



ASHOKA INNOVATORS FOR THE PUBLIC

## 60 Ashoka Fellows Illustrating Nutrient Value Chains

These system-changing social entrepreneurs, selected from Ashoka's network of over 3,000 worldwide, illustrate enterprises, insights and opportunities we see emerging.



**Sam Agutu of Kenya** has applied his expertise in insurance to create affordable health insurance for the poor. Using the popular mPesa mobile money platform for subscribing customers and receiving premium payments, Sam has partnered with a large wireless company and an insurance company to create and manage low cost farm and family insurance products. In collaboration with Ashoka, he is now exploring the idea of expanding his initiatives from acute care coverage to a program that includes full nourishment and wellness care.

**Tülin Akin of Turkey** founded Tarismi Pazarla to leverage the power of information technologies (ICT) in order to embolden the rural agricultural sector. She established the Farmer's Club, a mobile subscription plan that offers free cell phone service and provides weather reports, market price quotes, and other information that allows farmers to make sound decisions with regards to their wellbeing. Driven by positive outcomes so far, Akin believes that empowering the public with ICT is integral to a nutrient-based economy and wants to extend her network into empowering members with additional health and nourishment information.



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Washington, D.C.



**Jason Aramburu of the United States** has created two new business models, each of which involved invention of an innovative small-scale technology, enabling small farmers to improve their soils and growing conditions by using local resources. His companies cater to consumers in the United States and East Africa. First, *SOIL IQ* is a wireless soil testing probe that transmits real-time data about your soil conditions (including nutrient content, temperature, humidity, etc.) to a web site or cell phone of your choosing (now operable in the USA, and coming soon to East Africa). In addition to providing the farmer with on-demand and historical access to this data, the cloud-based *SOIL IQ* databases aggregate this information from all soil plots using the system worldwide, thus gathering a useful information set for future analysis. Second, Jason's company *re:char* puts the ability to produce and use biochar soil additives in the hands of enterprising small-scale farmers, community collectives or local entrepreneurs. Via *re:char*, Jason invented and markets a small-scale kiln for turning local waste products such as corn cobs or excess wood into biochar, which farmers use to extend the life of all types of fertilizers, help soils increase organic capacity and retain water.



**Sylvia Banda of Zambia** is working to shift smallholder farmers from subsistence to commercial farming of locally grown, nutrient-dense foods. Sylvia is creating higher demand for these traditional fresh foods by creating menus for them in leading restaurants, as well as hubs that foster the sale of these goods in both rural and urban markets. She uses her prominence in the country and access to the media to promote these initiatives, and to advise social entrepreneurs in neighboring countries.



**Pranjal Baruah of India** uses nutritional mushroom growing as a platform to demonstrate a systematic, multipronged strategy addressing all facets of organizing farmers. Starting in Assam, the *Mushroom Development Foundation* leads potential farmers through the process of training, growing, and cultivating mushrooms in order to establish a new market and economic opportunities. Pranjal's efforts to promote mushrooms are connecting the Nutrient Value Chain due to the fungi's high nutritional value, lucrative economic potential, and their ability to rapidly improve conditions in their surrounding natural environment.

**Geoff Cape of Canada** is making cities and public spaces more environmentally sustainable by bringing together stakeholders from business, nonprofit, and government to develop and operate green projects such as Toronto's Brick Works. Situated in a former 43 acre industrial site with 16 buildings, the Brick Works provides a large-scale natural public venue for organic food markets, arts activities, and youth leadership programs. Geoff's organization, Evergreen, also develops educational resources, policy recommendations, landscape planning, and a variety of showcase projects to inspire healthier urban design across Canada.



**Indu Capoor of India** has spent the last three decades promoting health, rights and empowerment of women, girls, children, and youth. She has been strongly advocating for comprehensive health care, with a special focus on gender equality. With a focus on saving the girl child, Indu started the Centre for Health Education Training and Nutrition Awareness (CHETNA) as a full support and changemaking organization. Working with field based and government organizations, CHETNA aims to improve access to food and enhance nutrition. More recently, Indu has expanded her focus to include healthcare in her nutrition programs (and advocating for health programs to include nutrition).





**Julie Carney** founded *Gardens for Health International* in **Rwanda** to teach mothers about proper health and nutrition in rural Rwanda. She has linked nutrition to healthcare. Using



community health centers as access points, mothers who are themselves clearly malnourished, or have children that show signs of malnourishment, are enrolled into her program. Julie and her team show participants how to create and tend to a personal garden as well as educate them about gardening, healthy eating habits, and nutrient diversification as a means of creating healthier individuals. By linking the health, food, and food growing segments of the Nutrient Value Chain, Julie is tackling the root cause of malnutrition and providing a compelling model.

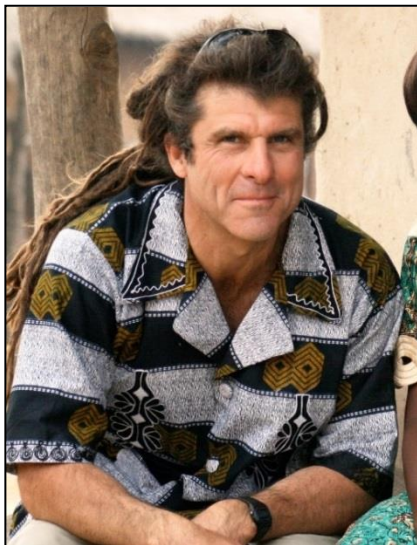
**Guilhem Chéron** of France is altering how consumers access local food products while also enabling merchants to sell through efficient and expansive networks without having to go through large centralized distributors. He created *La Ruche qui dit Oui*, an online shopping platform where consumers buy directly from a range of local producers and pick up their groceries at a later time at various convenient locations. This facilitates the efficiency benefits of larger scale for distribution and consumption of local products, the nutritional benefits of eating fresh and locally produced foods, and the social and economic benefits of trust-building between buyers and sellers.



**Paul Cohen of South Africa** engages rural community leaders and entrepreneurs to integrate agricultural, watershed, sanitation, economic and cultural resources and planning. He combines traditional and innovative land and water techniques. His initiatives at Tlohelo (North West Province) and Mambulu Village (Kwazulu Natal), for example, are helping transform degraded



ecosystems into active sustainable-agriculture communities with improved food and nutrition and cleaner and more stable water supplies, all based on active local community management. Paul includes an element of active youth education in all his work, helping them through experience to adopt a “communities that nourish” vision that enables neighborhoods to self-sufficiently thrive.



Witnessing first-hand the horrors of famine in East Africa, **Dr. Steve Collins of Ireland** uses what he has trademarked as the Community-based Therapeutic Care (CTC) model in his two institutes, Valid International and Valid Nutrition. His revolutionary methods strive to bring treatment to afflicted patients rather than bringing afflicted individuals to treatment. Moving beyond emergency feeding, Collins is intertwining business marketing and local crops and production value chains to create new hybrid value systems in Africa that create and sell inexpensive commercial bio-available, nutrient complete supplements to malnourished individuals.



Community-based conservation is taking hold in East Africa. Groups of once-warring pastoralists have embraced wildlife conservation and are organizing their communally held lands as private conservancies. In a model developed by **Ian Craig of Kenya**, these democratically governed conservancies are funded through a blend of philanthropic, government, and earned-income sources and – as their numbers grow – are transforming lives, securing peace, and conserving natural resources across the continent.

**Brendan Dunford of Ireland** has developed simple economic tools that motivate cattle farmers to re-establish and increase biodiversity in their pasture lands while improving nutritional quality of their cattle. Furthermore, in doing so, he has helped bring more eco- and farm-tourism into these



farming communities, and has reinforced the traditional cultural heritage of the region, creating a sense of agency and entrepreneurship amongst the populations. Brendan’s financial models, scoring templates, and grassland and cattle farming techniques are proving informative and practical for Ashoka’s wider Nutrient Value Chain initiative.



**Marta Echavarría of Ecuador** initially developed a public-private financial mechanism in Quito, Ecuador (and subsequently replicated elsewhere), through which institutional water users in urban areas collectively fund upstream pasture and forest conservation. Those

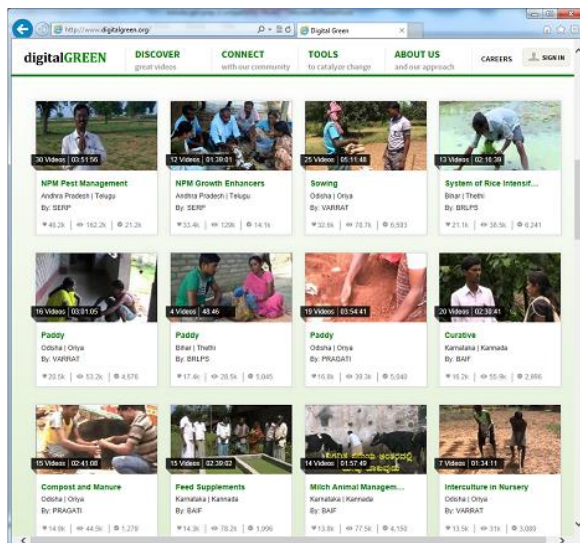
investments maintain and spread nutritious living soils upstream while providing stable and cleaner water supply to the cities downstream. Marta has now launched another initiative, the *Canopy Bridge* commerce platform for connecting international buyers and sellers of sustainable and regenerative natural products, enabling B2B commerce along Nutrient Value Chains.





**William Foote**, founder of Root Capital and a long-time Ashoka Fellow and innovator in social finance for small producers in Africa and Latin America, recently added a line of financial services focused specifically on nutrition. Root Capital provides farmers with access to capital, financial literacy services, and value chains in which underserved populations can sell their yield for fair prices to large corporations including General Mills, Green Mountain Coffee, Starbucks,

and Whole Foods Market. Some of their current clients include Freshco, a Kenyan company that sells high-yield hybrid seeds to rural farmers; Nyirefami Ltd, a Tanzanian company that purchases, processes, and sells highly nutritious millet flour to local families; and La Cooperativa de Servicios Múltiples Campesinos Activos de Jalapa, a maize cooperative in Nicaragua.



Effective and quick-turnaround training is required across the entire Nutrient Value Chain. Inspired by agricultural extension services, **Rikin Gandhi of India** and his organization Digital Green

combine grassroots peer-to-peer training with digital media and a smart subscription-based knowledge system. They create and syndicate videos that share best practices of farmers with other communities, and track video use in detail to inform their success strategies. Rikin has overcome many of the hurdles that written information and extension services have failed to

address, including illiteracy and the slow pace of outreach. Using inexpensive production templates and viewing technologies, his methods empower individuals by networking around local knowledge, locally produced. Rikin is now working on incorporating health and nutrition videos for pregnant women into Green Digital's mission.







For over 25 years **C.K. “Bablu” Ganguly of India** has led the regeneration of thousands of acres of dry, desertified, former forest lands back into an ecologically rich natural and farming landscape, restoring the water cycle, local food production, and substantial biodiversity. Throughout this process, much of which has centered around the Timbaktu Collective in Andhra Pradesh, Bablu has worked with community members to recall, redevelop and adapt historical techniques for improving productivity of land with local resources, taking control of their surroundings and improving their livelihoods by working with natural systems. In doing so he has developed pivotal methods of engaging local participation and government sanction in the regeneration of “arid wastelands.” Social and nutritional health of families and communities has been an explicit goal and consistent result throughout Bablu’s career.



In response to the increasing industrialization of dairy farming in France, **Fabrice Hegron** is developing an entrepreneurial, small-scale farming alternative that reinvents the role of small farmers, keeping them in the agricultural landscape. Through new modes of production and distribution that respect the environment and offer healthy milk, he positions dairy producers as wellness partners and reconnects them with consumers. This creates a viable subsidy-free economic model to maintain a collapsing industry.

**Christian Hiss’ of Germany** *Regionalwert* AG holding company, with publicly available shares, focuses agricultural investors on social and environmental impact. In doing so, it places a new lens on investing in local value chains, drawing market and policy attention to smallholder producers who create triple-bottom-line returns.







**Harry Jonas** and co-founder Kabir Bavikatte's organization Natural Justice, based in South Africa and operating in Africa, Southeast Asia and Latin America, created the legal instrument called Bio-cultural Community Protocols (BCPs), which have changed the landscape of environmental law by translating traditional law around use of natural resources and indigenous knowledge into more formal legal language, making it accessible to

lawmakers and other stakeholders nationally and internationally. This has in essence helped codify a number of traditional practices for nutrient-secure land management within pre-existing and new legal structures. Harry is also developing on diagnostic tools to help people assess and plan strategically around the overlapping, often confused range of legal protocols from different agencies that affect farming, food and land management in their communities.



**Gladys Kalema-Zikusoka** of Uganda is a recognized pioneer of integrated health and environment management in remote areas, helping at-risk communities on the margins of fragile but environmentally important ecosystems (like mountain gorilla conservation zones) stabilize and develop in a way that benefits both themselves and the environment. Her organization *Conservation through Public Health* has received several national and international awards, for example, for innovations that use income generating projects and village savings and loans associations to scale up community-based delivery of social services, including integrated packages of behavioral support in hygiene and sanitation, infectious disease prevention and controls, sustainable agriculture and nutrition, and wildlife conservation.

**Cindy Kaplan of the United States** is leading the introduction into orphanages in Asia and India of full nourishment and proper feeding techniques for infants. These orphans are at the critical early stages of human development and are particularly vulnerable. She is showing orphanages and NGOs who serve them how to radically improve nourishment and intake of nourishing food without significantly increasing costs.





Through innovation, market force and public policy influence, **Nelson Kariuki of Kenya** is effectively defining the standards for local organic fertilizer production throughout Kenya. He originally created a rapid-composting agent, using it to manufacture rich organic fertilizer locally, primarily using products

that were previously considered as waste. Nelson then partnered with women and youth groups to create a network of organic fertilizer production units in every county in Kenya, integrating nutrient flows and local and national economy in multiple ways.



**Michael Kelly of Ireland's** expanding network of "Grow It Yourself" groups, now numbering over 50,000, fosters consumer action all along the Nutrient Value Chain. By growing some of their own food for the first time, even at very small scale, and by connecting with others in their community doing the same, participants quickly gain a personal understanding of connections between soil health, farming practices, and their own well-being. Informed by this new

"food empathy," their consumption patterns in supermarkets and restaurants then begins to shift, as does the health of themselves and their families.

**Basil Kransdorff of South Africa** invented *e'Pap*, a fortified, ready-to-eat nutritional supplement which helps individuals quickly achieve full nourishment and high performance, even when a diverse nutrient rich diet is otherwise not available. Basil's innovation of bio-available, wide-spectrum nutrition has improved HIV/AIDS treatment and cure rates in tuberculosis patients, reduced re-infection rates, and led to healthy weight and muscle gain in malnourished communities.







**Dinesh Kumar of India** is creating the enabling environment to retrieve millets, a nutritious substitute to rice and wheat, and encourage their consumption as a staple food in India. By pioneering a much-needed processing system for millets, he is creating the capacity among farmers and micro-entrepreneurs to make available quality, nutritious, whole grain millet to the consumers at scale.



**Kaushlendra Kumar of India** is re-imagining the distribution of food in the Bihar region in northeastern India. Starting with 1,000 vegetable farmers in Bihar and 800 vegetable distributors, Kumar founded the Kaushalya Foundation, a complete vegetable supply chain that directly supplies larger food distributors in cities all over India with nutrient-dense foods. He is demonstrating the potential to enhance people's vitality through the provision of more nutrient replete foods, specifically fruits and vegetables.

Setting out originally to protect wildlife and forests, **Dale Lewis in Zambia** has created an integrated farming and food business



that now engages over 87,000 smallholder farmers in highly successful, regenerative agriculture. His nutritious *It's Wild* brand of food sells in cities as well as the countryside, with demand growing in neighboring countries as well. His business model combines strong prices and other incentives to farmers in his supply chain, but only if they adhere to certain farming, forest and wildlife management practices. Over an eight-year period, due to these farming practices and related social incentives, agricultural productivity has increased 2-3 times per plot of land, endangered species are no longer being poached in the forests, and the surrounding population of over 1 million people is demonstrably better off in terms of health and economy. Dale's expanding enterprise illustrates the entire Nutrient Value Chain in action, from environment and soils through food production, human health and wellness, and economic development.



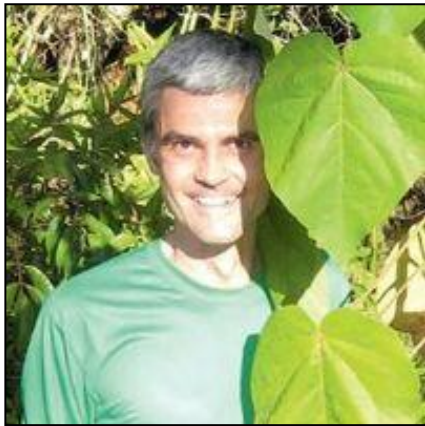
**Sunanda Mane of India** is a leader in the key area of training. She is introducing local entrepreneurs into local education systems in order to combat the large gap between knowledge acquired in the classroom and real-life skills required to thrive in rural communities. With the help of *Lend-A-Hand India*, Sunanda brings local farmers into rural classrooms to teach students to the vital skills needed to succeed in the agricultural sector.

Her work has resulted in a sharp decrease in the dropout rate of students over the past four years in rural Maharashtra and has successfully linked together agriculture and education. She is now helping lead Ashoka's Nourishing Schools initiative in India.

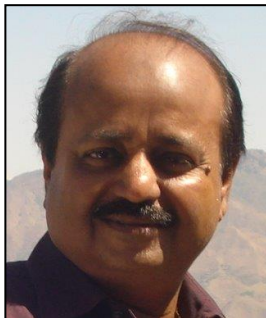
**Paul Matthew of South Africa** developed a very successful truck stop approach to HIV/AIDS treatment and prevention, attacking a critical infection path for the disease. He is now expanding his approach to address the wellness of farm workers, developing a system to address their health, water, sanitation and nourishment needs.







Across continents, **Nicolas Métro of France** connects businesses, government and citizen-sector organizations in collaborative projects for greater results than any would have achieved individually. He does in large part so by using trees as a living tool to foster nutritious, regenerative soils that produce multi-sectoral benefits such as clean water for people and industry, nutritious and resilient agriculture, micro-enterprise development, supply chain development for large companies, carbon sequestration in soils, increased biodiversity, and more. Furthermore, Nicolas' scientific team has also been developing techniques to measure nutritious, living soils, helping support and substantiate Ashoka's top priorities for enabling the acceleration and spread of action along the Nutrient Value Chain.



**Bibhu Mohanty of India** began working in the area of nutrition in 2006, when thirty-four children died of malnutrition in the Simlipal Wildlife Sanctuary in Orissa and the Gudgudiya Panchataya recorded an alarming 83% rate of malnutrition among the residents. With more than 15 years of experience in the field, Bibhu has been bringing about changes in health-seeking behaviors, especially in the areas of nutrition, health, hygiene and safe-drinking water. He has been active in several key areas of the Nutrient Value Chain. He has attempted to meet nutritional needs through the production of fortified supplementary food, through a strong supply-chain model, and the supply of seed kits for kitchen herbal gardens. Bibhu has improved nutrition security of the region through land development, agro-horticulture, changes in cropping patterns, grain banks and income generation programs. As a result, Bibhu has showcased the importance of connecting the Nutrient Value Chain. The results have been good: malnutrition deaths came down to less than five deaths a year, with Grade III and IV malnourishment showing significant decline in the region.

**Adam Molyneux-Berry of Egypt** is shifting the focus of Egyptian business culture to the green economy. He is creating a new generation of entrepreneurs with a green mindset (environment friendly and socially responsible) and empowering them through an enabling environment for inclusive, green businesses and social innovations in urban and rural areas.



**Genevieve Moreau**, a pharmacist, created a simple nutrition label for foods now used by restaurants, supermarkets and large institutional kitchens in **Belgium and France**. This *Intelligent Nutrition (iN)* system was developed in consultation with nutrition experts, doctors, restaurants, retailers, food producers, medical experts, and consumers all along the food chain. It includes a 1,500-page reference guide, and considers factors like seasonality, proximity and soils in its research and messaging about nutrient availability. In addition to the basic labels, Genevieve now offers a wide set of trainings, coaching and an incentive and certification system, strengthened by a large and growing network of health professionals (doctors and pharmacists), restaurant and institutional chefs, and producers and farmers who have integrated these practices into their work.



Influenced by the demise of the Shona Woodlands over 50 years, **Osmond Mugweni of Zimbabwe** studied and developed landscape, livestock and watershed management techniques



that communities can use to restore the land and reduce ecological and economic risks. Osmond's *Njeremoto Biodiversity Institute* now spreads innovative, culturally relevant natural resource management and regeneration throughout southern Africa. For example, he engages formerly independent rural herders in collective grazing techniques that improve livestock productivity, invigorate soils, and halt desertification.



**Mwalimu Musheshe of Uganda** created the *African Rural University (ARU)*, for which he was recently awarded Uganda's prestigious Golden Jubilee medal celebrating the country's 50<sup>th</sup> year of independence. ARU is a prestigious agricultural peer-to-peer training network, which educates rural and often illiterate farmers in both traditional and modern sustainable farming practices. It stresses agroecological practices that are locally appropriate, produce more nutritious food crops for communities and sustain or regenerate the natural environment.





Biodiversity has a priceless value for humans, and while bees are responsible for 84% of our cultivated species, their mortality rate has been alarmingly growing since the beginning of the century. **Kim Nguyen of Belgium** mixes his unique scientific skills and his entrepreneurial qualities to design tailor-made projects to develop biodiversity on his clients' territories, those projects include replanting specific species, implanting bee colonies and closely monitoring the environment. To preserve bees, he is one of the very few who tackles all their mortality causes at once, he then empowers bee keepers, farmers, institutions, scientists and the public to rally behind his multi-factorial approach and be actively part of his virtuous cycle. To scale up, he leverages the

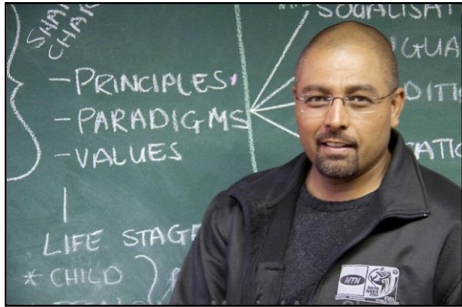
engaged network he developed during 15 years of research, and relies on local actors to multiply rapidly the number and locations of his projects. Kim also works relentlessly to put biodiversity and bees on the political agenda through constant lobbying and communication.

In rural areas of arid Gujarat, India, where high saline soils create an impermeable layer that prevents rainwater from percolating into the soils, **Biplab Paul of India** invented a new rainwater harvesting technology and business model. During the rainy season it enables local communities to store fresh water in saline underground aquifers, and then extract it to grow an additional crop during the dry season, which was never before possible. The model improves nutrition and food security, economy, and local biodiversity. Furthermore, it focuses on and helps transform the very important role of the poorest women in these communities (and therefore, the nutrition and welfare of entire families), as they are the core water harvesters available and motivated to do the work during this dry season when many other community members are working elsewhere.



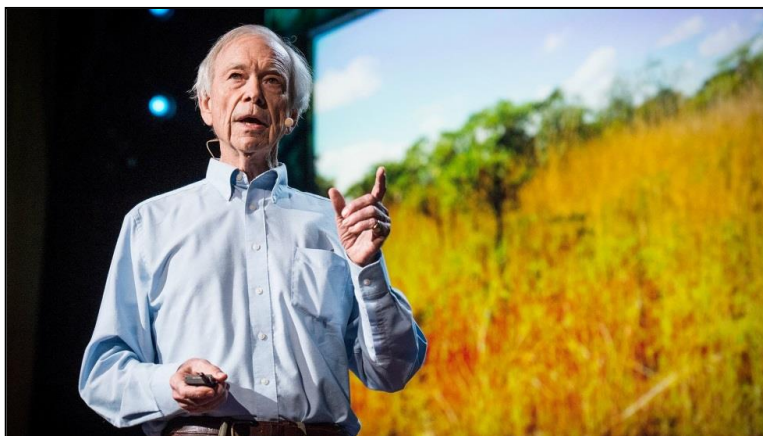
Across the Himalayan watershed, **Pushkin Phartiyal of India** works with rural and urban communities to develop economies based on the financial and social value of stewarding forests, rivers, biodiversity and soils. He leads financial valuations for local markets of ecosystem services and innovates closely with traditional village governance systems on how to transform and grow their communities along these lines. For example, Pushkin has brokered payments from downstream cities to upstream villages for watershed protection services, helped the villages envision and develop other lines of commerce based on the resulting changes in forest management, and then layered carbon credit payments on top of that scheme. He also works with governments across regions of India on public policy to support this kind of action.





**Pat Pillai of South Africa** is working with Ashoka's teams to apply a Nourishing Schools model to improve the wellbeing and educational performance of the students in his schools. Pat's Life College is readying students to tackle a new struggle—true liberation from the apathy, low self-esteem, and ongoing psychosocial oppression that is apartheid's legacy. Developed over eight years, Pat's model of education cultivates attitudes, behaviors, and competencies based on confidence, communication, project management skills, leadership, and entrepreneurship.

**Seema and Michael Prakash of India** gained initial attention after achieving drastic reductions in malnutrition by successfully transferring a state-run program that caters to the health and education of mothers and children from the government to rural communities. They currently work in some of the most malnourished areas of the country, in Madhya Pradesh. Using a multi-pronged strategy, this husband and wife team is comprehensively addressing the issue by ensuring livelihood security, strengthening the Public Distribution System and thereby food security, and transforming the food culture of the region to focus on nourishment and nutrient security.



Based on his own cattle farming experience and research over five decades, **Allan Savory of Zimbabwe** pioneered and continues leading the global movement for managing livestock in arid and semi-arid regions in innovative ways that restore degraded soils and watersheds, enhance food and water security, reverse desertification of savannas and grasslands, and improve

livelihoods of local farming communities. This includes, depending on economic and cultural context, increasing profits, stewarding the land and family/community heritage, and providing other direct and indirect benefits that focus the farmer and community on seeing and pursuing their own paths for vitality and growth. Allan's regions of focus include the United States, Australia, and Africa.





**Chetna Gala Sinha of India** has created the *Mann Deshi Mahila Sahakari Bank* to economically empower rural women. From her base of finance, she is influencing several links in the Nutrient Value Chain. Chetna recognizes the links between environmental sustainability and



and economic vitality and thus provides training for farmers to teach them about alternatives to chemical pesticides, water use, and nutrient balance. The Bank's influence has been a catalyst for rural businesses and individuals to make sound decisions regarding environmental vitality, health, and communal support. Chetna is exploring the encouragement of nourishment and the use of nutritional outcome contests and tests to improve the wellbeing of her borrowers and thus the bank's lending performance rates.



**Hisashi Sonehara of Japan** rejuvenates both rural, downtrodden agricultural communities and urban corporations and citizens by partnering them with each other in strategic and innovative ways. Now operating in a majority of Japan's rural prefectures, his program *Egao Tsunagete* spurs urban residents and businesses to visit the countryside, practice farming and engage with local people, invigorating cultural traditions and both rural and urban economic productivity. The agricultural experience fulfills city-dwellers who yearn for traditional cultural connection to rural living, and help the corporations with human resource development for employees.

**Judy Stuart of South Africa** channels disadvantaged young people into commercial farm management, addressing critical economic gaps in the country while institutionalizing the relationship between nourished soils, nourished crops and nourished communities. Judy's organization *Future Farmers* leverages economic and cultural forces driving youth unemployment with opportunities along Nutrient Value Chains, recruiting interested but under-employed and largely unskilled youths from rural communities into intensive commercial farm management apprenticeships, including a compulsory yearlong internship on a farm overseas, where they learn new technologies and cultures. They return replete with both farming and business skills. Judy has trained over 375 future farmers in the KwaZulu-Natal province, introducing modern practices and new management energy and enthusiasm to the traditional farming industry.





**Dr. Hanumappa Sudarshan of India** is addressing the challenge of healthcare provision in rural India through the *Karuna Trust*, a development organization that implements direct intervention programs at the primary healthcare level, as well as sustained lobbying and advocacy on health policy with state and national governments. He has been instrumental in the design and implementation of Karnataka’s largest micro health insurance scheme, *Yashaswini Insurance*. He is working to include full nourishment in programs of primary health care in rural communities and schools; and helping *Ashoka India* design *Nourishing Schools* model programs.

Through her foundation, *P.E.A.C.E.* (Planning, Education, Agriculture, Cooperatives, Environment), **Nora Tager of South Africa** partners with rural communities to establish commerce-and-education hubs that integrate across multiple topics, thus realizing unconventional but powerful synergies. Her model is perfectly suited for bringing together different players along the *Nutrient Value Chain* in a single community, including farmers, commodity traders, small and medium scale food processors, health and sanitation workers, and others. Nora’s hubs often involve a single physical building in which various enterprises plus educational activities are housed, facilitating natural synergies between sectors that don’t otherwise tend to work together.



For over 15 years **Mario Tapia of Peru** has combated childhood malnutrition and promoted community health more broadly by facilitating expanded production and consumption of highly nutritious, indigenous Andean grains (quinoa, lupinus and others). He has identified varieties of those grains that can be profitably produced under various ecological conditions, and developed pilot processing plants, educational programs and other initiatives to encourage their uptake.

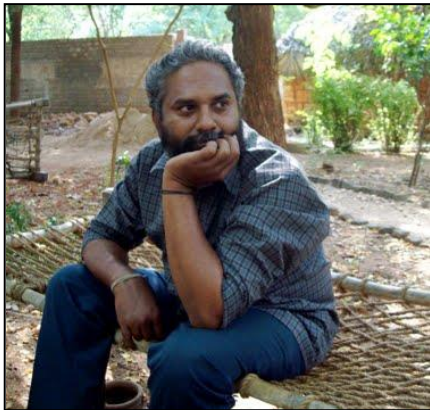
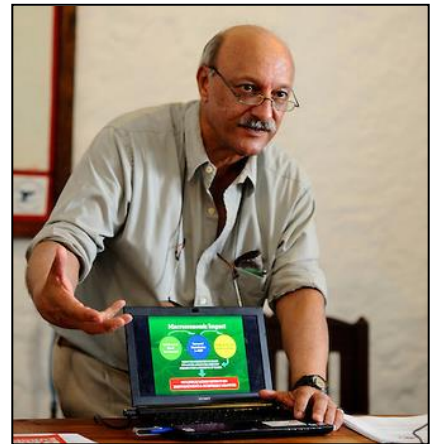
**Zoe Finch Totten of the United States** has developed a detailed model of human nourishment designed to reduce soaring medical costs from chronic illnesses such as heart disease and diabetes. Working with insurance companies and food stores she has conducted successful pilots, and is now moving to scale those approaches.





**Dr. Prasanta Tripathy of India** realized that matters of life and death are often in the hands of the communities rather than healthcare professionals. By engaging communities in interactive storytelling and game sessions, Prasanta helps them comprehend and overcome an intricate web of social, cultural, medical and economical causes leading to death and disease among them. This strategy has led to 45% reduction of infant mortality, and 57% reduction in maternal depression in three years. Ekjut is in the process of designing interventions that will tackle malnutrition through similar methodologies. Working in the poorest areas that have almost no access to primary healthcare, Prasanta capitalizes on the most universal resource to improve infant mortality rates, namely the will of the mothers to ensure healthy lives for the children.

In response to demand for fuel in cities, **Adam Tuller of Kenya** created a new business model whereby pastoral communities produce charcoal by planting and growing leguminous trees, which also enrich soils with nitrogen. Tree planting and harvesting becomes balanced over time, while the soil enrichment continually increases, stimulating grassland growth and other benefits. Modern agricultural additives help the trees grow at a faster pace than would happen otherwise in the depleted soils, enabling financial returns within reasonable timeframes. In three year cycles from the time of planting, villagers have trees to harvest for sale, and soils have become richer.



**Muthu Velayutham of India** is building production and consumption chains that result in sustainable value for rural farming communities. Muthu's *Covenant Center for Development* has trained hundreds of rural residents to sustainably gather, process, and market local medicinal plants that are sold to local medicine practitioners, schools and government departments. He is also educates rural communities on the benefits of eating nutrient balanced meals and has built a cooperative from which individuals can purchase locally grown nutritious foods. His work over the past 15 years illustrates the nutrient economy in action.



**Christian Vieth of Germany** is addressing the disappearance of small and mid-size family farms by offering training courses at the university level to students who are interested in entering the agricultural sector. His program, *hofgrüder.de*, then matches students with existing ventures who do not have a family member to take over the business. The process allows older farmers to gently transition their businesses to a younger generation outside their family. In doing so, he is putting a stop to the demise of small family farms and encouraging communities to support local value chains.



**Haron Wachira of Kenya** is a consummate entrepreneur of rural agricultural initiatives. He was originally selected as an Ashoka Fellow for aggregating crop production amongst small rural farmers, establishing farmer co-ownership of agricultural businesses, and then retooling value chains around this new enterprise structure. In doing so he created a surprising win-win scenario between subsistence farmers and the agro-processing industry. Most

recently, Haron is innovating along the Nutrient Value Chain by collaborating with Ashoka Fellow Anders Wilhelmson of Sweden to transform human “waste” from urban areas, using the very successful appropriate-scale sanitation technology invented by Anders, into a source of extremely rich and appropriately packaged local fertilizers for rural agricultural markets. They are now processing and marketing thousands of bags of this powerful, locally produced fertilizer per week.

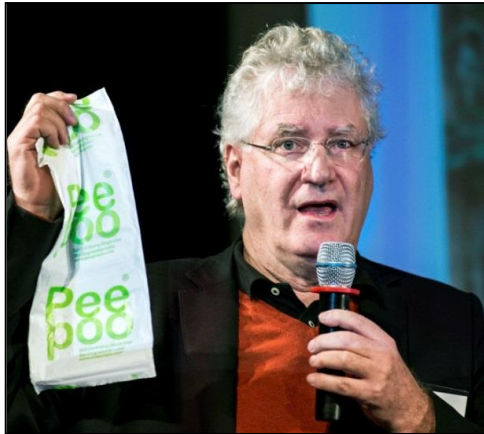


**Florence Wambugu of Kenya** is making it possible for smallholder farmers to increase their nutritional output by developing seeds that are genetically modified to increase the nutrient content of the food. Until very recently, seed selection and development had focused on production qualities, not on nutrition.



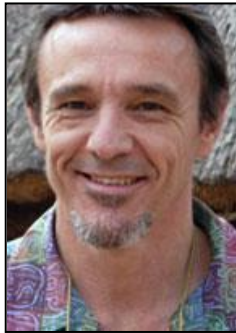
**Cathy Watson** launched several creative radio, print and other mass media programs in Uganda over a 25 year period, inspiring people to make informed decisions regarding their health and vitality. Her successes include programs focused around environmental sustainability, agriculture, youth, the education system and sexual health. Two years ago Cathy took on a new role, focused on scaling up African agroforestry as head of programme development at the World Agroforestry Centre (ICRAF) in Nairobi, Kenya.





**Anders Wilhelmson of Sweden's** pioneering technology for reducing sanitation-borne illnesses in areas with poor sewage systems is turning into a Nutrient Value Chain boon. His bio-plastic toilet bags neutralize disease pathogens in the waste, turning it into nutrient-rich fertilizers for agriculture. For example, in partnership with Ashoka Fellow Haron Wachira in Kenya, over 25,000 bags are now processed weekly, reducing sanitation burden around Nairobi, providing locally-produced, highly effective fertilizers to farmers in the surrounding countryside, generating local employment through this enterprise, and putting more

choices and resources under control of local communities. The Kenya-based business enterprise continues expanding, and Anders is working elsewhere as well.



**John Wilson of Zimbabwe** develops strategies with communities throughout Sub-Saharan Africa for creating holistic local economies that integrate agriculture, environment, health and culture. He focuses on community vitality and integrated farming and community-led planning practices as the key mechanism for reducing environmental and economic risks – locally and nationally – in the face of some of Africa's biggest development challenges.



For nearly 20 years, **Victor Zambrano of Peru** has been showing how deforested areas in the Amazon can once again become healthy ecosystems through new small scale farming and land management strategies that restore soil nutrition. Amongst other things, Victor's team pioneered difficult tasks of

community organizing in this indigenous region, as well as plantings of mixtures of native plants and crops that simultaneously restore the environment and produce sustainable food supplies for consumption and sale by small farmers.

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Read more about these and many other Ashoka Fellows at [www.Ashoka.org](http://www.Ashoka.org)

