



## Spiritual and Religious Valuing of Forests and Biodiversity

Noah's inspired effort to save animal species was perhaps the first act of biodiversity conservation recorded in the Semitic faiths. The Psalmist sings the Creator's praise for the soul-restoring value of still waters and green pastures, and for nature's habitat. *"The trees ... which he hath planted; Where the birds make their nests"* (104:16-17), as does Muhammad: *"If any Muslim plants any plant and a human being or an animal eats of it, he will be rewarded as if he had given that much in charity."* (Sahih Al-Bukhari, 8:41) Further East, the diverse faiths "beyond the Indus," referred to as Hindus, developed under the towering "abode of snows," Himalaya. These inaccessible peaks seem to have evoked a sense of awe permeating the religions in their shadow, evolving from an animism never fully left behind. Siddhartha Gautama, born a prince amidst the sal forests of southern Nepal, awakened under a pipal tree, the Buddha, to teach: *"The forest is a peculiar organism of unlimited kindness and benevolence that makes no demands for its sustenance and extends generously the products of its life activity; it affords protection to all beings, offering shade even to the axe-man who destroys it."* The world religion founded upon his teachings has a school of 'forest teachings,' akin to the later Vedic scriptures, called Aranyakas, or forest texts. Among the Hindu's prescribed stages of life after the householder phase associated with meeting the demands of family life, is *Vanaprastha*, a time to situate oneself in the forest, for the greater wisdom it can endow. As Vandana Shiva says, *"Biodiversity has been my teacher of abundance and freedom, of cooperation and mutual giving."*

This wisdom is gained by observing, joining con-

sciously with the interdependence of the array of life forms comprising the whole of the forest. This recognition of a spiritual unity residing in the multitude of life forms may inspire the Hindu to fold palms before a tree, a cow, a serpent or a fellow human being. It is the oneness that Chief Seattle called the web of life, or an ecologist calls an ecosystem. We are not apart. What we do to the web affects the whole and returns to us.

So, Nature speaks its enduring truths, also the signs of times, ignored at our peril. Evidence of the human role in earth's warming along with its oil industry-funded denial are both accelerating. Nature speaks with an ever louder voice. Christians embrace the evergreen Christmas tree as symbolizing everlasting life. Yet scripturally, the most relevant story may be the throwing out of the money changers, if we take Nature as our temple. How can we condone patenting life, even human DNA or ignoring the impacts of fossil fuels? As Hurricane Sandy Occupied Wall Street, Mayor Bloomberg and his magazine got the message: "It's Global Warming ...!" SeedTree's "seed deeds," while addressing local problems, are targeted toward such concerns of the global commons. Even as we aim toward ecosystem restoration, modeling promising, sustainable principles and practices, human induced warming impinges as more than a peripheral concern. While SeedTree's

**Nursery & Tree Planting program,** eventually succeeded in planting 141,773 trees, in 2012, of our 19 Nepalese nurseries, several in the mid-hills needed reseeding after the first sprouting seedlings withered in the longer dry season.



Discouraged after losing her crops, Dhanmaya Thamang (left with planted sapling) took heart when SeedTree offered fruit saplings. She walked 12 km on foot to receive them, despite the threat

of a Maoist halt on travel. In addition to our seed grown nursery stock, we distributed 1,000 fruit saplings, like the valuable pomegranate at (right) to 250 of those most hurt by the severe drought.



**trees planted.** Since EDEN has little access to land, they are raising the extra needed to purchase nursery stock. Homeowners have planted their formerly bare courtyards, and some of the girls have inspired their government employee fathers and brothers to plant trees on public lands. Such partnering in public works has good potential for leveraging our resources and inviting replication. Other activities include plastics recycling with advocacy and the sewing and sales of cloth shopping bag and water conservation, including using wash water on their kitchen gardens.

SeedTree's nursery and tree-planting program bonds groups in self-determination for purposeful action, sharing their knowledge of the many values of their native species. As they turn soil and plant the seed they have selected, they affirm the power to halt environmental degradation, build a better future, improve the quality of their own lives and that of the human and biotic communities in which they live.

## Educating for Informed Action

Education assists our tree planting efforts. The best seed is local, selecting for desired qualities,



and knowing proper handling for each species. Ram Gautam of NAFSCOL (left) conducted a seed collection and handling workshop (above). Our partnership has revitalized native seed collection networks. Nursery Management Workshops follow, and after the seedlings are grown, we hold Agro-Forestry training to integrate trees most synergistically into agricultural systems. While tree-planting gathers our groups and initi-

**Ni Bero (Seed of the Rainforest)**, our local Peruvian NGO partners managing the Ucayali Eco-Reserve, *Nahua Fundo*, planted **2600 trees**, primarily *cacao*, (behind Lila Maldonado) also the related *macambo* fruit (held), medicinal *copaiba*, and other native species, near the Shipibo village of Santa Clara. Eduardo Maldonado, leading this SeedTree Ni Bero effort, is eager to expand the project.



## Greening Urban Ecosystems in Pakistan



The 2012 SeedTree EDEN Project (STEP) served centers in Halloki, Sahiwal, Green Town, and Bheer Basti, Pakistan. EDEN and their Urdu Eco-Ed

classes' participants engaged a range of groups and activities from school children planting trees to kitchen gardening for the elderly. In all, STEP established **18 successful kitchen gardens and 3000**

ates them into action for the future of their environment, our 5 month Eco-Ed courses (basic environmental systems science and applied human ecology) is an equally effective foundation for wider and enduring change within the communities. In addition to the Urdu classes held by EDEN in Pakistan, in Nepal 2 secondary schools joined 24 groups in five districts holding the course. Their activities are included on p.4 chart. 25 new classes have just begun.

In addition to our 3-day facilitator training, we also hold a refresher during the session to address any questions that may arise.

We are revising our Nepalese “Ourselves and Our Environment” for its next publication, to further clarify the section on greenhouse gases and climate change.

**Nabin Baral, PhD, of Virginia Tech**, fluent in the concepts and languages, has generously volunteered helpful editorial advice. It is ironic that Nepalese education about climate change is with those who do least harm to the climate.

The World Bank estimates for Nepal, per capita CO<sup>2</sup> emissions to be 0.12 metric tons whereas for the USA it is about 18 metric tons. Our participants take pride that they are contributing to improving their lives and our earth’s shared atmosphere.

### Mega-fauna/human conflicts studied

Nepal Programs Coordinator Suraj Upadhaya studied the prey of his mountainous district of Dolpa’s elusive snow leopard: wild blue sheep (above) and human owned livestock. , has is an issue in his mountainous native district of Dolpa. Suraj was invited with full scholarship to give a presentation in January at the Student Conference on Conservation Science of the University of Queensland, Australia, entitled: “*Human — Snow Leopard Conflict.*”

Our Kate Kinley Gregg Scholarship recipient



*Baburam VK holds a Biodiversity Conservation class*



Beeju Paudyal, earned her B.Sc. Forestry from the Institute of Forestry as a SeedTree Work-Study Scholar. Beeju’s research focused on the conflict between humans and the mega-fauna that has caused so many problems in her home district of

Jhapa, in Southeastern Nepal —Elephants! With population increases, land available for elephants has been reduced and conflicts have increased. Both elephants and humans have been killed, crops destroyed, and houses demolished.



Beeju is exploring conflict reducing solutions for conservation of these great creatures.

Beeju has opened an Eco-Ed class in Jhapa, now being held. She is also interested in graduate study.



We also helped M.Sc. student Sangita Pant to conduct and report on a “Community Awareness Program in Renewable Energy Technology: Improved Cooking Stove (ICS), in Jhaukhel in Bhaktapur”

Her study highlights the many benefits of these stoves, confirming our findings from the the communities we have helped to transition from the traditional open fire in the kitchen. Fuel wood use is reduced 30-35%. A few Dang households report even 50% reductions.

With assistance, the technology may be carried out by even the poorest households. While we now use a few metal parts, they may be constructed entirely with gathered materials, stone and mud. Our Eco-ed groups often make the mud chimney and stove bricks as a class activity, and advocate in their communities for this simple but significant improvement. The time saved from gathering

wood allows more time for growing or preparing vegetables, reading or joining groups for savings or learning, such as attending our



night classes in environmental Eco-Ed. Noxious smoke is carried out of the kitchen, reducing exposure to carbon monoxide by 69%, formaldehyde by 63%, significantly improving human health. The women in our classes, after learning more about these benefits,



often advocate with those in the community who may have such stoves but use the traditional hearth out of habit. They also do this with biogas plants, a great technology

for households with livestock. One community had received 11 biogas plants from another NGO, but did not quite understand how or why to use them. Informed and motivated by our class, all of these were brought back into use. One frequently neglected but necessary step for successful adoption of biogas is learning how to compost the digested slurry. The compost is higher in nitrogen even than the original manure, and must be mixed with high carbon refuse like wheat or rice straw, etc. As a soil amendment, the resulting compost, exceeds all its constituents combined. Once the composting habit is formed, there



are as many advantages to the farmers' fields as to the household environment. The household gains a clean, convenient cooking fuel, a hygienic latrine outhouse, and a completely integrated, renewable and sustainable home energy supply and utilization system, that also removes the extremely potent greenhouse gas, methane, from the air. These small home systems are self-contained and managed, offering an enviable integrity. In marked contrast, is a gargantuan 22.7 million

gallon, 14 story LPG-tank proposed by a limited liability corp. for within 3 miles of our Home Office and a mere 140' from a restaurant/motel. We do not know the source of the LPG to arrive by tanker from abroad nor the conditions of the extracting workers. We do know now fossil fuel reserves *already* held by the industry are 5 times greater than our atmosphere can tolerate, (McKibben, "...New Math") before setting off potentially irreversible feedback loops such as methane release from thawing permafrost. Even if our energy supply is not conducive to home systems, there are renewable options to develop. Besides solar, wind, hydro, tidal, and geothermal, one local landfill is generating electricity for the grid as a giant biogas plant. Considering our energy use as a spiritual and ethical concern for life, we can surely do better. So, let's!



*Proposed tank's 202' perimeter traced by local group, THANKS BUT NO TANK.*

<b>SeedTree 2012 Program Outcomes Summary:</b>		
	<b>1995-2012</b>	<b>2012</b>
trees planted	<b>4,208,188</b>	<b>141,773</b>
Wells/pumps: new constr./old, repaired)	<b>97</b>	<b>1/(42)</b>
5 mo. Eco-Ed Classes	<b>153</b>	<b>26 with 633 participants</b>
improved stoves constructed/(restored)	<b>1119</b>	<b>149/(72)</b>
outhouse latrines constructed/(restored)	<b>667</b>	<b>170/(171)</b>
biogas -stove -latrines new constr./restored)	<b>280</b>	<b>56/(48)</b>
vegetable gardening/organic agriculture	<b>830</b>	<b>209</b>
scholarships	<b>86</b>	<b>4</b>
<b>Additionally. # Class participants did:</b>		
composting		<b>319</b>
recycling		<b>434</b>
organic fertilization, green manure		<b>354</b>
fishery pond or bee-keeping		<b>12</b>
horticulture		<b>26</b>
Sanitation, improved waste management		<b>550</b>

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