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## In Gandhi's footsteps (2002)

### Two unusual development organizations foster sustainable livelihoods in the villages of India

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*We never thought we could sit on the same mat as the men. But things have changed now. We no longer draw the veil over our faces, and we can talk with men as equals.*  
- Malla, Secretary of the RHEP Village Committee, in Orissa

*I began my training at TARAGram as a mason. As my plastering and masonry skills developed, I confided to the didis (elder sisters) who were training us that I would only be able to work within the campus, because no one in the village would employ a woman mason. I was immediately transferred to the tilemaking unit. Here I can use the masonry skills I have learnt, and tilemaking is also a small household level business, which I can easily manage on my own.*  
- Women tilemaker at Development Alternatives' resource centre, TARAGram.

In village India, the challenges for development are great. India may be the largest secular democracy in the world, with constitutional guarantees against discrimination on the basis of religion, caste or gender. Nevertheless, feudal and chauvinistic practices remain and a large section of the rural population is effectively marginalised.

Life is especially difficult for *adivasis* (tribal people who have occupied the land and forests since pre-historic times) and *dalits* (members of the "untouchables" caste) who have lost their traditional access to sources of livelihoods due to post-independence government policies. For the use of resources from the forest, such as stone for building their houses, or fuelwood for cooking, they often have to bribe forest guards (police). Moreover, markets for the forest produce that they do collect, their main source of sustenance, are now mostly governed by exploitative monopolies and middlemen.

Facing such realities, development work must address people's immediate needs in ways that also promise the security and dignity of sustainable livelihoods. The best bottom-up development initiatives typically focus on building rural economies through the investment of seed capital to make better use of available local skills and resources. But they also integrate careful attention to all aspects of fostering sustainable livelihoods - strengthening local assets, increasing social equity, rehabilitating damaged ecologies and enhancing local control.<sup>1</sup>

The approach is well illustrated in the efforts of two Indian NGOs: Development Alternatives<sup>2</sup> and Gram Vikas,<sup>3</sup> both of which work in villages of rural India whose most marginalized residents are *adivasis* and *dalits*.

The Development Alternatives program began with the establishment of TARAGram, a gradually expanding technology resource centre for small-scale enterprises that is within walking distance of a dozen villages in the Bundelkhand region of Madhya Pradesh. The centre's activities now include paper making, building materials manufacture and biomass energy generation, all using local resources.

The Gram Vikas' Rural Health and Environment Program (RHEP) is much more extensive, involving over 60 villages in the eastern Indian state of Orissa. RHEP provides clean water and sanitation improvements in ways that build cooperative local governance structures and skills, giving villagers more tools for self-directed action to improve their lives.

The two cases are in some ways quite different. Development Alternatives uses micro-enterprises and mixes public and private sector components.<sup>4</sup> Gram Vikas' rural health and environment projects rely on strengthening co-operative village governance structures. But both groups use appropriate technologies for lasting local economic opportunities, while carefully integrating social needs with attention to ecosystem capacity. And both see women as the primary agents of change.

### Development Alternatives builds rural industries

*It was July and there were still no signs of rain. Mithila's family (name changed) had prepared their field of less than a hectare, and sown the seeds in early May in anticipation of the monsoons in June. With no other source of water, the field was now completely parched. There seemed little hope that their crop would survive the drought. In desperation, Mithila's husband had borrowed from a moneylender. Their family of five needed two quintals (200 kg) of wheat to survive the year, and if he waited any longer, the rising market price of wheat could make it unaffordable. Husband and wife both needed jobs just to be able to pay the monthly interest on the borrowed money. They were paying ten percent interest per month, and had little hope of ever returning the principal. In effect they were bonded to the moneylender.*

This was the story of more than one family in the Bundelkhand region in the summer of 1995, the year that Development Alternatives arrived to set up a hand-made paper production unit funded by Canada's International Development Research Centre. For over ten years Development Alternatives had run soil and water conservation programs in the region. Now it was looking for opportunities to create off-farm livelihood initiatives – building rural industry using local materials and skills, creating jobs for local villagers, meeting other basic needs, and acting as a deterrent to urban migration.

The initial mandate was to employ rural women and youth in proving the technical and economic feasibility of the hand-made paper unit. But the work gradually expanded to include food, energy and building materials projects – all based at TARAGram, the Development Alternatives' resource centre, and all devoted to training and employing local people, especially disadvantaged women, as well as using and rehabilitating local resources.

Located 14 kilometres east of the city of Jhansi on a four hectare site provided by the Madhya Pradesh state government, TARAGram now directly employs over 70 people and serves about 25 villages in a rural area where about 30 percent of the people are *adivasis* and *dalits*. Agriculture is the main occupation of the people in the Bundelkhand region, yet only 35 percent of the net sown area has any source of irrigation. In spite of being a pastoral economy with a very high livestock population, the milk yield is extremely low. Industrial activity is also very low. It is therefore not surprising that every year up to 39 percent of the people migrate to other regions in search of seasonal jobs.

As a first step in building a foundation for more sustainable local livelihoods, Development Alternatives staff worked with local people to build a small dam on a nearby stream to augment on-site water supplies and help recharge wells in the vicinity. Because of the improved water regime, the forests flanking the stream are now lush and the neighbouring farmlands have a perennial source of water.

As the site was being cleared for the construction activities, care was taken to preserve indigenous trees and to keep grazing animals out so that dormant rootstocks could regenerate. Soon, there were many more trees on the site even though new new saplings had been planted.

At a rudimentary workshop, Development Alternatives staff fabricated a simple pyrolysing device and trained local villagers to use it to make charcoal from weeds cleared from the site. They focused especially on *Lantana camara*, a prolific invasive plant that was also taking over the neighbouring teak forests. The smokeless *Lantana* charcoal was blended with other binders including clay and cowdung to form a briquetted fuel. Initially it was just used in the TARAGram kitchen, but slowly it became popular with the villagers providing an alternative to fuelwood.

Within nine months, the site had about 600 square metres of semi-covered production sheds and an equivalent area of covered production facility. The first building housed the handmade paper training and production centre for 40 women. Electricity for the machines was generated on site using a 100 kW biomass based gasifier.<sup>5</sup> The gasifier feedstock was another invasive weed, *Ipoemia*, which was slowly overrunning local water bodies. Using it in the gasifier solved two problems at once.

In response to the rapid deforestation caused by the over-dependence on fuelwood for cooking, Development Alternatives staff initiated research on alternate fuels from other waste biomass and promoted gasifier use as a decentralised source for rural electrification and rural industrialization.

Manufacturing wall and roof materials has become TARAGram's most significant activity. When Development Alternatives arrived, the Bundelkhand region needed an estimated 17,000 more homes for the existing population, and substantial upgrading of an additional 32,000. It also had a major industrial waste problem. Stone crushing operations in the region export stone aggregates and leave behind great volumes of stone dust, which has been dumped along roadsides and in fallow agricultural fields.

TARAGram's materials centre uses the stone dust and other local materials to make an affordable microconcrete roofing tile. The centre also trains potential entrepreneurs, masons and roof-layers in the production and use of these building materials. Today, the Development Alternatives tile-making unit is completely run by rural women, and similar tiles are also supplied by over a dozen independent micro-enterprises. The tiles are readily available in the market and are gradually being adopted throughout the region.

In a region with such a great housing shortage, closing the housing gap would have been a mammoth task for any single organization. But by working with local independent entrepreneurs, Development Alternatives has been able to have a much more substantial effect.

All the Development Alternatives projects - soil and water management, paper making, biomass energy generation and building materials manufacture - have emphasized training local villagers. As well, some of the villagers have acquired specialized masonry skills through the

construction of the various buildings on the site. While almost all the buildings were designed using the local arched masonry style, they also introduce the builders and the local communities to modern eco-friendly building materials, manufactured on the site.

Gradually the TARAGram trainees and workers grew into project stakeholders, starting as unskilled and underemployed, and becoming skilled, productively employed community members able to earn much more, while also subscribing to a larger vision.

Not everything worked well and Development Alternatives staff have had to adjust to unexpected effects. For example, even as the employed mothers were becoming more equal economic partners, their children, especially the young girls, were dropping out of school in order to take over household chores and care for younger siblings. The TARAGram design was therefore immediately changed to include a crèche on site for the children of the working mothers.

*Mithila has been working at the tile making unit at TARAGram for over four years now and can with her team of two helpers, also women, make up to 200 tiles each day. Her family is no longer at the mercy of the monsoons or the moneylenders, as their land is no longer the only source of assured food for the family. Mithila is the main breadwinner in her family. Working at TARAGram has not made her life more complex. On the contrary, she gets support in her role as a working mother and wife. She is accompanied by her children every morning, as she arrives at TARAGram to begin work. The Development Alternatives' van doubles as a school bus, taking the workers' children to a school seven kilometres away at Orchha. The children return every evening by the same van to TARAGram and then go home to their villages with their parents.*

*Mithila's association with TARAGram is not just as a place to earn an income: it has become a way of life for her and a source of power for improving her life. She plans to replace her leaky roof and is thinking about taking a loan in the form of building materials from the centre, the value of which she will pay back in easy interest free installments deducted from her monthly income. She is also part of a savings group, where women and men collectively save a small amount every month. The members can borrow from this fund at interest rates that the members of the groups have fixed by consensus. This interest accrues back to the common fund, which is allowed to grow until the festival season in October. It is then temporarily annulled and the money divided equally among all its members, providing them with money for festivities and celebration.*

Similar stories can be told of at least 70-80 other people, a majority of them women, working at the different production centres on the site. More villagers are involved in spin-off activities such as household-run tile manufacturing for which husbands are marketing agents and the wives stay at home and produce tiles while managing the house.

Like most development initiatives, Development Alternatives' work is an intervention from outside. It brings in new resources and expertise and, at least to some extent, it brings in its own outside agenda. But this agenda places a heavy emphasis on local skills and resources. As well, it uses the market as a delivery channel and as the medium for replication and scaling up. And it stresses partnerships with local artisans, building material makers, retailers and building contractors.

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Much of the TARAgam project's success in enhancing sustainable local livelihood opportunities rests on its integrated character - linking local employment with adult training and child education, ecological restoration, reliance on local materials and markets, opportunities for women and partnerships with local entrepreneurs. The results so far are impressive and should continue to build on each other. They include reduced seasonal migration to cities for casual employment, improved local availability of basic need items such as alternative cooking fuels and building materials, more purchasing power for local people, a local economy that is more self-reliant and an environment that is less degraded.

### **Gram Vikas strengthens local governance**

Like Development Alternatives, Gram Vikas is an organization that brings technological improvements to villages in India. And it too has a much larger, broadly integrated agenda centred on building skills and consequent long term opportunities for local people. But instead of rural microenterprises, Gram Vikas focuses on village democracy.

Technology is the entry point. Between 1984 and 1993 Gram Vikas built over 55,000 biogas units<sup>6</sup> in 6,000 villages across the state of Orissa, as part of a rural energy drive promoted by the Orissa state government and other partners including India's Agricultural and Food Production Organization, the Government of India and the Canadian Hunger Foundation.

Since then it has continued at the same pace, though it has branched out from energy projects to water supply and sanitation infrastructure. Gram Vikas' Rural Health and Environment Program (RHEP) involves constructing communal village water tanks that are then used to support drinking water supply and washrooms for each house in the participating villages.

There is nothing extraordinary about facilities that are constructed. Financing and decision making are another story.

RHEP requires one hundred percent participation in the program by all the households in the village. The thinking is that if even one household fails to participate, open defecation sites would continue to be used, eventually resulting in the contamination of the water bodies and the spread of water-borne diseases. This would negate any steps taken in improving the health of the community.

Therefore Gram Vikas brings the entire community together and facilitates the formation of a village committee for the common purpose of building the village central water tank. Once this community asset is created, the now experienced village committee addresses the water and sanitation needs of each household.

Seed capital comes from external agencies, but Gram Vikas generates much of the necessary funding locally, from government programs and from the community itself. Indeed, the community contributes up to 45 percent of the total capital investment required for the new facilities infrastructure. But since the money goes to employing local people, it stays and circulates in the village.

The strategy forces all the villagers, irrespective of status, to come together, not only to raise the desired finances for the project but also for joint decision making, initially with respect to the water facilities, but eventually for other decisions within the community. Gram Vikas has also adopted a campaign approach, training volunteers from the villages in local development

issues, through regular leadership programs. The intent is to increase local decision making and reduce dependence on external managerial support.

Gram Vikas' work in Orissa today includes 20,000 households in 500 villages. RHEP alone involves 5000 households in 67 villages. By 2010, Gram Vikas estimates, the ripple effect of RHEP will have spread to at least 400,000 people - approximately one percent of Orissa's total population.

The program has had a positive impact on the health status of all participating villages, through the eradication of water-borne diseases and an overall improvement in nutrition levels. Many women now have easy access to green vegetables grown in their own small kitchen gardens that use the wastewater diverted from the baths. In many villages there has also been a marked increase in school attendance because the village committee has been supervising the effectiveness of the educational curriculum.

For Gram Vikas, the provision of infrastructure for water supply and individual toilets and bathing rooms is the immediate focus only. The long term goal is to mobilize the village community, and create local decision-making structures that are directed towards building up community assets.

In RHEP, the villagers raise a core financial fund with contributions from every single household in the village. This money is invested in the banks for a fixed period and the principal will be used within the village only in the case of dire emergencies such as serious cyclone damage. But the accrued interest will be used to finance the construction of toilets for new households in the village, thus replacing the development funds for toilet construction currently provided by Gram Vikas.

Many village committees are also using the money saved in this fund as collateral to access loans for building-up village community assets and for re-circulating wealth within the village economy through informal local lending including women's savings and credit schemes.

*In the village of Mothamukundapur, famed for its tomato crop, the village committee has used the money raised as financial corpus (currently held under fixed deposits in the banks) as collateral to develop a community based irrigation system. This irrigation system includes HDPE pipes for water distribution, a sprinkler system for irrigation and even a tractor. With assured water from the RHEP water tank, the irrigation system has improved availability of water in the village's remotest fields and led to bumper tomato crops. Because livelihood resources are now more secure, villagers have begun to access loans to upgrade their homes, confident that they will be able to repay them.*

*Village women in Mothamukundapur now rally together every year to celebrate the International Women's Day on the 8th of March. They have a revolving fund from which money is loaned out among members at an interest rate of three percent per month and a four month ceiling for repayment. The money is often used to purchase seeds and fertilizers, but seldom for food-grains.*

*For the provision of food grains, Gram Vikas has revived the traditional grain bank practices. The grain bank is still governed by the customary village laws. Bank members can borrow grain, which they return from the subsequent harvest. Contributions to the grain bank are based on the yields of every farmer, with richer farmers making a bigger contribution. Before these traditional structures for loans had been revived, and new ones*

*for savings and credits established, the village community had been at the mercy of moneylenders who would sometimes charge as much as 15 percent monthly interest on the principal.*

RHEP uses development funds to create local assets and it enables communities to maintain and reproduce these assets without external assistance. Between 1992 and 1998, through RHEP, 3,000 households in 40 villages had saved an equivalent of Cdn\$110,000 in banks, the value of which today has grown to over Cdn\$189,000. This is enough money to build over 100 permanent and disaster proof, two-roomed 45 square metre houses with a kitchen and a verandah, meeting the minimum needs of a small family.

No less significantly, the Gram Vikas program has established a much stronger informal economy based on barter and local micro-credits, as an alternative to the prevalent economic system. Money is no longer the only medium of exchange. Skills are now actively bartered. The local decision-making abilities of the village committees have also been enhanced through their experience in managing the RHEP initiatives. In some cases the local governance structures have expanded into a network of villages, which are slowly establishing their own levels of self-sufficiency on a larger scale.

### Catalysts for change

Individual small successes in local development efforts may not by themselves overturn exploitative socio-economic systems. But they can have a ripple effect far beyond the initiating villages. The result can be clusters of more sustainable communities with the critical mass necessary to force governments, political organisations, private businesses and civil society organisations to respond to their demands.<sup>7</sup>

The efforts of Development Alternatives, Gram Vikas and other such organizations to build sustainable livelihoods in Indian villages<sup>8</sup> can be seen as just the most recent incarnation of Gandhi's dream of *purna swarajya*, empowered self-reliance at the village level. Their successes centre on helping marginalised people gain access to local resources and opportunities. So far these are just small steps towards the redistribution of power that Gandhi had in mind. But the cluster-effect of such social transformations should gradually build and may yet exert significant pressure on the state and central governments.

The Indian government has recently moved, through the recent 73rd amendment to India's Constitution, to give village governance bodies more powers related to developmental activities. If this is to help currently marginalised villagers, it will have to be accompanied by development initiatives that build the foundations of livelihood security and confidence that support a "politically assertive community." As Joe Madiath describes the efforts of Gram Vikas in Orissa, the idea is to foster "a people's movement ... where each individual in the community is represented, and each and everyone can assert for themselves in the Panchayati Raj (village governance)."<sup>9</sup>

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<sup>1</sup> The Institute for Development Studies at Sussex has defined sustainable livelihoods as those that are achieved through improved access to a range of livelihood resources (natural, economic, human and social capitals), combined in the pursuit of different livelihood strategies (agricultural intensification or extensification, livelihood diversification and migration). See Ian Scoones, *Sustainable Rural Livelihoods, A framework for analysis*, IDS Sussex, Working Paper 72, 1998. A sustainable livelihood can also be defined as a remunerative, satisfying and meaningful jobs that enable every member of the community to contribute in the nurturing and regeneration of the resource base. See Ashok Khosla, "Sustainable livelihoods," in *Policy Matters*, Issue no. 5 (July 1999), pp. 1-7.

<sup>2</sup> For more information on Development Alternatives visit their website: [www.devalt.org](http://www.devalt.org)

<sup>3</sup> For more information on Gram Vikas visit their website: [www.gramvikas.org](http://www.gramvikas.org). The RHEP project has recently been awarded the "Most Innovative Project Award, GDN 2001" by the Global Development Network of the World Bank.

<sup>4</sup> Such a mix has been rare in development work. See Ashok Khosla, "Making development a good business," Editorial, *Development Alternatives*, Vol. 11, no. 8, August 2001.

<sup>5</sup> The equipment has a reactor in which biomass is processed into producer gas, which can replace diesel as a fuel for electricity generation or can be used directly for combustion heating or cooking.

<sup>6</sup> The biogas units built by Gram Vikas are masonry structures, ranging in capacity from two to four cubic metres. Using cowdung as feedstock, the units generate methane gas and a by-product slurry that is a good organic manure. The methane gas is directly piped into the kitchens, providing a clean smokeless fuel. Thus the biogas not only improves the cooking environment for the women, it also displaces the use of chemical fertilisers in the farms.

<sup>7</sup> Project Description: The Rural Health and Environment Program, Gram Vikas, Submitted for "Most Innovative Project Award," Global Development Network GDN, 2001.

<sup>8</sup> Examples of successful grassroots initiatives include the Narmada Bachao Andolan (Save the Narmada movement, [www.narmada.org](http://www.narmada.org)), the Ralegoan Siddhi experiment, and The Centre of Science for Villages. For more examples, see [www.cseindia.org](http://www.cseindia.org)

<sup>9</sup> Joe Madiath, personal communication, Jan 1999.