer once humorously put it,"that it would be best of all, in those terms, if I stopped breathing right now".

So what is the answer? Perhaps the merits of re-usage have been. Reducing and re-using involves no true tangible investment in resources and energy; and thus, becomes a real profitable investment in our market economy. Although the level at which re-usage strategies are being engaged and researched may still be modest, it would be more prudent to invest the money and resources wasted on recycling into this innovative research. This will enable the creation of productive re-usage and reduction strategies, which can create new guidelines for conservation of scarce materials within increasingly efficient production processes. From my examination of this line of reasoning, I've reached an interesting corollary:

Environmentalism is not compatible with humanism. *en.v*

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Pocketbook

BIOLOGICAL DIVERSITY

Variability among living organisms from all sources including: terrestrial, marine and other aquatic ecosystems; and the ecological complexes of which they are a part.

SUSTAINABILITY

The ability of a society, ecosystem, or any such ongoing system to continue functioning into the indefinite future without being forced into decline through exhaustion of key natural resources.

ECOLOGICAL LITERACY

The realization and knowledge that all human activities have consequences for the larger ecosystem; and a sense of wonder and respect for life.

ENVIRONMENTAL REFUGEES

People who are globally displaced because of rising sea levels, desertification, dried up aquifers, weather-induced flooding and other serious environmental changes.

CORPORATE ENVIRONMENTAL RESPONSIBILITY (CER)

The duty of a company to cover the adverse environmental implications of its operations, products and facilities through various mechanisms including: the elimination of waste and emissions, and the minimization of practices that might adversely affect a nation's natural resources for future generations.

CARBON SEQUESTRATION

The long-term storage of carbon dioxide in forests, soils and oceans or underground in depleted oil and gas reservoirs.

ENVIRONMENTAL TERRORISM

The unlawful destruction of resources in order to deprive others of its use.

1

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2

3

IF THE POPULATION OF CHINA WALKED PAST YOU, IN A SINGLE FILE, THE LINE WOULD NEVER END BECAUSE OF THE RATE OF REPRODUCTION!

ONE CAN ONLY IMAGINE THE AMOUNT OF GARBAGE PRODUCED BY THIS VAST POPULATION.

4

THIS GARBAGE WOULD INCLUDE 5 MOBILES; WHICH MEANS A TOTAL OF 130 MILLION MOBILES ARE ADDED TO THE WASTE STREAM EACH YEAR.

5

WHAT'S MORE, FOR EVERY 100 KILOGRAMS OF PRODUCTS MANUFACTURED IN THE UNITED STATES, 3,200 KILOGRAMS OF WASTE IS CREATED.

6

7

RECYCLING IS NOT SUCH A BAD OPTION, CONSIDERING THAT RECYCLING JUST 1 ALUMINUM CAN SAVES ENOUGH ENERGY TO POWER A TV SET FOR 3 HOURS!

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8

9

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10

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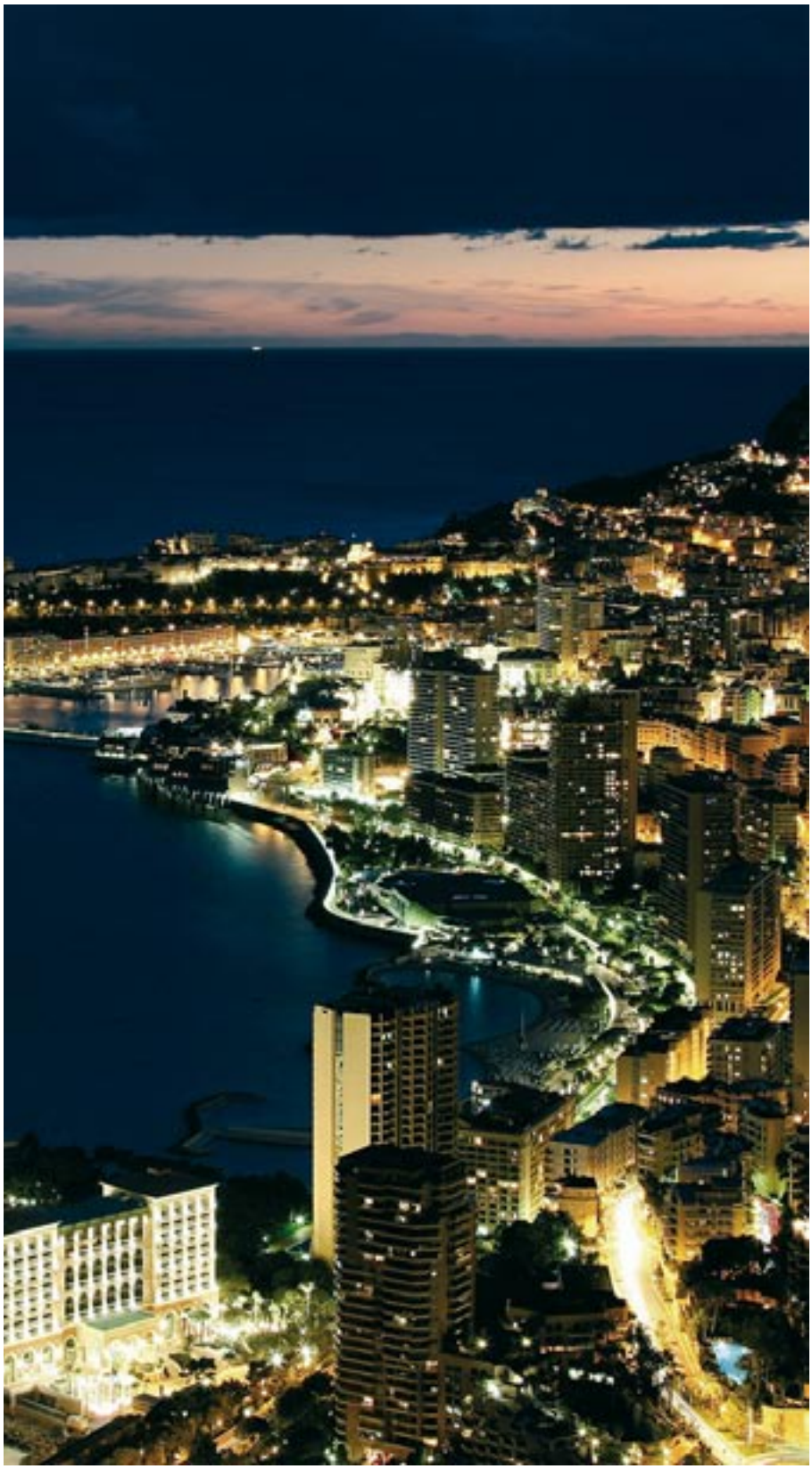

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The Stars Are Green

Wilderness Guide

Veteran actor Robert Redford has been working with the United States' Natural Resources Defense Council to save the environment for over 30 years. He has worked to protect wilderness areas near his home in Utah, U.S.A. and promoted the use of solar energy. He also used his celebrity clout to cozy up to politicians to bring attention to climate change. His internationally-renowned Sundance Film Festival promotes up-and-coming eco-indie filmmakers and projects, such as the "Green Porno" series featuring Isabelli Rossalini. Most recently, he has dedicated three hours of weekly programming on his Sundance cable television station to environmental programming.

International Eco-icon

Major Bollywood star and Indian film industry icon, Amitabh Bachchan, worked to launch a partnership between Global Cool and the International Indian Film Academy (IIFA). Partnering with fellow silver screeners including actress Sienna Miller, Bachchan is asking the film industry to begin taking simple steps toward a greener future. Bachchan and the IIFA hope to become a vehicle for bringing environmental awareness to India through Global Cool, a UK-based nonprofit organization that helps individuals reduce their carbon footprints. The goal of this venture is to use film to create awareness about climate change.

Serious Tree-hugger

Actress and passionate environmentalist, Darryl Hannah, takes her green thumb seriously. In 2007, she was arrested for a three-week-long tree sit-in, in which she lived in a tree 24 hours a day in an attempt to save a California community garden. She also drives a biodiesel car and powers her mountain home with solar energy. Her website (www.dhlovelife.com) promotes green living with tips and online eco-products including everyday essentials like reusable kitchenware; along with green wish-list items like hemp guitars. Hannah even keeps a video blog on the site with eco-news updates from around the world.

Bringing Green Home

While not all Hollywood scenesters are using their celebrity to create international campaigns, many are still finding ways to gain a foothold in the green scene while dashing about town. Actress Cate Blanchett, Seinfeld TV star Julia Louis Dreyfuss and funny man Will Ferrell all reside in eco-homes. While Cameron Diaz does her part by driving hybrid cars through the hills of Hollywood, actors and directors Tom Hanks and George Clooney have stepped up their green power with fully electric rides. And when Sheryl Crow's biodiesel tour bus needs a refill, the songbird need look no further than fellow crooner and long-time environmental activist Willie Nelson's BioWillie brand of earth-friendly fuel.

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Arab Forum
For Environment and Development (AFED)

Siham Nuseibeh

A Bedouin Ten

The Arab Environment Is Lagging it has simply not been up to par with global standards. While there has been an abundance of environmental institutional measures, laws, and treaties enacted and signed; there has, nonetheless, been a dearth in adequate implementation strategies. This deficiency has been the result of poor human resources and insufficient budgets. It is not, therefore, the case that the region lacks eco-awareness; but that it has been riddled with initiatives that often fall short of their intended objectives.

On June 17, 2006, however, a new plan of action was declared with the creation of the Arab Forum for Environment and Development (AFED). AFED is the result of a regional conference organized by Al-Bia Wal-Tanmia (Environment and Development) magazine in Beirut. What started as an unofficial gathering of the publication's readers in 2001, developed into an Arab-wide organization where experts, civil society, the private sector and the media came together to endorse good environmental policies.

"AFED is not an official organization, it is not a government organization, nor is it an NGO as such in the classical meaning," explains Najib Saab, editor-in-chief of Al-Bia Wal-Tanmia magazine and secretary general of the Forum, during an interview with *en.v.*

"AFED is meant to affect the policies of official environmental organizations as well as civil society (NGOs), the media and research centers in a positive way to help them to perform better.

The unique thing about AFED is that it groups all stakeholders on the environmental arena – all those who should be part of the solution, not a part of the problem," continues Saab. "So we have researchers, environmental experts, research institutions along with corporations who are willing to do good for the environment.

Government institutions can join, but as observers. They cannot vote – they can discuss, but cannot vote," he reiterates. "They cannot affect our policies, but they can hear our views – this structure is unique in this regard."

At the official level, an institution comparable to AFED would be the Council of Arab Ministers Responsible for the Environment (CAMRE). This body belongs to the League of Arab States and was established in 1987 with the support of the United Nations Environment Programme (UNEP). CAMRE, however, started operating without setting a budget until they finally agreed, with some prodding, that one was needed.

"The agreed upon budget was $5,000, which each country was to contribute annually. However, most countries do not pay this; so the organization works de facto without a proper budget," explains Saab. "They meet once a year, they produce ideas; but if you cannot force a budget, you cannot force any implementation."

AFED's financing relies on its membership fees – while also accepting contributions from institutions. Membership fees vary; while a corporation will certainly pay a higher fee, an NGO will not

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be expected to match the same amount. In addition, AFED is in the process of forming a trust fund so that they can ensure continuity in their work. This will enable NGOs that cannot afford conference fees to participate regardless of their financial constraints.

"Membership fees are important to feel ownership – they should feel they are a part of it," explains Saab. "This is very important in many Arab NGOs since, in most cases, members don't pay a membership fee. I can't imagine how an NGO can operate if it lives on contributions from the government. How can they oppose any plan from the government when their budget comes from the government?"

AFED's main output is a series of periodical reports that will address the state of the environment in the Arab world in order to monitor environmental endeavors and set benchmarks. The first report, Arab Environment: Future Challenges, will be presented at the organization's first annual assembly in October. The report tries to answer five main questions: What is happening to the environment? Why is it happening? Why is it significant? What is being done about it?; and: Is this sustainable?

AFED also has a number of other projects – one of the main ones being a Corporate Environmental Responsibility (CER) program, which was launched at a conference in Abu Dhabi in November 2007. Over 120 Arab business leaders and CEOs participated and pledged their commitment to be environmentally responsible and to reduce their corporations' consumption of energy and water by 20% by the year 2012.

"We make [the CEOs] sign a document, which says they agree to abide by the mission statements of AFED," clarifies Saab. "I say this because many would say that you are in a classical sense admitting polluters. But we cannot change if we don't bring them in as part of the process – on the condition that they sign on a paper that they accept to go along with our principles."

The environment, Saab admits, is not black and white.

"When I was young we always thought it was right or wrong. When you have more experience, you discover it is somewhere in the gray area.

It is because the polluters are mainly the developers and [...] they want to push the rules and regulations to their side. The environmentalists [likewise] want to push the rules and regulations to their side. [However], the industrialists [...] have big resources – [legal and scientific]. You cannot face them with just goodwill. You have to face them with science and law. That's why the result is always a compromise. The better it looks to the environmentalists, the nearer the compromise is to their side."

Up until now, unfortunately, in the Arab region, either there is no compromise – the industrialists and businessmen impose their will because the other party [environmental NGOs] is non-existent," laments Saab. "Or, in best cases, the solution is much closer to the business people's will because they have leaders' [...] and scientific support."
Saab, however, is hopeful that AFED will be able to affect sound environmental policies in the region, and break the cycle of undelivered eco-promises. *en.v*

Does It Pay To Be Green?

The Rise of Carbon Trading Markets And the Middle East Experience

Nadia Akil

Carbon Trading And The Notion

of 'CarbonNeutral', Has Become A Sign Of Our Times.The allure of the carbon trend is evident. Not only are politicians such as Hillary Clinton running carbon neutral campaigns, but a growing list of reputable businesses such as top investment banks and luxury airlines are declaring 'carbon neutrality'. Even celebrities such as Brad Pitt and George Clooney are turning the carbon trend into the latest phenomenon of the twenty-first century.

'To Be Green Is Hip'

Managing emissions has become the new hip trend saturating Western markets today, and it is currently spreading like wild fire. Emissions trading has become one of the fastest growing segments in financial services today. Companies are flocking towards the green wagon in the hopes of snatching up a piece of a market that is currently worth about US$30 billion, and is expected to grow up to $1 trillion within the next decade.

Green mania has landed and is here to stay. Not only has this phenomenon become popular amongst top investment banks in the financial centers of London and New York; but it has also become prevalent amongst consulting companies, traders and other companies that are seeking to make a profit through commissions by organizing carbon deals. And why not? The carbon trade is clearly a lucrative market, with the potential to become perhaps the world's biggest commodity market if played right. The World Bank, a major player in carbon financing, has placed a $10 billion price tag on the value of carbon traded in 2005. Furthermore, the Bank expects that the carbon market will produce about $25 billion in new financing for sustainable development projects in the near future.

What Is Carbon Trading?

Carbon trading is simply a market mechanism devised to tackle climate change. The basic idea behind the carbon trade is such that each company is allocated a certain number of credits to offset their polluting tendencies. Companies that are 'energy efficient' may build up their credits, and in turn make a profit by selling them on the carbon market to others who end up exceeding their own quota.

The system that has become known as carbon trading began in 2005 as part of the Kyoto Protocol, which called on all industrialized countries to reduce total greenhouse gas emissions by an estimated 5.2% between 2008 and 2012. Under the Kyoto Treaty, each government that is party to the plan has its own target for the reduction of CO2 emissions. There is a clear financial incentive that lies in the fact that companies can make money from polluting less. The scheme embodies a classic 'carrot and stick approach' whereby heavy polluting companies are offered the financial carrot to clean up their own mess, while simultaneously being threatened with the financial stick should they continue to pollute above their quota.

Historically, we have used this very same approach to reward good behavior and punish the bad. The market has thus created, along the same lines, a clear choice to manage consumer behavior – either spend corporate money to cover the costs of over-polluting or carry on as usual by having someone else clean up your mess. But the question is this: Are we really solving the underlying problem inherent in today's corporate attitude towards pollution; or, are we simply providing an easy way out?

An Imperfect System

As with any system tackling a challenging global issue, there are always flaws. Some critics of the system argue that carbon trading is ultimately supporting a paradox: Greed is ok if it is green. The argument is based on the idea that this scheme ultimately fails to address the fundamentals of corporate behavior and ends up promoting a kind of guilt-free conscience by granting a 'license to pollute'.
Developed countries are, without a question, the biggest polluters of the world; but they have also done the least to contribute to climate change. This is because the practice of outsourcing among large corporations has become quite popular in this day and age. This is encouraging big corporations to 'outsource' their bad habits to others, and in effect, 'buy an indulgence to forgive their sins.'

Other critics argue that the main driver behind the carbon trade is that the total count is far more important than the source – thus, where carbon emissions come from is not really significant, it is the reduction of the total amount that we should really care about. As long as this is the practice, we are doing well for the environment. Defenders of this market argue that humans are naturally inclined to resist drastic change and if they can contribute to do good for the environment, then the means by which they got there is irrelevant. Thus, this mechanism is a legitimate means – albeit an imperfect one – to support an important environmental, political and business ethic."Consumers are always going to gravitate toward a more parsimonious solution that requires less behavioral change," states Michael R. Solomon, a professor at Auburn University and author of "Consumer Behavior: Buying, Having, and Being" (quoted from Revkin).

Spillover Effect: The Middle East Market

There is no doubt that climate change is a serious issue that needs to be confronted, and this attitude is gradually spilling over to other developing regions such as the Middle East. Until recently, phrases such as carbon emissions, carbon footprint, renewable energy and climate change were virtually unheard of in this part of the world. But today, we are seeing positive signs that at least some countries in the Middle East are moving towards a more eco-friendly attitude.

In recent years, the Arab Gulf States have also stepped up to confront this very serious environmental concern. Collectively, the states of the GCC have launched projects aimed at reducing emissions by 40% in total over the next few years.

Just last year, the Gulf States pledged an estimated $750 million to a new fund geared to tackle climate change.

The fund aims to support cleaner and more efficient energy technologies to benefit both the regional and global environment. So far, Saudi Arabia has committed $300 million into the fund, with Kuwait, Qatar and the UAE contributing $150 million each.

Through its massive oil & gas industries, as well as through other infrastructure and construction projects – all fairly energy-intensive – the Gulf region is a major contributor to global greenhouse gas emissions. Take Dubai for example, well-known for its ongoing construction and endless rows of air conditioned malls and hotels, the emirate is one of the highest per capita producers of greenhouse gasses in the world. Although yet to be seen in action, Dubai has played the game right – it has done the talk and is now taking the necessary steps to do the walk. Not only has the emirate launched a bid to become the center for trading greenhouse gas emissions' permits, but Dubai Multi Commodities Center (DMCC) and the London-listed carbon-credit company EcoSecurities have signed a deal to transform Dubai into the regional center for trading carbon offsets.

Abu Dhabi has also taken on similar bold initiatives to tackle pressing issues such as sustainable human development. In April 2006, the emirate launched the Masdar Initiative, which is a global platform that calls for collaboration and engagement in search of sustainable solutions to current and future environmental challenges.

In addition, Abu Dhabi has recently launched the world's first carbon-free city, which is set to open in late 2009 after the completion of its second phase. (The whole project is expected to be finished in 2015 with the conclusion of its seventh and final phase.) This six-kilometer energy, science and technology city is set to make use of traditional planning, as well as existing technologies to achieve zero-carbon and zero-waste sustainable development projects.

Other regions in the Middle East such as Qatar have also proved to be committed to this initiative and have taken the necessary steps to confront this – EcoSecurities has also signed on to a project in Qatar to help cut gas flaring in the Al-Shaheen oilfield. This project aims to cut emissions by two million tons of CO2 per year – which, translated into monetary terms, would amount to approximately $40 million in carbon offset revenue annually.

It is difficult to assess when carbon trading will pick up in full force in a region like the Middle East. As a nascent market, there needs to be considerable and competitive trading before such a market can be developed. There are, however, clear signs that emissions reductions could be transferred into tradable carbon credits in the future.

A Long-Term Solution?

If carbon trading is the solution to combating climate change, then as most solutions to problems, it does not come without limitations. Not only are major industries and sectors excluded from the system, such as the aviation and transportation sectors; but the world's largest polluter, the United States, has not ratified the Kyoto protocol. In addition, countries like China, expected to fast become the largest energy consumer by mid-century, is not obligated to cut emissions. Failing to address such exclusions will never fare out well – accountability and compliance cannot be understated.

Emissions reductions will continue to play an important role in producing sustainable economic transformations. The creation of a market for trading is just the first step towards realizing the benefits of these reductions. The true test of success will only come once trading is fully comprehensive. If such a scheme is to flourish in the long run, then consistency and accountability are key ingredients.

For the present time, and in the absence of an alternative means of confronting a very hot, yet very grave environmental issue, this is the next best thing. Unless we are able to hold those 'big polluters' accountable for their mistakes, the system will only continue to be sustainable by default – at least for the time being. *en.v*

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Sandra Al-Saleh, a managing partner of Equilibrium (www.eqcco.com), recently gave en.v some advice on how to find and invest in carbon neutral projects online.

Carbon Offsetting

A carbon offset is a financial instrument representing a reduction of greenhouse gases. One carbon offset represents the reduction of one metric ton of carbon dioxide, or its equivalent in other greenhouse gases.

Application

The process of "carbon offsetting" can be an easily adoptable habit for individuals with disposable income. For example: If you are planning to take a flight, you can generally pay an extra fee and the airline will offset the carbon footprint you produced by taking that particular flight – Easyjet, Virgin and Lufthansa have this option.

What To Look For:

1. The Industry Is Not Strictly Regulated.
New mechanisms are being developed to enforce standards, but they are as of yet imperfect.

2. The Offset Company Needs To Be
Transparent With Verifiable Projects, and third parties should be present to ensure that they follow through on their pledged offsets.

3. Proposed Offsets From Corporations
Must Supplement Offset Quotas Promised By Governments, according to international regulations.

4. Avoid Tree Planting
either entirely or as a major offset source. It is hard to regulate and very few organizations can be depended upon to do this well.

5. Regularly Review The Most Recent
Laws, regulations and critiques of offset companies.

6. Offsets Should Not Replace The
Carbon You Could Have Decreased Or Eliminated At The Source. (i.e. drive less, turn lights off, use renewable energy, etc.)

7. Different Offset Companies Have
Different Prices For Their Single Ton Of Carbon. It is not necessarily the cheaper one that is best to pick. Value for your money includes what they consider within that ton: What other greenhouse gasses do they take into account? Which projects are they financing? How do they calculate the cost and which currency are they using?

8. Look For Words Like Ee=Energy
efficiency And Re=Renewable energy. These are good types of offsets. But you also have to look at where and how these are being implemented.

On average, a good review will take several weeks to weed out the bad apples, and then you have to decide with which of the better ones you most want to work. After that, you should not assume that the company will remain the best option for the next time you offset: It may change hands, or it may not develop and improve as well as others; or it may move into an offset project type that is not dependable. You, therefore, have to keep up with the companies you choose.

A few years ago this industry was the 'Wild West'. As more regulations are being promised and fewer standards become voluntary, it will eventually be easier for the average person to identify dependable organizations to work with – despite the fact that hundreds have been added into the mix. *en.v*

10 TIPS
TO GREEN YOUR OFFICE

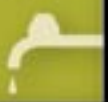
1. TURN OFF EQUIPMENT WHEN NOT IN USE

2. USE LOCAL PRODUCTS

3. USE A FAX-MODEM TO REDUCE FAX-RELATED PAPER WASTE

4. CHOOSE SUPPLIERS WHO TAKE BACK PACKAGING FOR REUSE

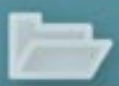
5. DO NOT LEAVE TAPS DRIPPING



6. REFURBISH AND REUSE OLD FURNITURE

7. USE RECYCLED PAPER

8. PRODUCE DOUBLE-SIDED DOCUMENTS



9. USE A DUAL FLUSH TOILET

10. USE EMAIL, READ MESSAGES ONSCREEN

Souq Al Ard

Leen Al Zaben

a.

b.

c.

d.

a-d. A regular Friday at Souq Al Ard.

It's a regular Friday and people are gathering to browse the organic produce available at Amman's farmers' market, Souq Al Ard. The market exemplifies one of the few initiatives taking place in the country that promotes a sustainable living agenda; which, until recently, was quite unexplored in Jordan. Sustainable living, which has gained popularity in Europe and North America, aims to support local farmers and assist local communities in making organic produce readily available. Most importantly, it aims to reduce costs and harmful emissions associated with the transportation process – ultimately translating into lower levels of pollution.

Tareq Emtairah, a lecturer at the International Institute for Industrial and Environmental Economics at Lund University in Sweden, explained how "there is a growing debate in the media about the damaging impact of the consumerist lifestyle on the environment. Souq Al Ard is the perfect example of community projects that can help simplify one's life and reduce [one's] carbon footprint."

Souq Al Ard also provides economic empowerment to small producers in Jordan, and supports their efforts to adopt sustainable farming practices. Souq Al Ard creates opportunities for people from underprivileged communities around Jordan through fair-trade practices. The project achieves this by giving farmers direct access to customers, providing training on how to set up a small business as well as facilitating the selling process.

The farmers of the Souq belong to co-ops that help reduce the vulnerability of farming life by giving them a collective work ethos. The project gives priority to farmers who use sustainable farming practices such as: drip irrigation (which saves water), organic farming and permaculture (agriculture that can be sustained indefinitely as opposed to other traditional methods).

Initiatives like Souq Al Ard will undoubtedly help disadvantaged individuals improve their socio-economic standing, while also encouraging consumers to incorporate sustainable purchasing habits into their daily routine. *en.v*

The Unknown Martyr

Siham Nuseibeh

War is not an unfamiliar event in the region nor is it one that has faded into the collective – nor is it one that has faded into the collective memories of its Arab victims. For as long as the Middle East has resources to exploit, war and conflict are evils we have come to expect, live through and combat continuously. The sacrifices of past and ongoing wars in the region reach beyond the mass of human casualties and senseless losses of life. Its consequences are ones that endure and are felt long after a battle has been fought and subsequent treaties and negotiations have been signed. There is a victim who has thus far gone unnoticed and whose sufferings have remained silent and overlooked. The following article will seek to expose the plight of war's unknown martyr – our natural environment.

Dead Camel In The Kuwaiti Desert

"I saw birds just dropping out of the sky. Later, I found a herd of dead camels covered with dead flies: whatever killed the camels killed the flies at the same time."

The Case of Kuwait

"I've never seen such devastation. Kuwait's desert before the Gulf War was very healthy, despite centuries of nomadic grazing and decades of oil development. It supported substantial greenery and wildlife. But now it's coated in oil residues that affect water permeability, seed germination and microbial life. Plants are dying because they can't breathe through blackened leaves under dark skies." – A scientist touring Kuwait's destroyed oil fields after the Gulf War in 1991.

There are three classifications to measure war-related damage to the environment according to Jurgen Brauer, associate professor of economics at Augusta State University: i) intentional direct destruction of the environment during war; ii) incidental direct destruction; and iii) indirect or induced destruction as a medium- or long-term consequence of war but still accredited to war. Intentional direct destruction is the purposeful targeting of the environment for the sole objective of its devastation. The prime example of this is the setting of the oil fires in Kuwait after the Gulf War in 1991. Incidental direct destruction would be indirect damage to the environment from troop and tank movements - without it being the primary aim. The third classification, indirect or induced destruction as a medium- or long-term consequence of war, happens when a population migrates because of war and in turn applies stress on the environment.

The Iraqi invasion of Kuwait is perhaps the best case study example for the detrimental effects of war on the environment – direct and indirect. Virtually every aspect of the environment and ecosystem was affected by the conflict. Incidental direct destruction was caused by the movement of heavy weaponry and troops across the desert, and the subsequent build-up of solid wastes polluted the ground causing groundwater contamination. In addition, vegetation in the desert was crushed and destroyed throughout the war.

The withdrawal of Iraqi troops from Kuwait did not prove to be the reprieve Mother Nature anticipated. Iraqi soldiers set fire to over 600 oil wells as they evacuated, which sparked fears that rising smoke may cause the planet's weather pattern to change. These fires took 10 months to extinguish, during which time tens of thousands of marine birds and mammals were killed. Oil leaked from wells that formed lakes of petrol destroying the landscape and noxious fumes killed thousands of migratory birds. Approximately 60 million spilled barrels of oil formed more than 300 oil lakes, which covered almost 50 square kilometers of land surface. A veterinarian who witnessed the carnage commented later: "I saw birds just dropping out of the sky. Later, I found a herd of dead camels covered with dead flies: whatever killed the camels killed the flies at the same time."

Rumors ran rampant in the months and years that followed about the possible health hazards following the end of the war. Although the planet's weather pattern was not seriously affected, experts were apprehensive that people with respiratory problems would be fatally impacted. Public health experts at a conference at Harvard University even went so far as to predict that the air contamination would kill around 1,000 Kuwaitis during the subsequent year. Over the course of the invasion, scientific instruments were purposefully destroyed by the invading army so that measurement of environmental damage would be made impossible.

Fortunately, the aforementioned dangers of the war did not turn out to be as severe as originally predicted. Our natural environment has possibly been the best remedy for the damage. The natural cleaning process has been the primary technique for restoration- and possibly the best in some cases. Although the early predictions of the

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war's environmental damages were overestimated, the complete impact of this destruction will not be fully realized for years to come.

The Case of Palestine

Environmental terrorism, as it is dubbed by Elizabeth Chalecki, is not a new phenomenon - nor is it exclusive to any one geographical area. Rather, this form of terror is a tactic that has been employed all over the world for centuries to cut off the targeted population from its resource bases. This is even more significant today when world population – and consequent consumption – is increasing at an exponentially greater rate than current available natural resources. "As the value and vulnerability of these resources increases, so does their attractiveness as terrorist targets." The term environmental terrorism should not be confused with eco-terrorism, which involves the directing of attacks towards infrastructure such as buildings and roads as opposed to the natural environment. Environmental terrorism should also not be mistaken for general environmental warfare – the distinction between the two traditionally relies on the difference between warfare conducted by states (general environmental warfare) and terrorism carried out by rebel groups (environmental terrorism). However, this distinction can mask the fact that terrorism can be carried out by states, as well as paramilitary groups, against non-combatants. It is important to keep in mind the fact that just because the target of a terrorist act is the environment, does not detract away from the unjustness or brutality of the act: "Just as terrorists do not apply the just in bello criterion [the internationally established rules for just conduct during warfare] to human non-combatants, neither do they apply it to the environment."

In no place is environmental terrorism more blatant or more vicious as in the occupied Palestinian territory (oPt). Environmental terrorism has been used as a function in the ongoing Israeli occupation of the Palestinian territories. One of the many tools used in the Israeli occupation has been the creation of settlements by confiscating Palestinian land on hilltops above other Palestinian communities. These Israeli settlements are created by clearing and leveling the hilltop sites of the trees and orchards of their ex-Palestinian owners, and seizing their water resources. Between September 2000 and January 2003, the Israeli Occupation Force uprooted around 750,000 trees (54,000 dunums of land), mostly olive and citrus, in the West Bank alone. This has resulted in a USD 43.3 million in crop loss for Palestinian farmers. This is a significant blow since 47% of the population in the oPt is living on less that $2.10 a day; and the figure is even more stark for Gaza with well above 70% of its population living in poverty. In addition, total food consumption since the start of the Intifada in 2000 has fallen by one-third – a fact exasperated even further by the Israeli destruction of Palestinian agricultural lands. In fact, since the Israelis occupied the West Bank in 1967, 750,000 dunums of cultivated land with more than 12 million olive trees have been uprooted.

This remaking of territory has been designed over time to make Palestinian life untenable," (Dr. Jad Issac from the Applied Research Institute – Jerusalem (ARIJ), quoted from Gary Fields). On average, Israeli settlers use four times the per capita amount of water used by Palestinians. Case studies have shown how these settlements site wastewater tanks close to Palestinian villages – an example of this would be the Israeli settlement of Betar and its placing of wastewater tanks close to the Palestinian village of Nahalin. The result of this water consumption is a strain on water resources in an area with an already high Palestinian growth rate. In a region that already suffers from water scarcity and a brutal occupation regime, it is not hard to imagine where priorities for water consumption will go to first.

One of the biggest forms of environmental terrorism in the oPt – and perhaps terrorism in general – is the construction of the West Bank Separation Barrier. Israel's "newest addition to the occupation's matrix of control," has resulted in the confiscation of large amounts of agricultural land. When construction is completed, 180 square kilometers of agricultural land will be lost to the Palestinians, in addition to 45 square kilometers of forest land. This translates into a shrinking of Palestinian territory by 50% in the West Bank alone.

For a population barely living above subsistence level, the land is of vital importance for survival. As aforementioned, it is this very fact that makes it

a target. Over 130 recommendations for environmental protection have been made by the United Nations Environment Programme (UNEP) due to the "alarming" indications of environmental degradation. The UNEP Governing Council, at a meeting in Kenya in 2003, stated that it is "gravely concerned over the continuing deterioration and destruction of the environment in the Occupied Palestinian Territories." The population has been jointly burdened with a "scarcity of land, weak environmental infrastructure, inadequate resources for environmental management, and global trends such as desertification and climate change," all of which are disintegrating its tenuous natural resources.

The Case of Iraq

"Until recently, the impact of war on nature has often been ignored or obscured by the conflict itself. As the 1990-1991 Gulf War showed, such conflicts have devastating effects on the environment, biodiversity and the quality of life of local people long after the cessation of hostilities." – Dr Michael Rands, Director and Chief Executive of BirdLife International.

Starting over two decades ago and continuing on to this day, the destruction and deterioration of Iraq's environment has been constant and unforgiving. There were unprecedented acts of environmental damage inflicted on Iraq's environment during the 1990 Gulf War – which were further exasperated by economic sanctions in the decade that followed. As though it had not been through enough, Iraq's environment reached its breaking point after the 2003 US-led invasion. Damages accrued included: physical destruction of wildlife natural habitats from weapons' use; toxic pollution of these habitats from oil spills and oil-well fires; chemical and radiological contamination from the use of weapons of mass destruction and bombing of military or industrial facilities; pollution of the natural environment due to mass movements of refugees; burning of wetland and forest vegetation; desertification worsened by military vehicles and weapons' use; and extinction of certain species.

Perhaps the most alarming aspect of all this degradation is the fact that there still exists more than 400 polluted sites in Iraq that pose grave health threats to residents. The only problem is that the ongoing violence, targeting of government workers and shortage of funds hinder the clean-up process. The possibility of an outbreak of disease in communities near polluted sites is rife – these sites are cesspools of chemical materials and depleted uranium from weapons.

These polluted sites have not only contaminated areas around communities, but have also seeped into Iraq's river, lakes and potable water systems. What this has translated into is a dramatic rise in cancer patients over the past five years, due to over 25 years of wartime exposure to hazardous materials. At the Cancer Radiation Hospital in Baghdad, one doctor said there are more than six new cases of cancer per week at the hospital. She also drew attention to the alarming rise in cancer patients per year in the past three years, which was up to 9,000 from 4,000 patients.

The most startling figure is that 52% of all cancer patients in Iraq are children under the age of five. In fact, cancer is now one of the leading causes of death in the southern provinces of Iraq – 45% of deaths in the south are caused by cancer. Most of these cancer-related deaths are prevalent among women and children – there has been a 22% increase in leukemia among children since 2005; and a 19% increase in breast cancer among women compared to the same year. Some reports cite that many children are born in hospitals without limbs or organs; and some have even developed cancer-related diseases only four weeks after birth.

Many have attributed this staggering rise in illnesses to the widespread use of depleted uranium ammunitions during the 1990 Gulf War and the subsequent conflict in 2003. In fact, the 1990 Gulf War was the first time depleted uranium ammunition was reportedly used on such a mass scale in a conflict. In total, 50 metric tons of depleted uranium were used during tank battles and 250 tons were deployed in air to ground attacks. The complete amount used during the 2003 US-led invasion is still unknown, but figures vary between 170 and 1,700 metric tons. The United Kingdom Ministry of Defense has reported that it used less than one ton in 1991, and around 1.9 tons in 2003. The ministry even provided coordinates for UNEP in 2003 where depleted uranium was fired. The US government, however, has yet to disclose that information.

"The magnitude of the complications and damage related to the use of such radioactive and toxic weapons on the environment and the human population mostly results from the intended concealment, denial and misleading information released by the Pentagon about the quantities, characteristics and the areas in Iraq, in which these weapons have been used (Professor Souad N. Al-Azzawi from the Center for Research on Globalization)."

The invading forces were no less forgiving and additional rounds of depleted uranium were used in heavily populated areas of Iraq such as Baghdad, Samawa and other provinces. "It is only fair to conclude that the environment in Iraq and its population have been exposed continuously to [depleted uranium] weaponry or its contaminating remains, since 1991."

The Aftermath

The tragedy that war reaps upon us is not simply measured by the number of soldiers or civilians lives claimed; but by other unfathomable costs. It is not only the dreadful human carnage that is left behind for which we are accountable, but the damages we amass that future generations must muddle through. The constant upheavals that our region has been made to suffer through do not end with the signing of a document entitled 'Peace Treaty' – as we have come to learn from past experiences.

After years of conflict in the region, our natural landscape can be read like pages from a book. All one has to do to see the damage that decades of war has wrought on our environment is to scrape the surface. Mother Nature's pleas for help have gone unanswered for far too long. *en.v*

Ibrahim Al-Zu'bi

Diving For Change

Siham Nuseibeh

"Biofuels Are A Crime Against Humanity," exclaims Ibrahim al-Zu'bi, Director of the Environment and Research Department at the Emirates Diving Association (EDA) in Dubai.

At a time when biofuels have become a globally explosive and controversial issue, Zu'bi has no compunction voicing his opinions. In fact, Zu'bi has no problem expressing himself on any number of issues concerning the environment.

"People are starving because their resources are being used for energy when we have a lot of other alternatives. Having a safe environment does not mean making people starve - instead of playing with [our natural environment], we should try and be a part of it."

Zu'bi has made it his life's work to spread awareness about issues pertaining to environmental conservation and sustainable consumption. He is not only the director at EDA; but also heads the Education for Sustainable Development Project for the Knowledge and Human Development Authority of Dubai, as well as being the West Asia Coordinator of the United Nations Environment Programme's (UNEP) YouthXchange Project.

The EDA was founded in 1995 and strives to enact safe practices for commercial and recreational diving. It also tries to preserve the historical significance that diving has to the United Arab Emirates (UAE) and the rest of the Gulf countries. It also monitors, reports and implements measures to conserve marine ecosystems and biodiversity.

During a phone interview with en.v, Zu'bi - a Jordanian native of Palestinian origin - recounted how his love affair with the natural environment began. "It started when I was a kid. I watched my mom planting things at home, while trying to use the natural environment around her and I always wanted to know more. [While in school] I got to know a friend, or pen pal, in England and she sent me Greenpeace brochures. I started distributing them and when I finished high school I knew that this is what I wanted to do."
However, this was not to become a vocation until much later. After studying civil engineering with a specialization in water resources and environmental engineering at the Jordan University of Science and Technology (JUST), Zu'bi became a site engineer at a wastewater treatment plant in Jordan. It was not until a fortuitous hiking trip to the mountains of Italy in January 1997, to trace wildlife, that Zu'bi realized "if I wanted to make a difference in this region, then I had to make it my job, my career and my passion." Upon his return to Jordan, Zu'bi quit his job and took another one - which paid half his previous salary - at the Jordan Royal Ecological Diving Society (JREDS).
To date, Zu'bi and his team of international divers at EDA have participated in dives all over the world. The most memorable for Zu'bi was when he lead his team on a clean-up mission in Tsunami-ravaged Thailand in December 2004.

"It was very emotional because the Thai people were very emotional. We were cleaning up personal belongings of the victims. It made us think of different ways in which you can help. It made me feel like I made a difference." In fact, Zu'bi and his divers were the first international dive team to reach the devastated islands.

A Sea Turtle Surrounded By Admirers

"My goal was to support the small businesses and dive centers in Thailand."

If one of the highlights of Zu'bi's work experiences was his time in Thailand post-Tsunami, then perhaps the biggest disappointments he has dealt with was after the 2006 war in Lebanon. The Israeli aggression in Lebanon did not just affect human lives, but it also resulted in oil spills and dangerous marine waste. Zu'bi and his team, however, never made it to Lebanon; and his frustration at their failed attempt to help can be felt and heard in his voice.

"We didn't end up going because of politics. We had contacted the UN and oil companies and offered our technical help with Canadian sponsors. But because of politics, we couldn't go," he laments on the phone. "I felt so disappointed because we wanted to help as Arabs. A few months later, Greenpeace divers were doing the clean up in Lebanon and I was so sad that we could not."

"We wanted to tell the world that Israel hit Lebanon, but Lebanon is still safe. We were always trying to link the economy and sustainability. People were suffering [economically], so we wanted tourism to come back to help the economy. So, just come back!"

Another of Zu'bi's many responsibilities is managing UNEP's YouthXchange project, which attempts to spread awareness about sustainable consumption and production by creating an affiliated network of organizations and educational institutions in the West Asia region.

It seems then, at least on the surface, that the youth would be the easiest demographic in which to instill an eco-conscientious lifestyle. This is not just because of the relatively easy access to them, but also because the youth are - as of yet - an uncultivated eco-terrain.

The next question, therefore, that had to be asked was this: Have the youth been the most receptive to the campaign to promote sustainable consumption?

Before Zu'bi even began to speak, I was forming the word 'yes' with my pen when his actual reply made me pause mid-pen stroke.

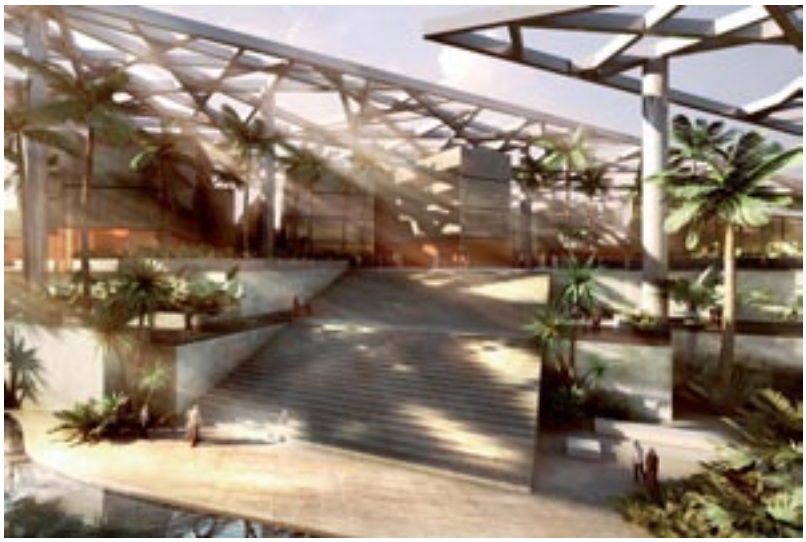
"The youth in general, according to our research are hedonistic idealists," contends Zu'bi. "When they walk into a mall the first thing they think of is the latest phone or the latest bag [etc.]. [The youth] are not fully empowered; we do not give them access to the proper knowledge - the knowledge of reality," explains Zu'bi. "They dream about things they want to get involved with, but they do not have the tools or the know-how. We need strategic thinking [and] long-term plans to invest in the youth, so that they can fulfill their roles in society."
The interview finally comes to a close with the most prolific of thoughts:

"I wish people will 'be the change they want to see in the world' - then our problems will be solved," says Zu'bi.

"Gandhi said that" *en.v*

The Sustainable City

Sandra Al Saleh



Masdar City rendering.

London

In December 1952, a black smog entered theatres in London. Audiences could not see the stage, and actors could not see the orchestra. Shows were cancelled all over the city and people stumbling out into the streets were met with a darkness that stopped traffic. Londoners could not see their own feet, some walked into the Thames and drowned. Others suffocated in parks and streets, while hospitals overflowed and coffins in the city ran out. In five days 4,000 people died, their lips blue and their lungs black. It is estimated that as many as 12,000 died as a result of the 'Great Killer Smog.'

Even though people had complained about coal and air pollution for decades, up until that moment nothing had been done about mitigating the problem. It took a catastrophic event like the killer fog to finally bring about the Clean Air Act. A recent study in Nature GeoScience estimated that 400,000 people worldwide still die every year because of soot particles that find their way into their lungs. The complicated fabric of cities and modern life have meant that our effects on the natural world, and thus upon ourselves, have been constant and often brutal. If the rules of the game do not change, we are set to lose on a massive scale.

The City

By the end of this year, one half of the world's population will live in less than 0.5% of the world: cities. These concentrations of human activity will not only generate most of the world's carbon emissions; they will consume most of its resources and produce much of its waste. These cities will also be home to many of the world's poor who come in search of livelihoods and end up in poorly managed, unsanitary slums. More than one and a half million people die each year due to these disease-bearing conditions.

The city is a planned environment, a looming mass of concrete, steel, wood, electrical wires, plastic, and endless miles of piping that carry our waste. Human activities concentrated into small areas have always been a source of disease and waste generation on a massive scale. Cities have been the incubators for pandemics like the plague and have helped contagions spread among thickets of people crammed into small spaces. They have crushed wildlife and gobbled up resources at an unsustainable rate.

Yet, cities have also been the incubators for some of the best that humans have to offer. The city can either destroy us, or propel us forward to a healthier future. We are at a point where the choice is critical.

Brazil

Any conversation about sustainable cities will always include the city of Curitiba in the south of Brazil. It is there that urban planning has ensured that 99% of residents say that they are happy and would not live anywhere else. The bus system is world famous and nearly 90% of the population uses it. It has become the model for other transport systems in the region. Old buses are turned into daycare centers, which are free for all. They are also turned into classrooms and mini clinics. The city not only recycles buses but buildings as well, instead of tearing them down.

Slums, which are a staple of every city, are different in Curitiba. A sack of garbage can be exchanged for a sack of food or bus tickets, so that areas can be kept clean. If you are too poor to afford a house the city will provide you with a small plot, two trees and an hour with an architect. All around there are families building their own homes. Walking is encouraged with entire spaces free of cars and over 50 square meters of green per resident. There is even a special hotline to report polluters.

Worldwide

All over the world, cities are turning green. San Francisco and Portland Oregon have topped the list in sustainable transformations. New York, the most iconic of cities, has massive plans to decrease energy use, reduce carbon emissions, create green spaces and discourage the use of cars. Iceland has raced ahead of the pack by using clean geothermal and hydroelectric energy to power more than two thirds of the entire country. New Zealand derives most of its electricity from hydropower. Sweden is transforming its third largest city, Malmo, into an eco-city. Vancouver in Canada already gets 90% of its energy from renewable sources, and has more than 200 parks. If you want to be really carbon neutral, one of the first steps is not to build a whole new city but to remodel an old one. In some places however, cities are a fairly new feature on the landscape, and if you must create new cities, then the only way to do it is sustainably.

The Gulf

In the dusty, dry and desert landscapes of today's Gulf region, cities sprout in the blink of an eye. Massive oil wealth and small populations mean that money can be spent on a large scale. In a plot of land near Abu Dhabi airport, 22 solar panels are being tested for their resistance to the dust and heat where a future city will stand. Masdar City is the offshoot of the Masdar Initiative; an ambitious plan to help develop, fund and promote renewable energy worldwide. Masdar has just signed a deal to help develop concentrated solar plants - the most promising solar technology - all along the world's sunbelt. It is an interesting sign of the times when a major producer of fossil fuels takes such serious steps to promote clean technology.

Masdar City will house nearly 50,000 residents and will welcome 60,000 commuters. The city is over 1,000 acres in size and all of that human pressure is intended to be sustainable.

The headquarters of Masdar's parent, the Future Energy Company, will have a photovoltaic roof that will be the first component of the built structure. It will then supply the solar power to construct the rest of the building. In the same spirit, Masdar City aims to supply as much clean energy as it uses throughout the construction phase and beyond. Students at the Masdar Institute of Science and Technology, which opens its doors in 2009, will work on the development of the city while they study sustainability. Students are offered full scholarships, and living spaces with stipends. This is directly offering sustainability to future generations.

Masdar City will rely on recycled materials, and will source its wood from sustainable 'Forest Stewardship Council' certified timber. The architecture of the city will marry traditional styles of cooling like regionally compatible design and wind towers, with modern technologies like solar power. The desalination plant, a necessary evil in such a dry country, will be solar powered and will be up to 80% more efficient than other plants. No building will exceed five stories and streets will remain narrow for shading and cooling.

On six square kilometers in the massive state of Abu Dhabi, this zero-carbon, zero-waste city is racing (perhaps too fast) to be built ahead of any other. No cars will be allowed into the city, so people will have to access it via four passenger travel pods that will take them to the locations they plug in. Shading from the harsh desert heat will also encourage walking. This eco-friendly futuristic vision of a city is promising a great deal, and we can only hope that such a vision can be realized. Masdar will divert 99% of its waste from landfills, it will use 50% less water than other cities its size and it will preserve, repair or relocate the wildlife in the area.

Masdar does not come without its critics, and perhaps it is the critics who will push it to realize its full potential. This experiment in clean and green living is nestled, after all, in one of the world's worst-known polluters. The UAE has the second largest carbon footprint worldwide, and has an economy that relies heavily on fossil fuels. Abu Dhabi's neighbor Dubai has put itself on the map by developing ecologically disruptive mega luxury projects. Masdar must avoid the pitfall of becoming a flashy playground for the rich, and more importantly, it must become a model of how cities should be built. Masdar must remember that quality should not be rushed. It must not try to sprout in a desert in the same speedy style that has made its fellow Gulf cities the sometimes unsafe, and badly realized artifacts for which they have become famous. If it does not change 'business as usual' in the region, it will have been no more than an interesting blip on the sustainability radar.

Will this experiment create the kind of ripple effect necessary to take the way we build to a level needed to sustain the world around us and ourselves? The technologies are available and the need is urgent. All it takes is the kind of will provided by visionary leaders and willing communities. There are no excuses anymore to rely on the bad ideas and the polluting technologies that are the blotted features of our past. The future is clean; who will be smart enough to embrace it is the question. *en.v*

Masdar City - aerial view.

By the end of this year, one half of the world's population will live in less than 0.5% of the world: cities.

Changing The Environment
Before It Changes You

Sahar Al Nasrallah

"The peoples of the Middle East and North Africa face serious environmental threats and a mindset of cooperation is needed toward addressing the effects of global climate change."

Burning waste.

Across the Arab region, environmental issues have often been overshadowed by local and regional conflicts, and other socioeconomic concerns. Some might even argue that the environment should not be a priority for this region. This stance, however, is both shortsighted and erroneous – especially when considering the range of environmental problems the region faces in the long-term. These include: degradation of coastal areas due to rising sea levels, effects of climate change, increased urbanization – leading to increased urban pollution and its accompanying health problems – and loss of arable land. If a worst-case scenario were to unfold, any one of these environmental problems would only contribute in further destabilizing the region. For this reason, and to improve the welfare of all inhabitants, it is of vital importance that countries and citizens take a closer look at the environment around them. A study on environmental trends in Arab countries conducted by "Al Bia Wal Tanmia" (Environment and Development) magazine surveyed citizens on what they thought were the main causes of environmental deterioration in their country. Non-compliance with environmental legislation topped the list, according to 46% of the respondents; followed by weak environmental awareness programmes (44%). Bad environmental management scored third (43%), a rank closely shared by weak environmental protection institutions (42%). Respondents from Iraq were nearly unanimous (89%) in choosing bad environmental management as the major cause of deterioration.

Where Do We Begin?

How do we determine the degree of degradation, if any, in our natural environment? To what do we compare our current state? As mentioned above, governments and other institutions have largely ignored the environment; and there is very little historical data that would allow us to determine a baseline, or snapshot of what the environment might have looked like before human intervention. This, however, is not an insurmountable obstacle because data from similar regions and climates can also be used to create a type of proxy baseline.

Another survey, conducted by the Arab Forum on Environment and Development (AFED), evaluated the various perceptions people have on the state of the environment in their country today as compared with the last 10 years. The majority of respondents thought that environmental conditions in their country have deteriorated over the past 10 years. Sixty percent of

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Sunset behind a wind farm

respondents replied that it has become worse, 10% think it has not changed, while 30% find that it has improved.

Where Are We Going Wrong?

The various pressures on the Arab environment are only expected to increase due to climate change. Dr. Hans Gunter Brauch, a German climate expert noted: "The peoples of the Middle East and North Africa face serious environmental threats and a mindset of cooperation is needed toward addressing the effects of global climate change."

Sea levels are projected to rise by over 0.5 meters by the end of the century, which would place low-lying coastal areas in Tunisia, Qatar, Libya, UAE, Kuwait, and Egypt at particular risk. Most models predict that the region will progressively see less annual rainfall, exacerbating the problems created by increased populations, and per capita use. Additionally, rising sea levels are expected to create serious problems for coastal areas, including increased and more frequent flooding, and the loss of beaches.

"Rising sea levels could affect 43 port cities—24 in the Middle East and 19 in North Africa. For example, sea level rise is expected to heavily impact Alexandria, Egypt, [which] would leave more than two million people displaced, with $35 billion in losses in land, property, and infrastructure, as well as incalculable losses of historic and cultural assets."

Furthermore, the presence of foreign agents – invasive species, minerals not commonly found in the area, human-made chemicals – can be safely assumed to be signs of environmental degradation.

According to Climate Change and National Security:

"In the developing world, even a relatively small climatic shift can trigger or exacerbate food shortages, water scarcity, destructive weather events, the spread of disease, human migration, and natural resource competition.

These crises are all the more dangerous because they are interwoven and self-perpetuating: water shortages can lead to food shortages, which can lead to conflict over remaining resources, which can drive human migration, which, in turn, can create new food shortages in new regions."

Poor countries in the region – especially in the North Africa region – frequently dependent on environmental resources for their livelihood, are the most affected by environmental degradation and natural disasters. "Those who are currently poor, malnourished and dependent on local production for food are the most vulnerable to climate change in terms of hunger and malnutrition." Wealthy countries are major consumers of products and services from the environment. Consequently, wealthy countries and poor countries alike have a stake in using environmental resources wisely.

The effect of increased urbanization causes pollutant emissions and arable land changes; and can have considerable impacts on air quality, regional climate and human health. Poor health and quality of life related to present welfare conditions in the region is affected by air, water, land and waste pollution. At present, less than 10% of land in the region is used for

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agriculture.

"While the overall population is growing, the region is experiencing declining farm populations and declining land in farms, and increasing urbanization has reduced the availability of water for agriculture." Through a combination of poor agricultural practices, flawed water management and changes in climate; it is expected that this agricultural deficiency will deteriorate further in the next few decades – increasing the region's dependence on imports to meet its nutrient needs.

"Climate change also could add a new challenge in the region's efforts to create new jobs and to address poverty, which currently affects about 20 [%] of the total population, equal to 59 million people (using a poverty line of $2 per capita per day for a largely middle-income region)" (Iqbal 2006).

The Arab region is home to not only the largest oil and natural gas reserves in the world, but also to some of the lowest levels of renewable water resources. In addition, the region has experienced a high rate of population growth in the last few decades. While this has slowed down somewhat, the trend is expected to continue into the next decade – nearly doubling the population in the region. This growth has caused significant stress on water resources and agriculture. The region, as result of climate change, is affected by changes of temperature and rainfall patterns. "An additional 155 to 600 million people may be suffering an increase in water stress in North Africa with a 3°C rise in temperature," according to one study (Warren 2006).

"Yemen is particularly at risk given its low income levels, rapidly growing populations and acute water shortages today." Poorer countries are more affected by loss of arable land.

"In Yemen, the poorest economy among the Arabian Peninsula countries, agriculture contributes more than 15 % to GDP and employs more than 55 % of the economically active population. Many of the poor derive their livelihoods and incomes exclusively from agriculture and agriculture-related activities."

Agriculture and crops in these farming countries are highly impacted by climate change, which in turn adds stress on their growth and development. The impacts will be strongest across Africa (including the Northern Arab parts), where yields of the predominant regional crops may fall by 25-35% (weak carbon fertilization) or 15-20% (strong carbon fertilization) once temperatures reach 3 or 4°C.

What And Who Are Making A Change?

Until recently, the Arab region has not made the environment a top priority. However, the environmental movement has made giant strides on several fronts. According to World Bank estimates, tens of billions of dollars will be invested in the waste management and environmental sectors in the Middle East over the next 10 years. Moreover, many of the region's private and public sectors are making changes to contribute to sustainable living. The government and private sectors of the United Arab Emirates (UAE) are developing drastically towards creating green cities and industries with their current and prospective projects. "Last year The Emirates Green Building Council (EGBC) was established. The non-profit organization focuses on advancing green building principles to protect the environment and ensure sustainability across the UAE." As a result, an increasing number of people are seeking areas that are eco-friendly communities.

There are also private companies from Kuwait investing in environmental solutions in waste management and in the recycling sector. Egypt and Morocco, on a medium scale, are two countries involved in energy investments and renewable energy generation projects in wind farms. These eco-moves are not only environmentally-friendly, but are also socially- and economically-beneficial for job creation and the reduction of pollution. "Some countries in the Region such as Kuwait, Oman, the UAE and Egypt are building solid experiences in reforestation and reclamation of desert areas, using sewage water for irrigation."

Other states – among them Jordan, the UAE, Kuwait and Egypt – are conducting environmental conferences and exhibitions pertaining to addressing different issues affecting our region's environment. For example, 'Kuwait Waste Management Conference & Exhibition' took place on April 7, 2008, which addressed a variety of waste management issues. In Jordan, a conference on 'Middle East Recycling, Waste and Environmental Management Congress' took place on February 19, 2008. In addition there is the upcoming 'First Annual Conference of the Arab Forum for Environment and Development', which will take place on October 26, 2008 in Bahrain. These conferences address conditions concerning the environment and the use of scientific research in policy-making, while also examining key trends regarding environmental sustainability. These types of projects and events are major steps towards increased improvement in the region's environment.

As mentioned earlier, climate change will cause gradual shifts in temperature, water availability and sea levels. There will also be increased climatic variability and extreme weather events – of which there is already some evidence. Wealthier countries in the region have responded by turning to desalinization and other technologies to increase water availability; while poorer nations have turned to better water management, the construction of water reservoirs and efficient agricultural practices. These environmentally-sound habits will, in turn, lead to enhanced living standards and overall ecological improvements in the fight against poverty, water scarcity and environmental degradation. Countries in the Arab region, therefore, have substantial opportunities towards realizing sustainable development goals.

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Sahar presented this report on behalf of National Projects Holding Company (NPH).

NPH is a subsidiary of the National Real Estate Co. It was set up with a clear strategy of investing in Real Estate Development and Industrial projects in emerging markets. Since inception it has been actively pursuing transactions in complicated jurisdictions through its subsidiaries and associate companies.

Massoumeh Ebtekar

Siham Nuseibeh

An Iranian
A Woman
A Muslim
An Academic
An Environmentalist
A Politician
An Activist
A Scientist

Dr. Massoumeh Ebtekar is a busy woman. No, that is an understatement – she is a very busy woman. Besides being the former vice president of Iran (the first female to occupy that office) and the former head of the Department of Environment; she is an elected representative in the Tehran City Council (where she is head of the environment committee), president of the Center for Peace and Environment in Tehran, and a university professor of immunology. She is also the 2006 United Nations Environment Programme's (UNEP) Champion of the Earth; as well as being a wife and mother of two. During a phone interview with **en.v**, Dr. Ebtekar revealed the origins of her passion for the environment and her zeal in campaigning on behalf of Mother Nature.

Your efforts and initiatives to spread awareness about a range of social, political and cultural issues demonstrate a tireless passion and unwavering dedication on your part. Where did this passion come from ?

This passion actually comes from being brought up in a family that was very dedicated to the environment. My father was the first head of the Department of the Environment after the [1979] Revolution. He was always very concerned with the environment and the need for its protection. The environment was always an issue at home and I became more involved as time passed. I started getting involved in NGOs and my own passion for biological sciences lead me to study in this sphere. It is also related to being a mother and woman. The environment is essential for the well-being of our future and generally if a mother understands this relationship between the well-being of her children and future generations, then she will have that passion to protect the environment. All these different experiences synergized and contributed to my passion for the environment.

You are an Iranian, a woman, a muslim, an academic, an environmentalist, a politician, an activist, a scientist... Is it hard being all these at once?

It is not an easy endeavor. But, if you believe in what you are doing and you find an identity for yourself in an area

of interest and find that capability within yourself, the rest will come. My mother played an important role - without her help and support it would not have been possible, and my husband as well. When President Khatami told me about my appointment [as vice president], I told him I have to confer with my family and think about it. It was the first time [to have a] woman in the cabinet and I knew it was very meaningful. There was a conception after the revolution that women were excluded from high levels of government, so I had to make sure I was in a position where I could perform competently and successfully. Because if not, then it would be a defeat for the whole women's agenda in Iran.

I told my two sons that they had to help out because I would be out of the house a lot. The little one, my son Taha, said to me: 'Would you tell the president no if I said no?'. I said that from the bottom of my heart I would say no if [he was] not convinced. And he was like: 'No, no don't say no! We will help you out!'. They were very supportive and very helpful.

This was not only an official job I had, but a social campaign. The people were really mobilized in these issues and that is what made a change in Iran during those years.

Which of your different roles has been the hardest for you?

It is difficult to say because I have always tried to make a balance and tried to put my efforts so that I could make it in each of these different roles. Development projects were popping up and there was an economic boom, [so] there was a lot of pressure. We had to work out ways to get win-win solutions. We could not beat the petroleum sector; but, on the other hand, we could not give up on the environment. [There were] many different fronts and we would look around and a new front would come up. It was a very demanding job, but I had a very good team of colleagues, director generals and staff. The educational aspect was the most important. In fact, it was not just to educate decision-makers, but people themselves and how they can play a role in this campaign. They responded very well. When we started off in 1997, there were around 20 NGOs that were somehow related to environmental activities. By the time I left office in 2005, I couldn't believe what I was seeing with the growth of these NGOs – there were over 600 NGOs working on environmental issues, resource protection and biodiversity protection! These little ripples brought about massive waves that brought about change in people and the media and policymakers as well.

Was your gender ever an obstacle to achieving your goals?

Gender was an obstacle in the beginning. When President Khatami had made the final decision [to appoint me as vice president], some of the ulema [religious leaders] had expressed their reservations at having a woman as vice president in Iran. But President Khatami was very adamant and strong; and he sent an envoy saying to the ulema that this [appointment] was an expectation that Iranian women had. They agreed with that and there was no outright opposition after that. A lot of questions were asked by colleagues when we would have visits to parks and to the provinces like: 'Could you perform as a woman?'. Initially, the first few months [they would say]: 'This was too difficult', and 'We didn't think you could go through this mountainous range'. I said to them: 'This was no problem - I have no problem camping at night on the ground'. Gradually, they relaxed and there was no problem. [I] would do anything that was expected as a leader to perform at that time and they stopped using certain phrases like: 'Since you are a woman we wouldn't have this program.' I was like: 'No, don't change anything'. Soon, they were saying: 'You are moving too fast!' and I would respond: 'But you were supposed to move fast and I was supposed to be the weaker gender!'.

I thought to myself: 'This was enough, this would be a great step forward!'.

Have the iranian people been receptive to the message you are trying to get across concerning the environment?

They have been very receptive, but that does not mean everything is fixed. What we did during those years was just the beginning of a very strong campaign to educate people on environmental issues. Although there is a thriving civil society, they do not have the final say. When we see subtle changes in government, then different policy effects on gender and the environment are drastic; and you can see that after the Khatami years finished and the new government came with different issues. They didn't see the environment as important the way we did, it was not a mainstream issue in the country anymore. We are trying

If i could, i would change the world by bringing more compassion into the equations that are governing today's world; and to start with inner peace to enable global leaders to make peace with nature and among other human beings so that there will be no war or terrorism.

2006 United Nations Environment Programme's (UNEP) Champion of The Earth.

in the context of civil society and the councils to make up for that recession. We still have a long way before we can say that the Iranian people have totally changed their habits and lifestyles to protect the environment.

In iran, have there been innovations in alternative energy?

There have been efforts to use solar energy; we have now a whole network of solar stoves throughout the villages for heating and cooling purposes. There has been a lot of talk to go back to traditional architecture - particularly since it is more environmentally friendly and [uses less] energy consumption, but it is not a widespread practice. Solar energy is being used more. We have an eco-park in Tehran where I had instructed that 10% of the electricity used should be from solar power and that this should increase every year. Now, we have a lot of solar lamps in other parts of the city. A lot of work has also been done on wind energy and we have wind turbines. There is also a lot of work on hydro power and since we have power plants, which are adjacent to the Caspian Sea and [Arabian] Gulf, 5 to 6% of their power is derived from hydro power.

Is environmental awareness something that is taught or something that is inherent to a society or culture?

It is inherent to some extent because when you see religious teachings that say something is not in line with the religion, then people who are very religious will refrain from that practice. On environmental issues, the message is improperly delivered and there is not enough knowledge about how the protection of nature is in our religious teachings and how much it is in line with the teachings of the Prophet (PBUH) and his followers. Environmental protection is not only material, but also spiritual - when you get close to nature, this is like an act of worship like 'ibada' and moving ahead spiritually. But sometimes we do not get the message to the people properly and we can't convey the Holy Quran's teachings in a way that would conform to the standards of modern life.

If you had one selfish wish, what would it be?

It is hard to make a selfish wish when you have been serving others and when you are always wishing for the betterment of your people and your country - you forget about yourself. Sometimes I wish I had the opportunity to just be and relax, and be myself away from a lot of the issues we face in our day-to-day lives. To be able to reflect on many of the things we find inside of ourselves – we sometimes forget that these inner incentives are what are actually guiding us and driving us in life. If we do not achieve inner peace then we won't be able to come to peace with other people or with nature.

If you had one selfless wish, what would it be?

That would be that the leaders - global leaders and politicians - would wake up to the realities of the world and stop following selfish, egotistic drives [...] To wake up to the realities of the world today and make peace with nature and the environment and promote true peace and understating among nations [...] The prevention of war and that no child is hungry, and that the poverty that is afflicting many parts of the world is taken care of; and that the world is run by people who have a true, or genuine sense of understanding of humanity and a sense of compassion *en.v*

Good Things Come
In Green Packages

Mindy Schulte

Packaging, by its very nature, is designed to blend into the background and showcase the product it hosts. A product, is often by definition, disposable as we rip open a lid or tear off plastic casing to get to the goods inside. And so it follows that we spend little time thinking about the packaging that the everyday items we use are wrapped up in and where that packaging goes once we are done with it. Now, more and more manufacturers, retailers and design companies are starting to pay attention to the impact packaging products have on our health, resources and environment; and are moving toward sustainable packaging for the future. With the cost-effective nature of renewable, recycled materials and innovative eco-friendly designs hitting the market, green is decidedly the new package.

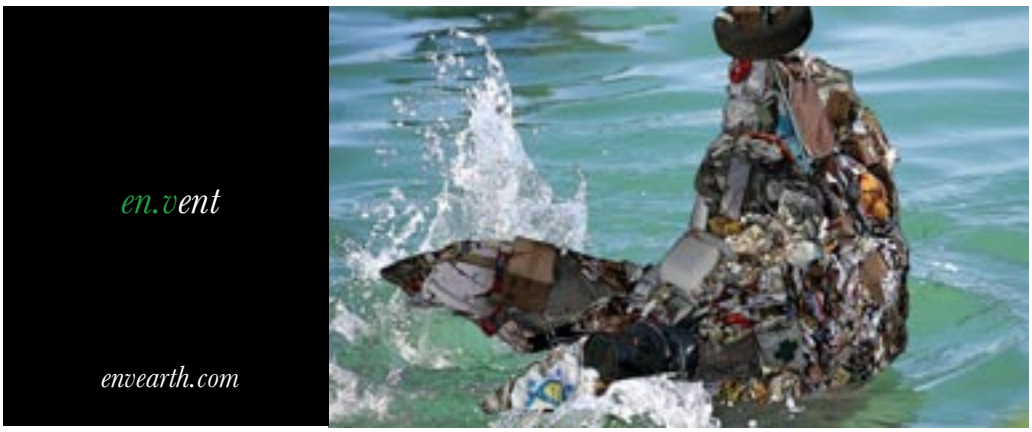
In fact, marketing research company Datamonitor Productscan recently listed eco-friendly packaging in its compilation of the top ten packaging trends for 2008. With some of the largest manufacturers and product distributors around the globe adopting the 'green' ideology, it is clear that this trend is fast becoming a stalwart reality for the packaging industry. Take Walmart, for instance. The world's largest retailer recently implemented a scorecard system to monitor the environmental impact of product packaging. The corporation's goal is to reduce all product packaging by 5% in the near future. With over 90,000 different products available on store shelves worldwide, that's no small feat.

But just what constitutes green packaging? The Sustainable Packaging Coalition provides a multi-pronged definition that goes beyond reuse, reduce and recycle. The SPC is a project of the non-profit organization, GreenBlue and counts international leviathans like Nike, Mattel, Inc, Microsoft, PepsiCo/Frito Lay, Philip Morris and the chemical giant Chevron Phillips Chemical Co. (think world-scale chemical plants in Qatar and Saudi Arabia) among its members. The coalition works with manufacturers and large businesses to develop packaging practices that encompass the "cradle to cradle" philosophy of the environmental movement. This means creating merchandise that has a life cycle that goes beyond the recycling bin as beneficial, safe and healthy; so that no matter where a shipping container or food carton may end up, it is not harming the environment or contributing to harmful health effects for local communities. This large-scale definition also includes sourcing renewable materials and manufacturing and transporting packaging materials with renewable energy when possible; and creating processes for effectively recovering and disposing of used materials.

Putting Green Packaging Into Practice

Napco – This media packaging manufacturer has produced materials for well-known music artists and blockbuster film releases from companies like Disney. Napco recently created a line of environmentally sustainable CD and DVD packages. Called ECOtray media packaging, the products are made from 100% recycled paper, cardboard and corrugated box materials resulting in durable and environmentally-friendly consumer media cases.

Boxal - The company's plans for the future of beverage packaging include manufacturing aluminum beverage bottles to replace current glass and plastic vessels. The containers are safer than traditional bottles – the metal is unbreakable, durable, lightweight and of course, 100% recyclable. The switch to these bottles also eliminates



tons of potential trash, while keeping consumers healthier by avoiding soft plastic materials that can leach harmful chemicals into beverages.

While some product designers and manufacturers like the ones mentioned above are already making a real move toward greener packaging, the claims of going green are popping up all over the place. How can consumers filter through the 'greenery' to find products that are truly taking an interest in protecting the planet? Here are a few simple steps to get you started:

1. Look For Labels – Not all green labels are created equal. Futerra Sustainability Communications' Greenwash Guide is a good place to start learning about the greenwash effect – and how to avoid it. Many products on retailers' shelves bear stickers or claims of green certification, often by organizations or environmental agencies you've never heard of. Published in April 2008, the newly released Greenwash Guide is an easy-to-read overview for identifying false 'green' advertising on product packaging. Download the guide at www.futerra.co.uk. Tips in the guide include avoiding green-washed products by looking out for trusted and well-known labels.

For instance, the Forest Stewardship Council conducts thorough inspections of forest management units before allowing products created from the forest's raw materials to bear the FSC logo. Visit www.fsc.org to view the label and learn more about the certification process.

In Europe, the EU's Eco-Labeling Board awards the "eco-daisy" shaped Flower label to products that meet established criteria such as: considering effects on public health, basing products on good environmental science and developing products with transparent processes. Businesses that meet the criteria are encouraged to apply for the award and carry the eco-label on their products to foster environmental awareness among consumers.

The familiar Green Dot is a symbol included on many European packages to indicate that the producer of the package has made a contribution to the recycling of packaging. However, it is worth noting that the Green Dot does not indicate that the package itself is recyclable, which may be confusing for consumers.

A comprehensive list of many international packaging, environmental labels is available online through www.recycle-more.co.uk, a website dedicated to providing information on recycling at home, school and work.

2. Do Your Homework – a quick visit to sites such as the Sustainable Packaging Coalition will land you on a long list of its member companies, who have vowed to work toward more responsible packaging design and production.

3. Shop Locally, Buy In Bulk. What is one of the easiest ways to make sure the items you are bringing home are sustainably packaged? Simple. Pack goods yourself. Bring reusable shopping bags to the grocery store and buy products in bulk to avoid excessive "single serving" packaging altogether. Using products like aluminum reusable water bottles lets you skip the decision of which bottled water to pick up at the store altogether! And, shopping at local farmer's markets and wholesalers whenever possible cuts down on transportation packaging, refrigeration and the carbon footprints created by long-distance shipping.

These small steps, when combined with the larger strides of eco-minded companies, are slowly and surely leading the retail world toward a future wrapped in a greener package. *en.v*

10 TIPS
TO GREEN YOUR HOME

1. REPAIR AND REFURBISH

2. REDUCE WASTE

3. TAKE SHORTER SHOWERS

4. REDUCE PETROLEUM-BASED CLEANING PRODUCTS

5. TURN HEATING AND LIGHTING OFF WHEN NOT IN USE

6. USE RENEWABLE NATURAL MATERIALS

7. MAXIMIZE USAGE OF NATURAL LIGHT

8. USE NATURAL VENTILATION METHODS

9. BUY LOCAL PRODUCTS

10. REDUCE, REUSE, AND RECYCLE


The Verve

The Darker Side of Green

Nur Kaoukji

Ushers are escorting celebrities to their front-row seats. The paparazzi are buzzing, the music is pumping, the lights are ش and everyone is breathlessly waiting for the show to start.

And then- BAM!
One by one, out strut these bandit-looking models, their faces half-covered by masks and clad in outfits made up of shredded t-shirts depicting cartoon characters. Others are clothed in what appear to be prom dresses with distorted brand names sewn on, knee-high striped sock-shoes and colourful electrified wigs.

Confused? Understandable - since this is not a description of any ordinary fashion show. This is the show that took London Spring/Summer 2008 Fashion Week by storm, generating as much press as any fashion new-comer could ever dream.

Bewilderment, shock and fascination are the most common words used to describe the reactions that follow the 'Noki House of Sustainability' dark and eccentric show.

Noki, IKON backwards, has taken fashion sustainability into his own hands and declared war against mass-production. Born JJ Hudson in Aberdeen, Scotland, Noki is also famously known as 'The Man Behind the Mask'. The name so given because he will only be seen or photographed with his face covered to maintain complete anonymity, so that his collection may stand out and speak for itself.

Critics have accused Noki of creating un-wearable pieces and of developing publicity stunts to cause media frenzy. However, one must take into consideration the objective of Noki's cause and whether attracting this much attention to such a cause is worthy of criticism.

Like every fashion designer, Noki is interested in sparking trends – though not one that encourages people to consume. Instead, his aim is to prompt people to fight mass consumption by being resourceful and creating unique pieces from old stock. Whether one is aesthetically attracted to these pieces is not the issue. What is really important is the message that Noki is trying to get across.

Here is what JJ Hudson of Noki House of Sustainability had to say for himself.

Who is dr. Noki?
Dr Noki is the head of the NHS (Noki House of Sustainability), the art director to a new kind of brand fashion house, driven by a sustainable heart.

How did you establish noki house of sustainability (NHS)?
Lulu Kennedy, from London's Fashion East platform, invited the Noki style to walk its catwalk for spring/summer '08 to represent a sustainable fashion silhouette. The NHS was born to make a strong fashion statement rather than an art one to celebrate the 12 years Noki art has been represented in fashion tabloids. Art can be rather slow and serious. Fashion is more immediate and accessible. The NHS is the studio created to work within a fashion field, collaborating with industry to spread a sustainable statement to a new fashion generation.

What inspires you?
The things I find irritating, it is at this point I find a need to reclaim the hate that has been presented to me.

Is your goal to get a message across or establish a new fashion trend?
Both I would say, the NHS will bring to the fashion field, a new concept in consumerism where it is uniqueness, [and] not homogenization it is selling.

Where did you receive your professional training?
Edinburgh College of Art in Scotland and life experience, survival and determination to make the pattern fit.

Are there any plans for an nhs ready-to-wear line?
That would have to be done on an organic canvas like Katherine Hammnete does. This is a positive message, so [it] is very possible.

Why the anonymity?
Tabloid fame is not my aim.

What type of consumer has shown the most interest in your pieces?
Those that seek to be unique.

Any plans on expanding globally?
A shop in Brick Lane London called LMB in June' 08 – let's see where that takes us.

Do you think the current interest in sustainable fashion is a passing trend or an introduction to a new 'eco-friendly' lifestyle?
No, not at all – the unique piece is the desired want. The consumer is now aware that this brings much needed love and desire from their peers. *en.v*

Eating Greener

Mindy Schulte

The Organic Argument

If you argue that you're already eating green because you're buying products labeled "organic", you might be surprised to find out that organic does not always equal planet-friendly. Large-scale organic farms can still produce vast amounts of waste and cast large carbon footprints on the earth, much like traditional farming.

Now, many smaller, local and family farms are banding together to create certifications that better encapsulate the ideals of the organic movement. How can you find out if the veggies you're about to eat are organic and eco-friendly? Nonprofit organizations like the Swiss-based Institute for Marketecology (www.imo.ch), provide detailed information about their organic certification processes online. If you can't research a product's certification, shop at local farmer's markets or buy directly from vendors. This way, you can ask questions and get answers from the people who actually grow the food. For instance, large-scale poultry producers may still raise organic chickens in small, confined cages. Ask if the hens are free-range and hormone-free.

Count Your Food Miles

The term food miles is used by environmental researchers, farmer's market advocates and green activists to describe the distance an item of food must travel from its origin to its final destination. Food miles are one way of measuring the carbon footprint, or environmental impact, of food production and consumption. A large number of food miles are often found with products like imported fruits and vegetables, exotic species of meats, poultry and fish, and grains grown in other regions of the world. These foods often require some degree of processing and packaging, refrigeration and large-scale transport (think gas-guzzling trucks, ships, or planes) to get from here to there. Select locally produced foods and encourage stores to carry local products if they don't already do so.

The Dirty Details – It All Adds Up

Looking for organic products not only means healthier foods for you, it can mean healthier long-term impacts for local ecology. In regions with sandy or porous soil, such as that found in much of the UAE, fertilizers, pesticides and medications used to treat crops and cattle often quickly wash right into the soil and ground water before the chemicals have a chance to break down – a fact that the UAE's Ministry of Agriculture and Fisheries has recognized as a danger. The ministry is currently taking steps to support organic farming methods as healthier alternatives to traditional farming in the region. Farmers in the region are steadily joining the organic farming trend. Earlier this year, the Abu Dhabi Organic Farm received international recognition by the Food and Agriculture Organization of the United Nations (FAO), after receiving full organic certification in 2007. Projects like the Abu Dhabi Organic Farm not only produce organic products for the local community, they are important milestones in creating awareness and education about the importance of farming locally, organically and sustainably. Supporting these projects means a green (and tasty) future for food. *en.v*

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Spring Cleaning

Meets Green Cleaning

Mindy Schulte

When You Swipe A Countertop or spray down a bathtub with traditional, commercial cleaning products, you're introducing a ton of toxic chemicals into the nooks and crannies of your home. All that is about to change with the newest line of green cleaning products that are about to hit the markets. Companies are recognizing the need for creating eco-friendly cleaners that are green from their packages right down to what's inside the bottle. For instance, the Simple Green line of cleaners shines windows and de-greases pots and pans, without introducing harmful chemicals and vapors into your home. The company jumped on the 'green product' bandwagon over 30 years ago – before the bandwagon was even in motion. The manufacturer, Sunshine Makers Co., now sells the cleaning line in stores in over 100 countries, including the UAE and Kuwait. What makes these green cleaning products better than traditional cleaners? To start, they use water-based formulas and contain no ozone-depleting ingredients like chlorofluorocarbons (CFCs). They're also free of toxic chemicals, making them safe for use near pets, plants and children too. Convinced that it's time for your home to go green? When you're gearing up for spring cleaning, here are a few elements to consider:

Animal Safety

The newest wave of green cleaners promote animal safety in the lab by avoiding animal testing, and they also keep your furry family members out of harm's way. Look for formulas that are non-toxic, plant or mineral-based and safe to use near plants and gardens, where pets often roam.

Reduce And Reuse

Save the Earth and some cash by switching from disposable to reusable cleaning tools. Microfiber cloths and reusable dish towels are just as effective as paper towels and pre-soaked wipes, without adding to the trash pile. To Try: Pick up the E-Cloth, a reusable microfiber cloth great for cleaning hard surfaces from stainless steel to glass and wood. The microfibers can be used dry or dampened with water to pick up dust particles, eliminating breeding grounds for bacteria. To clean the E-cloth, simply boil or toss in the wash with the rest of your laundry. Another bonus: They're great to use if you are prone to household allergies.
(www.enviroproducts.co.uk)

Green Clothes Cleaners

Dry cleaners are notorious for using harsh, environmentally damaging chemicals that add to poor air quality and are harmful to humans too. If you must dry-clean clothes, seek out dry-cleaners who adopt healthier alternatives like carbon dioxide cleaning or the GreenEarth cleaning method. Or play it safe and wash delicates at home with laundry products like the Belgium-based Ecover's Delicate Wash, which has a nontoxic, completely biodegradable formula, and comes in a 100% recyclable bottle.
(www.amazon.com/Ecover-Delicate-Wash)

Do-It-Yourself

If green cleaning products aren't readily available in your neighborhood, you can whip up a batch of ready-to-use cleaner from easy to find household items.

To Try: All purpose cleaner – for countertops, windows, and bathroom fixtures: 1/2 cup vinegar and 1/4 cup baking soda (or 2 teaspoons borax) into 1/2 gallon (2 liters) water. Store and keep.

There are many guides to do-it-yourself natural cleaning now available online. For more inspiration, check out: "The Naturally Clean Home: 100 Safe and Easy Herbal Formulas for Non-Toxic Cleansers" by Karyn Siegel-Maier
(www.amazon.com/Naturally-Clean-Home) *en.v*

www.grassrootsstore.com, www.shop.wwf.org.uk, www.ecover.co.nz

Riding The Wave

Ahmed Al Sabah

Wind, Water and an adventurous disposition is all that is needed to enjoy kitesurfing. The whistling of the breeze blowing past your ears, the sound of your board slicing through the waves, and the occasional splash of water slapping your sunburned face makes kitesurfing more of a lifestyle than a sport.

When your car becomes a virtual beach because of sandy, wet kitesurfing gear; When you start to hope that the weather forecast will change to windy through sheer willpower alone; When your everyday language is littered with words no one else comprehends, and you start jumping on your mattress practicing your next kitesurfing trick – you know you've been bit, and bit hard by the kitesurfing bug.

Kitesurfing first gained traction around 2001 and, since then, has been growing fast.

Today, there are around 100,000 sufferers worldwide infected with the virus.

I started kitesurfing around 2001, and it has been an unmerciful addiction ever since. I have lugged my kitesurfing gear from Brazil to New Zealand, and lots of places in-between, in search of the next fix. The search for a nirvana of endless beaches with constant winds and bright, warm sunshine still continues.

One of the beauties of kitesurfing is that the gear can be easily chucked in the plane's baggage hold, while you stare outside the window trying to spot great beaches from 30,000 km in the air. The gear needed for kitesurfing includes: kite, bar, board and harness. The kite can come in many different shapes, colors and features. The boards, like the kites, also come in a variety of shapes and for various purposes. The control bars are connected to the kites with lines measuring between 20 and 27 meters. The bar is how the kites are manipulated, or controlled, by the kitesurfer. The kitesurfer wears a harness around his lower abs and hips that connects to the bar and distributes the pull across the whole body- rather than just on the arms. With the power of the wind channeled through the kite, bar and harness, the fun begins with the board. By digging in the edge, or sides, of the board into the water, the board starts to glide across the water; and, provided you're being pulled by the kite at the same time, presto! You have kitesurfing!

A disclaimer: Kitesurfing, similar to driving on Kuwait's Gulf Road, can be dangerous if one's not careful enough. There have been cases of broken legs and other more serious injuries among the kitesurfing community in Kuwait. It's usually with people that have not taken proper instruction and believe that they know it all – until they get humbled by the power of the kite, and sometimes get injured in the process.

The kite, therefore, is a serious power source. It should be treated with the care, caution and consideration that it deserves. Follow the rules, and you'll be rewarded with a great "stoke" and a huge grin on your face. Disobey, and you'll more than likely end up nursing more than a few battle wounds. *en.v*

Shutterstock

Arctic Nomads

Abdulwahab Al-Ghanim

Abandoned workstation in the Arctic.

Brrr... They have just opened the door of the plane signaling we have officially landed in the Arctic Circle. Where's my jacket?

As we set foot off of the plane, the wind blowing at speeds of up to 40 km/h, I realize this expedition is not going to be easy and that Mother Nature is going to be a tough lady to please.

National Projects Holding Company, headed by Musaed Al-Saleh, sent a group from Kuwait to the Arctic Circle to experience the effects of global climate change firsthand. Upon our return, we would educate people on what we saw with our own eyes, heard with our own ears and felt with our own frozen skins.

The following are excerpts from our journey by my team members and myself: H.E. Jose Maria Figueres Olsen, CEO of Grupo Felipe IV and former President of Costa Rica (1994-1998) and former Head of the World Economic Forum; Captain Ali A. Haider, Acting Director General of Kuwait Environment Public Authority; Ahmad A. Al-Hamad, Managing Director of Kuwait China Investment Company; Sahar O. Al-Nasrallah, Environmental Policy Advisor for National Projects Holding Company; and finally, myself, on behalf of *en.v* magazine.

Abdulwahab Al-Ghanim

Day 1: Tuesday, February 26, 2008

Getting there... After hours of long plane rides and waiting in airports, we have finally reached our first destination – Winnipeg Airport. My fellow teammates and I took a glimpse at the weather outside as we were waiting for our luggage, and knew we were in for a weather shock. Later on that night, Jose Maria and Ahmad honored us with their arrival – the group was complete. Finally! It was time to head to the airport, to catch our 2:45 pm flight to Churchill. As we were waiting at the gate, we were told that the current temperature in Churchill was -26°C. We all looked at one another and started to laugh, knowing we had a great cold challenge ahead of us. After two and a half hours on Calm Air, not to mention a loud and bumpy one, we reached our final destination! As we bundled up, walked down the plane, cold wind blowing onto my face, one word came to my mind – Wow! I was wowed not just by the -30°C temperature, but by the natural beauty of white snow and fresh air. After picking up the remaining gear, we headed towards Churchill Norton Studies Center (CNSC) – Reality has struck!

Sahar Al-Nasrallah

Day 2: Wednesday, February 27, 2008

Today is when we test ourselves and meet our threshold for pain to prepare for the extreme temperatures we will be experiencing over the next 10 days. We are told to dress up in our gear and meet up outside to get better acquainted with -35°C. We run through a few procedures and gear checks before heading back in for a briefing about our duties for the next day.

Abdulwahab Al-Ghanim

Day 3: Thursday, February 28, 2008

Another chilly start but with the prospect of kitchen duty. I wonder what chemical agent they use to get the chef's scrapings off the plates. We will do some more sampling and testing today but will start the morning briefly reading our blogs to each other, which will be posted on the projector. It was very cheesy, but we were told it was supposed to be a group bonding experience. Getting on the tree team – which means tagging, snipping and recording tree stubs to study later. We were off to a site, which was about a 10 minute ride in the back of a snow mobile. The day was gorgeous, only -23°C, and the views amazing. One of the ponds next to the site was completely frozen to the bottom, which was astounding as you could stand on top and see right down.

Did you know that you cannot make snowballs out of the snow around us because it is too cold and dry?! Honestly. As hard as you may pack it, you can't

a.

a. Volunteers leaving for a work site in a qamutik.

b. An abandoned vehicle by the canadian military.

b.

get it to stick. Nor can you ski on this stuff... Useless snow if you ask me.

The afternoon was spent recording the length and weight of twigs. Wax their ends and put them in desiccators (dryers) to dry them out – Fun.

Ahmad Al-Hamad

Day 4: Friday, February 29, 2008

Morning started with a winter blizzard warning: -52 °C and wind gusts of up to 80 km. We are going out this morning to do some sampling, but might have to cut it short due to the weather. Not a problem, as I have gotten myself into trouble promising to make falafel for everyone today. Yes, I managed to wangle myself into the kitchen after numerous complaints about the food and a few days of charming the chef. I just might need to keep a few falafels and see how long I can survive on them.

Got the latest on the weather: Snow. Blizzard developing in the morning – does not bode well for going out, but will allow us to rest up. We have been going at this non-stop from 7 am until 10 pm everyday. Not that we will not be put to work. We will be building an igloo and then completing our data sheets in the lab.

We just got back and have another fitful dinner session. Meatloaf and dehydrated mash potatoes. I think the falafel will be a blessing tomorrow as the chef decided to delay my efforts until then. This was the longest day, early morning session in the snow and then an extended afternoon session which was at a site close to the airport. In fact, it was the first site which was used in the 1970s to record data. One thing I did enjoy was riding across the lakes and seeing the snow ridges which were carved by the winds. Some of the most beautiful shapes, which I hope to take photos of on our next trip and when the weather allows for some good lighting.

Another stunning experience was walking across the Hudson Bay (named after a man who was left by his crew in an open skiff after their mutiny in the 19th century) and seeing the whole sea frozen. I am talking about 3,000 km squared! Just thinking about the amount of energy needed to freeze and thaw a body of water that large is mind-boggling.

A quick stop in town allowed us to pick up some, and I mean some, essentials for the lock-in tomorrow.

Tonight I will definitely sleep well.

Ahmad Al-Hamad

Day 5: Saturday, March 1, 2008

As usual woke up around 6:15 am. Performed my morning routine, and then it was time for snow pits and core sampling. My partner and I gathered our kit, and rode off to another site on the Qamutik (Eskimo sled). Today, we did two sites – before and after lunch. In the morning, we went to a difficult site (it was deeper); we had "Forest" sampling this time, so our pit was about 3.5 feet deep. We've been really lucky with the weather, sunny and no wind, and honestly -23 °C doesn't feel like that at all when you are working and digging. It was actually hot, plus the foot warmers helped tremendously. The staff was telling us that we were fortunate for the weather conditions – I had just told them that that was because the Kuwaitis are in town, and the sun always follows us! Some of the team members wanted a change in the food, so Captain Ali and Ahmad decided to make falafel. Have to admit, they did an excellent job. On the other hand, we had more lab and data entry forms to input, and waxing of a tree branch. (Yes there is a scientific reason behind us dipping it into wax.) Tonight's lecture was given by Lee Ann, another professor/researcher, on "The Aurora lights" – aka Northern Lights. It was actually pretty interesting to learn about them and the different colors it produces and what causes the Aurora – which we were very fortunate to witness. So all in all, we are not just working, but we are getting educated on many amazing things.

Sahar Al-Nasrallah

a.

b.

a. Ahmad coring for samples.

b. Abdulwahab helping to build an igloo.

Day 6: Sunday, March 2, 2008

The forecast reads that there is a blizzard on its' way with winds up to 70 km/h but predicted to reach us in the afternoon. This means that we have time to tackle a site and make it back for lunch. The wind slowly picks up as we work in the field and by 9:30 a.m., the visibility drops drastically. We wrap up our work as quickly as possible, jump in the Qamutiks and rush back to the studies center. The experience of riding in a Qamutik in blizzard-type weather is a completely scary experience that has you in a surreal state of mind. You can't see much, you feel like you're trapped in a white room with no walls, just endless white landscape. I can barely see the light of the snow mobile behind us. Thankfully, we reach the studies center in one piece and with everyone accounted for. The wind is now blowing at approximately 80 km/h and the temperature has dropped to -43°C. We decided that for the rest of the afternoon, since there was no way we were going to head out to another site, we would attempt to build an igloo right outside the center. This was a grueling experience, which requires a lot of physical work especially in the insane windy conditions we are in. Unfortunately, we were not able to continue due to the weather.

Abdulwahab Al-Ghanim

Day 7: Monday, March 3, 2008

Today was a day to recuperate. The blizzard had left us with cold and windy temperatures, which were not favorable.

Abdulwahab Al-Ghanim

Day 8: Tuesday, March 4, 2008

Our Day Off... No. It could not be true. In fact, it wasn't. We ended up being told that we will be working in the morning doing some more sampling and then dropped off into town for the afternoon. A little bit of shopping (two shops in town, a supermarket and a post office/bookshop) and then dinner. Not sure if my system can handle a meal not cooked by Chef.

Anyhow, work was done in -52°C; but what made it worse was the fact that none of the snow mobiles worked in the morning. Eventually, we settled on using one of the machines to relay people across to the site. I was in the first batch.

Unfortunately for us, and fortunately for others, our machine died when we arrived. This meant that we then had to walk back. A 40-minute walk facing the wind on the coldest day since we've been here.

Lunch is served.

Ahmad Al-Hamad

Day 9: Wednesday, March 5th, 2008

We Are Not Going Out Today...
This morning we assembled for our usual morning planning session. Lee Ann made it official: The weather today is just too cold to go out. With a temperature of - 34°C and a wind chill factor of -57°C, it's too much of a risk to go out.

Yesterday we experienced some of the difficulties and equipment failures when the temperature drops down into the -40s. Today, being colder, getting out there would make no sense.

Nevertheless just for the experience, some of our team members decided to step out for a short walk... You should have seen them when they came back in!

There is plenty of lab work for us to do inside anyway...

Jose Maria Figueres

Day 10: Thursday, March 6, 2008

After being stuck indoors the night before due to bad weather conditions, we were greeted this morning with a less windy scenario. We were told to suck it up and get ready to go out. We were all ready by 8 something (I think) and went outside to get in the Qamutiks. I

a.

b.

c.

a. Ahmad & abdulwahab work on a snow pit.

b. A small island frozen in the midst of the north Atlantic ocean.

c. Snowmobile pulling the qamutik over a frozen lake.

think having a day off from working in the field resulted in a lot of whimpering. I, myself, was complaining about everything, especially my frozen toes (I really do sound like a little girl sometimes); other people were complaining that they thought this could possibly have been the coldest day since we started working at the sites. The ride back was business as usual, however when we got back there was a strange feeling in the air. Everyone was drained and sore; nobody had the energy and willpower to continue. We almost quit, right there on the spot. We were not so sure if we could pull it off and were in between staying and going. Finally, the decision was made and instantly we were getting suited up after lunch. I was worried once again about my toes freezing up because that is a heck of a painful feeling; however I just used extra in-sole heat pads. We headed out to a site named Black Spruce, where gorgeous trees were lined up endlessly on both sides of our route. It was extremely cold but with the view around us, you seemed almost lost in a trance. I knew this was the last time we were going to be out and about in the Arctic. I guess I just wanted to take it all in quietly leaving the complaints back at the studies center.

Abdulwahab Al-Ghanim

Day 11: Friday, March 7, 2008

The Struggle Continues...
Today is our last day at the research center. Packing up, saying goodbye to those that have been our colleagues and will stay behind, and beginning the long journey home will occupy most of our time.

According to the weather forecast, every time I land after multiple flights during the next hours, I will have experienced a 'climate change' of about 15°C.

First we will travel from the Center to Churchill;

We will leave Churchill with temperatures of - 34°C; Arrive in Winnipeg with temperatures of -16°C; Continue to Toronto with temperatures of -2°C; And arrive in Madrid with temperatures of 14°C.

On a very small scale, my trip back is representative of the change our planet is going through. I will survive my trip without any major inconvenience. However, I ask myself if my grandchildren will be able to live the lives I would like them to live, with the progression and consequences of climate change.

We can still act and make a difference.
en.v

Jose Maria Figueres

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You're Part of the Big System:
Hubert Sauper's "Darwin's Nightmare"

Kelly Innes

Lates niloticus, the Nile Perch, is an invasive species of freshwater fish native to Sub-Saharan Africa's river basins. Though not native to Lake Victoria, since its introduction in the 1950s the fish has come to dominate the lake's ecology such that Tanzanians now refer to the perch as 'Vic Fish'. Perch populations have devoured all other fish species in Lake Victoria. Since their appearance, at least 210 species of cichlids have vanished. (Vic Fish often cannibalize their young as well.)

"The Perch," we are told in Hubert Sauper's 2004 documentary "Darwin's Nightmare", "is eliminating all hope for the future." Sauper offers the Nile Perch as the point at which ecological disaster interfaces with the global economy and armed conflict through the town of Mwanza, Tanzania. Mwanza, the southern port of Lake Victoria, is the point where Lake Victoria's fishermen export Perch via aircraft to Europe – even as a famine rages across Tanzania. While Europeans eat perch fillets, Mwanzans subsist on "fish frames": Vic Fish carcasses stripped nearly to the bone, discarded and covered in flies on the rubbish heap, retaining only that which can't be made into fillets.

In one striking scene, the camera comes to rest on a calendar inside the fillet factory. The calendar's slogan insists on the crossing point between human beings' everyday lives and the global economy as a whole: "You're part of the big system."

Sauper's film documents the horror of the daily lives of those at the bottom of this system even as it implicates the developed world in wanton human and environmental destruction. Indeed, the same planes which carry perch fillets to Europe return bearing weapons to arm African wars. In the "Big System," then, even something as banal as fish fillets can lead to horrific ecological and geopolitical destruction. *en.v*

Flickr by Timmo

Doris Lessing and the Poetics of Climate Change

Kelly Innes

It's likely just an historical accident that in the same year in which Al Gore won the Nobel Peace Prize for his efforts to address global climate change, the Swedish Academy awarded the Nobel in Literature to Doris Lessing. Coincidentally, Lessing's five-volume science fiction series, Canopus in Argos, includes one novel about a planet suffering catastrophic climate change. The Making of the Representative for Planet 8 (one of the novels in the series) narrates an ice age besetting an earth-like world. As 'Planet 8' freezes and dies, its people gradually accept extinction by a cosmic resignation through the recognition of an inter-connectedness with other living beings – and even with the ice that ultimately covers the planet's surface.

Shikasta – first novel in the series – terms this sense of affiliation "the substance-of-we-feeling." Shikasta recounts the colonization of Earth by 'Canopus', a benign cosmic empire especially attuned to this shared being. Canopus antedates human life and from the Canopean perspective, the catastrophe of human history is the failure to harmonize earth with the substance-of-we-feeling. This catastrophic loss divides human beings and culminates in "the century of destruction": our twentieth century, with its world wars and mass killings.

In Shikasta and in Canopus in Argos as a whole, to lose touch with this substance of cosmic empathy is to be divided from other beings. The Swedish Academy's Nobel citation notes that Lessing "has subjected a divided civilization to scrutiny." Canopus in Argos argues, perhaps, that our divisions – historical, political, economic, and cultural – occlude a deep and increasingly urgent sense that we share more than we now recognize. And that we must think about what we are doing – to each other and to the world we share – before our planet's ice disappears. *en.v*

Flickr Betsy The Divine

Reducing Carbon Footprints, One Concert at a Time

Leen Al Zaben

Have you ever wondered how much energy is consumed during a concert tour? How about how much carbon a concert emits? Between the fuel consumed by the tour buses and the accompanying fleet; the waste produced by fans attending the concerts; and the amount of plastic cups used - the answer is a lot!

This is where Reverb comes in. A non-profit organization, Reverb helps musicians become more eco-friendly. Founded by Lauren Sullivan and her musician husband, Adam Gardner, in 2004; Reverb is working towards greening the rock concert industry, band-aiding the environment (pun intended) and promoting environmental sustainability. They consult artists and provide solutions to help them green-up their concert tours; in addition to spreading their love for our planet to fans.

So, how do they do it? Some of the things Reverb does to help concert tours go green is to convert the fuel used by the tour bus and the fleet to biodiesel. It also sets up backstage recycling programs for all the paper, plastic and cans used; as well as recycling broken guitar strings into bracelets. Reverb also sets up "eco-villages" at concerts in order to educate fans about environmental issues. Through these initiatives, the organization has reached over 4.6 million fans to date. The coolest part? If you go to a concert that has been greened by Reverb, you can go home with an organic cotton, souvenir t-shirt of the band!

Reverb has worked with artists ranging from The Barenaked Ladies and the Red Hot Chili Peppers, to the Beastie Boys and Linkin Park – to name just a few. They have worked on a total of 50 tours, and have reduced 32,619 tons of CO2 in the last four years. This is the equivalent of annual greenhouse gas emissions of 5,420 passenger cars; or, CO2 emissions from the energy use of 2,612 homes for one year; or, the carbon sequestered annually by 6,725 acres of pine or fir forests! *en.v*

www.reverbrock.org

Hassan Hajjaj

Leen Al Zaben

Think of the most mundane items on your supermarket shopping list and try to imagine how they can be turned into a work of art. Hassan Hajjaj manages to do just this and deliver a fantastic piece of pop art, which transforms salt, milk, fabric softener, tea bags and cornflakes into a funky wall hanging.

Born in Morocco in 1961, Hassan Hajjaj spent his childhood absorbing the colorful landscapes of Fez, Marrakech and Casablanca; which later served as inspirations for his edgy art. His teenage years spent in London's underground club culture fused with his eastern roots and shaped his artistic personality.

Hajjaj is best known for recycling the everyday objects of the typical North African urban landscape. He makes use of the objects that were lying around during his childhood in Morocco such as: road signs, Fuji Film advertisements, red plastic Coca-Cola crates, old cans and industrial paint buckets. Hajjaj mixes the old with the new to create the comfortably-relaxed feel of his early childhood in Morocco. His recycled creations include furniture, lamps and wall hangings; whilst his other forms of creativity manifest themselves through the camera lens and on large canvases. In this way, Hajjaj has been able to tap into various mediums of artistic expression in order to spread his creative message.

Hassan Hajjaj has been dubbed "the Andy Warhol of Marrakech", because his work manages to bring the pop out of the souk. Camels, vibrant colors and the raw, unkempt feel of Morocco and its desert mixed in with the use of the Coca-Cola brand gives Hajjaj's work its 'Warholesque' feel. Hajjaj wants to spread awareness about contemporary art that can be found in North Africa, and which has been influenced by European stereotypes. His work is a paradox in itself – mixing the symbol of capitalism with the traditional North African landscape to create his unique brand of pop art.

Hajjaj is best known for designing the Andy Wahloo restaurant in Paris, where he managed to make recycled North African objects the main motif of this funky Parisian establishment. His work has been exhibited in London, Paris, Morocco and the UAE. *en.v*

www.hassan-hajjaj.com

Leed

en.v

World Green Building Council (WGBC)

How do you know that a building or a design is actually 'green' and sustainable? Fortunately, there are international councils that can test and measure buildings that claim to be green. The council and the rating systems are affiliated with the United States Green Building Council (USGBC) and the Leadership in Environmental and Energy Designs (LEED) ratings. The WGBC is a union of national councils, which represent 50% of the global construction activity and 15,000 companies worldwide. The council was established due to the vast amount [40%] of greenhouse gases buildings and communities generate; and because of such environmental pitfalls, councils are sprouting up all over the world.

Leed Green Building Ranking System

What is LEED? And, why are hip architects insisting that their buildings or designs be LEED certified? No, LEED is not the latest trend; it is a ranking system that ensures designs and construction are energy and environmentally-efficient. To be LEED-certified, architects and developers ensure 90% of materials are regionally sourced, have exemplary water performance, 100% certified wood usage, indoor environmental quality, and use biodegradable and eco-friendly cleaning products.

The First LEED Platinum Certified

Building in the Middle East
The new Pacific Controls headquarters building in Dubai is the first Platinum rated LEED building in the Middle East, and the 16th in the world. Pacific Controls, the crescent shaped five-story building, will house a research and development team that will focus on eco-friendly automation solutions and products for global markets. Inaugurated in October 2007, the building is globally recognized as 'green' because it was built on a sustainable site. The site was assembled entirely from recycled content and utilized high-efficiency lighting systems and renewable energy for heating and cooling.

Emirates Green Building Council (EGBC)

When the Pacific Controls building was under construction, the developers sought out the India Green Building Council for consultation and recognition. Today, architects and developers in the region can seek advice on sustainable design and green building standards from the EGBC. EGBC is affiliated to the WGBC and the USGBC, is a non-profit organization that encourages eco-friendly design in the Middle East. *en.v*

Kuwait... Naturally.

Kuwait's rich landscape is home to a diverse array of insects, plants, animals and wild flowers. Once marred by pollution from burning oil wells and resultant oil lakes, Kuwait's wildlife and vegetation has proven resilient; and, like its people, has weathered the worst and come out blooming and thriving.

The following is a series of photographs that highlights Kuwait's natural beauty.

These images were donated to *en.v* by a local photographer on behalf of the kuwait volunteer group.

Bader Al Attar

Insects of Kuwait

Bader Al Attar

Birds of Kuwait

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Think Forward

Restoration Eden

The Challenge of Environmental and Cultural Renewal

Nadia Akil

The Euphrates.

Believed by some to symbolize the original biblical Garden of Eden – sacred to Islam, Christianity and Judaism – it is also the birthplace of Western civilization; the meeting point of the Tigris and the Euphrates rivers; heir of the ancient Babylonian and Sumerian cultures and Mesopotamian mythology; and home to the first literary epic poem, Gilgamesh.

The most ecologically diverse ecosystem in the Middle East – the Mesopotamian Marshlands - certainly represent an important environmental challenge, but they also reflect a deep rooted historical and cultural significance that have recently shown positive signs of revival.

The Mesopotamian Marshlands: Destruction Of A Complete Ecosystem

The Mesopotamian Marshlands lie in southern Iraq, at the convergence of the Tigris and Euphrates rivers, covering over 20,000 square kilometers of lush interconnected lakes and wetlands. The Marshes represent a very distinct portion of Middle Eastern heritage and have continued to prompt curiosity amongst environmentalists globally.

The 'Ma'dan,' or marsh dwellers, played an essential role in the uprising against Saddam Hussein's regime in the early 1990s. Because the Marshes offered a kind of safe haven to the Iraqi resistance movement, part of the regime's mandate was to punish the rebellion by desecrating the Marshes. They did this through a system of drainage and water diversion that left the area empty and dry, and its villages burned to the core. In 1988, about half a million Ma'dan called the Marshes their home; but by 1991, following the regime's tragic incidents, more than 300,000 villagers either died or became displaced within Iraq and Iran. In addition, by 2002, the Marshes had shrunk to one-tenth of their 1970 area of 3,600 square miles, and less than a tenth of the original population remained.

The United Nations Environmental Programme (UNEP) in 2001, called the disappearance of the Mesopotamian Marshlands "[...] a major environmental catastrophe that will be remembered as one of humanity's worst engineered disasters." Environmental experts feared that if immediate action was not taken to revive the Marshes, then the entire wetlands - home to a 5,000 year-old civilization - could disappear entirely by 2008.

Restoring Cultural Significance: Iraq Responds

Today, Iraq has restored the Marshlands to about half of its 1970 levels. About 40% of the area has already been revived and many of its former inhabitants, approximately 80,000 today, have safely returned to their villages. The global response to save the Mesopotamian Marshlands has been more than remarkable.

Sponsored by the Iraq Foundation, the Eden Again project was set up in 2001 by Iraqi expatriates; and has since played a key role in the revival process of the marshlands. Although the primary objective of the project was geared towards environmental recovery, its mandate was also aimed at restoring both the cultural heritage and historical significance that these Marshes represent.

In 2004, UNEP launched a multi-million dollar project to restore the environment of the marshlands and provide other humanitarian services to the area. The project is primarily funded by the government of Japan, and supports the implementation of environmentally safe technologies to restore the area. Furthermore, in November 2005, the Iraqi government – along with several donor countries including the United States, Japan and Italy – joined forces in an effort to preserve the Marshes.

Although the revival process is already well underway, it will still be quite a few years before Iraq can witness a complete restoration of its marshlands to their original condition. For a country that has been ravaged by war and destruction over the years, it is comforting to see a glimpse of life once again. Not only does the restoration project help build a feeling of hope amongst the Ma'dan, but it also provides a promising link to a rich cultural past that would have otherwise been forgotten.

en.v

Flickr by James Gordan

A hazardous forest in danger.

Carbon Storage

Casey Farthing

Eighteen hundred meters below an oasis in central Algeria are 200,000 cars – or at least the carbon dioxide they would have emitted. The town of In Salah is home to a natural gas facility practicing a form of Carbon Capture and Storage (CCS) called geologic isolation, where the CO2 that would otherwise be released into the atmosphere as a result of gas production is instead being pumped into an aquifer below the gas fields.

CCS is the science of capturing CO2 produced by major industries, and both stashing it away in key locations, or isolating it from being released into the atmosphere (where it builds up over time causing global changes to the climate). Isolating the CO2 is a challenge in itself, but once that is overcome there are several options for storage.

In addition to being kept beneath oil and gas fields, CO2 can be stored in saline formations. These are a common natural occurrence and provide massive storage potential. While some areas currently use reservoirs beneath oil and gas fields for carbon storage, it must be regulated carefully. Mass amounts of CO2 is known to have an acidic effect on water, and it may eventually become harmful to surrounding agricultural lands.

Our oceans may be another possible location for carbon storage. This is accomplished by injecting CO2 thousands of meters deep into the ocean, causing it to form an underwater gas pocket where it is expected to remain stored. Unfortunately, this method may not be entirely safe. Scientists are concerned with the effect vast quantities of CO2 will have on marine habitats and wildlife. Large concentrations of CO2 may harm ocean creatures and those organisms dependent on them – causing damage to entire ecosystems. The oceans hold significant potential for carbon storage, but first we need to determine if the benefits outweigh the dangers.

The ecosystem itself provides a solution for our excess CO2: terrestrial storage. This method focuses on reducing atmospheric CO2 through the use of abundant natural sources such as plants and trees, which absorb and exchange CO2 for oxygen as part of their natural respiration cycle. Vegetation is a very effective carbon sink. Some of the best ways to accomplish terrestrial storage are as simple as planting trees, preserving forests, and restoring damaged wetlands and deserts.

The ideal solution would be to stop producing CO2 entirely. However, our current energy systems are heavily dependent on fossil fuels, and burning these fuels generates CO2. As concern over changes in the global climate grows, techniques to reduce and store carbon dioxide are attracting more attention than ever and major industries across the globe are following in the footsteps of the facilities at In Salah.

As we continue to amass copious amounts of CO2, it may be time to start cleaning it up – and carbon storage may just be the solution. *en.v*

Flickr by C.wsteeds

Colorful Coral.

Turtles, Rainbow
Fish and Barracudas. Oh My!

Hussah Al Tamimi

Underwater Rainforests

Coral reefs are rightly considered 'underwater rainforests' for their biodiverse ecosystem. They are biogenic (produced by living organisms) and are geologically ancient structures. Their longevity of age is due to the adaptability of the coral animal itself. They have a wide geographic distribution because they grow – and flourish – in clear, warm, nutrient poor, saline water. Such environmental conditions are abundant in many coastlines around the world, which allow coral reefs to sustain diverse communities through their efficient recycling process.

Global Threats

Coral reefs are extremely valuable – not only to the species they harbor, but to humans as well. Much of the world's poor live in costal zones, and fish is a major part of their diet. For this reason, the various threats that reefs face worldwide have monumental consequences. These dangers include: coastal development, overfishing, rising of temperatures and sea levels, rising of carbon dioxide (which leads to the spread of diseases), and inland pollution.

The Coral Reefs off the Coast of Kuwait

Kuwait's coral reefs make up 0.04 % of the world's total. They occupy an area of 110 square meters, and are home to 33 different types of coral and over 100 marine species. According to Waleed Al-Shatti, vice president of the Kuwait Diving Team, swimming in the Arabian Gulf immediately after the 1990 Iraqi invasion was extremely dangerous because of mines and toxic pollutants from weapons and oil spills. Nonetheless, government efforts, with the assistance of the Kuwait Diving Team, quickly restored Kuwait's sea through the removal of a grand total of 392 boats and 330 tons of pollutants (garbage and oils) from the ocean floor. Up until 1999, however, there still remained remnants of the invasion such as canons that were found on coral off the island of Karouh.

Today, the adverse effects of the invasion have subsided; but Kuwait's reefs still face threats: Discarded plastic bags – which are non-biodegradable and block sunlight – and leftover fruits serve to alter fishes' nutritional systems. Although there exist various laws that protect the marine environment, awareness for the detrimental effects of littering need to be prioritized and relayed to the general public so eco-friendly attitudes may one day be adopted. *en.v*

After Oil:
Alternative Energy in the GCC

Sarah Schmidhofer & Casy Farthing

Wind turbines – a clean form of energy.

In November of last year, a participant at an alternative energy conference in Dubai posed a very interesting question: Why should countries in the most oil- and gas-rich region of the world, secure in their fuel sources, worry about alternative energy? In other words: Why would you dig a well near a river?

You don't have to look far into the future to find compelling reasons. The GCC has experienced a population explosion over the past few years, while the regional population is projected to double by 2050 from 59 to 124 million. In that same period, the demand for energy is expected to increase fourfold, with continued growth in the double digits for many areas. In the UAE alone, power needs are projected to increase by 60% in the next three to five years. This dramatic increase in demand, on a curve so much steeper than the already precipitous slope of population, derives primarily from the artifacts of urbanization, such as utilities, lighting and air-conditioning.
All of this adds up to a huge increase in demand on a system that is already reaching its limits. In some cases those limits are painfully clear - Kuwait and Saudi Arabia have both experienced blackouts in the past two years, and generating capacity is being stretched thin in many other countries. It is true that there are plenty of new power plants in the works, but with more plants comes more pollution. This would be damaging in a region that already produces more CO2 per capita than anywhere else in the world, so clean sources of power are becoming increasingly valuable.

The term 'alternative energy', often used synonymously with renewable or green energy, refers to most power sources that are not fossil fuels: hydrogen, geothermal, solar, wind, hydroelectric and biofuels, to name a few. Nearly 100% of the power currently generated in the GCC comes from plants that burn oil and natural gas, and most current expansion plans involve building more of the same. The reason for using so much oil and gas is very simple: it has always been the cheapest method available, period. Alternative energy production, which is to say anything more complex than simply setting things on fire, has traditionally been prohibitively expensive. There are technological limitations to overcome: The initial investment cost is higher, and often the established infrastructure does not support new methods (e.g., hydrogen). As petroleum prices continue to rise and technology costs begin to drop, however, the price gap between fossil fuels and other methods begins to shrink, making it viable to explore alternative energy sources. At a certain threshold it will become cheaper, and thus economically irresistible, to use less fossil fuel for producing energy and to sell it instead. This is known as grid parity, the point when alternative energy becomes competitive.

Several forces are currently coinciding to bring about this grid parity. Record high crude prices are driving up oil production, and along with it, energy demand. If that same oil is being used to generate power, there is a closed cycle where the price starts to rise very rapidly. Broader recognition of global climate change and the Kyoto Protocol's Clean Development Mechanism (CDM) have created global carbon markets, which allow producers who are generating less carbon to sell the resulting credits subsequently turning carbon into cash. This trading can be done before construction even begins, offsetting some of the initial costs of alternative energy.

Of all the possible sources of alternative energy, the obvious front-runner in the Middle East is the sun. Solar energy itself is the root cause of much demand in the region – the highest power draws are on hot, sunny days when millions of air conditioners are humming away. It is fitting, then, that solar power may prove to be the solution to the region's energy woes.

The sun's energy can be employed in a number of ways: Indirectly, through methods such as biomass reactors, or directly, via photovoltaic panels and solar power plants. On a small scale, buildings can be equipped with light-absorbing panels to offset their own energy usage. On the large scale, methods such as solar thermal generation

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By the middle of this century, the GCC may have transitioned away from exporting pollution-heavy hydrocarbons like petroleum and find itself in the business of selling sunlight.

help overcome the limitations usually associated with solar power by storing energy as heat, which allows the plant to generate electricity even when the sun has gone down.
The GCC - and MENA in general - is one of the most sun-rich areas of the world; with some areas receiving up to 350 days of sunlight a year, so it is uniquely positioned to capitalize on solar power. The countries in this global sunbelt are not blind to this opportunity, and they are beginning to take advantage of it.

"For a country like Saudi Arabia [...] one of the most important sources of energy to look at and to develop is solar energy," said Saudi Oil Minister Ali Al-Nuaimi. In Kuwait, the Ministry of Electricity and Water is studying solar technology in an effort to avoid the programmed blackouts of the past years, which were forced upon the country by insufficient power generation. Qatar expects to quadruple its generating capacity in the next 30 years, and is considering building one of the world's largest solar power complexes to produce up to a quarter of that demand.

Abu Dhabi is in the process of building a number of alternative energy plants that will utilize solar, hydrogen and wind power. "Abu Dhabi recognizes that the global energy markets are evolving and are evolving with substantial growth in alternative energy," Sultan Ahmed Al-Jaber, CEO of Masdar, part of Abu Dhabi's state energy company, told CNN earlier this year. "It's only going to go up. Does that make it a threat or an opportunity? It's a great opportunity if we invest in it now."

Vast swathes of the desert might soon be covered in solar panels; but for regions where land is at a premium, the sea may provide another solution. The Emirate of Ras Al Khaimah is working on a prototype for a 'solar island'; which, when completed, will include mammoth floating islands covered in solar panels that will reduce infrastructure costs and bring down the price of solar power. These islands will rotate to the movement of the sun throughout the day - increasing their efficiency compared to land-based plants, which must constantly adjust their panels as the sun travels across the sky.

The upshot of all this investment in solar power is that GCC states could end up producing excess electricity via solar plants. There is so much potential in solar generation that countries in Europe are already looking to the sunbelt to provide their energy as demand increases. A study published by the German government in 2006 stated that the EU could eventually receive up to 70% of its energy from solar producers in the Arab region. This possibility is already being explored: Abu Dhabi's Masdar Initiative recently partnered with a group in Spain to form a company called Torresol Energy. Torresol is building three solar plants in Spain – both to provide power to the grid and to improve their concentrated solar power technology, making it more competitive. Europe is banking on their success and the prospect of solar power from the sunbelt (cables to transmit energy have already been built beneath the Mediterranean Sea).
If these projects succeed, and the Gulf States are able to take advantage of the abundant amount of solar energy, the positive effects could be exponential. *en.v*

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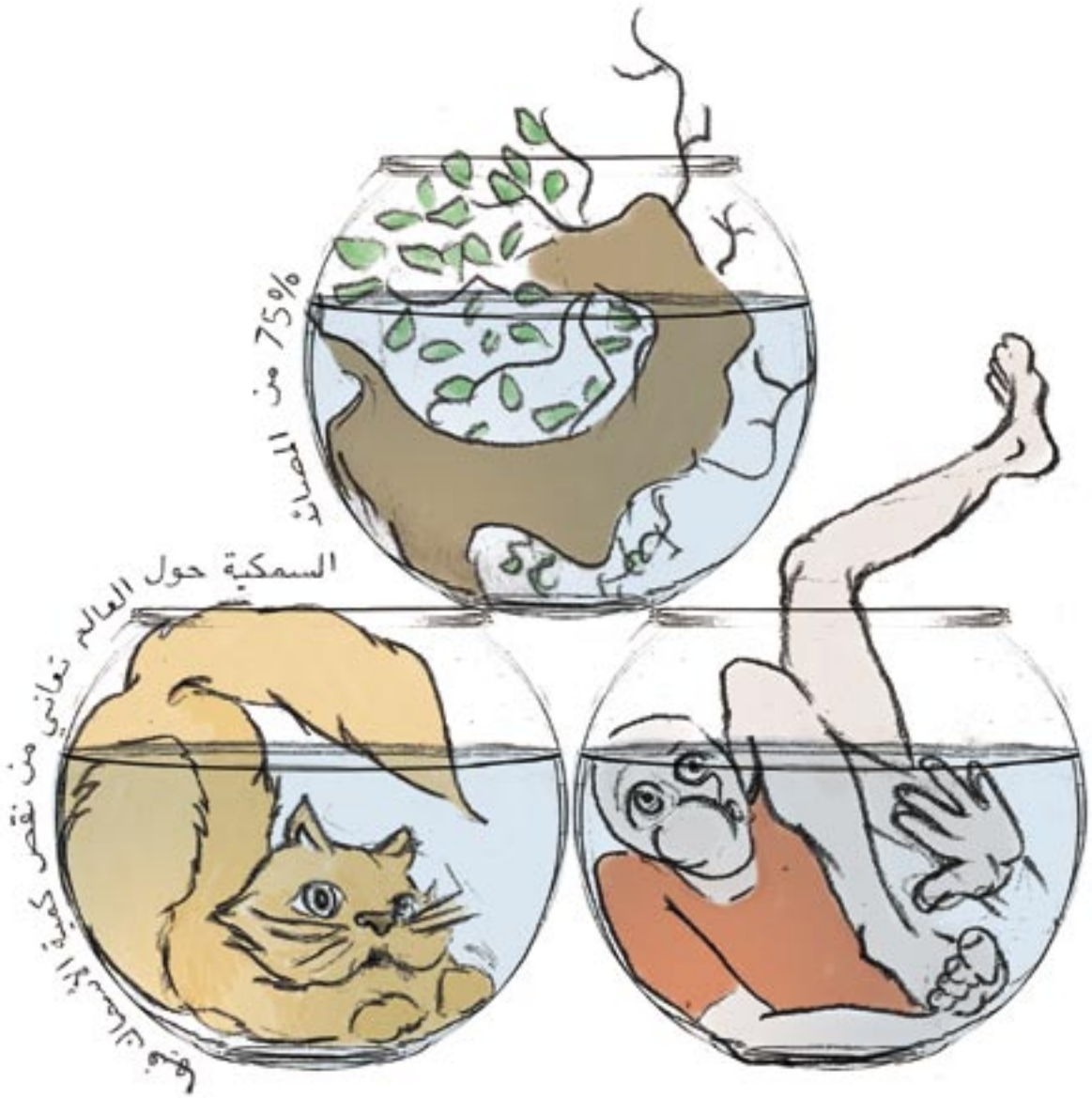
AROUND 75% OF THE WORLD'S FISHERIES ARE OVERFISHED.



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3. CHECK IF YOUR HOTEL HAS A RECYCLING PROGRAM

4. PURCHASE LOCAL GOODS

5. REDUCE YOUR AIR TRAVEL

6. OFFSET YOUR CO2 EMISSIONS THROUGH CARBON-REDUCING PROGRAMS

7. TRY STAYING AT A GREEN HOTEL OR ECO-LODGE

8. RESPECT THE LOCAL ECOSYSTEM ON YOUR VISIT

9. REDUCE USAGE OF BAGS, NAPKINS AND DISPOSABLE CUPS

10. BUY CARBON OFFSETS TO COUNTER YOUR FLIGHT'S EMISSIONS

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