

# 01

## Issue

# Environ

Pakistani students' perspective on environment

### Conversation with:

**Mr. Hameed Ullah Jan Afridi**  
Federal Minister for Environment Pakistan

**Ms. Rina Saeed Khan**  
Leading International Journalist on Environment

### Book Reviews:

- Stern Review Report
- Hot, Flat, and Crowded
- Silent Spring

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- An Inconvenient truth



**Environmental Club**  
International Islamic University, Islamabad

**A Conversation with Federal Minister for Environment:**

Panel Members: S. Mubashar Gardazi, Ghulam Ali Murtaza, M. Majid Sharif.  
(The interview was conducted in the office of Federal minister).

**A Conversation with Ms. Rina Saeed Khan**

Panel Members: S. Mubashar Gardazi, Ghulam Ali Murtaza, M. Majid Sharif, Ilyas Hussain  
(The interview was conducted in the office of Lead International Islamabad).

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## Patron-in-Chief's Message

Use of force is no longer the norm of diplomacy among the most powerful countries of the world. In a multi-polar political order, only that country would enjoy respect which acts in the interest of the whole humanity. Outgrown telecommunication industry and the inter connectivity it spurred over the years has completely changed the outlook of the world for us. It has put old issues into new light; addressing of the environmental and climate change issue sits on the top of. I believe that the students have the capability which, if guided properly, could be effective in confronting the challenges we face today. Given Pakistan's vulnerability to climate change and environmental degradation, Environmental Club of International Islamic University was set up to translate the vision of mobilizing Pakistani students to participate in scientific research, environmental policy making and especially in climate negotiations being held on world's

leading diplomatic forums into reality. So far, despite meager resources Environmental Club IIUI has done a remarkable job - they have initiated collaboration with Ministry of Environment, UNO, WWF, World Vision, and several other renowned organizations. Being a part of such group of dedicated, selfless and hardworking students makes me proud. Our students have set a model that is worth following for all the students across Pakistan. For that we could guide and facilitate them by all means. I wish the Environmental Club, IIUI sees greater accomplishments on its part in the future.



*Anwar Siddiqui*

**Dr. Anwar Hussain Siddiqui**  
President  
International Islamic University,  
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## Patron's Message

Since the onset of industrial revolution in Europe and then later in America, development has at an increasing rate - generally been fuelled by reckless consumption of natural resources that has subsequently led to global warming and highly polluted environment. Unfortunately, the development that should have been for the benefit of mankind may become a significant contributor to its destruction. As a Native American proverb goes on to say: "We do not inherit the earth from our ancestors, we borrow it from our children" It is our generation who will pay for the deeds of our predecessors. Nevertheless, we shall not silently watch the world crumble before us.

Today's youth can make a huge

difference especially through the platforms of universities and research institutes. Students can come up with indigenous development plans maximizing the

interests of the whole ecological system rather than just adding to human luxuries. I welcome students from all disciplines to join us for developing Pakistan into a nature-friendly region. It could bring us at par with the developed nations and would also add meaning to our ideology reflecting our true identity; Pakistan, the land of the pure.



*Syed Mubashar*

**Syed Mubashar Hussain Gardazi**  
President Environmental Club, IIUI

## Editor's Note

Finally, we are here with the first issue of "Environ". In the beginning, we aimed for a simple newsletter reporting the events taken place under the auspices of our club; however, it was felt later that this approach would not help us to mobilize Pakistani youth for the environmental cause. Therefore, we are going to discuss environmental

issue in broader context with a critical outlook; we have tried to educate our readers about the contemporary debates underway in environmental sphere as much as it was possible in these few pages.



Rachel Carson could be rightly called the progenitor of environmental movement. In her masterpiece book "Silent Spring", published in 1962, she added a chapter titled "Fable for Tomorrow" that talks about how human beings are destroying their environment and how their participation help to make this disaster happen. Long ago, she had foreseen how the excesses committed by man against nature could strike back. But unfortunately, we did not give ear to her word and are today bearing the brunt of man-made effects causing environmental degradation, changes in weather patterns, extinction of species, rise in sea-levels, melting of glaciers, floods, draughts, etc. Aforementioned consequences of climate change could create social upheavals also, adding to rising poverty in the world and resultantly generating the largest crisis for the whole humanity. Pakistan is most vulnerable to climate change due to its large coastline, Himalayan glaciers, deserts, rivers, etc.

However, amidst all these bad news, there is some good development too. The World is no more in the mood of self-denial. One could see many nations pushing their leaders to formulate environmental laws, pass the bills on clean energy and take some radical measures to reduce carbon emissions. There are worldwide environmental campaigns being run by the governments, non-governmental organizations and the various international bodies and each international summit on climate draws attraction of millions. The issue that once was only scientific now is on the top of the agenda in the political meetings and the discourses among world leaders.

No doubt, the environmental issue has many sides and cannot be summed up in one issue of magazine; nevertheless, we have tried to highlight those aspects of it that demand our immediate attention. I now analyze the policy measures taken nationally and also how with new approaches and right changes effective legal and policy framework could be developed.

Domestic importance of the environmental issue has been recognized in Pakistan, there have been rulings by courts in favor of the environment caring citizens of Pakistan and right of living stated in the constitution has been interpreted by the court in its famous decision as right of healthy living. But practically, addressing the environmental issue has been considered an elitist luxury. Job of our policy-makers is not only to successfully organize seminars or conferences in the five-star hotels. The poor masses that are most vulnerable to climate change and environmental degradation are yet to be approached and guided. Reality is that we have failed to create indigenous environmental policy-making, environmental education and awareness programs, and environmental standards. Climate change may not be addressed unless international community reaches to consensus, but the other sides of the environmental movement, I believe, must be dealt in local context. For that the government needs to spearhead change and depend less on NGOs. NGOs have done some commendable service to the environmental cause but it is always the government that keeping in mind certain political and social realities could push for radical changes.

Nothing substantial could be achieved unless common man takes care of environmental issues and perceives the threat of global warming. How is it possible? I have few suggestions. Firstly, the regional media channels that have large viewership and listeners in the cities and rural areas

should be used to disseminate the environmental messages and special workshop could be arranged in collaboration with the district administrations on various issues like saving energy, use of clean energy, protecting forests, etc. and the information understood in the native language be it Punjabi, Saraiki, Sindhi, Baluchi, Pashtu, Balti is likely to create much more difference among them. Add to this policy the Islamic perspective on environment. Through Holy Quran and Hadiths, meaningful impact could be made. Secondly, there seems to be paucity of environmental writers, commentators and authors in the mainstream print and electronic media. One hardly sees any article in English newspapers while in Urdu newspapers that are widely read across the country, no one pains to write anything related to environment. The ministry of environment and other world organizations like UNEP should encourage the youth to write on such issues and particularly must invest in Urdu journalism. In this way people will own environmental movement and not attribute the lake burst in Attabad or recent floods to certain mythical causes. The masses will feel the immediate threat of global warming.

Climate change followed by water scarcity could prove to be fatal for an agricultural country like Pakistan and its economy that is already crumbling. At the time of signing Indus Basin Water Treaty with India in 1960, the effects of climate change were not considered. As a result, we see the mishandling of this issue and India, on the pretext of meeting her energy needs, continues to build dams on the water flowing from area under her control. I suggest that Pakistan should attach national security significance to this issue and bring the world climate bodies to force otherwise stubborn India to restrict her construction on dams; through effective lobbying many government and non-government organizations could be brought to one platform and convinced to raise our concerns so that the immediate redressing of water issue could be achieved. I also suggest that in the light of climate change and its likely impacts on water levels in our rivers, Indus Basin Water Treaty must be revised and necessary clauses that assure nation's long run water security be incorporated into it.

Corporate farming is gradually seeping its way into our agriculture sector. This year saw Plant Breeders Act, 2010 and the Seed Amendments Act, 2010 approved by National Assembly standing committee on Food & Agriculture; few controversial seeds are also being introduced to increase cotton yield. Instead of working out honestly on the real causes behind the decrease in country's crop production and exports, lawmakers have put soil health at stake. Most of the members of parliamentary committee working on Pesticides Act were themselves owners of big pesticides companies. Their proposals are bound to benefit the business and investment more than the environment. Being an inhabitant of a small town of Punjab, I have witnessed how over-fertilization and use of low quality pesticides has converted many fields into stinking pools of water, caused eutrophication and polluted the overall environment of rural life. Villages must be as important as cities; environment ministry should take up this matter with the concerned ministries and should give its input in Agriculture law-making.

Though each year Pakistani universities churn out thousands of electrical and electronics engineering graduates, these students have had little in their hands to

positively influence the national energy crisis. In fact, when it comes to selecting elective subjects and final projects in the final year of studies, most of the students opt for fields like telecommunication, robotics, etc. due to the better job prospects and their strong domestic market. WAPDA, the largest state owned energy producer, does not encourage innovations in energy sector. If a fraction of money from the vast pool of financial resources possessed by local cells of UN agencies especially United Nations Environment Programme (UNEP) and other cells working in area of sustainable development is diverted to the Pakistani universities and students are provided financial and technical assistance in alternative energy projects, I am confident that our students will take interest in relatively new studies like Power electronics and renewable energy and hence, would come up with clean energy solutions to national power crisis. Clean Development Mechanism (CDM) cell has already been established in Pakistan, as a first step towards building low carbon industrial structure under the commitments made by the developed countries. Research on this project can be started from Pakistani universities by harnessing the innovative skills of our students who are to work in various industries later. Energy management is also indispensable for any future energy policy and the best platform for its launch is our universities. Keeping in view the role of universities in affecting the environment positively, ENERCON a cell being run by the environment ministry must conduct free energy audits of university campuses and guide the students in energy conservation.

This year floods in Khyber Pakhtunkhwa, Sindh, and Punjab have wreaked havoc, killing hundreds, displacing 20 million people and heavy monsoon rainfall across the country had brought life to a standstill. The whole country seemed paralyzed and our streets reflected the gloomy state that most of the third world countries are made to live in even in 21<sup>st</sup> century. Government's complete dependence on bureaucratic set-up leaves many flaws and each year monsoon season end up in complete devastation for farmers, rural inhabitants, etc. I believe that the workforce for dealing with such natural calamities could be increased if subjects related to disaster management and risk assessment are made the part of environmental science curricula at university level. Higher Education Commission should revise the syllabus content and universities must be directed to focus on the practical realms of environmental sciences. Besides that, I held a discussion with the students of environmental sciences in my university; many students realized, in the discussion, that their coursework does not offer them the necessary insight that could help them later in any kind of environmental policy or law making.

Having discussed the domestic importance of environmental issue, I now move on to highlight few things that could be helpful to the understanding of debates on Conference of Parties Summit that will be held at the end of this year in Mexico.

The position that USA takes in upcoming COP16 summit will actually be a test for American democracy. Corporate firms are proving stronger than American political institutions. California voters defeated proposition 23 in this November, had it been passed it would have suspended AB32 which is a Global Warming act passed by state assembly in 2006 to envisage a reduction in its carbon emission below 1990 level by 2020. According to Economist magazine, proposition 23 had been funded by a multimillion dollar donation from two Texan oil companies, Valero services and Tesoro companies. The voting results in California may be sigh of relief for global warming proponents but given the rise of conservative elements in USA politics after November Congress elections, any global warming act or International commitment to cut CO2 emissions in the future by Obama administration will face stiff resistance from American lawmakers. Increasing clout of American corporate companies also became manifest when US Supreme Court lifted the limitations on corporate spending in election campaigns this January; it will give the corporations free hand to manipulate public opinions and US politicians for their own benefits. President Obama declared this decision as a greatest blow to democracy. So, in the backdrop of high unemployment rates in USA and as a result of lobbying by multinational giants like ExxonMobil and other oil companies, American negotiators will come up with nothing in their hand and their performance will be more dismal than last year's Copenhagen Summit. When the rest of the world ratified Kyoto Protocol, America did not stand along them. This time too, political leaders should go ahead for Post-Kyoto roadmap without wasting time on convincing USA.

Notwithstanding the importance of the issue, the science of climate change has not yet developed significantly. It became clear when, in spite of many evidences of link of floods in Pakistan to global warming, the climatologists could not come up with a single agreeable explanation. Likewise, climate economists instead of countering the arguments of climate-deniers with strong statistic and mathematics lean chiefly on ethics. Before these experts leave for Cancun, Mexico, they should work-out on these short comings.

Let us realize that reason behind owning environmental movement for us should not be either politics or its populist appeal. Recall the thousands helpless faces and gory images you would have come across on your TV sets during the recent floods in our country keeping in mind chaotic political and economic situation of the country- we cannot afford similar kind of disaster in future. So, this feeling should make every concerned Pakistani a volunteer of environmental movement.

Here, I close this note with my appreciation for Mubashar, President of Environmental club, who is a devoted young environmentalist and helped a great deal in getting this magazine published in a very short time. The magazine owes it beautiful design to the hard work and patience of Zaman. Let me also appreciate the consistency and interest of Majid all through our way until the Magazine's completion.

**Ghulam Ali Murtaza**  
Editor Environ

**We expect your feedback and contribution for the next issue of "Environ".  
Write to me at: [editor.environ@iiu.edu.pk](mailto:editor.environ@iiu.edu.pk)**

## A Conversation with Federal Minister for Environment

**Environ:** What steps your ministry has taken to convince the foreign office and relevant authorities to include water issue, in the light of climate change, into our water negotiations with Indian authorities?

**FME (Federal Minister for Environment):** Countries have their own Environmental Impact Assessment (EIA) mechanism that constitutes a framework for protecting environment. It is not necessarily the same everywhere; each country formulates its EIA according to its own priorities and standards. India also possesses such system that principally should forestall her from constructing dams in a controversial manner because Pakistan being a stakeholder in water flowing from Indian controlled territory and naturally part of that environment is likely to become its primary victim. Prior to the bilateral meeting held few weeks ago, we had communicated our point of view to the foreign office of Pakistan and urged them to take up water issue in the light of EIA which India has adopted as a system domestically. However, she is committing gross violation of the same law in dealing with its neighbors.

FOP had assured us in writing that water issue was to be discussed in the backdrop of our suggestions. In numerous international seminars and conferences, I keep on drawing world's attention to the breach of the international conventions being carried out by India that had earlier been ratified by her. Last time in a conference held in Bangkok on Trans boundary water pollution, I had requested

**I keep on drawing world's attention to the breach of the international conventions being carried out by India that had earlier been ratified by her.**

international community to force India to comply with the International laws and shed her stubborn attitude. We, here in environment ministry, are supposed to identify the issues while the task of garnering international support is strictly the domain of Foreign Office of Pakistan (FOP).

**Environ:** What outcomes you expect from the climate negotiations that are underway in UNO and how effectively Pakistan's vulnerability to climate change has been presented to the world and is there any compensation sought that could help Pakistan domestically to mitigate the climate effects and to rehabilitate the victims in case of flooding, and droughts, etc.? There were reports of attempts by the developed countries to divide G77. Did anything like this happen in Copenhagen?

**FME:** We were expecting positive outcomes from COP15 summit and were hopeful that the developed countries will come up with impactful resolutions this time. Unfortunately, this did not happen as a gridlock between the developed and the developing economies like China, India, and Brazil stultified the progress towards any legal agreement.

The developed countries argued that the Carbon emissions of China, India, and Brazil exceed that of the developed countries therefore under the verifiable and monitorable structure of UNO their emissions must be checked and scrutinized too. The other side, however,



**Federal Minister for Environment Pakistan, Mr. Hameed Ullah Jan Afridi during an interview with the panel of Environ.**

retorted by highlighting the issue of poverty and relatively rudimentary industrial infrastructure which leads to greater Carbon emissions. Although the developing countries agreed to reduce their Carbon emissions, they were skeptical of any monitoring system targeted against them. This lack of mutual agreement made the summit quite inconclusive.

We now look forward to Cancun Summit in Mexico this year. Individually our stance has been that we are the most vulnerable country. For reasons such as: erosion along 1100 KM of our coast-line, risk to Himalayan areas as a result of glacial-lake burst, gradual shifting of the river-beds, overall water-scarcity in the region risking the agrarian network which would affect the region economically as well as demographically. So, on and off we consistently fight to prove that we are the most vulnerable country. So far Pakistan has not been taken seriously on vulnerability issue. G77 has stood united despite many efforts by the developed countries to divide it. Pakistan is also a member of G77. We also received a circular from such organizations, asking us to sign it, and we were also told that some countries of G77 had already been taken into confidence in this regard.

If countries like Maldives agree on any such thing for the sake of a little amount of money, it will be detrimental to the consensus between member states on this issue. I do not think any country from G77 will go for any such thing.

**Environ:** What role parliamentarians have played so far in legislating environmental laws? Has there been any effort on your part to educate them on environmental issues so that urgency to formulate laws and policy could be felt by them?

**FME:** It is very important to educate Pakistani parliamentarians about environmental degradation because ultimately it is they who are to formulate laws in this regard. There are standing committees on environment in both the National Assembly and the Senate. Besides that we invite them to the celebration of various environmental events throughout the year. In the beginning, I would brief them about our activities and the gravity of the threat that environmental degradation poses to us all. Apart from that, we also convinced the Prime Minister and the Cabinet to watch Al Gore's film "An Inconvenient Truth" in order to acquire their support for

environmental and climate legislations. Ambassadors from different countries and other stakeholders also accompanied us. However, we are done with basic legislation. Let me share it with you: we have brought a Bill on the National Trade of endangered species of flora and fauna in the National Assembly, policy on energy conservation and clean drinking water has been passed by the Parliament, We have presented our forest and wetland and range land policies in draft form to the Cabinet for approval. We are currently working with World Wild Federation (WWF), Pakistan, on a project named "Green Parliamentarian". Its objective is to ensure parliamentarians' participation in all environmental conferences which will be helpful in furthering the environmental cause. Nothing substantial can be achieved unless I have support of the parliamentarians as these are the people who sit on the environmental committees. These committees are empowered to make legislations and have a chairman and 11 members appointed from various political parties.

**Environ: There has been much uproar in media over the forest land encroachment and concerned citizenry has turned toward courts for reclaiming public right over parks and other recreational places. What is your stance on this issue and will the petitioners be backed by the ministry in this regard?**

**FME:** We have a very clear stance that we shall not tolerate the use of forest land for non forest activities. We raised it as an agenda issue in the meeting of Pakistan Environmental Protection Council (PEPC) that is headed by the Prime Minister (PM). The PM said very clearly that no forest land will be given to non forest use. As a federal minister, I could have gone to the courts too but that would have been interpreted as the government's weakness. A more appropriate way is to convince the Prime Minister who can then direct the provinces and relevant departments accordingly. We have ample resources to act against land encroachers and will recover the lands that originally belong to the public and the forests. The lands under the possession of Pakistan's military have been treated more fairly; thickly populated forest has been grown by army in their lands situated in Rachna Doab. Besides that Pakistan's Army participation in the spring and Monsoon plantation campaign is much higher than other departments.

**Environ: We happened to attend the talks delivered by the leading environmental lawyers and officials of Environmental Ministry and according to them the diffusion of authority to the provinces in environmental matters hampers the role of federal government. Is this argument justified? What will be the limitation of federal government after the passing of 18th amendment and then how federal set-up would regulate and coordinate with the provinces?**

**FME:** Let me remove this confusion, 18<sup>th</sup> amendment is not going to stifle the growth of our ministry or hamper our efforts. The Provinces lack in technical and human resource capital. If we look at our role before the passing of this Bill- our job was to formulate a certain policy and provide the provinces with kind of technical and financial assistance needed to effectively implement that policy. Therefore, the task of implementation always rested with provinces. We have established Environmental Protection Agency (EPA) separately in each province. We have funneled 12 billion rupees to EPA's, provided them the facility of mobile laboratories and the technical training from abroad. The steps have been taken to increase the area of forests. We have also delegated the power given to us by Environmental Protection Act of 1997 to the provinces. At federal level, we deal with 14 international conventions. Weight is given to suggestion and input provided by the provinces and laws are made in consultation with the provinces. There are committees at both ministerial and secretary level. We welcome the participation of the provinces and I think their active involvement could make things easier for us. Although, USA states are more powerful and independent in making legislations; they cannot run their environmental set-up without the help of federal environment department situated in Washington. Similarly, in India, environment is the subject of concurrent list.

**Environ: What steps ministry has undertaken in collaboration with other relevant ministries like water, electricity, commerce, etc. to attract investment in clean energy projects that not only could solve the lingering problem of electricity shortage but also could promote environment friendly energy usage?**

**FME:** Everything that surrounds us is our environment. Keeping in view this definition, we here at Environment Ministry come across maze of issues and disputes that require interaction with the Commerce Ministry, Energy Ministry, Water Ministry, Health Ministry, and IT Ministry ; we have had legal and constitutional power to get engaged with them. In this manner, the ministries are inter-dependent on each other but, unfortunately, at the highest level there happens to be very less interaction. When a certain policy is presented in the Cabinet meeting without taking us into confidence, it evokes our criticism and reservation since being signatories of many international protocols, that policy is most of the times either not consistent with our commitments or the International laws ,and hence could cause a diplomatic fuss for us . Now let me point out to the fields where better coordination could have made significant difference. ENERCON, a department being run under Environment Ministry has been working on Alternative Energy and energy conservation - best ideas regarding conservation of energy are likely to be floated by us because we possess all the necessary staff and infrastructure. Recently, we came up with a plan to conserve 6000 MW of energy a week. This was shared with WAPDA and the relevant ministries. As a result, markets were to be closed at 8:00 pm and significant conservation was achieved.

Though this is not a long-term solution, we shall have to cope up with the situation unless we do add anything to our existing pool of the energy production resources. The energy crises situation necessitates placing energy conservation agenda on the top of National Energy Policy.

Perhaps we are immune to any change and do not foresee the long term benefits that the change could bring forth. Although mobile companies are deemed to be swift in adapting to new technologies and market trends, in Pakistan when I directed all the mobile companies to either replace their power plants with the solar panels before 30th June, 2010 or risk their operations otherwise - huge uproar followed it and pressure started building on me to reverse it. Ministry of IT and WAPDA plunged in to rescue the mobile companies. I called in a meeting of all the stakeholders and stated quite categorically that the energy spared by the mobile networks would not lighten my home but the poor masses that depend solely on hydro power energy to meet their energy requirements. However, I succeeded in convincing WAPDA and IT officials. Telecommunication Companies had come up with high estimated costs of the replacement to convince me; they fail to realize that in fact installation of solar panels is in their long term interest since it will save their expenditure on generators' fuel and electricity bills. I made it very clear that it is none of my concern but it is their duty to seriously consider the energy problems faced by people of Pakistan who have been reason of their profit that amounts to billions of rupees. However, I agreed to extend the deadline given earlier. But they approached the Prime Minister who asked me to do further consultancy with them. Had other Ministries supported us, we would have left no choice for the power units of the mobile companies other than to shift to solar energy.

In collaboration with WAPDA, we have initiated a 30 million rupees project that will replace CEC with Compact Fluorescent Lamps (CFL). Two firms have contacted us in this regard. Though this was to be done by Alternative Energy Board, they refused to carry on with such sort of project because of heavy duties imposed on CFL by government. An agreement was reached between related boards and the environment ministry and the summary to take off 75% of import duty on solar panels has been forwarded to ECCA. We do hope that it will be approved. We have also pushed for converting LED's of sign boards into cells driven by solar energy. As a Nation, we need not to squander our resources on such insignificant things.

We are educating government departments as well; we communicated to Planning Ministry, Pakistan Engineering Council (PEC), and Capital Development Authority (CDA) to cancel the license of the contractors who have not yet conducted Environment Impact Assessment (EIA) of their projects.

**Environ: Does your ministry give any instructions to Higher Education Commission regarding the designing of curricula for environmental sciences and other physical and earth sciences at university level that could help students further in policymaking and dealing environmental problems both scientifically and socially?**

**FME:** Since assuming the ministerial charge, my aim has been to get deeply involved with the educational sector.

This desire took me to the office of Higher Education Commission, Pakistan. In a meeting held there, I emphasized on the need of incorporating environmental subjects into the university curricula. A focal group comprising of officials both from HEC and the environment ministry has been given shape; Director General of environment is also part of this team and would guide to the designing of the environmental courses.

But I have not rested here; Ministry of Education has also been taken on board in this regard since I firmly believe that if sprouting student lot especially at primary and secondary level is made aware of the environmental knowledge, they with their selfless attitude and sheer dedication could be our potential workforce. So, our policy is based on long term engagement and

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addresses large spectrum of students from university level to colleges and schools.

**Environ: How nuclear waste is disposed off and does the relevant institution involve the environment ministry in the verification and inspection of dumping sites where such hazardous waste are finally disposed off?**

**FME:** Previously, little significance was attached to this issue. While dumping nuclear waste, they are supposed to redress our concerns. I have not compromised on this issue. We had chosen a site and asked them to conduct its Environment Impact Assessment (EIA). They sent us a report which turned out to be little unclear so we have referred it to the relevant department for further review and explanation. They are fully cooperating with us in this regard.

**Environ: Environment ministry has facilitated the student from various institutes and they have been interning in the ministry; apart from that, is there any policy to encourage the environmental graduates by inducting them on permanent basis in the environmental projects being undertaken across the country?**

**FME:** It perhaps was not noticed before that Ministry of Environment interacted so keenly with the students from junior level to the university level. We have established green clubs and societies in schools, colleges, and universities all over Pakistan. I have personally visited educational institutions to motivate the students. You would have seen many students interning here in Ministry. I have passed directions that in case new vacancies are introduced, these students must be preferred over others because they have worked with us and they will right away start their work without wasting any time on adapting to the ministry working conditions. I believe that without taking youth on board, policy enforcement is not reliable.



**Environ:** Environmental issues hardly grab the headline or front page. Has your ministry made any contact with media companies to act voluntarily in the service of nature and propagate the environmental issues and create awareness among the masses? How much effective media could be in making things easier for you?

**FME:** I personally believe that the media is the single most influential source that reaches to the hearts of 170 million Pakistanis. Unfortunately, the media appears to be least interested in creating mass awareness about environmental issue. Basically, they are ignorant about the scale of destruction and impact that environmental degradation and climate change could have on our lives. To encourage the journalists, we have introduced National Green Journalist awards that the country's Prime Minister or President confers on those journalists who, through writing or any other media outlet, have contributed to the environmental cause. Similarly, we have formed National Journalist Forum having its bodies scattered across all the provinces. We take them along with us to the conferences held at federal or international level so that they could be enlightened on environmental affairs and feel the attraction and purpose in writing about them. Recently, we conducted a workshop of journalists in order to promote Clean Development Mechanism (CDM).

Notwithstanding only a one billion rupees budget of my ministry, I am intent on broadening my course of action; I shored up the cooperation of government agencies and departments, especially the Information Ministry, on environmental issue.

I will feel my job done if the environmental awareness is created in Pakistan. We are about to start the environmental TV channel that I will hand over to the students and the environmental activists. Already, our FM channel is working in a joint venture with Islamabad Traffic Police.

Let me make it clear that our target group is not the elite but the general public. It is unfortunate that the UN agencies immediately disburse money for organizing seminars and conferences in Marriot and Serena Hotels which, to me, is not very effective in producing desired results. If we ask them to fund us for creating awareness in the populace through Pakistani channels they will not support us. I also took the Ulema on board in a meeting and told them that they should shed light on Islamic perspective of environment and motivate people in their Friday sermons and other gatherings. The Federal government has allocated only 2.5 lakh for awareness campaigns. It has been two years since I had submitted a proposal of 2.5 crore. With a larger pot of money, Pakistani cause could have been projected in the international magazines like *news week*, *times*, etc. and it would have been much easier to spread the awareness messages through all the domestic print and electronic media; I am, however, still waiting for its approval.

We need to understand that anthropogenic factors contribute significantly to the onset of floods, droughts and the subsequent water borne diseases and if our message reaches every home through newspapers, radio and TV channels, Pakistani Nation could be mobilized to positively influence these disasters.

**Activity**

**The Climate Project (TCP): Role of youth is decisive for the future of the climate movement-2<sup>nd</sup> Connector Training Programme in Pakistan**

"I must say I had such a fantastic group of students I talked to on the Climate Change issue. I found everything that I needed, interest, ambition, commitment and most important love for the nature", writes Mr. Asif Iqbal, TCP Australia's official Presenter and District Manager in Pakistan under the Al Gore Climate Change Leadership Programme, about the members of Environmental Club International Islamic University, Islamabad while concluding his blog entry on that particular event.

The training course chiefly tended to be helpful in creating climate change awareness among students and focused on the significance of youth participation in climate discourses and agenda setting meetings being conducted across the world before the start of the Conference of Parties (COP16) that is to be held at the end of this year in Mexico.

In otherwise scientific training, train of slides highlighting the struggles of Al Gore and milestones achieved by him highly captivated and motivated the participants. Mr. Asif, who also happens to be a volunteer, has found the connector network of youth quite effective in creating awareness among masses.



Overall, the exercise exposed our members to the working of individuals and non government organizations in the climate related projects and the necessary managerial and professional skills needed to run any such set-up. We express our gratitude and thanks to Mr. Asif and his organization, and wish them best in their endeavors.



## A Conversation with Ms. Rina Saeed Khan

**Environ:** What rare developments preceded the COP15 Copenhagen Summit that aroused high hopes and expectations among world climate experts? And why did the summit fall short of expectations?

**Rina Saeed:** Bali Action Plan was agreed upon by the member countries including USA in "UN Climate Summit" of 2007 held in the island of Bali, Indonesia. According to the plan, a comprehensive agreement was to be signed in Copenhagen in 2009 to deal with global warming and climate change. Although, they had not decided on the legal nature of outcome, what they foresaw was a binding deal for curbing carbon emissions and Copenhagen was the deadline for it. Before the Bali Action Plan, Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report had already started heated debate on global warming and the resulting temperature rise. IPCC had employed scientists from all over the world which gave it additional legitimacy and its conclusions about floods, droughts, etc. struck as a wakeup call to many people. It was natural, then, that people expected a lot from Copenhagen Summit which was the next step for the Bali Plan.

At the time of the Plan, financial recession was far from Europe but after the financial crunch and higher unemployment rates, European leaders now feared the political costs of expensive carbon credits. The countries who had earlier taken lead in signing Kyoto Protocol now withdrew from most of their previously made commitments. Some new relatively less developed countries had joined European Union (EU) and they were not ready to follow the strict criteria of reducing carbon emissions. However, it has much to do with the political will - Sweden's emissions are going down yet it is progressing economically. USA was to play a key role but, unfortunately, it came with nothing in her hand to Copenhagen.

**Environ:** You were among those journalists who had attended Copenhagen Summit; on what issues did the discussion actually take place during the 2 weeks summit and also on what issues did the discord prevail?

**Rina Saeed:** The primary discord is between USA and China. China has now overtaken USA as the biggest emitter of Green House Gases. USA wants China to act first because of her largest contribution to pollution. However, China claims that US has a historical responsibility towards this issue; they have not created climate change therefore they are not responsible it is the West that is responsible. China has taken measures to reduce CO2 emissions in term of national target but have refused to strike any legal deal with the developed countries. China's point is that West has polluted atmosphere for more than 200 years, now it is their turn, India's turn and Brazil's turn to use the remaining emission space which, according to the scientists, is decreasing rapidly. One of the Chinese envoys had even said that their emission space is occupied and they want it back. USA although instructed countries like China to use new technology, it is not transferring that technology to these countries.



Ms. Rina Saeed Khan during an interview with the panel of Environ.

**Environ:** Tell us about the agenda points of Pakistani delegation in COP15, and how effectively did they put their case?

**Rina Saeed:** I do not think that Pakistan made her presence felt in Copenhagen. Countries like Maldives, Bhutan, and Nepal fared much better and presented their case more effectively. Now, after these tumultuous floods, Pakistan is keen on enlisting herself among the most vulnerable countries of the world. Although Pakistan falls presently in the 20 top most vulnerable countries, it looks forward to securing any place among V-10. We can manage it easily now.

**Environ:** An argument is presented by many people that capitalism being inherently based on growth, industrialization, expansion, and consumption is unlikely to bring nature friendly reforms within its working unless structural changes are made in the very system. Do you agree that inherent constraints in Capitalism are making the change less likely to happen?

**Rina Saeed:** Whole of the capitalist system is rambling. America is throwing more and more money to bail out Wall Street firms but so far it has not brought any structural reforms in the capitalist system. Perhaps, the problem has become too complicated and they want only to keep the system running by funneling more money. But as many people argue, it is a short term strategy and USA economy will crunch again. The global capitalist system needs to be restructured. Given the large carbon foot prints of countries like China, India, and Brazil caused by huge population and rising growth rate economic system is clearly not viable and there is hardly any possibility that these countries will take radical steps to curb Carbon emissions at the cost of their growth.

**Environ:** What role USA has played in shaping the world consensus on legally binding agreement to curb CO2 emissions?

**Rina Saeed:** Though American delegation makes promises every year that they will come up with something substantial soon, it has brought nothing of

notice on the table. In fact, USA has tried to sabotage Kyoto and is asking countries like Russia and Japan to withdraw from Kyoto Protocol and formulate their own Carbon emission reducing standards at home. USA is stressing upon China to reduce her emissions but is itself doing nothing even though it is the 2<sup>nd</sup> largest emitter of CO2 gases globally. China argues that their carbon emission relative to the population is much less than that of the US and, according to Chinese perspective, it would be only fair that carbon emissions must be accounted per capita. Nothing of note, therefore, should be expected from USA in the coming Mexico summit.

There is talk going behind the scenes among the negotiators that the world should go ahead without USA and let the world realize that USA is the one that is blocking legal agreement.

**There is talk going behind the scenes among the negotiators that the world should go ahead without USA and let the world realize that USA is the one that is blocking legal agreement.**

**Environ: Why our media is not projecting the recent flooding as a consequence of global warming. We also see that be it Katrina, Tsunami, or other disaster-scientists and experts fail to establish clear and plausible link of it with the climate change. Why is it so?**

**Rina Saeed:** I think there is a general lack of awareness among media personnel about the climate change; there are few journalists who know about it and they have been writing regularly about it. Even professional climate scientists are usually reluctant to associate the cause of some drastic weather condition with climate change. They will give you round about answers. But if the overall patterns emerging from the fires in Russia, cyclone in Pakistan, and the erratic behavior of Monsoon are linked together - it is only global warming that appears to be the main cause. This year's summer was hottest to date all across the world. Head scientist of Islamabad Global impact study center has said that they are in touch with the International scientists and according to the climate scientists, floods in Pakistan have been caused by jet streams. Floods in Pakistan are a corollary to heat waves in Russia. Unusual pattern of jet streams around this time of the year caused heat waves and dry season in Russia and the rain that did not fall in Russia later supplemented by the Monsoon - poured down in Pakistan. However, a single event like flooding is technically very difficult for the scientists to attribute solely to climate change.

**Environ: Many people in Pakistan have lost trust on Indus Basin Water Treaty after it failed to stop India from constructing dams. Could Pakistan's vulnerability to Indian dams ambitions be entertained in the COP summits?**

**Rina Saeed:** Pakistani water commissioner has quite clearly said that there has been no violation of Indus Basin Water Treaty from Indian side. Therefore, India can use the water for their hydro-electric projects within the framework of Indus Basin treaty. However, Pakistan

objected to the designs of few dams. Although Public sentiments in Pakistan are against this treaty, Pakistani diplomats, on the other hand, are very cautious and they do not want to tamper with the treaty that, in spite of three wars has remained intact. Since UN was not an arbiter in the water talks between two countries, the issue has to be resolved either mutually between these countries or with the help of institutions like World Bank. The only thing India did wrong in Baglihar was that it filled the dam in the dry season instead of wet season which caused shortage of water for the farmers living downstream. We lost Baglihar dam case because our legal team proved too weak to present Pakistan's point of view effectively. Setting Baglihar decision as a precedent, India is now blatantly pushing for the construction of more dams. Likewise, Kishanganga also falls outside the scope of climate negotiations; it has to be dealt with in the mechanism provided by Indus Basin Water Treaty. Water previously was not considered in Climate negotiations, now they have included it in the text as a potential source of conflict. Basically, we have been working on the text in the Conference of Parties summits held every year and that text eventually led to the treaty. It is a slow process. Recently I met with someone in Bonn who said that they had been campaigning for a year before the water issue was finally included in the treaty. However, nothing has been signed as yet.

**Environ: Studies show that 18 percent of Carbon Dioxide emission is caused by deforestation. There was talk of giving financial leverages to the inhabitants of world's largest forest reserves by the developed countries to stop the cutting of trees; on smaller scale, it is being done in Amazon. Was anything decided on it in COP15 and how significant is the issue of deforestation in reducing CO2 emissions?**

**Rina Saeed:** Reducing Emissions from Deforestation and Forest Degradation (REDD) is the most powerful treaty that hopefully will be signed in the upcoming Mexico Summit. REDD will be helpful in reducing CO2 emissions. Brazil's take on this issue is that poor settlers of Amazon cut the trees to earn their livelihood; if they are provided with sufficient amount of money; they will not chop trees any more. Similarly peat forests in Indonesia could be saved by paying its inhabitants. So, these countries have asked for money from the developed countries.

It is very significant issue because when biomass of the forest is burned away, it produces large amount of CO2. In Malaysia, forests are denuded to extract Palm oil that many people export and large revenue is generated. Hence, few countries could try to stymie any such agreement.

**Environ: In one of your articles published in the "Guardian". You wrote about a document prepared by the developed countries to divide G77 countries and the different controversies it sparked. Besides that few findings of IPCC report were also rejected on the scientific grounds. What really unfolded there and where it will lead the whole climate change debate?**

**Rina Saeed:** There was an attempt to resolve the issue by offering some incentives and money to few members. G77 is basically a negotiating block. The members know

that division among them on issues will weaken them and they will not be able to exert pressure on the developed countries. However, few analytical setbacks have damaged the climate science especially the findings of IPCC report that stated Himalayan glaciers would disappear by 2035. I think this was one line that should not have been in IPCC report. In fact there has been considerable increase in the size of Baltoro glaciers, it is now much bigger than it was in 1947. Perhaps reviewers of report could not catch point and it fell through cracks.

On the other hand, IPCC has also underestimated in some cases; more ice is melting in the North Pole than they expected. On some places they had overestimated the climate change fall outs and on some places had underestimated. This has given way to counter-arguments against climate change. On the whole, the report was decisive and just and its importance should not be overshadowed because of the some inaccuracies.

**Environ:** What changes and developments if any you expect from upcoming Mexico Summit?

**Rina Saeed:** The consensus among the world leaders for binding agreement on climate change is distant possibility in Mexico. We are running out of time on the climate issue. Economic cost of natural disasters is increasing day by day. Look at the devastation caused by floods - Who is going to pay for the after effects?

**Rina Saeed Khan is a Lahore based freelance journalist by profession, with an MSc in Environment and Development from the London School of Oriental and African Studies. Rina is currently writing a weekly column on the environment called 'Earthly Matters' for DAWN, Pakistan's largest circulation English-language national daily. She is also Lead fellow at Lead international, Pakistan.**

By now, disasters are occurring every two or three years, there is no recovery time in between disaster and rehabilitation. Given the frequency of natural disasters, Climate change is going to attract much attention. What world political leaders need to realize is that debate around the economic side of reducing Carbon emissions could extend beyond many years but the reality on the other side is happening much faster and they have to act immediately

beyond many years but the reality on the other side is happening much faster and they have to act immediately.

**Environ:** Which aspect of climate change political or scientific you think could be result oriented and cause a real change?

**Rina Saeed:** It should be blend of both but the politicians could make real difference.

## Event

### Earth Hour celebrated in the university

Millions of people across the globe commemorated the Earth Hour to conserve energy by March 27 between 8:00 Pm to 9:00 Pm by flicking their switches, shutting off their lights and appliances an hour exclusively celebrated in the service of nature. In collaboration with the World Wild Federation (WWF), Environmental Club of International Islamic University, Islamabad also organized an event to mark Earth Hour in the university campus. Amid the buzzing National anthem and songs, Mr. Hamid Ullah Jan Afridi, Federal Minister for Environment, Pakistan lit a candle at 8:30 Pm to formally initiate the Earth Hour celebration across the country.

Speaking on the occasion, Mr. Afridi said, 'Earth Hour 2010' celebration was all about empowering individuals to combat climate change. "The ministry aims to usher a new era of climate consciousness, encouraging personal accountability and behavioral change to facilitate sustainable living," he said. A large number of students attended the event along with faculty members. President International Islamic University Dr. Anwar H. Siddiqui and Ms. Mariam, the country representative of WWF, also spoke on this occasion. Live coverage was aired on both national and international T.V channels.



Federal Minister for Environment, Pakistan speaking on the occasion of "Earth Hour" celebration in the university campus.



President International Islamic University, Islamabad speaking on the occasion of "Earth Hour" celebration in the university campus.

## Stern Review: The Economics of Climate Change

Since the start of the Climate Change Movement, one argument that had dominated discourses among various Western economists was that the economic costs of Carbon Free economy outweigh the benefits of early action. To test this assumption, the then Chancellor of Exchequer, Gordon Brown, commissioned former World Bank Chief economist, Nicolas Stern, to review the Climate Change economics, assess the impacts of Climate Change on global economy and to chalk out the paperwork which could help deal with the Climate Change issue both in UK and globally. The report was released on October 30, 2006.

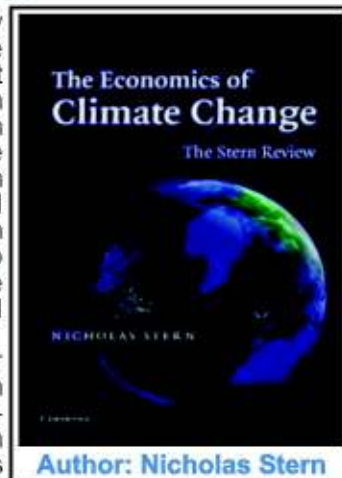
The report clearly states in the light of scientific evidence that Climate Change is not a myth but an irreversible reality that demands immediate response at the international level. Climate Change will disrupt the very balance of life on earth - Water shortage, droughts, floods, rise of sea-level, and hunger would affect millions of people around the globe. The poor countries are more vulnerable to the Climate Change; 300 million could become refugees as they fall victim to droughts and floods. The report estimates that if the world springs into action now the cost of stabilizing Green House Gases between 450 ppm and 550 ppm (CO<sub>2</sub> equivalent) will be 1% of global GDP each year. But if we fail to act now the cost would go up from 5% of global GDP each year to 20% of global GDP each year due to the damages done by Climate Change. In case of inaction, the economic debacle will be equivalent to that of great depression of 1930's that could cut the world's growth by 20% and the social and political fallout will be akin to the period of the Great Wars.

Ethics are hardly accounted in economic calculations but Stern team made it the basis of any future policy action. Social Discount Rate is a measure used to help guide choices about the value of diverting funds to social projects. In low carbon economy cost-benefit analysis, the range of social discount rate is taken from 0% to 3%. In the Report under review, future generations were not discounted; it used the discount rate of only 0.1% giving equal weight to future generations and taking equal care of them in Climate Change policy considerations. The theory of Social Discount Rate (SDR) is very complex and debatable, and experts have not assigned SDR any single mutually agreed value. The rate varies country-to-country, depending upon the priorities of their policy makers. Reason for using zero discount rate in Stern report was purely ethical. However, bringing the consumption and wealth patterns of future generations into limelight, few economists argued for higher discount rates.

Though Stern team emphasized that concerted action must be taken by the developed countries, developing countries are also asked to control their emissions. To achieve the stabilizing standards, Green House Gases emission has to be reduced 80 % below their present

level which is not an easy target. However, the second part of the report proposes a solution pertaining to adaptation and mitigation of climate change. The contribution of deforestation in global emissions is greater than the transport sector so there should be more focus on saving natural forests.

The contribution of power sector has also been asserted owing to carbon-based power generation and a realistic target has been set which requires



the world to decarbonize its power sector to at least 60 % by 2050. Report also indicates three elements of policy necessary for global response: pricing of Carbon implemented through environmental tax, encouraging innovative and low-carbon technologies, and to inform, persuade, and educate people as to what they can do to respond to climate change. It also believes that man's ingenuity to stand up to the challenge of climate change would open new businesses worth billions of dollars, would create new jobs, and hence would cause higher growth rates.

As Nicolas Stern was working on the order of the British Government, the report naturally enjoyed more respect and legitimacy. Although on ground very little changed in UK and World response to climate change, by and large report lifted the curtain from world eyes. The low carbon economy that was earlier argued to be detrimental for growth rate, in Stern's view, is necessary for sustaining capitalist system and driving engine of growth. So, the report was a set back for climate deniers and lobbyists. In spite of many methodological drawbacks as pointed out by economists and criticism by public against imposing environmental tax, it is not easy to defy the Stern Review scientific evidences coupled with economic calculations. If, in the wake of financial recession, developed European countries do not take measures to reduce their emissions, the adaptability cost will keep on increasing and, as Stern said, the formidable Climate Change will be the "greatest market failure world has ever seen, interacting with other market imperfections".

**(Reviewed By: Ghulam Ali Murtaza)**

## Achievement

It is matter of great pride for all the members of Environmental Club (EC) that Ilyas Hussain, Secretary General EC, has been selected for Fulbright scholarship in the USA under the Global UGRAD Exchange Program of United States Educational Foundation in Pakistan. He will leave for USA in the first week of January, 2011. Ilyas Hussain has played a pivotal role in the establishment and development of Environmental Club IIUI. Besides that he is

sub-editor of SPECTRUM, students magazine of IIUI. He has also represented the Club and IIUI at various forums including National Youth Conference, various Debates and Seminars. We wish Ilyas all the best in his future endeavors!



### Hot, Flat, and Crowded

The most distinctive feature of the writings of Thomas L. Friedman, leading New York Times columnist, is the lucid and persuasive formation of his arguments. "Hot, Flat, and Crowded" is also full of brilliant ideas, focusing largely on the significance of "Green Revolution" to American super power status. The book argues that making environment friendly decisions could bring significant geo-strategic and geo-economic benefits for Americans in the 21st century: it would help to reduce the influence of oil rich Middle Eastern dictators and monarchs over US economy and politics, revive America's old innovative spirit, create new jobs in renewable energy sector, and champion a new political idea - "going green".

Americans consume a significant portion of energy produced around the world, hardly caring to know the source of it or how it is reaching them. This is because of cheap energy costs. Friedman suggests that making energy more expensive on the patterns of Europe will convince companies and people to start investing in alternative energy for their survival. However, he also feels the need of improvement in energy storing capabilities of solar and wind panels so that they could be used in variable environments. Bad consumer behaviors and easy access to credit has stifled the innovative stride of Americans, while Europeans on the other side are readily resorting to clean energy to meet their requirements. The price of preferring cheap energy on the clean energy will be recovered from the future generations of America.

Promoting green market at home and abroad can increase the market value of green products. The author believes that markets encourage the competitions and it were markets that made the present developments of sectors like Biology, Physics, Chemistry and internet possible. He emphasizes on imposing environmental taxes, according to him "if we do not impose taxes on polluters then nature will start taxing us and we will have no relief". Environmental regulations besides improving environment would also make the whole nation competitive. Even in USA, California State has environment friendly state policies; use of renewable energy and natural gas is encouraged and there are strict regulations curbing carbon emissions to a certain extent which results in every Californian resident, on an average, producing less than half of greenhouse gases as compared

to other Americans. For cheapest green infrastructure and green buildings engineers should be properly educated insustainable site development, water efficiency, material selection, and indoor environmental quality. Biodiversity and ecosystem could be preserved by providing the inhabitants of forests some economic opportunities to avoid deforestation - the primary

and secondary education should develop the environmental knowledge among youth, and local governments should show willingness to protect certain areas.

Friedman advises China not to repeat the mistakes of USA, since its massive population of 1.3 billion, which will reach to 1.5 billion in few years, could add to miseries; smoke, at times, makes it hard to see things even a block away in cities like Beijing. Adding to the problem is the serious threat of acid rain and the fact that 1/3 of the Chinese do not have access to clean water. Though the writer thinks that Chinese leadership is abreast of the climate fall outs on their country and have taken few initiatives too, increasing GDP will remain their top priority as it has been the case throughout the past decades. Owing to China's huge population, the decisions taken by their leaders are likely to impact whole humanity.

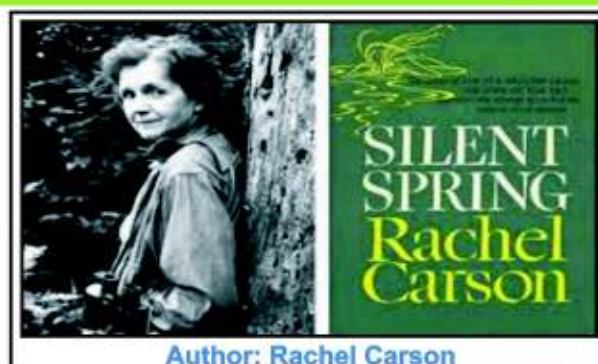
At the moment, Friedman laments that there is no energy policy but energy politics in USA. It is also reflected in the fact that in 2006-2007, the budget allocated for research and development in energy conservation was less than the R&D budget of pet food industry.

"Hot, Flat, and Crowded" was a joyful read indeed. The reviewer is sure that readers of this book will definitely laugh several times after reading Friedman's teasing and entertaining remarks scattered across the pages of the book.

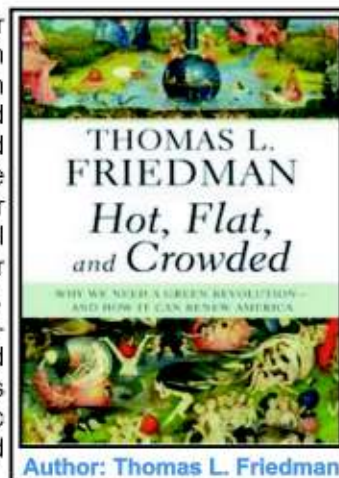
(Reviewed by: Syed Mubashar Hussain Gardazi)

### Silent Spring

Never before has any book on scientific issue inspired me more than Rachel Carson's "Silent Spring". For the environmental writers, the book set a precedent on how through effective writing one can not only advocate the environmental cause but also bring about a change in real life. After the publication of "Silent Spring" in 1962, heated debate started over the controversial use of DDT in USA which finally led to its ban in USA in 1972. The author, a biologist by profession, demonstrated that a correct combination of science and social activism is in the benefit of mankind. As the book reviews do not always summarize the book entirely, it makes me uneasy to leave out many details.



Author: Rachel Carson



First chapter of the book titled "Fable for tomorrow" talks about an American town. Spring season in this town would come in full bloom, bringing the singing birds and a green view. People from far away would come to fish in clean streams of water and to feel the beauty of countryside. But as the settlement grew in the town, the chirping of birds was no more heard and strange kind of diseases took over the residents; spring is silenced. In the following chapters, Carson tells us what has silenced the spring in the countless towns.

The second chapter "obligation to endure" borrows its name from the words of Jean Rostand, "The obligation to endure gives us the right to know". Insects over the time become resistant to insecticides. The sprays and the chemical poisons used to kill insects are equally harmful and unfit for all the other life on the earth's surface. Owing to this impact of insecticides, she terms them "biocides" not merely "insecticides".

If for some reason, in your college and university classes, you could not grasp the evolution of organic chemistry or how by changing the numbers of Carbon atoms and manipulating their position, most deadly insecticides have been manufactured "Elixirs of death", the third chapter of the book will be helpful in understanding the concept. Carson divides the insecticides into two groups: one is represented by DDT (dichlorodiphenyltrichloroethane) known as chlorinated hydrocarbon, and the other consists of organic phosphoric insecticides represented by Malathion and Parathion. Long after food items are cleaned these chemicals remain on them because of high residual power and are in the fatty tissues in human body where they get magnified. Man is exposed to slow poisoning. Different derivatives of DDT and phosphoric insecticides basically destroy the enzymes whose function is to protect human body from harm. Consequently, a long list of diseases are born which include Hepatitis, liver, Cancer, etc.

Water and soil are two very vital entities of our environment. Chapter four shows how insecticides make their entry into ground water that is the source of public water supplies. While underground, it also combines with other chemicals but no attention is paid to look into the consequence of that combination on human health. Chapter five underscores the presence of many living creatures in soil which are being killed by insecticides. Carson had documented proofs that ascertain the death of many birds due to weed killers. Chapter six highlights that the attempts made to destroy unwanted vegetation and weed have in fact added to the trouble, the grass that was to thrive by killing out broad-leaved plants using chemicals has now itself become weed, posing a great threat to corn and soya bean yields.

The next sections of book largely focus on the killing of birds and animals as result of spraying campaigns to which the author refers to as "Needless Havoc". Having proved ineffective in killing insects, insecticides had taken

the lives of many birds and animals. Carson cites some of the methods employed where insects like beetle were successfully countered with its natural enemies. Likewise, use of DDT in fight against Dutch elm disease failed to stop the disease; however, it resulted in killing of many birds. A very simple fact that birds eat the spray-affected insects and worm was ignored. In another campaign against gypsy moth, through aerial spraying, dairy farms and vegetable farms were poisoned. Whole environment and all living creature are so neatly and closely webbed that little rupture somewhere could shake the entire ecological set-up. DDT that initially imprinted its trace on plants and soil gradually seeped its way into human body. Chapter eleven makes an interesting case - man's effort to contaminate the environment finally ended up in his own contamination. Is not it the sordid reward of man's scientific accomplishments?

Furthermore, she explores the various impact of the contamination on human's health especially the link of insecticides poisoning to cancer. The cancerous cell grows because chemical poisoning severely damages the oxidation process of cell. In the final chapter, Carson concludes her masterpiece with an alternative approach to control the insects by using Parasites to kill them, by introducing natural enemies and natural diseases of the insects. The methods she wrote proved cost efficient and effective in various places.

Silent Spring deals with environmental issue at the grass root level. The scientific concepts have been humanized and general reader could easily grasp them. Though book drew lot of criticism from the pesticide industry, it was taken seriously by then USA president, John.F.Kennedy. President Kennedy's commission supported Carson's warnings. In 1970, USA congress established Environmental Protection Agency (EPA) to monitor and control pollution of water, soil, and air. Carson's findings about the link of cancer to pesticides were also reaffirmed by the later studies on cancer.

The message carried by Silent Spring is even relevant to this day. Despite knowing the consequences of global warming; we are not going the best way. We could do well by remembering Carson's words "We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road the one 'less traveled by' offers our last, our only chance to reach a destination that assures the preservation of our earth".

(Reviewed by: Ghulam Ali Murtaza)

## Event

### World Environment Day

This time Ministry of Environment decided to capitalize on students' creative skills and through highly fascinating dramas and tableaus staged in Pakistan National Council of Arts, Islamabad- the importance of clean environment to our lives and threats surrounding us due to the global warming were highlighted. Ministry of Environment had entrusted the complete responsibility of organizing the

event to Environmental Club of International Islamic University, Islamabad. The participants included the students from the Roots School, Beacon School, City School, Fatima Jinnah Women University, Bahria University, OPF, IMCG and International Islamic University. Federal Minister for Environment, Pakistan Mr. Hamid Ullah Jan Afridi along with Federal Secretary



Federal Minister for Environment and Federal Secretaries during World Environmental Day celebration at PNCA

and Additional Federal Secretary attended the event. Despite Mr. Afridi's engagement and hectic schedule on World Environmental Day in other places, he did not quit the place which encouraged the students to perform well.

Mr. Afridi distributed the prizes to the winner of the Drama and the Tableaus competition in the ceremony held at the end of the event. Our members must have felt delighted at the closing of event on pleasant note. Federal Minister met with EC members individually and appreciated our contribution to the event success.



EC members with Federal Minister for Environment at PNCA

### Seminar on "Pakistan's Environmental Crisis and their Solutions" at IIUI

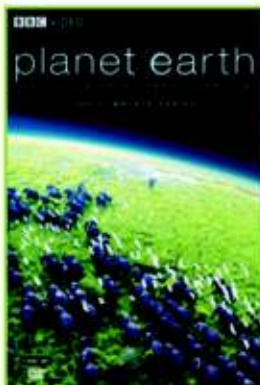
The Environmental Club IIUI organized a seminar on "Pakistan's Environmental crisis and their solutions" at the Faisal Mosque campus auditorium. The chief guest of the seminar was the Federal Minister for Environment Hamidullah Jan Afridi. The Vice President IIUI Mrs. Parveen Qadir Agha, Student Advisor IIUI Rizwan Faiz Muhammad, Head Department of Environmental Science Dr. Rashid Karim and faculty members of various disciplines were also present on the occasion. Club Advisor Zafeer Saqib said that the Club will strive hard to make Pakistan clean and green, while giving a welcome speech. Secretary General Environmental Club, Ilyas Hussain briefed the participants about the aims and objectives of the Club. The Minister appreciated the efforts of Environmental Club in creating awareness and assured his full support to the Club and the department of Environmental Science. He announced that in near future his ministry will establish a radio station for the students in order to create awareness among general masses about Environmental issues. He invited the students and the faculty members of Environmental Club to play a role in the ministry and emphasized that the Environmental issues can only be dealt if every citizen of



Federal Minister for Environment, Pakistan giving his talk to the students at International Islamic University, Islamabad

Pakistan shows responsibility. Students Advisor IIUI Rizwan Faiz Muhammad thanked the minister for gracing the occasion. In the end he was presented with a shield by the president of Environmental Club Mubashar Gardezi.

### Editor's Picks





## An Inconvenient Truth

Inconvenient truth is a documentary film explaining the phenomenon of global warming and the dangers associated with the climate change. If you are not sure exactly how Climate Change causes rise in sea-levels, disturbance in life cycle of bird species, etc., then it is necessary to watch this film. The film is set in a small hall. Al Gore, former American Vice-President, delivers multimedia presentation to the audience in the simplest manner and some of his occasional laughing remarks make the film even more interesting. The wake-up call coming from Al Gore has had its own significance; being an influential American he would have faced little difficulty in accessing critical scientific data and facts that make his analysis more reliable and authentic.

Here is the gist of Al Gore's presentation:

- Glaciers are melting. Having compared the pictures of glaciers taken many years ago with their present state, it is very apparent that they are gradually disappearing. Melting of Himalayan glacier that provides water to 40 percent of world's population could cause water shortage problem.
- In a year, graph of the CO<sub>2</sub> concentration repeats in erratic pattern from high to low then high and so on. Reason is that most of the earth's landmass is in the Northern Hemisphere and so is the vegetation, and when it comes in front of sun, leaves of plants come up and they inhale most of the CO<sub>2</sub> present but during times when Southern Hemisphere is tilted towards sun, the leaves exhale CO<sub>2</sub> adding to the CO<sub>2</sub> concentration and increasing of temperature in Northern Hemisphere.
- Though warming periods have occurred in the medieval periods too, the concentration of CO<sub>2</sub> had never exceeded 300 parts per million (ppm). Today due to the human activities, CO<sub>2</sub> level stands far above the natural cycle. That is shown by graph of 1000 years in which level of CO<sub>2</sub> and temperature rise is running parallel.
- Increase in ocean's temperature is causing hurricanes. The rise in temperature intensifies the wind velocity and moisture content and the subsequent energy generated is utilized by hurricane causing huge devastation. Hurricane Katrina and other Hurricanes that hit many coastal areas in recent history worked on the same principle. Paradox of global warming is that it not only increases precipitation but also relocates it. It has happened in China when one province was inundated by flood water, at the same time the neighboring province confronted severe draught. Once the largest lakes in Africa, now have shrunk in their size it will compound already the food scarcity and poverty problems of African continent.



An inconvenient truth

- Mosquitoes, due to increase in temperature, are climbing to higher elevation. Rise in temperature also extends the reach of other vector borne diseases.
- Ice-shelf in western Antarctica and Greenland is melting. And if half of it disappears, millions of people in Nether land and several major US cities would come under water. Even cities like Calcutta and Shanghai would face serious threats.
- 30 percent of CO<sub>2</sub> in atmosphere is released as a result of burning forests. Inhabitants of forests in order to earn their livelihood are erasing trees; and further rise in world's population would exacerbate the problem.
- Mileage standards of vehicles in USA are far behind the European countries and even China. Though America blames China for its high CO<sub>2</sub> emissions, vehicles manufactured in American automobile companies may not meet the relatively strict environmental standards of China. USA currently is lagging behind every major country as far as measures to curb Carbon emissions are concerned.
- USA leaders lack political will. There have been attempts by institutions like NASA to distort the truths and influence the scientific research. Moreover; Oil and gas lobbies have strong roots both in White House and USA senate, making passing of any environmental friendly legislation less likely to happen.

Al Gore has no doubt inspired millions; the film highlights various ups and downs in his daunting struggle to make the world realize the urgency to address climate change. He is seen travelling world-wide, from the busy urban centers of Europe and China to the quiet and calm topography of American Country side. Skeptics of the film have had very little to point out against the scientific facts presented by Al Gore, however, exploiting his political stature created doubts in the peoples mind. The same doubts which according to Al Gore have been corporate firms best products since campaign against tobacco. For every environmentalist, "An inconvenient Truth" is a must watch.

**(Reviewed by: Muhammad Majid Sharif)**



Students through physical postures forming logo of Environmental Club (EC) near Manthoka Waterfall, Skardu



Rector IIUI Professor Fateh Muhammad Malik and Vice-President IIUI Ms. Parveen Qadir Agha speaking to the students on the occasion of EC spring plantation campaign



Prof. Dr. Ehsan Ullah Khan (TI), Dean Faculty of Basic and Applied Sciences with the faculty members and the students on the occasion of World Water Day celebrated by EC in the University.



EC members at Shangrilla resort, Skardu: One of the most fascinating places in the World.



Dr. Mujeed, Head of Mass Awareness and Water Conservation Project UNDP rallying the students in Water Day Walk to highlight the importance of water to our daily lives and need to manage the unnecessary use of water.



EC members study trip to Khewra Salt Mines - World's 2<sup>nd</sup> largest salt reserves. It is said that Alexander horse discovered it when he by licking found the place salty.



Sun rays are peeping through the window of historical Shigar Fort. The scene was captured during EC trip to Shigar Valley, Skardu. To the left: Ornaments, Woodwork, and old manuscripts placed at the fort reflect the cultural and architectural marvels of



Adventurous impulse driving EC members to "Deosai Valley"- It is called roof of the world because of her location at height of more than 14,000 feet.



Team of Horticulture Department IIUI with Mr. Altaf Barki – We really thank you for your cooperation and help in the plantation campaigns .



To the Left-Prototypes of eco-friendly city : A clean Pakistan that is run by renewable energy source like wind mills and solar panel exhibited in the stall of EC on the 22<sup>nd</sup> Cultural week of IIUI. To the top right: EC was rewarded the 1<sup>st</sup> prize. We are highly indebted to OneUN joint programme for Environment for providing us the necessary support.



Selective representatives of EC before the final presentation on "Intricacies present in various provisions of Environmental Laws" in a workshop held at Marriot Hotel, Islamabad. EC representatives successfully defended the stance taken earlier by them in the case study discussed in the 3<sup>rd</sup> session of workshop. Leading Environmental lawyers from Asia and Pacific region delivered their talks. The Workshop was attended by the regional heads of UNEP and IUCN,



A step toward greener Pakistan: National Tree Plantation day was celebrated by Ministry of Environment in collaboration with Punjab Government. The students from various Universities, Colleges, and Schools planted saplings along the eroding banks of Murree expressway to highlight the importance of trees to the soil stability. To the top right: Federal Minister for Environment along the Federal Secretary participating in the plantation campaign .To the bottom right: EC members gathered for a shot after planting their site.

**Adaptation**

Action that helps cope with the effects of climate change - for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.

**Bali Action Plan**

A plan drawn up at the UN Climate Change Conference in Bali, in December 2007, forming part of the Bali roadmap. The action plan established a working group to define a long-term global goal for reduction of greenhouse gas emissions, and a "shared vision for long-term co-operative action" in the areas of mitigation, adaptation, finance and technology.

**Carbon Footprint**

A **Carbon Footprint** is a measure of the impact our activities have on the environment, and in

particular the climate change. It relates to the amount of greenhouse gases produced in our day-to-day lives through burning fossil fuels for electricity, heating and transportation etc.

**Carbon Credits**

Credits are basically a way of compensating for emissions of CO2 by participating in, or funding, efforts to take CO2 out of the atmosphere. It often involves paying another party, somewhere else, to save emissions equivalent to those produced by your activity. Credits can be exchanged between businesses or bought and sold in the international market at the current market price.

**Carbon dioxide (CO2)**

Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and is also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity.

**Cap and Trade**

An emission trading scheme whereby businesses or countries can buy or sell allowances to emit greenhouse gases via an exchange. The volume of allowances issued adds up to the limit, or cap, imposed by the authorities.

**CFCs**

The short name for chlorofluorocarbons - a family of gases that have contributed to stratospheric ozone depletion, but which are also potent greenhouse gases. Emissions of CFCs around the developed world are being phased out due to an international control agreement, the 1989 Montreal Protocol.

**Clean Development Mechanism (CDM)**

A programme that enables developed countries or companies to earn credits by investing in greenhouse gas emission reduction or removal projects in developing countries. These credits can be used to offset emissions and bring the country or company below its mandatory target.

**Climate Change**

Rising temperature contributes to climate change. This causes secondary effects such as sea level rise, melting of ice caps and glaciers, changes in rainfall patterns, and other aberrant shifts that could completely alter pattern of life on the planet.

**Deforestation**

The permanent removal of standing forests that can lead to significant levels of Carbon Dioxide emissions.

**Ec**

Environmental Club International Islamic University Islamabad.

**Environment Impact Assessment (EIA)**

A process whose breadth, depth, and type of analysis depend on the proposed project. EA evaluates a project's potential environmental risks and impacts in its area of influence and identifies ways of improving project design and implementation by preventing, minimizing, mitigating, or

compensating for adverse environmental impacts and by enhancing positive impacts.

**Fossil Fuels**

Natural resources, such as coal, oil and natural gas, containing hydrocarbons. These fuels are formed in the Earth over millions of years and produce carbon dioxide when burnt.

**G77**

The main negotiating bloc for developing countries, allied with China (G77+China). The G77 comprises 130 countries, including India and Brazil, most African countries, the grouping of small island states (Aosis), the Gulf States and many others, from Afghanistan to Zimbabwe. Pakistan is also very important member of this group.

**Global Warming**

It refers to average increase of earth temperature caused by human activities such as burning of fossil fuels, coal, and natural gas. Carbon Dioxide is produced in the fossil fuel combustion. Given the extensive use of fossil fuels in our daily lives contribution of CO2 in causing global warming is relatively greater than the other Green House Gases.

**Green House Gases Effect**

In our atmosphere, there are certain Green House Gases (water vapor, carbon dioxide, nitrous oxide, and methane) that trap energy from the sun.

The heat from sun, which in the absence of these gases would have escaped back in space, cannot get out of atmosphere. As a result, the temperature rises.

**IPCC**

The Intergovernmental Panel on Climate Change is a scientific body established by the United Nations Environment Programme and the World Meteorological Organization. It reviews and assesses the most recent scientific, technical, and socio-economic work relevant to climate change, but does not carry out its own research. The IPCC was honored with the 2007 Nobel Peace Prize.

**Kyoto Protocol**

A protocol attached to the UN Framework Convention on Climate Change, which sets legally binding commitments on greenhouse gas emissions. Industrialized countries agreed to reduce their combined emissions to 5.2% below 1990 levels during the five-year period 2008-2012. It was agreed by governments at a 1997 UN conference in Kyoto, Japan, but did not legally come into force until 2005.

**Per Capita Emissions**

The total amount of greenhouse gas emitted by a country per unit of population.

**REDD**

Reducing Emissions from Deforestation and forest Degradation, a concept that would provide developing countries with a financial incentive to preserve forests.

**Technological Transfer**

The process whereby technological advances are shared between different countries. Developed countries could, for example, share up-to-date renewable energy technologies with developing countries, in an effort to lower global greenhouse gas emissions.

**UNEP**

United Nation Environment Programme.

Sources: BBC, World Bank, Wikipedia.

**Call for Contributions**

We would like to receive your contributions for the next issue of Environ. Although articles, informative essay, and real life stories on any environment and sustainable development related issues are welcome and considered for publication, special attention is given to technical, socio-economic, policy, and scientific aspects of environment and sustainable development. Students from all the universities are encouraged to write in Environ. Following are the guidelines to be followed:

- Only soft copy will be accepted (MS Word form)
- The contributors are requested to provide their full name, postal address, and contact details.
- The contributors are expected to show competency and expertise in environmental issues.
- The contributors are requested to send their contributions before **20 February, 2011**
- Articles having the slightest shade of being plagiarized will be rejected.
- The Editorial Board reserves the right to refuse any contribution without communicating the reason.

All other suggestions and comments on the magazine are also welcome. Please take a moment to voice your opinion by sending an e-mail at: [editor.environ@iiu.edu.pk](mailto:editor.environ@iiu.edu.pk).