

LIFEFORCE REPORT 2008

Introduction

Until 2007, the conservation work had to be put 'on hold' when the British LifeForce personnel left India each year as visas expired, and to fund raise, prepare accounts and complete various other administrative tasks in England. Since our collaboration with a few select Indian NGOs, the work can continue all year round. Hence the report does not refer to the traditional 'season' crossing consecutive years such as 2006 – 2007 but refers only to 2008. For as long as current arrangements continue and/or LifeForce and/or tigers can survive, future reports will correspond to calendar years.

As LifeForce members may remember, projects have been reduced in number in order to focus reducing funds and resources on those threats to the tiger considered most critical. However, in order to give LifeForce supporters some idea of the 'bigger picture' the 'Updates' page on the website is becoming more current with very recent 'news bulletins'. This has become possible as trusted sources have been identified and communications improved. Whilst we cannot predict when or what news will arrive, the selections give a general description of developments regarding conservation issues in India and usually with particular reference to the tiger.

With regard to LifeForce projects, the reader may recall from last year that LifeForce worked in collaboration with another NGO called Nature Conservation Society Amravati to provide a village in Melghat Tiger Reserve with electricity generated by bio-diesel fuel.

Progress on the project was included in last year's report but since the project only completed in December 2007 this is the first opportunity to report on its conclusion.

The Bio-Diesel Project

To remind the reader of the scale of wood consumption in India, a few figures may help: About 70% of India's population live in villages (approx. 700 million people), the vast majority of which have remained outside the reach of economic development. Due to the remoteness of many of these villages, supplying electricity through long power lines is expensive, difficult and not always environmentally-friendly. Hence only c. 31% of rural households has access to electricity. Even in these so-called 'electrified villages', 70% of the households cannot afford connection. The other 30%, which has been connected, receive a poor quality supply and even this is frequently interrupted. There are also restricted times of supply, sometimes just 4 to 6 hrs during the night - when it may be of no use.

Where power lines have been supplied they have sometimes been used to kill wild animals, including tiger and leopard (one end of a conductor is attached to the power line and the other end left in a pool of water. Any animal drinking the water is electrocuted).

Moreover, from an environmental perspective, electricity is undesirable since India's electricity supply follows the Western model of enormous centralized power plants, usually burning fossil fuels.

Commercial petro-chemical fuels have not penetrated the majority of rural areas as the resident communities represent low purchasing power and have little infrastructural development to support such commerce.

Hence the rural energy scenario in India is characterised by a high dependence on natural fuels. According to a survey by the National Council for Agriculture and Economic Research, 90% of the energy needs of the rural domestic sector are met by biomass resources - fuel wood 56%, animal dung 20% and crop residue 14%.

So, more than half the energy requirements of many hundreds of millions of people are met by wood from the forest – which was, and most of what little remains still is, tiger habitat.

This project aimed at providing electricity generated by an un-modified diesel engine running on bio-diesel made from locally available non-edible tree-borne oils (the focus in India is on non-edible oils due to the high demand for and price of edible oils) using species such as Pongamia, Kusum and Behra. One species of tree-borne oil which is edible but not totally exploited commercially is that of the Mahua tree. All of these trees are available in ample quantity in the forest around the villages in Melghat Tiger Reserve. So in addition to removing the need to take wood for fuel, our bio-diesel project provides an incentive to protect the trees. Unlike some Western government-funded bio-diesel projects, not a single tree was cut for our project, much less whole forests clear-cut in order to plant 'bio-diesel species'. The seeds from most of these trees, if not collected for bio-diesel, would rot into the forest floor.

Worryingly, the decision makers within many governments remain appallingly ignorant of nature's interconnections and/or are still overly influenced by business. It is this combination of ignorance and powerful commercial interests that has taken us into the environmental crisis but it remains in place and renders various remedial actions of limited value or useless. One of the most harmful and stupid actions currently possible is to unnecessarily clear-cut any mature natural forest anywhere on Earth. The government has just woken up to global warming yet deforestation makes a major contribution to global warming whilst simultaneously removing another critically important 'carbon sink'. Moreover, the remaining forests are essential due to their function in

- retaining the water table
- binding the soil
- generating and holding nutrients in soil (nutrients used by neighbouring agricultural land)
- influencing oxygen/carbon dioxide interchange and cloud formation via transpiration
- providing shade for all
- providing a habitat for innumerable species of, for example, plants, fungi, insects, birds, reptiles and of course, mammals, such as the tiger

In addition to providing electricity from bio-diesel, additional challenges for this project were to make it affordable, reliable, local (de-centralised) and renewable, and be available for both personal and income-generating activities (e.g. running a flour mill, pumping water for irrigation or to operate agricultural equipment and transport). These benefits can transform the life of the poor, while removing a tremendous pressure on the forest, and hence, the tiger.

If all this could be achieved for tribal populations living in particularly remote and inaccessible areas (where both fuel and water for daily use are difficult to obtain and women and children have to trudge long distances to collect them) it could be achieved for villages nearer to towns and cities.

The village of Khamda is one of the remotest villages in Melghat, situated on the northern boundary of Melghat Tiger Reserve. As the terrain around the Khamda village is hilly and rugged, it is almost impossible to draw power lines through the forest. Mahua oil seed is locally and easily available and these vegetable oils do not require sophisticated technology for refinement or conversion to bio-diesel, nor require the engine to be modified. For these reasons, its socio-economic situation and that the villagers willingly gave their consent to the project, Khamda was the village selected for this project.

Preliminary meetings were conducted to introduce the concept to the villagers. Forest Guard Mr. S. S. Kharabe assisted in this critical work and the school teacher, local policeman and Sarpanch (local Headman) were all very co-operative. Enthusiastic tribal youths were also identified who could be trained to maintain the project after implementation.

The separate stages of implementation were described in last year's report and were mainly comprised of tests and trials. These were completed successfully and we can now report that full-scale provision followed such that the project completed successfully and met the criteria of providing affordable, reliable, local (de-centralised) and renewable energy from bio-diesel. Electricity is now available for all domestic uses and is also used for pumping water for agricultural purposes. Other applications will no doubt follow in due course. Villagers no longer need to go into the forest to collect fire wood or water. The necessary trees are close to the village and supply enough seeds to last until the tree produces more as part of its natural cycle.

The project has, in addition to achieving the objectives listed above proved that bio-diesel can help in

- **improving the quality of life of the tribal community**
- **fostering co-operation with the Forest Department (with which all our conservation projects always liaise)**
- **significantly reducing the biotic pressure on the tiger**

The village will be used as a working example to encourage other villages to follow suit.

Quoting directly from one of the Indian officer's field reports: "The villagers are early raisers as they have to finish off their daily life before 7 pm as there is no electricity in the village. Not only that, they can not grow second crop as they can not irrigate their agriculture land to full capacity without electricity. The electricity has been the sheer dream for the tribals of Khamda. When the testing work was on, the installation team was overwhelmed to see the smile on the faces of the tribals. Especially the school going kids and their teacher was very happy. Villagers served the nice simple food to installing team that night. That was the memorable day for the Project Director and the entire team."

The overall team included; from Visvesvaraiyya Institute of Technology in Nagpur, Prof. N. V. Deshpande, Mr. P. V. Bhale and Mr. Bhujade; from the Industrial Training Centre,

Badnera-Amravati, Mr Barbat, Mr. Tayde and a team of 12 students from VYWS College of Engineering who assisted in village electrification and Mr.Dinesh Kothari, Indore.

The work involved much commitment and personal sacrifice from the director of the project; Prof. Nishikant Kale. Congratulations and sincere thanks to them all.

As LifeForce members will be aware, it is essential to consider conservation in the context of the 'Larger LifeForce' and this project is environmentally-friendly in more ways than one: it replaces fossil fuels with clean, renewable energy sources while eliminating any net increase in carbon dioxide emissions, a major contributor to global warming.

(If required, here is a brief 'guide for the perplexed' –

The products of any complete combustion, including that of bio-fuels, are water and carbon dioxide.

The Earth which humans inherited obviously had a great deal of carbon present in the bodies of plants and animals, before humans developed industry. This carbon cycled along with all the other cycles (nitrogen, water etc. which form and maintain life-support systems.

The carbon present in coal, gas and oil was 'hidden' or 'locked-up' in vast reserves underground. The burning of these fossil fuels by human industry produces a net increase in carbon dioxide in the atmosphere and significantly contributes to global warming. However, in our project, we are using bio-fuel as the substitute for fossil fuel and the carbon dioxide released by this fuel was already present in the parent plant (hence making no net increase). Moreover, since our project does not cut or kill any plant, its future offspring will need to absorb carbon to grow. Therefore the carbon 'footprint' of bio-fuels is very small).

The Employment Cell Project

The Employment Cell (EC) is the other larger and on-going programme of work, which LifeForce is conducting in collaboration with the Satpuda Foundation. The EC, while providing employment not directly dependent on forest resources, also addresses (via awareness workshops/seminars) the role of wildlife and the forest in securing the biological and economic livelihoods of all people, including the EC applicants / participants and the numerous audiences attending the associated audio-visual presentations. The booklet produced by LifeForce addressing these issues is used as a tool.

(This booklet: 'Tiger Conservation is People Conservation' is available on the website

www.liforceindia.com

click on the button to the right of each screen page and labelled 'Conservation pdf')

This booklet (in Hindi) has been distributed to SF's core conservation team, NCSA conservation team, teachers and Forest Guards to spread the message to tribal villagers.

The EC is now active in most of the Tiger Reserves of central India: Satpura, Kanha, Melghat, Tadoba-Andhari and Pench (which straddles the border between the States of Maharashtra and Madhya Pradesh and hence has separate administrations). Unemployed youths from all of these Tiger Reserves have been provided with jobs. Whereas before

they may have been engaged in illegal cutting of bamboo, idling in their villages or taking only occasional labour, they are now engaged in regular, gainful employment. This has resulted in a boost to their own and to their families' standards of living while removing any need for them to go into the forests.

Although the quarterly report ending December '08 cannot, at time of writing, be included in this report, the total will exceed 130 individuals employed so far. Considering family sizes in India, this means a minimum of 500 fewer people directly dependent on the forest for their livelihoods).

The Cell has also taken the opportunity in its regular field visits to show films with a conservation message to villagers after its meetings/workshops. This has been thanks to the extra battery fitted in the Cell's Tata Sumo along with the LCD projector and DVD player purchased by LifeForce as part of the original capital outlay.



The EC cell's fully equipped Tata Sumo

In addition to 50 awareness workshops/seminars conducted, attended by over 350 people, environmental education programmes were conducted in 100 schools which were attended by 3902 students. In addition to the c.130 employed 'externally', training programmes have also been organised and conducted, imparting practical/vocational skills to 60 youths so far (e.g. handicrafts and the making of furniture from lantana; vermi-composting (composting of organic waste with the earthworm as the only added 'ingredient') plus other skills – see pictures below). 30 SHG's have been set up so far. (A SHG or 'Self-Help Group' is a group of workers who produce goods, the sale of which repays by instalments the loan that sets the group up commercially, while also generating a profit for the group members). These activities and the resulting changes to individuals' lives and their awareness, education, consciences and consciousnesses are hard to quantify but nonetheless essential for progress, conservation and hence all of our collective futures.



Preliminary meetings prior to training programmes or employment





Making (legal!) bamboo matting



Trainees learn how to make candles



A Community Officer (in blue shirt) addresses a SHG

The EC team went to Kanha Tiger Reserve to visit 10 villages and met around 80 youths and held meetings with them. People in one village called 'Chappri' make handicraft products out of bamboo (which they cut illegally from the jungle). After discussions with the EC team, we are confident that they will replace bamboo with lantana (which is not only legal but brings great ecological benefits by removing this artificially introduced and prolific weed).

The number of successful placements so far may seem small compared to the numbers of people requiring this type of help. However, a brief review of the reality of the situation puts these successes in perspective: the tribal people are not waiting for employment opportunities, or to shower the EC team with enthusiasm and gratitude. It is difficult to persuade some tribal youths who gain a good income from illegal activities (which do not occupy most of their time) to exchange it for a legal but lower income (which does occupy most of their time). Moreover, even after initially overcoming this problem, some youths will return to their village after only a few days or weeks of their new situation, which is often some distance from the homes, family and friends that they have been in close proximity to, all their lives. Tribal people are generally very naïve and innocent and, like youngsters experiencing school for the first time, they can be wary and reluctant to accept the new regimes and required disciplines. Partly due to these factors and partly due to some aspects of Eastern culture, they consider they are doing the EC team a favour by accepting their help!

The EC team already included psychological preparation and confidence-boosting classes in addition to the skills training but in response to those who leave their new positions prematurely, they have adjusted their strategies and are selecting candidates very carefully in order that the placements are long-term successes – for the employed, employer and for forests and tigers.

As the first project of its kind, much has to be learned from actual experience and the whole project is not yet two years old. All things considered, (including that work continues through the monsoon with particularly heavy rains during August 2008) the EC team has done a remarkable job so far and sincere thanks go to the team members; in particular, overall director Mr. Kishor Rithe, Mr. Giri Venkatesan - Executive Director of Satpuda Foundation, Mr. Naved Khan - Employment Officer, Mr. Anil Shelke – Driver; and those working in each Tiger Reserve;

Mr. Amit Awasthi (**Kanha Tiger Reserve**) and his team of 2 community officers;
Mr. Anoop Awasthi (**Pench Tiger Reserve**) and his team of 3 community officers;
Mr. Ashfaq Aarbi (**Satpura Tiger Reserve**) and his team of 2 community officers;
Mr. Sandeep Misra (**Melghat Tiger Reserve**) and his team of 2 community officers;
Mr. Bandu Kumare (**Tadoba-Andhari Tiger Reserve**) and his community officer.
(to support so many community officers in these Reserves funding has also been contributed by the Born Free Foundation and thanks go to them also).

EC has also made major contributions to; preventing loss of income due to alcoholism (e.g. getting one village to agree to permanently close the little store selling alcohol); preventing hygiene problems leading to bad health and has also provided advice on human and animal population control. Strong networks have been established and rapport developed with government agencies and various trainers while new employers continue to be identified and new associations made.

There are still some issues to be resolved, particularly where the attitude of villagers towards regular employment is concerned. Government agencies also need to be prodded to be more pro-active. However, overall, the Employment Cell team is now confident of scaling up its operations even further and making an even bigger impact in future – if LifeForce can acquire funding.

The LifeForce/SF/BFF project is running in all of the following Tiger Reserves (T.R.'s). The approximate length of the forested 'corridors' between them is given below as one measure of the size of tiger habitat with which we are dealing. It is almost certainly the largest block of tiger-inhabited tiger habitat left on earth. If you had to walk it, it is large, but compared to the scale of tiger habitat originally provided by nature, it is miniscule.

Satpura T.R. forest extends south-west to meet Melghat T.R. – c.170 km

Melghat T.R. forest extends east to meet Pench TR (Maharashtra) – c. 200 km

Pench T.R. (Madhya Pradesh) forest extends north-east to meet Kanha T.R. – c.142 km

Pench T.R. forest also extends south-east to meet Tadoba-Andhari T. R. - 150 km
However, this forest corridor is under serious threat. Details may be viewed on the updates page of the website (www.lifeforceindia.com)

Kanha T.R. forest extends north to meet Bandhavgarh T.R. – c.168 km but, due to lack of funds, Bandhavgarh has not yet been included in EC activities. However, if and when funding allows, these corridors and Bandhavgarh T.R. can be included in the EC project.

LifeForce's own analysis, that of SF personnel, comments from govt. personnel and experienced wildlife and environmental journalists all agree that this is a very important, if not critical, project addressing nearly all the factors threatening the tiger's continued existence – it takes people out of the forest and provides a regular, legal income to sustain them and their families. Animals, plants and produce are neither damaged nor removed but the associated human noise, pollution and disturbance are removed. It breeds co-operation between the tribal people and the authorities, as opposed to antagonism, which results in deliberate damage to the forest such as deliberately set forest fires. It also forms an efficient and free intelligence service since tribal people know when itinerant poachers are in the forest.

LifeForce is conscious of how relatively small its project is in comparison to the problem - yet in this case the only limiting factor is money. With more money, more staff can be employed to apply the principles and practices that are proving so successful. The experience, infrastructure and personnel are all available and only funding is required. LifeForce has just about sufficient funds to continue the current scope of the project into 2009 but current funds will not, unfortunately, allow expansion to Bandhavgarh Tiger Reserve and the corridors.

More worryingly, funding the project for 2009 will exhaust almost all LifeForce's financial reserves since, during 2008, no applications for funding have met with any success.

The Larger LifeForce

Given the current economic climate, the absence of funding during 2008 will probably be of no surprise to readers. Many people have to struggle to survive (except those who have caused the crisis, who remain extremely rich) let alone find money to help others. The full consequences of this crisis have yet to be seen. The 'credit crunch' is proof that greed and incompetence really are controlling influences at fundamentally important levels of our societies.

Does this have any relevance to tiger conservation beyond the drying up of donations? Very much so: the environmental crisis is also born of the same greed, stupidity and failure of governments to control big business. The looming and far more dangerous 'ecological credit crunch' is referred to in a report prepared by the Zoological Society of London and WWF which reveals that wildlife in general is dying out at the fastest rate since the dinosaurs became extinct – that wave of mass extinctions occurred before humans appeared on the planet, while this wave is a consequence of humans having appeared on the planet. LifeForce members will know that animals function as essential links in our life-support systems.

However, due to our behaviour it seems, in terms of geological time, our appearance will be a very brief one since the consequences of our actions indicate that we will soon be disappearing from the planet – emphasising the inaccuracy of a modern slogan commonly used in connection with the environmental crisis: 'save the planet'. *The planet is not under threat* - only our tenancy on it and that of species we affect.

In addition to tigers and other exotic species such as Asian elephants, various species of rhinoceros, penguins...species closer to home, such as a variety of insects (e.g. the honey bee), European mammals and songbirds, are all under serious threat. These and other environmental problems all equate, via a circuitous chain of connections, to our interfering dangerously with our sources of oxygen, water and food. Whilst the environmental crisis deepens generally, as 2009 arrives, the situation is immediately critical for both LifeForce and, more importantly, the tiger.

Problems born of the economic climate will pale into insignificance compared to problems born of the natural climate – which we continue to aggravate, not least by the amount of hot air spoken about it while too little action is being taken too late.

In connection with the ZSL/WWF report Jonathan Loh of the ZSL referred to us acting ecologically in the same way as financial institutions have acted economically – seeking immediate gratification without due regard for the consequences.

Hence it is evermore important to be examining every aspect of your life-style, particularly in terms of consumption, in order to make it as ethical and environmentally-friendly as possible - for the sakes of the tiger, yourself and your own family. All things are connected e.g. Friends of the Earth have recently reported that 20% of timber imports to the EU (and some proportion of this will have been tiger habitat) are illegal or of suspected illegal origin. They also report that much of this timber is then sold on to manufacturers *legally* under current EU laws (see F.O.E. website, where you can send protest emails to the relevant authorities). Once again commerce and lack of appropriate legislation are directly responsible for further serious damage to our, and tigers', life support system. When purchasing any hardwood product please *insist* on verifiably

checking the origins of, for examples, wooden garden furniture, double-glazing frames etc. The website (www.lifeforceindia.com) lists many other suggestions for action you can take.