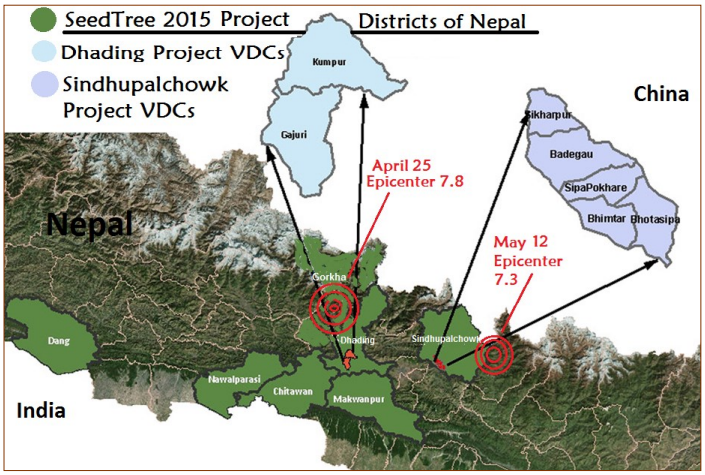
SeedTree at 20, *growing like a tree:*

Analogies between our development as an organization and that of a tree come irresistibly and aptly to mind. We likened organizations receiving excessive funding before learning to use it accountably and effectively to the exotic eucalyptus: fast-growing but brittle to break in the wind. We emulated rather, the indigenous *sal* tree (*Shorea robusta*) which grows slowly, but straight and strong as steel, with a resilient, coppicing root system. From the original *seed* idea to turn the tide of deforestation we called innovative initiatives '*seed deeds* ' and watched them *sprout and take root* as continuing programs: participatory diverse native tree-planting, water supply, sanitation with biogas (methane) systems, improved stoves, micro-credit and education for human ecological improvement. These programs reach thousands through our local *branches,* partners and allies. Conditions and challenges were unique in each of our three Nepal branches. Seed Tree Nepal (STN) expanded from Chitwan into neighboring districts, Nawalparasi and Makuwanpur. Our Dang program, pictured in the banner above, was active and relatively undisturbed in 2015. Our Central Mountains program with Nepal Agroforestry Seed Cooperative (NAFSCOL) was Anything but undisturbed.

The 7.8 magnitude earthquake of April 25, relentlessly followed by a 7.3m on May 12 tore

Aiding recovery in Earthquake-Shattered Mountain Communities



across the same fault, through our project districts Dhading and Sindhupalchowk, violently shaking them to their foundations. 99% of Sindhupalchowk homes were damaged, 91% rendered uninhabitable*, as more than a dozen aftershocks - 4m to 7m earthquakes in themselves - continued for months. We sent initial emergency food aid to 310 households, with our NAFSCOL partnership manager **Ram Gautam.** As soon as roads opened, we turned to more long term reconstruction relief. First we needed a **Participatory Rural Appraisal PRA** to plan

Ram surveys damage in Sindhupalchowk

*ShelterCluster.org, 5/25/15

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A post-quake PRA

what our 11 stricken communities and households could actually do to rebuild for the long term. Our urgent appeal to donors was promptly met with exceeding generosity, enabling us to fulfill our planed action. Fortuitously, earlier in the year we had already establishing our own mulberry nursery to affordably meet the widespread interest expressed in cultivating the trees for fruit, fodder, and eventually for sericulture, the production of silk cocoon for income. With monsoon approaching, the villagers feared landslides from the destabilized hills. They were relieved to have the 52,374 mulberry cuttings we brought, as they could easily plant them directly in the soil. Additionally, our 11 mountain groups' nurseries produced over 88,000 of diverse native trees species. And to the 8 most devastated, we added 160 hand spades and 775 prized fruit saplings: guava, pomegranate, lemon, litchi and mango, all now growing. To 450 households, we gave seed of 6 vegetables: carrot, cauliflower, spinach, radish, tomato and long "meter" beans. Soon they yielded much appreciated food with enough to sell some for needed cash, which has been especially appreciated, as has the regular stipend to Nursery Recorders and Eco-Ed Facilitators. 36% of Sindhupalchowk's VDC (Village) Secretaries* responsible to disburse government aid have left their posts. Neighbors are helping neighbors repair and reconstruct their homes.

SeedTree mulberry nursery

1. Women's group leader receives hand spades; 2. another divides veggie seed 3. harvest of beans.

Before and after: from open to chimney-vented.

Landlocked Nepal's humanitarian crisis compounded September 23rd with an Indian economic blockade over disagreements with its new constitution. Shortages of food, medicine and fuel are creating desperation and exacerbating deforestation. Our households have better alternatives:

Empty liquid propane gas (LPG) tanks

285 improved cooking stoves (ICS). These simple mud brick and steel stoves that even poorer homeowners can afford, offer a marked improvement over the open fire. Women who usually gather the fuel, can save 25-50% of their time spent gathering firewood, which relieves a corresponding pressure on the local forests. Women and young children no longer have to breathe smoke preparing meals with ICS, even more so for those with clean biogas fuel.

Hills are being stripped for fuel, but not where our groups have planted.

We supported construction of 106 biogas plants for the mountain communities, while **Dang** groups are building 20 more. Illi Chaudhary from Dang told how she was often so sick she used to make long trips to the next district for medical help. Since she has biogas, her health is restored. Referring to LPG, Sayni said "now people understand Gobar (dung) Gas is

*Kathmandu Post

more sustainable. If they have, that is for whole life, [better] resource in local level." With the program running smoothly in Dang, **Sayni** and her husband **Sobha Ram Chaudhary** arranged an internship on a nearby farm with the Maine Organic Farmers and Growers Association, and spent 2 months to learn organic farming methods to share with our groups in Dang. Under Sayni's leadership many communities are now regulating free range grazing of livestock, with fines. We hope to further develop systems of rotational grazing to further restore and protect the grassland ecosystems, as well as forests. Human understanding of the silvopastoral interface is vital to their preservation and the well being of all the populations that depend upon them. The mountain groups are also learning to plant grasses instead of relying entirely upon tree leaf fodder.

Chaudharys visit SeedTree in Maine

Though shaken and frightened by the earthquakes and nearby aftershocks that had people fleeing their homes to sleep outdoors, Chitwan suffered relatively little damage. **Baburam Vishwakarma** of Seed Tree Nepal, while offering personal assistance in Gorkha, epicenter district of the first 7.8m quake, also arranged for us to give a nursery program there. He further formed new Nursery and Tree Planting Groups, our first in Makuwanpur District, and extended our work deep into Nawalparasi District, furthering our reach to the communities encircling the Chitwan National Park (CNP).

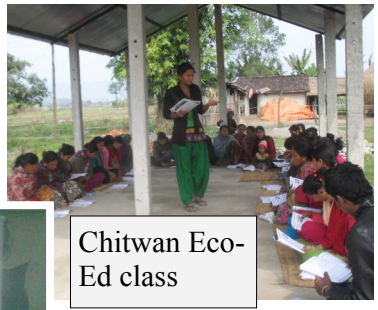
Behind are 2014 trees.

Seed Dispersal: Strategies for Replication:

Trees have evolved ingenious tactics for reproduction: the maple's seed wings, the kapok's wind-catching fluff, the banyan, its dropping tendrils that may become trees in themselves. Similarly, our SeedTree employs diverse strategies to share the promising principles and practices for forest regeneration, including offspring NGOs to continue locally. We established Chitwan based Seed Tree Nepal in 2001 through STN, two 2nd generation NGOs in Parbat. Carrying the seed further to Ucayali, Peru, SeedTree established NiBero to manage our remote Amazonian Eco-Reserve at the frontier of native "contact" with the modern world. 'NiBero,' refers to both 'seed' and 'eyes' of the rainforest. NiBero keeps its eyes on the rainforest, saves its seed, and preserves the ecological culture of the neighboring voluntarily isolated tribes that recognizes the consciousness (or eyes) of the living rainforest. **Adam Stone**'s strategies there promote sustainable ways to live with the forest, planting endangered trees. medicinal plants, and leading these activities as Eco-tourism adventures.

Education is the most far-reaching strategy for bringing a good program to scale. Which is more important for the life of the tree: roots or leaves? Just as the tree's vitality depends upon each to nourish each other, SeedTree aims that all educational levels from practical to academic should interact so as to inform and enlighten each other. This sort of integrated *communication is SeedTree's cambium layer.*

I was particularly delighted to see the earnest engagement by Narayani VDC, Nawalparasi, the most deforested of all the CNP Buffer Zone VDCs, managed by our Chitwan branch. Last year, in conjunction with Jared Stapp's research, we had conducted a hasty PRA, but too late for the planting season. A video clip may be viewed at http://tinyurl.com/hcaoao4. Collaborating with SeedTree Work Study Scholar **Suraj Upadhaya**, and **U. Maine** Forest Policy Prof. **Dr. Rob**



Chitwan Eco-Ed class

Baburam VK presents Eco-Ed Facilitator her graduation certificate.

Rob Lilieholm

Lilieholm, Jared published his research in "the Journal of Sustainable Forestry." Dr. Rob has done so much to integrate SeedTree's work into the academic community. Rob referred **Yale School of Forestry**'s **Environmental Training and Learning Institute** (**ELTI**) to SeedTree and me when asked for presentations on PRA and Participatory Methods for Engaging Communities in Forest Regeneration. It was a great opportunity to share our experience in Nepal with PRA, **SeedTree's** very ***DNA***. It was the success of my first '95 PRA around indigenous knowledge and uses of tree species that led to founding SeedTree. Yale filmed me giving slide presentations for an online course initially for Asian students, sponsored by the Smithsonian Institute. While presenting his work at **Kathmandu Forestry College** in 2014, Rob also established an annual scholarship to be given to a promising **KAFCOL** student to assist them with their final research project. The $200 cash award 1. recognizes a student's academic achievement; 2. addresses financial need; and 3. supports his or her desire to engage in a career related to SeedTree's mission of ecosystem protection and renewal. The first **Rob Lilieholm / SeedTree Scholarship** grant was awarded in April **to Jishan Karki.** In November, the second was awarded to **Jeewan Pandey**, conducting his research in Payment for Ecosystem Services (PES) schemes in Shivapuri Nagarjun National Park. Coincidentally, our **Kate Kinley Gregg Work-Study Scholar Beeju Poudyal** will also explore the applicability of PES at Rupa Watershed, Kaski, for her **Masters Research Project** at the **Institute of Forestry, Pokhara**. The PES concept attempts to align the value of nature's taken-for-granted gifts with the financial economy. It was increasingly discussed as at the recent COP21 conference in Paris, not only as a matter of "climate justice" for poorer countries who have hardly contributed to atmospheric CO2 yet must often bear its harshest impacts. Also, as a practical matter, PES might give such countries the financial means to conserve their ecosystems. Economic desperation is the enemy of conservation. Costs and incentives will need to reflect long term realities, if we are to ward off catastrophic climate change.

Jishan Karki

Jeewan Pandey

Beeju Poudyal

At COP21, which ***only*** addressed emissions, I heard one NGO leader say we do not yet have the technology that will suck CO^2 from the atmosphere. Yet SeedTree and Nepal with Nepal's progressive forestry policy have developed that very technology and it is largely social. As Glaciologist Jason Box said more accurately at COP21, reminding us about atmospheric CO^2, "… unfortunately, it's too high now, so … **the missing conversation is about atmospheric drawdown of carbon. And that's why I bring up trees and grasslands and restoring growing parts of our planet**…. a gesture of peace we can offer around the world."*

Thanks to all who join us in this effort.

*Democracy Now, **http://tinyurl.com/oddumr4**

SeedTree 2015 Program Outcomes Summary:		
	1995-2015	**2015**
Trees planted	**4,900,099**	**258,350**
Wells or pumps:	**103**	**4**
5-month Eco-Ed Courses	**223**	**24 with 628 participants**
Improved cook stoves ICS constructed / (under const)	**1,743**	**245/(113)**
Biogas -stove -latrines plants constructed	**580**	**106**
Vegetable and potato seed support / kitchen gardening	**1863**	**476 house-holds**
Scholarships	**94**	**4**
# of 628 Eco-Ed students without further		
Biogas plants		**122**
Wells / pumps		**3**
Organic Vegetable/kitchen gardening		**581**
Latrine / toilet constructed or repaired		**258**
Improved stove constructed		**3**
Sanitation, improved waste mgmt.		**596**