All human beings have the fundamental right to an environment adequate for their health and well-being.

States shall conserve and use the environment and natural resources for the benefit of present and future generations.

States shall establish adequate environmental protection standards and monitor changes in and publish relevant data on environmental quality and resource use.

**Proposed Legal Principles for Environmental Protection and Sustainable Development**

Article 1,2,4

Concern for the environment started gaining traction in the 70s when the effects of rapid and rampant ‘development’ on the ecosystem manifested themselves significantly and the muted voices warning about the finite nature of resources grew louder.

The UN Environment Conference in Stockholm in 1972 saw the mainstreaming of discourse on a clean and sustainable environment as a human right. The Stockholm Declaration sought to lay down certain principles to “inspire and guide the peoples of the world in the preservation and enhancement of the human environment.”

Its first principle focused on the environment not just as a shared resource for the present but for its preservation for the future generations.

In Pakistan, while the constitution does not recognise environmental rights...
to be part of the fundamental human rights, the Bhurban Declaration adopted by the Conference on Environmental Justice in 2012, set out a common Vision on Environment for the South Asian Judiciaries. Important among other collaborative and capacity/knowledge building measures recommended in the Declaration, was the one “that the right to clean and healthy environment be incorporated as a Fundamental Right in the Constitution.”

The Fundamental Rights granted by the Constitution of the Islamic Republic of Pakistan, 1973 do not specifically mention water, energy, electricity or water. However, the superior courts have extended the meaning of the fundamental right to life to include a right to access to clean drinking water (West Pakistan Salt Mines Labour Union (CBA) Khewra, Jhelum vs. The Director, Industries and Mineral Development, Punjab, Lahore, 1994 SCMR 2061), a right to electricity (Pakistan Flour Mills Association vs. WAPDA, WP 26524 of 2011 decided by the Lahore High Court on 28 January 2013) and a right to a clean and healthy environment (Shehla Zia vs. WAPDA, 1994 Supreme Court 693) as interpreted in the light of Article 9 (right to life), and Article 14 (human dignity).

Pakistan is also a signatory to 15 Multi-Lateral Environmental Agreements which makes it mandatory for the State to ensure the implementation of the agreements that have been endorsed. These are:

1. Convention on Biological Diversity (CBD)
2. Cartagena Protocol on Bio-safety
4. Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention)
5. Convention on the Conservation of Migratory Species (CMS)
6. United Nations Framework Convention on Climate Change (UNFCCC)
7. Kyoto Protocol to UNFCCC
8. Vienna Convention for the Protection of the Ozone Layer
9. Montreal Protocol on Substances that deplete the Ozone Layer
10. United Nations Convention to Combat Desertification (UNCCD)
11. Rotterdam Convention on prior Informed Consent (PIC) for certain Hazardous Chemicals and Pesticides in International Trade
13. Stockholm Convention on Persistent Organic pollutants (POPs)
15. Convention Concerning the Protection of the World Cultural and Natural Heritage

The situation oscillated on two ends of the scale with the government. It cannot claim ignorance of the indicators cited above, as all the reports were either prepared in collaboration with the government or for the government. However, the gap in governance belies the impression of knowledge, or concern about the threats from a degraded environment.

In an interconnected world where forums are being set up to resolve cross-cutting global, regional and trans-boundary issues, the subject of environment was devolved to provinces after the 18th Amendment.

At the federal level, the Ministry of Environment went through a name change and became the Ministry of Climate Change, then Ministry of Disaster Management, which was then a Climate Change Division within the Planning Commission. However, the law clearly states that “laws relating to the environment enacted by the federal government before the 18th Amendment will remain in force in the provinces till such time as it is amended or repealed by the competent provincial assembly.”

Each provincial assembly was now to make its own law, and on 20th March 2014, Sindh, the last province not to have done so, passed the Environment Protection Bill. The other provinces already had their Green Benches in place, as a follow-up to the Bhurban Declaration.

Progress on legislation has been slow because the importance of environmental issues has not yet seeped into the political system. The political parties that had taken part in the 2013 elections, gave very low priority to environment in the manifestos, and some did not mention it at all. *(See page 320)*

**Party Position Chart**

<table>
<thead>
<tr>
<th>Issues</th>
<th>ANP</th>
<th>JUI(F)</th>
<th>MQM</th>
<th>PML</th>
<th>PML-N</th>
<th>PPPP</th>
<th>PTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Issues</td>
<td>n</td>
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<td>nn</td>
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**Forest cover**

Pakistan Tehreek-e-Insaf formed a coalition government in Khyber Pakhtunkhwa. This allowed it to put into action the Green Growth Initiative, developed by party member and former minister of state for the environment, Malik Amin Aslam, who is also the Global Vice Chair of IUCN.

He has listed the key environmental challenges of Pakistan, i.e. energy,
Environmental Issues

Environmental issues figure prominently in the overall governance framework. Environment not only affects productivity, availability of natural resources, but also has an effect on health expenditures, reduced labour productivity, and other areas. Following table outlines the environment-related policies and programmes of various political parties:

<table>
<thead>
<tr>
<th>Party</th>
<th>Proposed programme</th>
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</table>
| ANP   | a Special importance to be accorded to protection of environment in the country  
      | b Ensure improved access to clean air, drinking water, waste management,  
      | sanitation and open spaces. |
| MMA   | a No specific reference made in the manifesto. |
| MQM   | a Improvement of environment by making efficient use of natural resources and  
      | energy, respecting the natural world and wild life, utilizing the open spaces, eco-
      | friendly designs and construction methods, recycling waste, plantation on a large  
      | scale and creating parks in each locality  
      | b Extensive forestation to be undertaken in a most aggressive way  
      | c Ensure industrial effluent and untreated sewage are not dumped in to the sea  
      | d Environment friendly urban development will be regulated  
      | e To combat industrial waste initially the government will facilitate installation of  
      | Combined effluent Treatment plants. |
| PML   | a Set up a National Environment, Climate change and Water Resources Authority  
      | b Compliance with all EPA requirements will be ensured  
      | c Establish green spaces through public parks  
      | d Design national guidelines and modules for the development of towns and cities.  
      | Activate the environment protection act 1997  
      | f Eliminate the timber mafia  
      | g Ban the import of hazardous chemical wastes  
      | h Deny exploitation of off shore resources  
      | i Waste disposal measures to be put in place |
| PML-N | a Encourage ecologically sound development policies to preserve and develop the  
      | country's natural and forest resources to counteract the impact of global warming |
| PPPP  | a Develop national parks, sanctuaries and reserves and promote ecotourism  
      | b Deforestation to be curbed  
      | c Curb the trafficking of endangered species  
      | d Use the green economy frame work  
      | e Strengthen the federal and provincial Institutions engaged in sustainable  
      | development activities. |
| PTI   | a Clean air and potable water to all will be the primary focus  
      | b The Environmental Impact assessment (EIA) requirements will be enforced for all  
      | development projects  
      | c Industrial pollution to be tackled through CETPs/clean production promotion EIAs  
      | d Rapid deforestation will be halted  
      | e Green jobs will be created through environment friendly alternative economic  
      | activities  
      | f Mass transit system in the most affordable and green manner will be introduced  
      | g Policy of Value Nature to Preserve Nature will be followed  
      | h Climate change will be addressed  
      | i Disaster management will be treated with urgency. |

-- Source: PILDAT
water, forestry, transport, air pollution, waste generation, agriculture, biodiversity protection, ecosystem valuation as well as overall environmental governance.

This initiative envisages gathering stakeholders to plant a billion trees in the province. This move to increase the woefully small tree cover is designed not only to prevent environmental degradation, and soil runoff during torrential rain, but also to earn them carbon credits by sequestering carbon as a mitigation measure.

Pointing out to the scarcity of water, skeptics have voiced concern as to the volume of water resources needed to nurture so large a number of trees. But there is no denying the need for an aggressive tree plantation to increase the woefully inadequate forest cover of Pakistan (4.8% against the global recommended 25%), which has the highest rate of deforestation in Asia. This has already resulted in disasters related to rain and flood as the soil cover is denuded and the water runoff has no barrier to check its flow. Other than the right of the local communities to use forest and forest products, the timber mafia, either in collusion with the local officials, or due to a weak governance system has been denuding the stock.

Citizen activism was able to halt the trend last year after getting courts to intervene and overturn the decision of the outgoing prime minister, Raja Pervez Ashraf, regarding timber movement in Gilgit-Baltistan, under the pretext of which new stock was cut down.

The KP government initiative for increasing the forest cover and monitoring the stock, should serve as a model for the other provinces to take advantage of the international mechanisms like REDD+ (Reducing Emissions from Deforestation and Forest Degradation) which “is an effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.”

It may work in a manner similar to the Trophy Hunting programme initiated by Pakistan for biodiversity conservation in which the community has a financial stake in the efforts to save the threatened forests. Similarly, once the community realizes that there is financial benefit in saving, preserving, and increasing the forest reserves, the weakness of the governance structures can be overcome.

Besides this one ambitious move, the situation in other provinces is reflective of the vision, or lack thereof, of parties ruling them; it corresponds to the glaring omissions that can be seen in the election manifestos.

This then, is the situation in a country that has been ranked among the top ten in the Global Climate Risk Index, for three years running; one with the lowest tree covers and highest rate of deforestation in Asia; a country that has been moving down the scale from being a water stressed to being water...
scarce; has the worst incidence of urban air pollution in the world; is the most urbanized country in South Asia, with its attendant problems of resource constraint, slum dwelling and socio-economic impact of migration; with around 6% of the GDP going in as health costs of environmental degradation.

Water resources

These measures were taking place alongside Pakistan’s adopting, among others, Indicator 7 of the Millennium Development Goals which commits to ‘ensuring environmental sustainability.’ The UNDP report tracking Pakistan’s progress in meeting these goals has this to say about the Indicator 7:

“With regards to MDG 7, Pakistan has achieved the target of access to improved water resources when three sources of improved water are taken into account: tap water, hand pumps and electric motor propelled water. Pakistan has also surpassed its target of converting 0.920 million of vehicles on Compressed Natural Gas (CNG) with more than 2.8 million vehicles reported to be running on CNG in 2008. Pakistan is on track to meet the target for land protection for the conservation of wildlife as a percentage of total land area, an indicator for MDG 7.

“Similarly in the area of ensuring environmental sustainability, MDG 7, while Pakistan has made significant progress in some indicators allowing the achievement of 2015 targets to be likely, there is a lag in equity based indicators of forest cover, sulphur content in high speed diesel, proportion of population with access to sanitation and energy efficiency. Attitudes and a lack of awareness about environmental issues as well as gross violation of government regulations pose serious challenges in overcoming this lag.”

Despite falling short in areas which impact the largest number of Pakistanis
the commitment to work towards their materialization was evident in accepting the Sustainable Development Goals outlined in the Rio+20 summit. These goals have been described as building on the foundation laid by the MDGs, and seeking to complete the unfinished business of the MDGs, and to respond to new challenges.” These goals have a far more interconnected agenda and environment can be seen as a crosscutting theme, which can tie in with the Vision 2025 espoused by the Planning Commission.

This also falls in line with the definition of environment given by the Pakistan Environment Protection Act (PEPA 1997), that is:

“environment” means:
(a) air, water and land;
(b) all layers of the atmosphere;
(c) all organic and inorganic matter and living organisms;
(d) the ecosystem and ecological relationships;
(e) buildings, structure, roads, facilities and works;
(f) all social and economic conditions affecting community life; and
(g) the inter-relationship between any of the factors specified in subclauses (a) to (f)

According to the “Environment and Climate Change Outlook of Pakistan” prepared by the Climate Change Division of the Planning Commission and UNEP (United Nations Environment Programme), there has been a growing realization, post-2000, to pay attention to the environmental problems beyond the economic development paradigm. The social sector linkages plus a more holistic ecosystem-based approach is now reflected in the number of sector-specific policies drafted. This change in priorities flowed from the adoption of the National Conservation Strategy in 1992.

These include:
♦ Biodiversity Action Plan of Pakistan 2000
♦ National Action Programme to Combat Desertification in Pakistan 2002
♦ Poverty Reduction Strategy Paper 2003
♦ National Energy Conservation Policy 2006
♦ National Sanitation Policy 2006
♦ Pakistan Wetland Programme 2007
♦ Energy Security Action Plan 2005
♦ National Drinking Water Policy 2009
♦ National Water Policy 2005
♦ National Rangeland Policy
♦ National Wetland Policy
♦ National Forest Policy
♦ National Climate Change Policy

These in effect cover all actions and interactions, which if not conducted sustainably would impact human rights.

Water impacts all life, human, plant and animal. So, it needs to be looked at the regional, trans-boundary, provincial levels from the angle of availability and equitable distribution, with the underlying principle of securing the rights of the lower riparians.

Pakistan already has the Indus Water Treaty with its own dispute resolution mechanism that governs the volume and distribution of water from the Hindukush-Himalayan mountains between India and Pakistan. The treaty has withstood the test of time despite two major wars and several armed conflicts like Kargil.

Growing population and its demand for water, especially for agriculture, has given rise to contentions about the interpretation of the treaty. International arbitration has so far ruled in favour of India by factoring in the element of climate change which was not known at the time of drafting the treaty.

This lesser amount of water received into Pakistan from the eastern rivers because of the reservoirs being built by India has been touted as ‘water wars’ and many have tried to claim political mileage out of the divergent stands of the two countries on this. The decibels increased when in 2014 more water than was expected entered Chenab and flooded vast tracts, and this was also seen as a sign of provocation.

Agencies like World Bank have recommended “Work[ing] with neighbouring countries through international agencies such as UNDP/Global Environmental Facility (GEF) to prevent chemical and biological pollution by effectively managing industrial, domestic and agricultural effluent disposal.”

Seen in the context of degradation of the river Ravi, and the contamination from the Hadyara Drain of India flowing into the Ravi, trans-boundary dialogue with third party oversight becomes imperative. The lives of all the people associated with the river Ravi, be they farmers, fisherfolk or boat owners who used them for transport and recreation are inexorably linked to the health of this river.

The hyperbole associated with this complex subject of water sharing needs to be tackled as the divergent views have created tensions between the two neighbours, as well as within Pakistan, between the provinces. Despite the Water Apportionment Award of 1991, there are always allegations of less than
the allocated release by the lower riparians.

Of the 48.76 MAF (Million Acre Feet) of water apportioned for Sindh, the International Panel of Experts recommended:

An escapage at Kotri Barrage of 5000 cubic feet per second (cusecs) throughout the year has been recommended as the amount needed as e-flows or water for the environment that is needed to be allowed to flow to the sea to recharge the delta. It recommended that a total volume of 25 MAF in any five-year period, or 5 MAF annually, be released below Kotri as flood flows (Kharif period).

WWF Pakistan and WWF UK report on the Indus River Basin security, while focusing on Integrated River Basin Management, recommends the involvement of farmers in decision making about water use, especially at farm level. Right now, they do not have access to the benefits of technology like timely meteorological, cropping and input information. Access to modern technological tools, like computers, cell phones and other tools of ICT must come with safeguards about the disposal of e-waste, for which no legislative framework exists. While Pakistan’s rural areas may be late starters in their use, the tools are widely used in urban areas. The rate at which the tools become obsolete is very high. As there are hazards attached to the many of their components, guidelines need to be adhered to in their disposal, in line with the Basel Convention.

Conventions, laws and regulations are the basis on which a system can be made to function. Even on water, research reports call for ‘a comprehensive set of water laws that define water rights, uses, value, conservation and principles of pricing, subsidies, licences and polluter penalties.’

Reservoirs and water storage facilities to ensure availability of this volume have still not been built, taking water security to dangerous levels. Any such plans however, must take into account the rights of the communities inhabiting the lands where the building of storages, dams and reservoirs are planned. Attention must also be paid to the cultural heritage that stands to be compromised, especially in the upper reaches, like Gilgit-Baltistan, for instance in the case of Diamer-Bhasha Dam, where the Gandhara petroglyphs are likely to be obliterated.

One effect of reduced flows downstream Kotri barrage cited in an IUCN-Pakistan report is the worst cases of environmental degradation in Sindh. The report says, “It is believed that sea intrusion is the main cause of destruction of several thousand hectares of land in the coastal districts of Thatta and Badin, rendering prime agricultural land barren, contaminating aquifers and causing degradation of coastal deltaic and riverine ecosystems. The degradation
of land and water resources has severely affected fishing and agriculture – the two principal vocations of the local populations – resulting in loss of livelihoods, migration to the hinterland and rise in poverty levels.” These few points in themselves encapsulate all the human rights compromises the people of the coastal belt have to bear.

Equitable availability of water for agriculture, industry, urban use and environmental flows is still a contentious matter, especially in view of the spectre of glacial retreat as a result of climate change. To promote water conservation, experts recommend that besides building storages like dams and reservoirs, water subsidies must be abolished and water must no longer be made available as a free resource (aquifer management).

The subsidies on power usage for water extraction have wreaked havoc in places like Balochistan, and have depleted ground water reservoirs. While taxation in a climate where focus needs to be on poverty alleviation is a step to be considered carefully, successful pilot schemes have been run by environmental organizations like IUCN Pakistan whereby water metering directly resulted in water conservation. The polluter pays concept also served to save the resource from contamination.

One of the missed MDGs was the availability of clean drinking water for all. Water quality has a direct bearing on health, as water borne diseases are the first to take their toll on the segments of the population that have no access to clean drinking water.

Laxity in adherence to and monitoring of NEQS (National Environment Quality Standards) has resulted in municipal, industrial and chemical pollutants, plus agricultural runoff contaminating water courses.

Open defecation and lack of water treatment facilities has caused the quality of water to be compromised as well as the health of the marine life in the coastal belt and fresh water sources. This has contaminated an important link in the food chain, and affected the health and livelihood of the communities associated with the trade.

**Waste management**

Also related to health and environment are solid waste management and safe disposal of hazardous industrial/chemical, hospital and what is known as ‘e-waste.’ Despite years of on again off again negotiations with the Chinese and then the Turks, we are still without a proper solid waste plan, or carefully sited landfills. Industrial waste with harmful chemicals and heavy metals falls untreated into the water bodies.

In the case of Manchar Lake in District Dadu, the toxicity had increased
to such a level that an entire community of ‘boat people’ was displaced, as their source of food and livelihood had been snatched from them.

Food and energy security also rest on water.

Depletion of water resources is going to severely affect food security, which is already a cause for concern because of the high population growth rate that outstrips all development indices.

However, experts agree that the country has the land and the capacity to feed its population if rational land use is practised. The agrarian base requires attention in a variety of ways. A key factor in increasing land under tillage would be to grant land rights to landless farmers, and make them stakeholders.

Measures like granting them lease have hardly been more than an eyewash as those given the lease were never really able to own the land. They were not able to meet the nutrition needs of even their own households.

**Climate change**

Food security stands to be compromised due to climate change caused by the shifting pattern of monsoons. For the third year running a pre-monsoon spell of heavy rain and hail in March has damaged crops.

The farming community is vulnerable to these changes and there are not enough safety nets to bolster them and help them ensure food security. The knowledge and research of developments in this field need to reach the farming community. For the third year running farmers are bearing losses from severe
‘pre-monsoon’ rain and hailstorms that have damaged crop ready for harvesting, and livestock.

Climate change experts cite this shifting pattern of monsoons as the reason to bring urgency to adaptation measures in the country’s agricultural sector. A recent study in econometrics, conducted by LUMS/WWF/LEAD under IDRC funding, clearly showed that the farmers using adaptive techniques including crop rotation and substitution had a 40% greater yield.

A political revival of the peasants’ movement, still in its nascent stage, may auger well for ensuring the rights of the marginalized tillers and growers. Professional farmers’ associations, now being formed at district and even some union council level, need to be strengthened to ensure safeguards for the farming community. The coming together of the farming community provides the government a negotiating partner when fixing prices and subsidies. The last two years have also seen growing activism on the part of farmer communities in trying to get the best deal for themselves.

Here again, complete decentralisation, right down to the union council level is seen as a solution to the problem, by agro-economists like Dr Pervaiz Amir, who says that Pakistan’s nine different agro-ecologies have different problems so their solutions also need to be developed at the micro level to be able to protect their rights and ensure food security for all.

Farmers have to be a part of the participatory approach in the development of solutions, and greater emphasis needs to be put on mainstreaming gender in dialogue and implementation. The agricultural sector has a very large number
of women workers, but they are mostly voiceless farm hands with no say in decisions about choice of crops or prices. They are also not paid wages equal to their male colleagues, and there are no safeguards available to them against health hazards caused by the chemicals used in farming.

This is also true of the fisheries sector where women make up a large part of the labour force. The fisherfolk, along the coasts as well as by rivers and canals, remain marginalized and suffer from livelihood compromises due to the environmental degradation of their habitat, resulting in loss of catch. Here too laxity in regulation of illegal nets, poor implementation of laws that allow for illegal interprovincial trawling as well as sweeping of the marine stock by international trawlers just off the Exclusive Economic Zone, and many times inside it directly impact the economies of the fishing communities.

Many fishing villages have experienced large scale migration of the able bodied youth in search of livelihood options. This has not only disturbed the social fabric of the communities but has also contributed to the strain on the nearby urban areas which act as magnets and draw them towards the cities, whose infrastructure and municipal facilities are unable to keep pace with this population shift.

**Food and water security and energy shortfall**

Tied to the issues of environmental rights is the case of access to energy which impacts food and water security. The energy supply and demand gap has become a politically explosive issue. The election promises regarding the resolution of the power crisis helped the present ruling party to come into
power, but that resolution still seems to be out of reach.

Energy shortfall, whether due to generation or transmission, has impacted all sectors, including agriculture and industry. Not only has production suffered setbacks, but its trickledown effect has resulted in increasing unemployment, and poverty. Besides overhauling the power infrastructure which is rife with technical as well as operational inefficiencies, a frenetic search has been mounted for other options.

Other than the on again off again discussion on the IPI (Iran Pakistan India) or now just the IP Pipeline and the external support for the TAPI (Turkmenistan Afghanistan Pakistan India) Pipeline, attention is being focused on the Thar coal deposits which are being touted as the panacea for all energy related ills of the country.

Environmental experts as well as civil rights activists have been sounding a note of caution on two scores; one, the ‘quality’ of the coal, with its sulphur content, as being environmentally unfriendly, and two, rights of the local communities to the benefits from local resources.

On the first score, coal, especially Thar coal, fares very poorly due to its mineral composition. This source of ‘dirty’ energy will do no favours to Pakistan’s standing on the air quality index. According to a World Bank report, the harm from Pakistan’s urban air pollution is among the highest in South Asia, exceeding several high-profile causes of mortality and morbidity in Pakistan.

This is more in the urban areas due to the mix of the diesel exhaust fumes from vehicles and the particulate matter in the air in tandem with the problem of a low tree cover that can act as carbon sinks. However, the prospect of extractive, strip mining, for a finite, fossil fuel reserve considered to be of low energy output which is not good value for money means that the non-urban areas will also experience a serious loss in air quality.

Extractive industry has proved to be quite damaging to the environment. Another point to watch out for is the extensive use of water in extraction, as is true in the case of the other ‘silver bullet’ being cited for the energy crisis; shale gas. Both of them require huge quantities of water, which, in a water-stressed country like Pakistan, has to be carefully considered.

There has been little or no stakeholder engagement in the discourse on exploitation of this fossil fuel. Thar is one of the poorest regions of the country. There is very little by way of land ownership. The population is scattered over a vast area and one of the biggest problems it faces is the availability of potable water. Their reliance is totally on underground water. Coal extraction through the use of this resource will severely compromise their rights to this natural
resource. The people of Thar stand to lose the right over their ancestral land and its resources.

**Indigenous people**

Similar to their plight is the case of the ‘indigenous people’ who have not been defined as such by the constitution, and no laws exist to safeguard their rights. Many of the traditional fishing and pastoral communities fall within the definition given by the UN, which has urged countries to draw up their national definitions and frame laws to protect them. However, Pakistan still lacks any progress on this count, and that is how their rights on the land they traverse or live on, and its resources are usurped without their having any recourse to justice.

We not only see rights of communities in Thar compromised, but all along the coast fishing communities are seeing their land taken over, and traditional livelihood resources being put out of their grasp in the name of development schemes. For instance, Pakistan has a coastline extending from Sir Creek bordering India to covering 243,000 hectares (ha) along Sindh’s coast and 7,400 ha along the Balochistan coast.

**Mangroves**

According to Mangroves for the Future, the economic importance of mangroves to Pakistan largely comes from the fishery resource they harbour. An estimated 80% of the fish caught in coastal waters spend at least part of their life cycle as fry in the mangrove creeks, or depend on the food web within the mangrove ecosystem. Shrimp fishery is the major fish export of mangroves, accounting for 68% of the $100 million of the foreign exchange the country earns from fisheries exports.

Despite forestry laws that forbid cutting, and Pakistan twice having entered its name in the Guinness Book of World Records as the country planting most mangrove saplings in a day, the depletion and degradation of the coastal habitat continues. The depletion in the marine stock has a direct bearing on the economic well-being of the communities whose livelihood depends on fishing. Pakistan Fisher Folk Forum puts the estimate of persons associated with fisheries as 4 million, 2 million of them with marine fisheries while the rest with inland fisheries.

**Development projects**

Large development projects, and housing developments have been squeezing their space, and they have been excluded from any of the benefits of these developments. Besides this, the industries sited along the coast discharge their effluent in the sea without any treatment. So, the creeks and
channels that once thrived with marine life now have very little of it. Samples taken by members of environmental organizations for testing have shown that there are traces of heavy metal in the fish and other marine life. This continues despite the clear guidelines of NEQS which require the installation of effluent treatment plants by the industries.

Industrial effluents and municipal waste of the city the size of Karachi are being thrown directly into the sea, severely compromising the health of the sea and not much action is seen on part of the provincial EPAs against the polluters. If and when any fines are levied, they are so nominal that they hardly make a dent in any profitability, and that is why the practice of environmental degradation continues.

**Environment activism**

Rights-based activism on environmental issues has been the highlight of 2014. With greater awareness at the level of judiciary and citizenry, we have seen a clear progress. Taking a cue from the Shehla Zia case that upheld a clean and healthy environment as a right to life, wherever the government has not been proactive, citizens have come together as groups and highlighted rights abuses.

In the case of the Margalla Hills Tunnel case in Islamabad, for example, which impinged on the laws about Protected Areas and National Parks, or the Lahore Canal Road Widening case in which massive tree cutting was to be undertaken, citizens took legal recourse after activism had highlighted the issue.

In the Margalla Hills Tunnel case, the project was shelved, but in the Lahore canal case, there has been back and forth with the Punjab government
In the case of violation of biodiversity protection laws, where the government departments were seen to be dragging their feet, the citizens stepped in, like in the case of the hunting of the threatened Houbara Bustard through illegal grant of licenses by the Foreign Office, which is not the competent authority.

The Balochistan High Court immediately put a ban on its hunting, and the violators were prosecuted. In Khyber Pakhtunkhwa too officials of the Wildlife Department were suspended after their collusion in hunting of rare birds was uncovered through the social media by citizens.

Another positive development was when 200 blackpond turtles were brought back to Pakistan from China through the efforts of Sindh Wildlife Department and WWF-Pakistan. They had been smuggled to China despite Pakistan being a signatory to CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) since 1976.

Perhaps the most promising development on the environmental rights of the citizens of Pakistan was the decision by the Sindh High Court to admit a petition against the location of two new nuclear power plants on the Karachi coast, alongside the existing but now dysfunctional KANNU.

The basic argument of the citizens was that any such project required an EIA, Environmental Impact Assessment, in which the pros and cons of the project are discussed threadbare, and citizens’ fears and reservations are heard and addressed. This process was bypassed in the name of ‘project of national importance’, but this was deemed to be in violation of the regulations.

This is the first time ever that a petition of this nature has even been admitted for hearing and orders given to conduct a public hearing in accordance with the rules of EIA. The question of projects proceeding without completing the formalities of EIA is also being raised about the Bahria Town flyover in Clifton Karachi, and the Islamabad Metro.

**Recommendations**

1. **Adherence to existing laws and regulations in their true spirit will ensure safeguard of the environmental rights of humans and species that they co-exist with**

2. **Concept of ‘polluter pays’ needs to be mainstreamed to not just mitigate the effects of any ‘development’ action that does not mainstream sustainability within it, but also to act as a deterrent for any future project design that does not keep environmental protection as its integral part.**

3. **Capacity building of the cadre of lawyers and members of the judiciary**
to take up environmental cases

4. **Capacity building of the Government Line Departments so they are able to monitor and safeguard the environment.**

5. **Collaboration between citizens’ bodies who take up environmental issues because they are ultimately human rights issues.**