

subh nau

May 2013

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a greener vision



**Public health:
what is at stake, and
how to make it better?**

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May 2013

Pakistan's health system is in shambles. Dr. Sania Nishtar, a leading expert in this domain, gives directions which could clear this clogged system towards equitable and efficient health delivery.



Public health: what is at stake, and how to make it better?

Pakistan's health system has been referred to as a system of clogged pipes, the infrastructure being there, but not working. Dr. Sania Nishtar, a public health expert par excellence talked to SN about the priority areas and effective actions that hold promising, sustainable solutions for the current and upcoming governments.

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Chief Editor's Message

Health issues and how these are addressed are a critical factor in determining the path of a nation. Pakistan is beset with many such issues that are of great and grave importance, sidetracking it even further from meaningful development.

This month's cover story features expert views as to how our health system is lagging in providing proper care. Dr. Sania Nishtar, who is a leading and world renowned authority on the Pakistani health systems, provides a way forward towards contending with these problems in a sustainable manner. She notes that dealing with a complex, mixed health system and its optimization requires efforts at all levels.

If these issues are not addressed in a timely manner, losses due to an inefficient system are not only immeasurable in terms of human suffering, but are also great sinks in terms of economy. With a large and growing disease burden in a vast section of a massive population, the economic damage due to lack of proper care ultimately also results in great economic baggage for all. To boot, with a measly 2% allocation in the budget, how can we even expect our health systems to become effective?

Overall, it will require a will on part of authorities, the private sector as well as health experts from across the board to rescue Pakistan from the jaws of disease and an increasingly inefficient health system.

Shahida Kauser Farooq
Chief Editor

What is Subh-e-Nau

This journalistic endeavor primarily focuses on the environment and public health sector, and is published every month. The dismal state of affairs in this sector demands public awareness and community involvement for the protection of our natural environment. The magazine cuts across a diverse range of environmental issues, which require thought and conveys action-oriented messages for the general public and decision makers.

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Letters to the Editor

Cover story April 2013

The idea of organic cosmetics is a wonderful one! I could not have imagined such a topic to be covered, but am thankful to Zahrah Nasir towards addressing something that is very day-to-day and relevant. A great cover story and keep it up!

Zainab Akhtar, Karachi

With cosmetic brands from high powered corporations literally ruining our beauty, Zahrah Nasir's article was a brush of fresh air. I was always aware that there are sneaky chemicals running in cosmetics, however, rarely did I know that it was this bad. As I suffer from skin allergies, I am further motivated to try these natural beauty products.

Farah Shabbaz, Islamabad

World Water Day

Subh-e-Nau's stance on conservation of water all year around is refreshing, affordable and above all, makes total sense. Why should we waste something so precious? Given that we lose almost half of our water to leaks, it is high time that we fix these. Further, with rainwater harvesting we will actually be adding water to our country supplies!

Shabbir Peracha, Karachi

The fragrant and historical jasmine

Dr. Quraishy's article on the jasmine was a great tribute to a flower that is not only beautiful and smells great, but also has a great history. It is too bad we are unkind to nature and all its bounty, however, with the jasmine, we may find a way towards treating our biodiversity more gently and respectfully.

Sarah Imran, Karachi

Public health: what is at stake, and how to make it better?





Dr. Farrukh Chishtie
Dr. Jawad Chishtie

Pakistan's health system has been referred to as a system of clogged pipes, the infrastructure being there, but not working. Dr. Sania Nishtar, a public health expert par excellence talked to SN about the priority areas and effective actions that hold promising, sustainable solutions for the current and upcoming governments.

The Quadruple Burden of Disease

Farrukh Chishtie (FC): Can you please elaborate on the quadruple burden of disease, and how this poses a challenge to public health and health professionals? Also how is this contributing to the nation's health, or lack of it?

Sania Nishtar (SN): Pakistan today suffers from the quadruple burden of disease (of which there are different dimensions). Infectious diseases which are labeled as the diseases of the poor countries are still a major challenge. Even today diarrhea and pneumonia are the third commonest cause of death in children. Pakistan houses the sixth largest burden of tuberculosis patients globally. And the problem of burgeoning multi-drug-resistant tuberculosis gives an additional dimension to the challenge. According to estimates more than 7% of the population suffers from infectious hepatitis and reemerging infections such as dengue are becoming seasonal nightmares. All of this represents one side of the quadruple burden of disease.

The second dimension relates to the high maternal neonatal and child mortality and morbidity where significant interprovincial, inter-district inequalities also prevail.



Sania Nishtar speaking at the US Institute for Peace in Washington in June 2011

Dr Sania Nishtar is Pakistan's first female cardiologist, a leading global health expert and supporter of health reform in developing countries. Locally, she has founded key health organizations, namely Heartfile, a NGO think tank, Pakistan's Health Policy Forum and Heartfile Health Financing. At the international level, she is a board member of the International Union of Health Promotion, the Alliance of Health Policy and Systems Research, the World Economic Forum's Global Agenda Council, the Ministerial Leader's Initiative for Global Health, the Clinton Global Initiative and is Chair of GAVI's Evaluation Advisory Committee. She has authored 6 books, amongst which one has become a guiding source for Pakistan's health policy. She has won many accolades including Sitara e-Imtiaz, a presidential award, Global Innovation award, the European Societies Population Science Award, and many awards of the International Biographical Centre, Cambridge and the American Biographical Centre. She holds a Ph.D. from Kings College and a London Fellowship of the Royal College of Physicians. She is also appointed as the Minister of Science and Technology in the current interim government.



The third dimension is the high magnitude of death, disease and disability posed by non-communicable diseases which is the collective name given to the four diseases linked by common risk factors...(these) include cardiovascular diseases, diabetes, some cancers and chronic lung conditions, whereas their common lifestyle risk factors are tobacco use, lack of physical activity and an unhealthy diet. These four diseases afflict more than a third of the adult population of Pakistan.

Just to give you an example, more than a quarter of the population above the age of 17 years suffers from high blood pressure alone. These diseases are thought of belonging to the developing world, but their coexistence with the high magnitude of infectious diseases indicates a demographic and epidemiological shift in Pakistan.

“A number of weaknesses in governance and transparency can further compromise the impact of investment in a highly constrained environment,”

The fourth burden is that of injuries and violence - road traffic accidents predominate...owing to the massive rise in population and spread of urbanization. This constellation of four dimensions of disease and injury contribute to the quadruple burden of disease in Pakistan.

A mixed health system, and its problems

FC: What is a “mixed” health system that you describe in your book “Choked Pipes”? What are the major problems with

our health system?

SN: In my book *Choked Pipes* and a prior paper published in the bulletin of the World Health Organization which I authored, I defined this as follows: It is a system in which out-of-pocket payments in market provision of services predominates, as a means of financing and providing services, in an environment with publicly financed government health delivery coexisting with privately financed market delivery. Under mixed health systems, there is interplay of three factors which undermine the quality of public services and defeats the equity objective. These factors are insufficient state funding for health regulatory environment, which enables the private sector to operate in the delivery of social services, sans regulation and lack of transparency in governance. Because of low levels of funding in the public system, (providers) are seldom remunerated according to prevailing market rates, and because of better incentives in the private system dual job holding is an inevitable result. Due to lack of monitoring, absenteeism occurs, with ghost worker phenomena at the root (of it). In the most extreme cases, as a result of limited public resources infrastructure of public facilities suffers. This often leads to imposition of user charges. Market provision of services, on the other hand, flourishes in such environments as public system cannot cater to the demand. However, because charges levied by the private sector are prohibitive, the equity objective is often compromised. A number of





Sania Nishtar (L), Founding President, Heartfile, during the session 'Forum Debate: Religion and Politics' at the Annual Meeting 2013 of the World Economic Forum in Davos, Switzerland

weaknesses in governance and transparency can further compromise the impact of investment in a highly constrained environment.

We are well aware that collusion in procurements and pilferages from supply chains further constraints care sources. And of course in recent years, we have seen the patronage and tolerance to circumventing procedures and state capture by the elite causes misappropriation of talent on the one hand, and whereas on the other, it biases laws and policies in the country towards issues to taint selected benefits to the few.

This public-market interaction and the manifestations that it leads to, has been described as the

“mixed health system syndrome.” You can appreciate that it impacts quality and equity adversely.

Inequities in the health system

FC: Why and how is the system inequitable? How can this be alleviated? What are the major factors contributing to the inequitable system?

SN: Achieving equity is one of the three goals of any health system. The others are fairness and financial contributions and responsiveness. We have recently completed an analysis of Pakistan's health system for the forthcoming Pakistan Lancet series. The results are astonishing,

because there are wide inequities across provinces, districts, gender and most glaringly, across income levels.

These inequities have become apparent when we analyzed the Pakistan demographic surveys. If you dig a little deeper into the successive Pakistan's Living and Social Standard Measurement Surveys, you will find a similar pattern for most health and health system performance outcomes.

The recent National Nutrition survey has also shown the child health outcomes are statistically significant with different levels of maternal education and training. Clearly, these are very ominous trends and it goes to show that our health



system is really performing poorly. In terms of the causes, I've already explained to you how the dynamics of the mixed health system contribute to the problem.

The reform agenda

FC: What should be the reform agenda for the political parties and people in power? Are any of the political parties on the right track in bringing about any kind of reform in the system?

SN: I think any reform can use results, if there are some ingredients at play of a policy consistency, commitment to learning from evidence, transparency and accountability, as well as respect for merit. You can have the best designed reform in place for a country, but, if every incoming government every three years changes the goal posts, nothing can be delivered.

However, on the other hand if there is a long-term commitment to even a modest set of changes, they can yield dividends provided there is commitment to learn

from evidence and a sincere intention to make modifications in the interest of building reform towards effectiveness and efficiency, rather than short-term political gains and personal propaganda.

In Pakistan, the history of attempted reform in health, and for that matter in any other sector is characterized by waxing and waning efforts. One government initiates, the other de-tracks and a third embarks upon a totally different route. In an environment where there is a total lack of accountability of decision-making of every nature, and this happens when the bureaucracy and technocracy are either disempowered, completely sidetracked or lack capacity to harness the appropriate skills and competencies.

Pakistan is a National Health Service style health system, where distortions have appeared over time, but there is a system in place nevertheless. An approach has to be tailored to overcome problems in a given context, rather than attempt to install imprints of imported reform that are not suited to our system at all. You need a round peg for a round hole and a square peg for a square hole. And many problems with Pakistan reform attempts have been importation of ideas from abroad by individuals who although well-meaning and technically competent, nevertheless did not have the right understanding of the local context to tailor modifications that will make lasting differences.

The pipes: in place, but choked

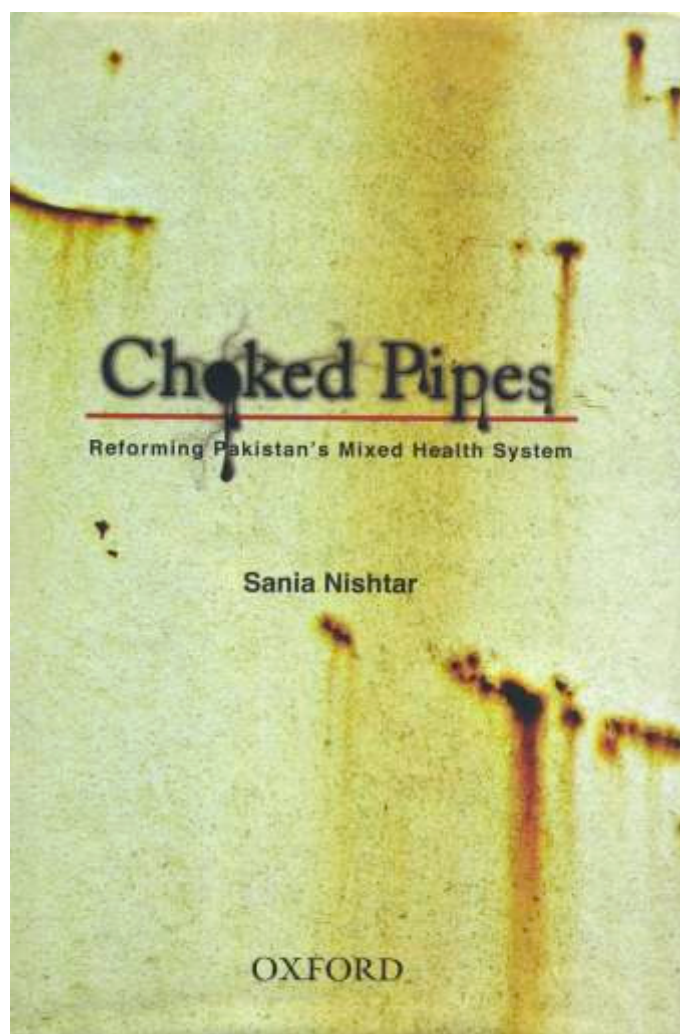
FC: So the 'system' is in place? Is that the message you were giving in "Choked Pipes"?

SN: Yes I wanted to signal that the system is in place no matter how pervasively damaged it is. And if the system does not work, the first motivation should be to unclog these (pipes)...we have to think about changes and reforms in a very local context.

Regulatory bodies' role

FC: What is the role of the major regulatory bodies (such as the Pakistan Medical and Dental Council (PMDC), Pakistan Medical Research Council, etc) in targeting this corruption? And in maintaining the quality of medical education and the quality of care?

SN: Regulatory bodies have a major role, especially when the market is at play, and they need to ensure a level playing field for the private sector. The PMDC sets standards of medical education; it registers medical practitioners and accredits medical institutions both in





the public and private sectors. By playing an effective role in these areas it can certainly help promote quality in the system from different angles. At present, the mandate of the PMDC has not been given the authority to deal with broader issues of quality in health service delivery. The PMDC has a set of challenges: the issue of politicization, and capture of PMDC's governance at different times over the years...have had a net negative impact on quality of medical education.

Major first steps towards reform

FC: In the recent meeting with political leaders, you have mentioned 9 major steps towards reaching meaningful results, which are non-contentious, brings in private sector and foreign investment, and obviates the need for public investment. Can you outline the motivation for this?

SN: Yes, I was referring to something that can be done even in the given constraints, because whenever we talk to politicians and decision makers they refer to the constraints they face in implementing social policies in public interest.

They cite competing priorities, in particular issues of the internal security, the problem of energy which takes out fiscal resources. They continue to refer to the constraints imposed by coalition politics, in general (politics itself)...as an impediment to getting anything done. However, decision makers need to have an astute understanding of policy

“Pakistan has few drug testing laboratories established in the public sector but most of them are non-functional. When medicines have to be tested for quality, samples have to be sent abroad as was the case in the recent Isotab drug death scandal”



actions that could cascade reform. It is within that background that I refer to something that can still be done, even without resources or limited resources.

I'm a great believer in partnerships. Some of these require zero investment by the government and would then have a positive effect on improving quality of medical services in the country. But while the opportunities exist and remain untapped, and while options to improve quality without public fiscal investments do exist, one must not lose sight of the key point and the crux of the matter in order to improve health: governments do need to make appropriate fiscal investments.

Some examples of zero investment actions

FC: Can you give examples of what the government can do that can

have a knock on effect, even in this environment of fiscal constraints?

SN: These policy actions have a public-private resonance, present commercially viable investment opportunities, and also have a public good character, by virtue of the knock-on effect on quality of health care delivered and cost savings incurred.

In some cases, both of these objectives are achieved. For example, indigenous vaccine production is one of these areas which is recommended by World Health Organization for countries as large Pakistan on grounds of health security and economies of scale. A carefully structured arrangement could incentivize a commercial manufacturer to produce for local consumption and the government could help here by reducing cost



of production through regulatory and tax incentives.

So, that over the long term investment in vaccine procurement could be optimized and technical support could be channeled. Say for instance through bilateral assistance for capacity building thereby creates a win-win model.

Another example is that of a bioequivalence lab. Pakistan has few drug testing laboratories established in the public sector but most of them are non-functional. When medicines have to be tested for quality, samples have to be sent

abroad as was the case in the recent Isotab drug death scandal. Establishment of a drug testing laboratory or a bioequivalence laboratory, through private investment is an opportunity which could both be commercially viable and it could be a step towards ensuring quality of medicines, and could have a spin off effect on the quality of generics.

Also, similar considerations can apply to the manufacturing of auto disable syringes. As you may be aware, Pakistan is labeled as a 'cirrhotic state' in a recent Lancet

publication. Pakistan has the highest rate of injection use per capita, and it is often unsafely administered. All of this is responsible for very high prevalence of viral infections such as infectious hepatitis in the country.

So investment in an auto disable syringe plant could meet a public objective by reducing the burden of hepatitis and this will reduce healthcare costs over the long term, because the pre-18th amendment hepatitis control program was all about treatment related procurement.

Technical related collaboration can (also) be solicited to ensure that investors with the right capacity and expertise come to financing this area. This is of course, as you know a commercially viable option in its own right given the economies of scale in Pakistan.

Tapping and generating the right human resource

FC: You have given all these examples in the area of pharmaceuticals. Are there comparable examples in the area of human resources for health?

SN: Pakistan faces an acute shortage of many categories of human resources for health - nurses and physiotherapists are the most acute. It is entirely possible through meaningful public-private engagement to help bridge this huge quantitative gap.

Pakistan's nurse to doctor ratio has been inverse for a very long time. It is 1 to 2.7 as opposed to the internationally recommended for 4 to 1. I fail to understand why the government does not encourage and incentivize the private sector





to invest in this and schools of physiotherapy.

The government can do that through certain regulatory and tax incentives to not only ensure that investments in these areas flow, but also to ensure that these ... (are) retained domestically. Similarly, there is an acute shortage of pharmacists. The current capacity of pharmacists production annually at a national level is 200, whereas there are more than 50,000 registered pharmacies the do not have qualified staff.

So, with public policy and regulation, numbers can be augmented and at the same time, this approach can contribute to employment generation. It can then have knock-on effects on improvement in the quality of dispensing medicines, their handling and storage in supply chains.

If the government subsidizes health infrastructure where crucial gaps exist, facilities can be created through investment by the private sector. Physiotherapy centers and disability management are other cases in point. They support infrastructure as well as related human resource shortage in this area and by incentivizing the private sector to invest, the government can at least bridge the availability and geographic access deficit.

Another set of policy options come into play when ensuring financial access from an equity standpoint, (that) has to be factored into the policy equation... in the broader context of a universal coverage. An astute government in Pakistan's mixed health system can develop the

“Similarly, there is an acute shortage of pharmacists. The current capacity of pharmacists production annually at a national level is 200, whereas there are more than 50,000 registered pharmacies the do not have qualified staff,”

capacity to produce from the market in order to achieve these goals.

Opportunities within existing programs: the LHW program for screening blood pressure

FC: How could existing programs such as lady health workers (LHWs) be improved or help in tackling the quadruple burden?

SN: Well, more than a quarter of the population of Pakistan under the age of 25, suffers from high blood pressure - one of the conditions in which population wide screening is recommended. Pakistan's existing field of grass root level health workers, in particular

LHWs are the ideal mechanism (for screening)... because checking of blood pressure is noninvasive.

Recent governments have been fixated towards using this workforce for Maternal, Newborn and Child Health (MNCH), and infectious diseases despite evidence which indicates that they have good time on their hands, as well as the appetite to engage in such activity. Such policy options which can enable leveraging the existing resources, need to be mainstreamed at a time of critical need. In the case of non-communicable diseases, we are way, way behind needed action towards issues of high priority.





Barcoding of medicines to prevent spurious medicine supply

FC: What was your basis for recommendation regarding barcoding in medicines and how do you see that solving associated problems?

SN: Counterfeit, spurious and substandard medicines are pervasively available in Pakistan's 'bona-fide' market. With the kind of regulatory practices we are living with, it is really no surprise that Pakistan's chances of addressing these issues through conventional regulation are slim, new traffic regulatory arrangements notwithstanding. This is why unconventional measures in public-private

synergies will have to be adopted to plug the current loopholes. One of the several ways this can be enabled ...is through distribution chain security and appropriate use of technology. Technology can help secure the distribution chain making the value chain more transparent, and it is here that specialized bar codes which can be read by mobile phones that authenticate the source of medicine can be extremely valuable. There are some international experiences regarding the use of this approach which is very promising.

Behavior change through soap operas

FC: You mentioned soap operas for behavior change especially for

family planning related messages. Can you elaborate on that?

SN: Health is not just about doctors, hospitals and medicines. It is also about individual choice, which is also something not fully factored into consideration. Whether it is smoking, or the use of alcohol, unhealthy dietary practices, lack of physical activity, unsafe sexual behaviors, all these risks to health are potentially in an individual's own hands, and so are the remedial actions. This is where behavior change communication can become very important. Pakistan has a very traditional style of health education centered on the public service message. This type of approach is done without paying much attention to the



| Patient mobile technology |



“The prevailing tensions and distortions can subvert and can potentially damage whatever positive impact there has been as a result of the 18th amendment. It really saddens me to see when the outgoing government really has (made) no commitment to solve these issues on its way out,”

contemporary catalysts of change. Recently, for example it is been documented that soap operas are one the most effective vehicles for women empowerment, and priming men to the need for an overhaul of their approach towards women. A similar approach can be adopted for health seeking behaviors, especially as far as reproductive health is concerned in Pakistan.

Mobile phones put to good use

FC: What is the potential of mobile phone technology for health purposes?

SN: There are more people with mobile phones in their hands in Pakistan then those with access to clean water. This creates an opportunity as with mobile devices we can address a lot of issues like poverty. Their roles range widely from women empowerment, basic education, social protection, access to financial services, microcredit, health education, mobile banking and the potential roles keeps on growing. Engaged in our own work at Heartfile with our health financing program, we are really experiencing how mobile phones, in our IT enabled social protection programs enable us to link with health providers, make patient

payments and do poverty validation checks. Also with mobile phones, in a cost effective manner (due to the high pervasiveness of usage and connectivity) allows various options for upscaling our existing programs.

Political will post-18th amendment

FC: You have been in the forefront of policy analysis in the health sector when the 18th Amendment was being brokered and its aftermath. How do you see the situation two years later now?

SN: This could be a very long discussion but let me say in a nutshell that in a reform of this

scale and depth, problems were inevitable. However it is the will to take remedial action which becomes important. Certainly 2 years on and within that context, while the former is understandable and can be condoned, lack of attention to the latter is completely unforgivable.

So, since the 18th amendment we have seen that there are two other amendments that were brokered, but with a focus on human resource prerogative and political power play. The inadvertent distortions created by the 18th amendment, vis-à-vis fragmentation of national roles in not just health but in almost every sector, were not the focus of attention. It seems that many state sectors have been systematically dismantled. Some very simple and basic themes which have now become a bone of contention between different agencies at the federal level and between the federal government in the provinces, have not been solved, despite the existence of an





institutional mechanism. If I recall correctly there is a section called the 'anomaly cell' which could have addressed these issues.

The prevailing tensions and distortions can subvert and can potentially damage whatever positive impact there has been as a result of the 18th amendment. It really saddens me to see when the outgoing government really has (made) no commitment to solve these issues on its way out.

Sustained solutions

FC: What do you recommend as a sustainable fix to our broken health system and unclogging its choked pipes?

SN: Experience in many developed countries and economies in transition have shown that locally relevant policy choices can be adopted to harness the reach of private providers. As private markets are unlikely to go away, it is important to analyze their implications for health goals. But it really entails a great capacity

reorientation at the level of the public entity to develop stewardship and regulatory agencies which can harness their outreach. At the other level, there is government's own engine of health delivery which needs to be revamped, and clear options are available for reforming for hospitals, and for turning around performance of basic health units. But these measures need to be in parallel with major efforts to broaden public financing. Again in my publication, I had discussed what options Pakistan has to exercise in terms of broader goals of health financing. The revenue base has to be enhanced, pooling approaches need to be stepped up inclusive of insurance of the formerly employed sector and the health equity fund for the non-formally employed sector, which is what we are trying to hone at Heartfile.

More important than these technocratic fixes is the need to address measures outside of the

healthcare system. What is crucial is to address constraints in the context of political economy and address inequities of power, money and resources which are the strongest determinants of health system achievements. If Pakistan continues to be limited by debt, fiscal irresponsibility and an inability to broaden the tax base, where is the money for the health reform going to come from?

Let me not mislead you or the reader by thinking that capitalizing the private market will be enough. There is no substitute for public investment in health and that requires money. In Pakistan, in addition to constraints that I talked about, health system that is hemorrhaging, so talking about reform within this context becomes very difficult...(with) major issues related to transparency and utilization of resources.

Pakistan needs to improve transparency and accountability and it has to inculcate incremental increases in revenue earmarked for health. It is then that increase in funding when coupled with strategic approaches to public service delivery, management reengineering will pay dividends in the long term.■

The article also follows from the discussions with stakeholders and policy makers in which Subh-e-nau has been involved in an advisory/advocacy capacity



Goodbye zangi nawar

A treasure to our biodiversity, Lake Zangi Nawar is a host to many arrivals and departures of birds from all over the planet.

After the domestic chores are over, the tired and tense but loving couple is planning a well deserved rest and blissful vacation.

They bid farewell, kiss goodbye and fly to the hinterland, yet far and away to the hinterland, yet far and strange where board and lodging will be free. Delicious

food, comfortable surroundings, fresh air, calm atmosphere will greet them, where plenty of sun and light will flood their courtyard, the starry nights will blink friendship and the large and placid swimming pool will ensure fun and frolic.

The bowers of bliss will keep the

hearts light, the spirits high and the ideal abode will be, as it were, in the seventh heaven. So they muse and imagine while on their way to the Garden of Hesperides.

And they are not alone; every autumn thousands of their kin and aliens train their compass, flutter a





rehearsal to ensure horsepower. And take off with a determined mind on apparently an unmarked route which in fact charted indelibly in their heads since generations.

The destination is far away, very far, thousands of miles away. Hunger, thirst, and tiresomeness do not dampen their zeal. Their flight continues led by the most experienced member of the tribe, finding way by the landmarks during the day and stars by the night. They chirp, chatter, whistle and whisper to keep up courage and company until they decide to alight.

But they choose wilderness, cruel



“Locally it is known as Zangi Nawar, a freak natural lake some 2070 hecta, perched at 975 meters from the sea level, 27kilometres North West from Nushki, in Chagai district of Baluchistan. Whether or not you approve it, the winter visitors adore it, and have been doing so for several million of years, and consider it as their home,”

and sheer barbarous from human' point of view. Naked and craggy hillocks and blistering sand dunes surround their dreamland, yet they love it, cherish it. This is their happy hunting ground.

Locally it is known as Zangi Nawar, a freak natural lake some 2070 hecta, perched at 975 meters from the sea level, 27kilometres North West from Nushki, in Chagai district of Baluchistan. Whether or not you approve it, the winter visitors adore it, and have been doing so for several million of years, and consider it as their home.

So contended they feel, that some twelve species of waders, and ducks are known to nest here, including the very rare marbled teal. Even the loveliest of

creatures—the swans—with heart of gold and the grace of a mermaid has been seen here, at times.

The lake is not always full; it sings in rains and swoons in drought, but the flicker of light never goes out of it. Its love for life swings between plenty and poverty. Judging by its versatility, it deserves to be designed as a sanctuary and not a game reserve as was done in 1982.

As the migrating guests like it, as it lies on their flight route in a hostile, inhospitable hinterland. It is indeed a blessing in disguise!

Cranes arriving in the late autumn for an overnight stay, Siberian cranes which are worth their weight in





“If you want to visit the lake, go in the spring when they are spick and span, clean and dressed in silk. If you come in autumn, there may be still in their dressing gown,”

diamonds have been seen her once in a decade.

The overall canvas is reassuring. In 1984 there were 250—300 marbled teals but in the drought of 1985, they flew over to better locations. Rains in 1987 brought in some relief and gaiety. 90 large species of ducks brought 40 toddlers with novices who paddled and waded in the muck and marsh of the loch. They will return with their offspring, as was amply shown in the early 1984 survey, when astronomical 90,000 migratory ducks, waders, stilts, plovers, snipes, storks, egrets and the like were recorded.

If you want to visit the lake, go in the

spring when they are spick and span, clean and dressed in silk. If you come in autumn, there may be still in their dressing gown.

By and large it is one of the finest wintering lakes in the world. This maybe tall claim but nevertheless true. The World Wide Fund considers it to be their darling, like the Englishman who when departing from this area lamented, “If I could take Zangi Nawar, I will do it for any price.”

By now the odds against it are numerous, as settlements around it have appeared and the people there hunt mercilessly with guns, nets, and noose and by foul and fair means. The threat of

drought looms overhead, but a national treasure of this richness is not measured by the yardstick of recurring returns. Zingi Nawar is not alive from the runoff of the surrounding hills. It was designed and created by Nature over millions of years by adjusting and readjusting its alignments magnificently.

There are vines that twine, others that do not, reeds that blooming grass that flourishes in anonymity, creepers that flower, moss that floats imperfect calm. Oblivious to the earthquakes that shake Baluchistan’s belly here and there, weed that prefer to lie submerged all their lives, lily with captivating aroma, mini plants that eat insects shrubs that harbor caterpillars from which emerge colorful butterflies, bushes in which hide glow worms in day time and lick their lanterns at night, playing cupid to their kind, thickets that provide shelter to the croaking frogs, snakes that slither in them for a perch to warm up and shed their surplus skin to look and shine better, mushrooms, moulds, flies, insects, beetles, snails, shells, scuttling lizards fish with long moustaches which hey twirl in delight without touching them, duck weed that is yum-yum chocolate for the winter dabblers – all in all a perfectly balanced chain of life, depending or lending support to others, microbes that digest the debris and turn the soil fertile, unicellular, multicultural myriad aquatic life, all irreplaceable cogs of the wheel of a delicate ecosystem.

Yes sir, it is not a simple sheep dip. It is a very complex web of flora and fauna some of which are still an object of curiosity to sciences. Lovely and calm, tranquil it is fit for fairies to skim over the surface of the lake, with nets in their hands to catch flitting butterflies.

Neglect it and the heaven will turn it into hell in our life time. A foul smelling swamp, bubbling marsh gas and fetid scum are what will be left for posterity.■





Sensible gardening

‘Over-gardening’ – may sound like a very strange term indeed but a surprising number of people, especially those new to gardening, are guilty of one or all.

Of the following which, when considered in the sensible light of everyday life, can make growing your own food a complete and utter waste of increasingly precious, given the demands of the world gone mad that we struggle to survive in, time.

1. Over-digging.
2. Over-planting.
3. Over-feeding.
4. Over-watering.
5. Over-weeding.
6. Over-producing.
7. Over-maintaining.

In an attempt at making gardening, with the production of organic fruit, vegetables and herbs at the very top of the list, worth the effort you put in to it and, with a view to minimizing rather than maximizing, necessary hours of labor, let us take a look at the ‘Over’ departments one by one.

1. Over-digging : First and foremost here is the strenuous act of digging which – unless you regard it as an outdoor substitute for having an expensive workout in the gym – is, once the initial ‘create a garden’ has been done, often – and more often than not no matter what some books and experts advise – more destructive than productive. There is absolutely no need, as long as the unavoidable and arduous task of proper soil preparation was done, to dig the same patch of garden over and over again. This over-digging completely destroys healthy soil structure along with all of the beneficial creatures and invisible microorganisms inhabiting it and which, together and when left well alone, actively work 24/7 365 days a year to keep the soil in tip-top condition without any disturbance from you. Your contribution to soil, and therefore crop health, need only be limited to disturbing as little as possible during the planting process and then by top





“Think, long and hard and seriously before sowing/planting anything at all. People tend to think that they must sow all the seeds from a packet,”



| Homegrown figs of 2 varieties |



| Over production is fine if you can sell the excess |

feeding the soil through repeated applications of organic compost/old, well rotted, organic manure and by the seasonal laying down of a nutritious, for the soil and crops, layer of weed suppressing, moisture retentive mulch. Just because the neighbour of the guy on the gardening program dig their gardens to extinction does not mean that you have to follow suit!

2. Over-planting: Think, long and hard and seriously before sowing/planting anything at all. People tend to think that they must sow all the seeds from a packet for example which, if germination is good, often means that there is not enough room to grow everything that pops up. In turn, this often leads to either a waste of seedlings – therefore time, money and effort as the seeds could have been stored in readiness for the next planting season, or, to overcrowding of seedlings which are then quite unable, due to competition for nutrients, water and sunlight, unable to thrive and crop as they should. All plants, edible ones and otherwise, require a certain amount of space in which to develop to their full potential. Giving it to them makes sense.

3. Over-feeding: If soil has been correctly prepared before planting commences – this means that attention has been paid to drainage and that organic compost/manure etc has been worked in, then there is no need to waste time, money and labour on perpetually feeding plants with this, that and the other. This is even more so if you are being sensible and applying mulch. Over-feeding is detrimental to plant health not, this must be stressed, beneficial as it encourages plants to grow at an unnatural rate, to an unnatural size and this actively reduces their cropping performance as, by the time they reach this stage, they have



often run out of ambition!

4. Over-watering: Fact – More plants are killed off or develop fungal diseases from over-watering than from any other cause – with over-feeding running a very close second. Wasting copious amounts of increasingly precious water on everything in your garden each and every single day is, putting it bluntly, and sheer lunacy! Different species of plants have different water requirements and few, aside from tender leafed species such as lettuce during periods of hot weather, need to be given a drink everyday and most certainly not in the morning and again in the evening that some people, especially work-creating Malis, consider to be necessary. Plants, by the way, can appear to be wilting when they are actually suffering from an overdose of water. Water only in an evening, never in a morning as the sun then quickly evaporates water before plants have had time to take up the potential benefit. Check soil moisture content by sticking your finger in the earth first. The top layer may be dry but, just an inch below the surface where plant roots are, it may still be moist in which case there is no water needed. It is almost a good and labour saving idea to plant species with similar water requirements close to each other: Planting thirsty and drought tolerant species in the same bed does not make good gardening sense.

5. Over-weeding: Some gardeners, in attempts at creating a ‘picture perfect’ garden, spend hours and hours hoeing or hand-weeding when, if beneficial layers of mulch have been applied and kept topped up as necessary, weeding is relegated, almost but not 100%, to being a thing of the past. Additionally, if you feel that you must weed, don’t do a hands and knees job every other day but allow the weeds to grow at least 3 – 4 inches high so that they, as long as they

have not reached the seeding stage of course, are useful additions to the compost heap/bin.

6. Over-producing: Before planting it is wise, no matter how many relatives and friends you have waiting, to work out which vegetables, fruits and herbs are worth your while growing and how much you can use. For instance, people merrily plant far too much lettuce as a matter of routine and, with freezable varieties too, you can, no matter how much jam/pickle/preserve you make,

more sense that having, for example, a garden dull of cabbages that no one wants to eat and which, when time, labour, water etc are factored in, it may have been simpler to just go out and purchase as required.

7. Over-maintaining: There is a distinct trend for emulating the garden photographs appearing in glossy magazines irrespective of the climate they happen to be in and this, although you may not agree, is ridiculous. Usually very costly to create and



| Almond blossom |

only consume so much and a freezer packed full of courgettes isn’t much good when you discover that you have planted far too many tomatoes and are sick and fed up of turning them in to ketchup. Check over how much of which fresh produce you use on a weekly basis and then, this is eminently sensible, think of the cost of each one too. Unless you have tons and tons of space in which to produce all the organic food you need, it is wise to opt to grow those which are highest priced in the market rather than those that, in season, are relatively cheap. Producing useable amounts of expensive items makes far

certainly expensive and labour intensive to maintain, such gardens are, on the whole, usually nothing but show pieces and yes, they may be beautiful to look at but are rarely either functional or predominantly ‘edible’ in own, increasingly fickle, climate. A garden should not demand all of your available time – and more – to upkeep. It is far better to create a useful garden, minus all of the difficult to care for fiddly bits, which produces lots of organic food and in which you also have time to simply chill out and just ‘Be’. Think about this and you will realize that it does make sense!■



A freshening flower show

A flower, vegetable and bird show was held at the Rose & Jasmine Garden, Islamabad in the first week of April. Subh-e-Nau participated in this event and simultaneously in another notable event held in Karachi.



The flower, vegetable and bird show heralded a fresh wave of spring for the citizens of Islamabad who had faced a prolonged winter this year. A large numbers of people, especially women and children attended this show. This was jointly organized by Capital Development Authority (CDA) and Islamabad Horticulture Society.

CDA Chairman Syed Tahir Shahbaz inaugurated the show that provided a chance to citizens of the federal capital to watch rare species of flowers and birds. It was the 31st annual flower, vegetable and bird show.

Different varieties of spring flowers and birds had been exhibited in the show. Different kinds of birds, pigeons, parrots and other rare species of birds remained a main attraction. Talking to media persons, Tahir Shahbaz said that CDA has been making all-out efforts to provide entertainment activities to the residents of the federal capital by organizing different programs, including flower, vegetable and bird shows.

The CDA chairman also said that cybernetic fountains would be installed in different sectors of the capital. Replying to a question, he said the slides and other facilities for the children in the parks of the CDA would be repaired and improved very soon.

He said the CDA had installed huge dinosaur replicas in one of the parks, but they were damaged due to various



| Scenes from the 2013 Flower, Vegetable and Birds Show at the Rose and Jasmine Garden in Islamabad |



“Subh-e-Nau (SN) also displayed a stall at the exhibition with environment-friendly material. Visitors hailed SN for its efforts and said that SN should publicize its efforts even further. They especially appreciated the selection of content covered in monthly Subh-e-Nau”

reasons and now it has been decided that these dinosaurs would be installed at the Islamabad Zoo. A flower competition was also held between different departments including Allama Iqbal University, Islamabad Horticulture Society and Islamabad Club.

Subh-e-Nau (SN) also displayed a stall at the exhibition with environment-friendly material. Visitors hailed SN for its efforts and said that SN should publicize its efforts even further. They especially appreciated the selection of content covered in monthly

Subh-e-Nau. Some of the visitors were of the view that they have never seen such a comprehensive magazine on environment in Pakistan.

SN at the All Pakistan Memon Foundation Exhibition

SN also participated in a three day event in Karachi on 5th, 6th & 7th April 2013 at the Expo Center, Karachi. This was organized by the E-Commerce Gateway Pakistan Private Limited. The sponsors and exhibitors included national and multinationals companies,

and many other companies encompassing small traders to big industrialists of Pakistan and abroad. Subh-e-nau also displayed a stall in the exhibition for awareness purposes. This initiative was widely appreciated, and the Chairperson Mrs. Shahida Kausar Farooq also gave interviews on the occasion to facilitate awareness regarding saving Pakistan's natural environment.

In tune with the theme, Vision of Prosperity was an entertaining for the entire family where special discounts,



| The Subh-e-Nau stall at the All Pakistan Memon Foundation Exhibition |



children pavilion, food-street and other attractions were a part of the festivity and more.

The event was extensively publicized in print, electronic and broadcast media. Sindh Caretaker Chief Minister Zahid Qurban Alvi performed the inauguration of this 6th annual exhibition. On this occasion, he said that the city of Karachi was the economic and commercial hub of the country. The maintenance of law and order would help to spur the commercial activities in the metropolis, he said. The Caretaker CM was optimistic that the usual hustle bustle would be restored soon in the city and that the law and order would be maintained.

He also lauded the contributions of



| SN Chairperson being interviewed by a local radio station |



“The event was extensively publicized in print, electronic and broadcast media. Sindh Caretaker Chief Minister Zahid Qurban Alvi performed the inauguration of this 6th annual exhibition,”

the Memon and the Gujrati community in the country especially in the realms of health and education. Alvi further pointed out that a number of trusts, schools and hospitals were established by these two communities.

The President of the Federation, Abdul Aziz Memon and General Secretary, Abdul Ghani Banghra, also spoke on the occasion and apprised of the aims and objectives of the event. The Caretaker CM also distributed shields among the sponsors and organizers of the exhibition.■



Dishwashing naturally

Serving those tasty, beautifully-crafted organic meals you worked so hard to prepare on clean-but-slightly-stained dishes takes that “wow” factor you were going for down a notch.



Whether you hand wash dishes or use a dishwasher, some stains just seem to stick, no matter how much sudsing and scrubbing you do. Cue the cleaning frustration.

Don't let pesky set-in stains on your dishes and cups get you down, you eco-hostess. Use these super simple natural cleaning methods to get rid of coffee, tea, food and hard water stains on your tableware.

Coffee and tea stains

As a perfectionist, I get particularly irked when my shiny white coffee mugs come out of the dishwasher sporting the same dingy brown rings that I put them in with. I'm sure you clean freaks out there can relate. Luckily, several natural ingredients can easily erase stubborn coffee and tea stains from dishware. No bleach needed. Why would you ever want to put those toxic chemicals near

the utensils you use to ingest food anyway? Try one of these green cleaning remedies instead:

- Squeeze the juice of half a lemon onto the stained area. Use a damp cloth to scrub at the stain. It may take a bit of elbow grease, but the acid in the lemon juice will work through those annoying brown blemishes.
- Soak persistent stains overnight in a



solution of hot water and vinegar or hot water and baking soda.

- Try this delightfully sweet scrub. Place about 1 tablespoon of sugar into a stained mug. Use a cloth or sponge dampened with hot water to work the coarse sweet stuff into the stain. The abrasive action of the sugar will remove set-in stains. (Yes, this actually works!) You could also try this method using salt.
- For a little less labor, simply add some vinegar to the dishwasher cycle to remove coffee and tea stains from dishes.

Food stains

Tomatoes, beets and other deep-colored food items can leave dishes with ugly orange blotches. Not exactly the dinnerware you want to showcase at your next get-together. Plastic dishes are especially susceptible to staining from red-colored foods, but it can happen to ceramic dishes as well. You don't have to tuck those dishes into exile in the back of the cupboard. Make them like new again with these natural methods:

“Plastic dishes are especially susceptible to staining from red-colored foods, but it can happen to ceramic dishes as well. You don't have to tuck those dishes into exile in the back of the cupboard,”

- Soak the dishes in a solution of water and vinegar overnight. Vinegar works especially well to make white dishes spotless.
- Use the green cleaning go-to method of scrubbing stains with a concoction of vinegar and baking soda. The chemical reaction between the base and acid makes this pair a powerful cleaning agent.
- Finally if none of these tried-and-true methods work, I got a doozy for ya. Stick the dishes in direct sunlight for four to five hours. Sunlight works as a natural bleaching agent and will remove stains from white and colored dishes. The sun's rays will also eliminate any lingering odors.



Hard water spots

To remove hard water spots from dishes and glasses soak them in a solution of water and vinegar for a few hours.

- Squeeze lemon juice on dishes plagued by hard water spots. Let the juice sit for a few minutes. Then rinse the dishes thoroughly with water.
- To prevent unsightly hard water stains from forming on your pretty dishes in the future, add some vinegar to each dishwasher cycle.
- To keep your dishes and cups sparkling clean always rinse the dishes immediately after use. Rinsing dishes will prevent gunky food stains from setting in. And if you do get a little bit lazy, don't worry. You'll always have these tips at your disposal.■

Courtesy: Organic Authority





Novel Energy Conversion Technology

Two University of Calgary researchers have developed a ground-breaking way to make new affordable and efficient catalysts for converting electricity into chemical energy.

Their technology opens the door to homeowners and energy companies being able to easily store and reuse solar and wind power. Such energy is clean and renewable, but it's available only when the sun is shining or the wind is blowing.

The research by Curtis Berlinguette and Simon Trudel, both in the chemistry department in the Faculty of Science, has just been published in *Science* – one of the world's top peer-reviewed journals.

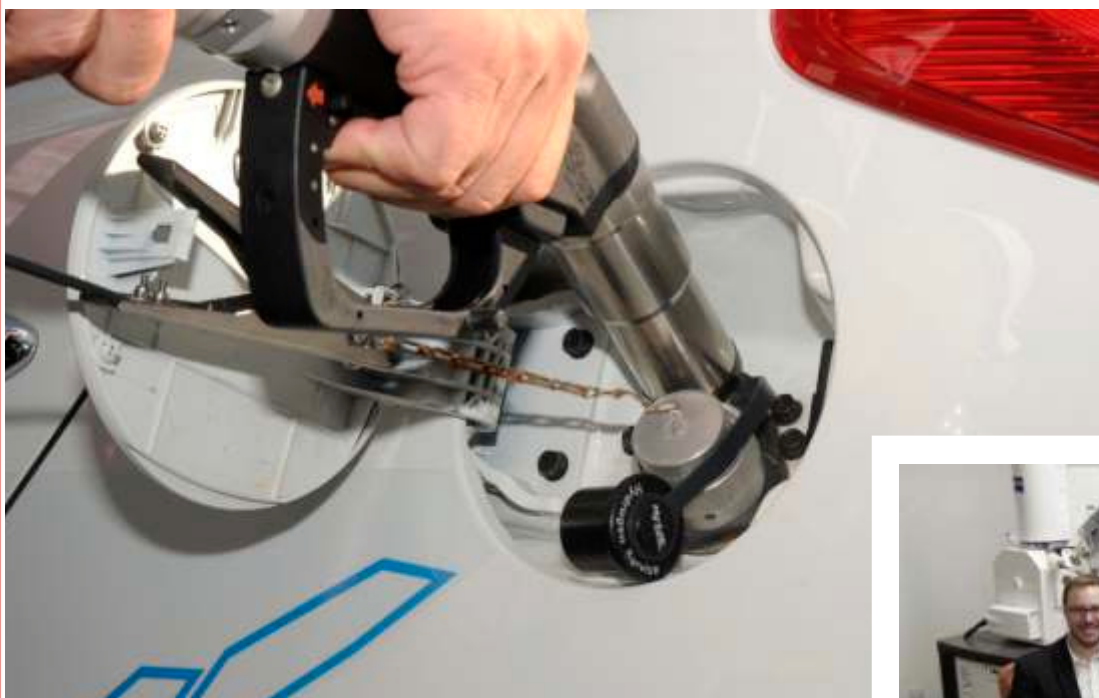
"This breakthrough offers a relatively cheaper method of storing and reusing electricity produced by wind turbines and solar panels," says Curtis Berlinguette, associate professor of chemistry and Canada Research Chair in Energy Conversion.

"Our work represents a critical step for realizing a large-scale, clean energy economy," adds Berlinguette, who's also director of the university's Centre for Advanced Solar Materials.

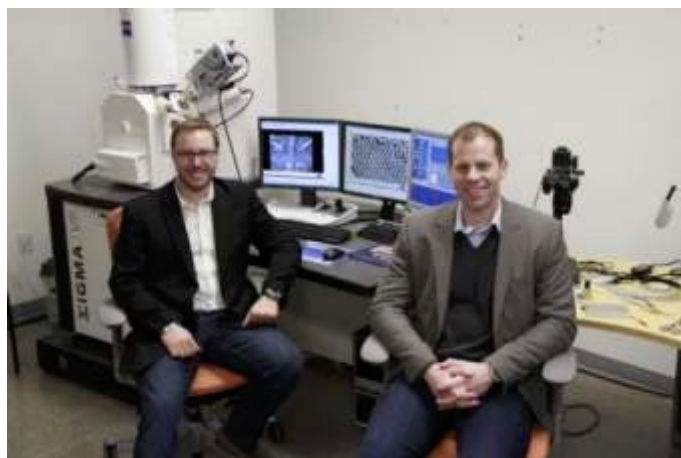
Simon Trudel, assistant professor of chemistry, says their work "opens up a whole new field of how to make catalytic materials. We now have a large new arena for discovery."

The pair have patented their technology and created from their university research a spin-off company, FireWater Fuel Corp., to commercialize their electrocatalysts for use in electrolyzers.





Researchers at the University of Calgary say they've made a breakthrough that could make renewable energy through a much easier and cheaper way to build an electrolyzer. This device uses electricity to break up water into hydrogen and oxygen, the basic requirements of fuel cells.



Two University of Calgary researchers have developed a ground-breaking way to make new affordable and efficient catalysts for converting electricity into chemical energy

Electrolyzer devices use catalysts to drive a chemical reaction that converts electricity into chemical energy by splitting water into hydrogen and oxygen fuels. These fuels can then be stored and re-converted to electricity for use whenever wanted.

The only byproduct from such a 'green' energy system is water, which can be recycled through the system.

To store and provide renewable power to a typical house would require an electrolyzer about the size of a beer fridge, containing a few litres of water and converting hydrogen to electricity with virtually no emissions, the

researchers say.

Key to their discovery is that they deviated from conventional thinking about catalysts, which typically are made from rare, expensive and toxic metals in a crystalline structure.

Instead, Berlinguette and Trudel turned to simpler production methods for catalysts. This involved using abundant metal compounds or oxides (including iron oxide or 'rust'), to create mixed metal oxide catalysts having a disordered, or amorphous, structure.

Laboratory tests – reported in their Science paper – show their new catalysts

perform as well or better than expensive catalysts now on the market, yet theirs cost 1,000 times less.

Their research was supported by the university's Institute for Sustainable Energy, Environment and Economy, Alberta Innovates, Mitacs and FireWater Fuel Corp.

FireWater Fuel Corp. expects to have a commercial product in the current large-scale electrolyzer market in 2014, and a prototype electrolyzer – using their new catalysts – ready by 2015 for testing in a home. ■

Courtesy: University of Calgary



NEWS MAKERS

Earthquakes strike Iran and surrounding regions



The strongest earthquake to strike Iran in more than 50 years hit the border area between Iran and Pakistan April 17 at 15:25 hours local time. The 7.8-magnitude earthquake has claimed the lives of an estimated 40 people and more than 180 others were injured. The ongoing collision of two enormous slabs of the Earth's crust – the Arabian and Eurasian plates – caused the quake, seismologists say. Its epicenter was about 83 kilometers (52 miles) east of Khash, Iran, a city with a population of more than 70,000. Tremors were felt across Pakistan, India and the Gulf States, with people from New Delhi to Abu Dhabi reporting they felt the earth shake. In Karachi, Pakistan, more than 500 kilometers to the south, office buildings were evacuated. The massive quake comes just eight days after a magnitude 6.3 earthquake in the Zagros Mountains shook southern Iran on April 9, killing 37 people and leaving 850 injured. This quake occurred 96 kilometers (60 miles) from the port city of Bushehr, where Iran's nuclear reactor is located. Across the border in western Pakistan, authorities report that as

many as 34 people were killed and roughly 80 others injured in the Mashkel district of Baluchistan province. In Pakistan, housing collapsed, leaving hundreds homeless in the town of Mashkel and nearby villages in Washuk district, Baluchistan province. Another strong quake with a magnitude of 5.6 shook the area on April 25 in the evening, resulting in eight casualties in Afghanistan.

(Courtesy: Environment News Service)

Curbing climate change on the agenda for Japan and the USA



Support for global action to curb climate change is growing stronger within the G8 group of the world's largest industrial democracies, which includes the United States and Japan. During an April 14 meeting in Tokyo, U.S. Secretary of State John Kerry and Japan's Foreign Minister Fumio Kishida expressed "serious concern about anthropogenic climate change and its worsening impacts." They said the United States and Japan "share the view" that human-caused climate change represents a threat to the security and economic development of all nations. "Cooperative efforts between the United States and Japan

demonstrate our shared commitment to advancing climate action in the multilateral context," the two officials said in a joint statement. "We plan to deepen our mutual engagement in advancing low-carbon growth." Kerry and Kishida said the United States and Japan will hold a new bilateral dialogue, based on three pillars of cooperation – a new, ambitious, global, post-2020 international agreement to combat climate change, cooperation to advance low-emissions development in the world, and cooperation on constructing climate-resilient societies. "We agreed that based on these three pillars, we will carry out cooperation regarding climate change," Kishida said. "The United States and Japan seek to join with other partners, both bilaterally and multilaterally, in a renewed effort to craft an ambitious post-2020 agreement that is applicable to all countries," they said.

(Courtesy: Environment News Service)

Famous NASA Scientist retires



Outspoken climate scientist James Hansen, director of NASA's Goddard Institute for Space Studies, is retiring as director of the cutting-edge Earth



climate research lab to devote more time to climate activism and scientific inquiry. In an email to the "New York Times" Monday, Hansen wrote that he is stepping down "so that I can spend full time on science, drawing attention to the implications for young people, and making clear what science says needs to be done." Hansen is the longest serving director in the institute's history. He came to GISS in a post-doctoral appointment in 1967, became a federal employee at GISS in 1972, and became director in 1981. Hansen's climate analyses have been based not only on the basic physics that goes into climate model design, but on detailed studies of the geological ice core and isotope records that are used to constrain and confirm climate model sensitivity. He has engaged in climate activism, offering himself for arrest at demonstrations against mountaintop removal coal mining and TransCanada's Keystone XL tar sands pipeline, among other actions. During the George W. Bush administration, Hansen was often at odds with federal government officials and was forbidden to speak directly to the members of the media. Environmental activist Bill McKibben, co-founder of the climate action group 350.org, said, "If 350.org has a patron saint, it's Jim. It was his 2008 paper that gave us our name, identifying 350 parts per million CO₂ as the safe upper limit for carbon in the atmosphere." "But as much as for his science, we respect him for his courage," said McKibben. "He's always been willing to speak the truth bluntly, from the day in 1988 when he told Congress that the time had come 'to stop waffling so much and say the planet was warming,' to all he's done to bring attention to damaging projects like Keystone XL – even to the point of risking arrest to do so. I have no doubt he'll go on doing science, and speaking

plainly." "One reason we're fighting the pipeline," said McKibben, "is because Jim Hansen did the math to show that if we combusted the tar sands on top of all else we burn, it would be 'game over for the climate.'"

(Courtesy: Environment News Service)

19th Century heralded ending of long-term global cooling



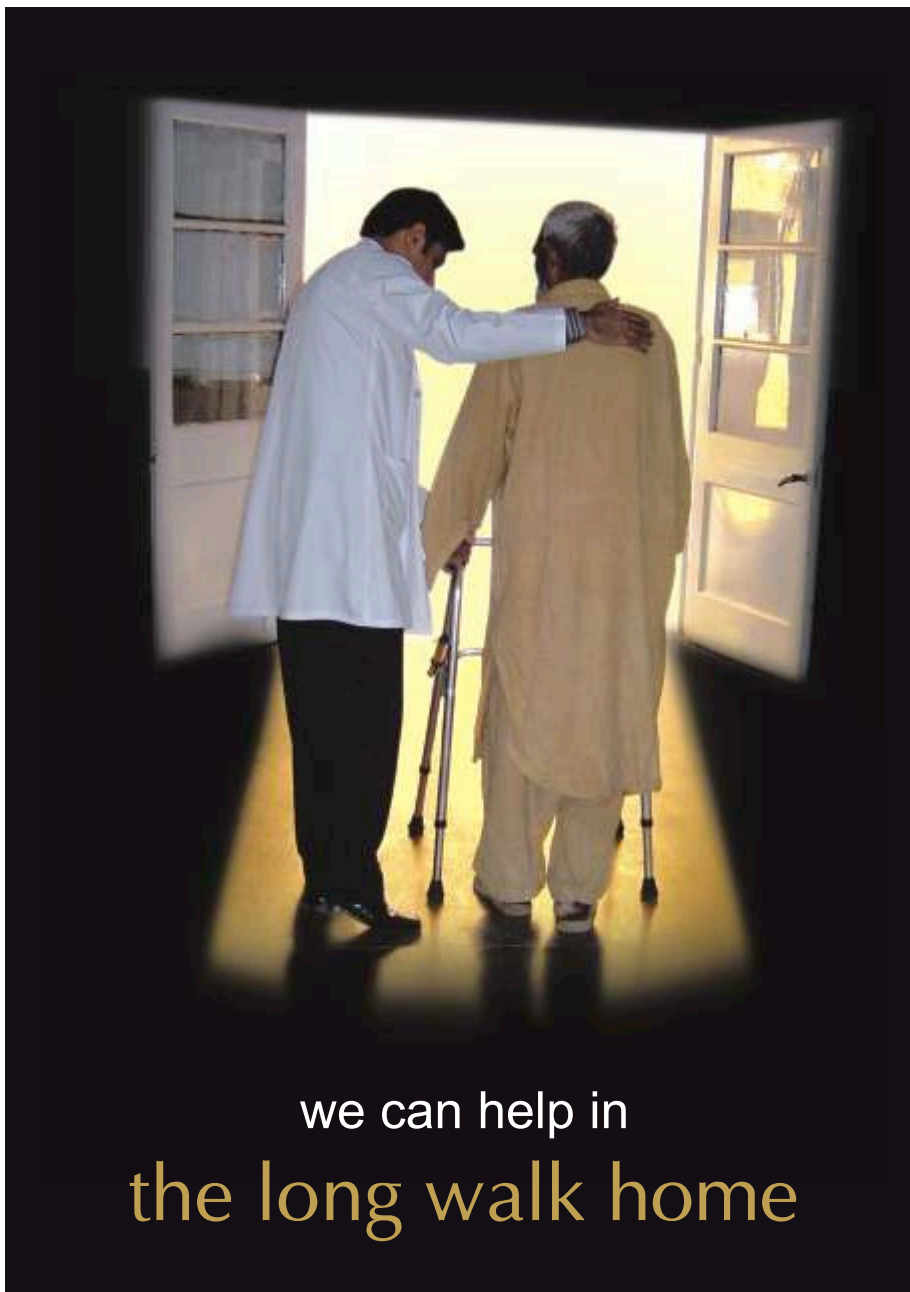
A global long-term cooling trend ended late in the 19th century and was followed decades later by the warmest temperatures in nearly 1,400 years, a sweeping study of temperature change showed. The study, by a consortium of 78 authors in 24 countries, said its 2,000 years of data made it harder to discount the impact on higher temperatures of increased greenhouse gases due to human activity. "Global warming that has occurred since the end of the 19th century reversed a persistent long-term global cooling trend," the National Science Foundation, one of the study's sponsors, quoted the report as saying. Researchers found that various factors, including fluctuations in the amount and distribution of heat from the Sun and increases in volcanic activity, fed an overall change in temperature patterns. The researchers were part of 2K Network of the International Geosphere Biosphere Program's Past Global Changes (PAGES) project. The research was published online on Sunday by the Nature Geoscience journal. The National Science

Foundation and the Swiss National Science Foundation jointly support the PAGES office. The U.S. agency called the study the most comprehensive evaluation of temperature change on the Earth's continents over the last 1,000 to 2,000 years. The PAGES study relied mainly on analysis of tree growth rings, pollen, skeletons of coral that register sea surface temperatures, polar and glacier ice samples and lake sediments, the National Science Foundation said. The 20th century ranked as the warmest or nearly the warmest century on all the continents except Antarctica. Africa lacked enough data to be included in the analysis.

St. Louis floods wreak havoc and accidents

Commercial shipping traffic was moving again on the Mississippi River south of St. Louis after a pair of barge accidents that forced the U.S. Coast Guard to close the waterway over the fourth week of April, but navigation remained severely impaired further north. Flooding following torrential rains across the central United States forced the U.S. Army Corps of Engineers to close about a dozen locks on the Illinois River and the Mississippi River north of St. Louis. The U.S. Coast Guard will also close a section of the Illinois River near Peoria to all traffic later on Monday to protect levees, and was considering shipping restrictions in other areas as heavy currents made navigation treacherous.

The shipping headaches come just three months after near-record-low water threatened to close the Mississippi River along a busy stretch from St. Louis to its confluence with the Ohio River at Cairo, Illinois. "While the conditions are much different than they were this winter, the effects are quite the same. We're placing operational



we can help in
the long walk home

Subh-e-Nau continues to work for the rehabilitation of seriously disabled persons from the Oct 05 earthquake in Muzaffarabad and adjoining areas.

- For donations call: 051 443 2194 or write to jac161@gmail.com
- For more details visit us at: www.greenpakistan.org



UNIVERSITY of TORONTO

International Centre for Disability and Rehabilitation

- REHABILITATION SCIENCES SECTOR -

guidelines on the vessel industry and shutting parts of the river," said Coast Guard spokesman Colin Fogarty. A 15-mile stretch of the Mississippi River near St. Louis was closed late Saturday after 114 barges primarily owned by American Commercial Lines (ACL) broke free from a fleeting area and 11 of them, all containing coal, sank.

(Courtesy: Reuters Environment)

Soda and sweet drinks can raise diabetes risk by 22 percent

Drinking just one can of sugar-laced soda drink a day increases the risk of developing diabetes by more than a fifth, according to a large European study. Using data from 350,000 people in eight European countries, researchers found that every extra 12 fluid ounce (340 ml) serving of sugar-sweetened drink raises the risk of diabetes by 22 percent compared with drinking just one can a month or less. "Given the increase in sweet beverage consumption in Europe, clear messages on the unhealthy effect of these drinks should be given to the population," said Dora Romaguera, who led with study with a team at Imperial College London. A 12-fluid-ounce serving is about equivalent to a normal-sized can of Coca-Cola, Pepsi or other soft drink. The findings echo similar conclusions from research in the United States, where several studies have shown that intake of sugar-sweetened drinks is strongly linked with higher body weight and conditions like type 2 diabetes. Type-2 diabetes is a long-term condition characterized by insulin resistance that affects around 2.9 million people in Britain and, according to the World Health Organization (WHO), more than 310 million people worldwide.



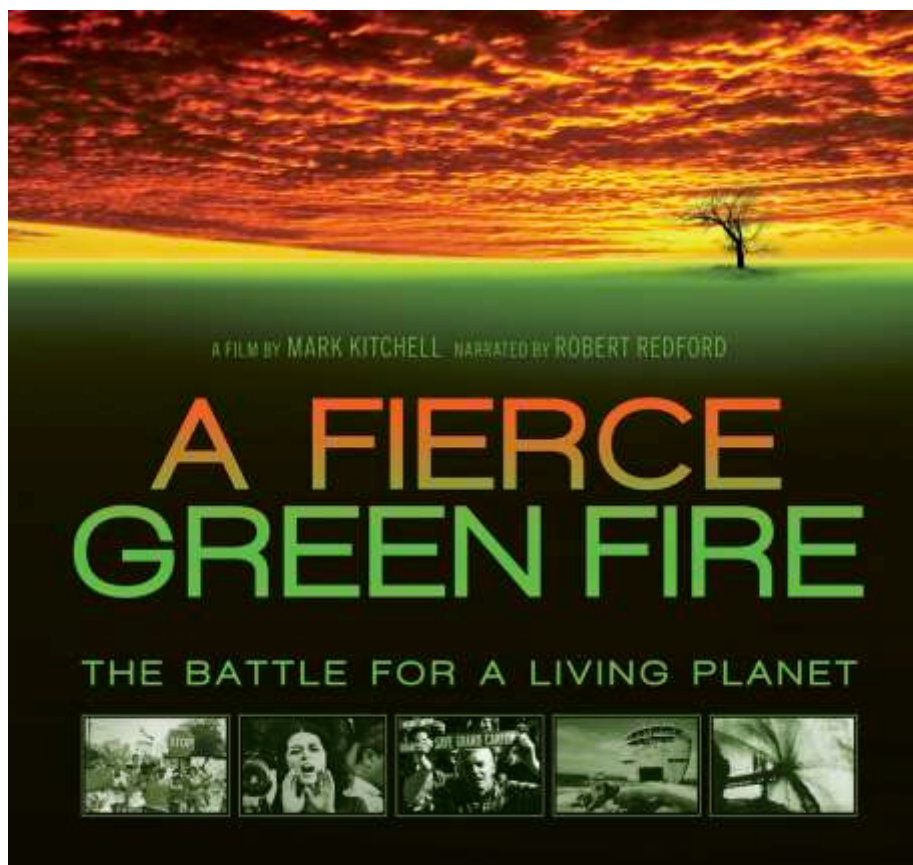
(Courtesy: Reuters Health)

May 2013



A fire that may save our planet

An extensive depiction on a global movement, “Fierce Green Fire: The Battle for a Living Planet” creates awareness about the roots of environmentalism, starting from efforts of conservation towards addressing contemporary climate change.



Call me biased, but I went gaga over “Fierce Green Fire” simply because it appealed to my own root cause, popularly known as environmentalism. The film is inspiring not only for those inspired by this movement, but is also informative on various levels. The odds against environmentalists have been huge; however, the results against these have simply been earth-transforming.

Proponents of caring for earth have cleaned and cleared about 20000 tons of toxic waste at so-called Love Canal. Dedicated Greenpeace workers have saved whales to halting permanently damaging oil drilling rigs. Indigenous efforts from rubber tappers in the Amazon saving their forests have the very effect of transforming and stopping our planet from dying.

Such acts of courage are a reason why

we have some stopping of the mindless degradation of our planet Earth. The film has five acts depicting these movements in great detail.

Narrated by Robert Redford, act 1 is about the 1960's conservation movement and David Brower, the Sierra Club struggle to halt dams in the Grand Canyon. A must watch for any budding environmentalist!

Depicted by Ashley Judd, act 2 details a new movement of the `70s with an additional emphasis on rampant pollution. The act is about Lois Gibbs who fought bravely over the mindless wasting of Love Canal.

Van Jones takes on act 3, which is about Greenpeace saving whales and the fight towards maintaining a healthy biodiversity on the planet.

Isabel Allende renders act 4 as the issues of global resources emerge in the 1980s and various crises as a result. Chico Mendes, alongside rubber tappers and their drive towards saving the amazing Amazon is narrated beautifully. The final act is about a well known concern and experienced crisis in the form of climate change. It is narrated by the multiple Oscar award winning Meryl Streep.

All in all, this is a beautiful movie to watch which renders various complex issues accessible to viewers. Highly recommended!■



Sweet, sweet honeydew

A refreshing fruit for scorching heat, honeydew melon is also packed with great nutritional benefits. Whether you add it to your salad, or if you enjoy it fresh, it would be a good part of a healthy diet.



Honeydew melon is a delicious, sweet fruit which we are blessed with this season. Did you know that it is also one of the healthiest fruits available? Providing up to 34 percent of the daily recommended intake of vitamin C, a cup of honeydew melon can get your system jumpstarted in no time. This is great news not only for our immune system which gets strengthened due to this, but there is further stoppage of diseases and aging due to cutting down of free radicals due to vitamin C.

Free radicals, as a byproduct of natural processes do a great deal of damage to our cells, leading to inflammation. Increased and sustained damage can lead right up to heart

damage and further disease. Vitamin C plays a key role in stopping the spread of these cells, and as such honeydew melon is a great way to get this supply quickly and naturally.

Another key mineral important for the proper functioning of our bodies is potassium. Our nerves, heart, blood vessels and muscles all need potassium towards healthy functioning. For example, for the heart to beat regularly, potassium is a key ingredient which carries an electric charge which regulates and stimulates muscular contractions and communication through nerves. So, a proper amount of potassium means maintenance of a proper heart beat and muscle tone of blood pressure walls. Hence, it is no

mystery that without potassium abnormalities in blood pressure is a likely occurrence. Towards getting regular potassium in your diet, a cup of honeydew has 385 milligrams which is about 8% of the recommended daily intake.

The fruit also contains insoluble and soluble fiber, which is a great source towards keeping blood sugar balanced. As the fiber facilitates a slower absorption of carbohydrates, a lowering of cholesterol also happens. Further, with a healthy intake of fiber, the digestion process is made more efficient and prevention of constipation and other types of gastrointestinal diseases are possible if honeydew melon is taken regularly. A cup contains about 1.3 grams of fiber against a required 38 grams for men and 25 grams for women.

Another vital vitamin present in this fruit is B-6, which facilitates enzymes towards metabolizing proteins. This vitamin is also responsible towards creation of serotonin which is responsible for regulating mood and sleep. A cup of this fruit and you will have about 11% of the recommended daily intake.

If I have not convinced you to include honeydew melon in your diet, try it as an experiment. The results may astonish you as you move towards a healthier state of being. ■



The great thing about honeydew melon is that its unique sweetness can be further tapped into making healthy desserts. Here are two recipes for try and enjoy!

Lime Ginger Honeydew mix

Ingredients

Sugar	1/3 cup
Water	3 tablespoons
Lime juice	1 tablespoon
Fresh ginger, peeled, finely grated	1 teaspoon
Honeydew melon cut in chunks	10 cups



Instructions

Combine sugar with water in a small pan and bring to a quick boil. Remove from heat and stir to melt the sugar. Cool for 4 minutes in the refrigerator. Add lime juice and ginger into the sugar mixture. Put melon in large bowl and pour sauce over the melon, stirring gently to mix. Return to refrigerator until ready to serve.

Lime Honeydew Sorbet

Ingredients

Cubed honeydew	3 cups
Sugar	½ cup
Lime juice	½ cup
Water	1 tablespoon
Grated lime peel	2 teaspoons



Instructions

In a food processor or blender, combine honeydew and sugar; cover and process until sugar is dissolved. Add the remaining ingredients; cover and process until blended. Freeze in an ice cream freezer according to manufacturer's directions. Spoon mixture into a freezer-safe container; cover and freeze in the refrigerator freezer 2-4 hours before serving. ■



Creature of the Month

Swordfish

Swordfish, also known as broadbill in some countries, are large, highly migratory, predatory fish characterized by a long, flat bill. The sword on a swordfish is about one-third as long as its body. They are elongated with large eyes, round-bodied, and lose all teeth and scales by adulthood. The first dorsal fin is tall and crescent-shaped while the second dorsal fin is small, both soft-rayed. Swordfish have no ventral fins and their tails are broad and crescent-shaped. The dorsal side can range from dark brown to grayish-blue while their undersides are silvery white. Swordfish has special organ next to their eyes to heat their eyes and brain. Temperatures of 10 to 15 °C above the surrounding water temperature have been measured. The heating of the eyes greatly improves their vision, and consequently improves their ability to catch prey. Mainly the swordfish relies on its great speed and agility in the water to catch its prey. It is undoubtedly among the fastest fish. These fish can live close to shore, but are not schooling fish. They feed daily, most often at night when they rise to surface and near-surface waters in search of smaller fish. They have been observed moving through schools of fish, thrashing their swords to kill or stun their prey and then quickly turning to consume their catch. In the western North Atlantic, squid is the most popular food item consumed. The swordfish may also use its sword as an aid in swimming. The sword breaks the flow of water, making it easier for the sword fish to swim. Though easily frightened by small boats, boaters report identifying swordfish when their dorsal fins surface. Swordfish are vigorous, powerful fighters and known for their jumping ability. Females generally grow larger than the males, yet mature one to two years later than males do.



Flower of the Month

Pincushion Protea



Pincushion Protea belongs to the protea family. Majority of these species can be found in South Africa. The climate there is perfect to grow these delicate and intricate flowers. It is part of the Cape Floral Kingdom and occurs only in the winter rainfall area with its wet winters from May to September and hot, dry summers from December to the end of February. During flowering time, these flowers attract numerous birds. In the early hours of the morning the abundant nectar flow attracts a variety of small insects, which in turn attract the Cape Sugar bird and three species of Sunbird. These insectivorous birds consume the small insects as well as the nectar, and in the process transfer pollen from one flower to the next. The flowers are not self-pollinating and depend on the small Scarab beetles and the birds for pollination. The birds are accustomed to the visitors in the Gardens and provide great photo opportunities when feeding on the flowers. Only a few large, hard, nut-like seeds are produced by each inflorescence. In their natural environment the seeds are collected by ants, stored in the soil, and germinate only after a fire has killed the mature plants and returned the nutrients back to the soil. Named because of the resemblance to a pincushion full of pins, this flower is perched on top of a sturdy stem covered in foliage. A member of one of the oldest families of flowers on earth, Protea flowers date back 300 million years and, according to Greek legend, are named after Proteus the son of Poseidon. Incredibly mystical and slightly mysterious, protea flowers symbolize transformation, diversity and courage.



Quote

Man is a complex being: he makes deserts bloom - and lakes die.

~ Gil Stern

Poem

Such is the Force of Happiness



Such is the Force of Happiness —
The Least — can lift a Ton
Assisted by its stimulus —

Who Misery — sustain —
No Sinew can afford —
The Cargo of Themselves —
Too infinite for Consciousness'
Slow capabilities.

Emily Dickinson

Interesting websites

<http://pbskids.org/itsmylife/>



Topics on this wonderful advice and information site include alcohol abuse, eating disorders, and celebrity drug abuse. Every game teaches kids about something from saving money to handling a tough friend. There's a lot of helpful information and advice for kids and teens about school, friends, family, emotions and money.

International days

May
07

World Asthma Day

World Asthma Day is organized by the Global Initiative for Asthma (GINA) in collaboration with health care groups to raise awareness about asthma and improve care globally. The theme of this year's event continues to be "You Can Control Your Asthma".

May
11

World Migratory Bird Day

World Migratory Bird Day (WMBD) was initiated in 2006 and is an annual awareness-raising campaign highlighting the need for the protection of migratory birds and their habitats. This year's World Migratory Bird Day theme - "Networking for migratory birds" - highlights the importance of networks of sites for migratory birds along their migration routes.

May
18

World Aids Vaccine Day

Over the past three decades, it is estimated that HIV has infected more than 60 million people worldwide and claimed nearly 30 million lives. Not to be confused, this noble initiative does not promote a vaccine as there is no vaccine against HIV infection at this time, but what we are reminded of is the urgent need of pushing for research to find an effective vaccine.

May
31

World No Tobacco Day

Annually, on 31 May, WHO and partners everywhere mark World 'No Tobacco Day,' highlighting the health risks associated with tobacco use towards effective policies to reduce tobacco consumption. Tobacco causes of death globally and is currently responsible for killing one in 10 adults worldwide. The theme for World No Tobacco Day 2013 is: ban tobacco advertising, promotion and sponsorship.■

