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Ecological Revival and Sustainable Living in the Tropical Dry Evergreen Forest of Tamil Nadu:

A Measurement of Residential Perceptions in
Sadhana Forest

By

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Introduction

Since 1970, the role and function of the U.S. Environmental Protection Agency (EPA) has been to promote environmental quality and to form strategies for carrying out environmental policy¹. The EPA has committed to sustainability as the next level of environmental protection. The agency states that sustainability calls for policies and strategies that meet society's present needs without compromising the ability of future generations to meet their own needs². Presently, society's requirements have resulted in natural resource exploitation and population distention- projected to reach 10 billion people within two human generations³. These paired occurrences are widely accepted as the most threatening and long-standing environmental challenges for the global community. Sustainability offers a starting place for addressing these threats and correcting the environmental degradation of the developed and developing nations⁴.

Ecovillage advocates define an ecovillage as, "A human-scale, full-featured settlement that is supportive of healthy human development and can be successfully continued in the indefinite future"⁵. Robert Gilman, founder of the Context Institute (one of the first non-governmental organizations's to focus on sustainability)⁶, refers to this description as the "sustainability principle". With at least 80 different contesting definitions of sustainability, it is reasonable that the EPA and Gilman's definitions do not align perfectly⁷; however, the importance of these two definitions exists within their similarities. Ecovillage inhabitants and the EPA are both concerned with the well-being of future generations on Earth and have proposed sustainability as an effective solution to combating environmental threats.

Sadhana Forest is an example of an ecovillage that fits the criteria of the "sustainability principle." It is located on the southeastern coast of India in the province Tamil Nadu⁸. Sadhana is an extension of the larger ecovillage, Auroville, and is situated west of the city Puducherry (Figure 1)⁹. The founders of Sadhana Forest, Yorit and Aviram Rozin, have taken residence there with their two children. As a family, they have dedicated their lives to living sustainably in addition to the ecological revival of

the once thriving tropical dry evergreen forest (TDEF) of Southern India¹⁰. All residents and volunteers of the ecovillage respect the sustainability principles of the community and the vegan diet, which epitomizes the communal endorsement of non-violence¹¹.

Though the mission of Sadhana is to re-establish the TDEF while simultaneously living sustainably, community activism has gone beyond definitions of sustainability aforementioned. Yorit and Aviram's home is a local and international place of opportunity for people to learn methods of sustainability. The Sadhana Forest web site, www.sadhanaforest.org, highlights what the ecovillage has done to establish itself with the local community and the work that the volunteers from all over the world have carried out in the forest. They uphold their maxim, "A forest to grow people", with invitations to free workshops taught by professionals living in nearby Auroville and weekly movie nights that feature environmentally conscious documentaries for all who wish to attend.

The purpose of this case study is to examine whether or not the residents of Sadhana Forest agree that they are effectively achieving their goals to revive the ecological condition of the TDEF and to live sustainably. This examination provides information about the human experience within a functioning ecovillage. Furthermore, understanding current perspectives of permanent and temporary residents of the community allows for reflection over the success of the community. This reflection is useful for further improving the sustainability methods of the future. In the end, Sadhana Forest offers inspiration to environmental conservation and sustainability as a global lesson for survival.

Literature review

There is much scientific debate about how sustainability should be defined, but very little discussion about those who live sustainably and methods of sustainability⁷. There are, however, many mainstream publications available about ecovillages as a means to achieve sustainability⁵. These publications highlight the various intentions of different communities ranging from environmentalism

and sustainable living, to human solidarity, and even the evolution of a higher consciousness¹⁵⁻¹⁷.

Sadhana Forest maintains their focus on reforestation. There are signs that the reforesting project is positively influencing the sustainability of the region. For example, monitoring has shown that their water conservation efforts have raised the local water table by six meters, and that the once barren flat lands now repopulate a young and thriving forest⁸.

Nevertheless, there are still threats to the forest due to its historical ties to the people of the region. Parthasarathy et al. discusses the need to include the local population in the TDEF's re-growth as cultural beliefs and attitudes evolve over time¹². For instance, many sacred grove sites are located in the TDEF and, in large, have helped to preserve the biodiversity of the TDEF. Cultural values and religious taboos have also influenced the undisturbed sites over time. However, as times change and new generations replace the old customs with Western norms, these areas are in greater danger of human disturbance.

Daly and Goodland reject the industrial world and negative impact it has on developing nations like India and insist that the entire world must become sustainable "as soon as humanly possible"¹³. They emphasize that the definition of sustainability varies between disciplines and that environmentalists should define sustainability as "maintaining natural capital;" natural capital being synonymous with the natural environment¹³. This definition is far too simple for discussing the Sadhana community. The residents' not only maintain the natural environment, but work to propagate new generations of indigenous plant and animal species that would not otherwise inhabit the region because of deforestation.

Maintenance is important for the livelihood of future Sadhana residents, however, the survival of the forest is dependent upon their continued efforts in water harvesting, reintroducing indigenous plants, building relationships with the local Indian villages, and hosting volunteer programs that help

spread awareness about Sadhana. Fowler and Hobbs expand upon the idea of “maintaining natural capital” with the argument that *Homo sapiens* must accept our role in nature¹⁴. They propose that humanity falls out of the normal range of natural variation and, therefore, is incapable of being sustainable unless we intentionally make the choice to be¹⁴.

Though this position supports Sadhana’s significance, and the residents who have chosen to be there, the authors do not offer a specific definition of sustainability. They also fail to explain the normal range of natural variation for humans. This is problematic because the absence of this information makes it impossible to build or test a model of sustainability limited to their theory. Despite this, Fowler and Hobbs’ reasoning is useful in that it encourages further examination of humans, like those at Sadhana, that intentionally practice sustainability.

Materials and methods

The primary research of this case study consists of ten interviews from the residents of Sadhana Forest December 24, 2010 through January 18, 2011. The sample size is limited to ten participants due to time restrictions, resident eligibility and their availability. Each interview was composed of the same five questions and recorded on an OLYMPUS® VN-6200 PC recording device. The only requirement for interview participation was that the subjects hold a long-term (anywhere from six months to three years) residency at Sadhana. Of the ten participants three were female and seven were male and their ages ranged from 21-48 years old.

With the exception of one, all participants were not indigenous to the TDEF. Despite their far away origins, each of these long-term residents calls Sadhana their home and considers themselves a part of a family. Long-term residents are preferred for this study because they are committed to the sustainable lifestyle at Sadhana, they have experience and exposure to the TDEF, and have unknowingly provided a testament of the Parthasarathy et al. recommendation that people are an integral variable in

the rehabilitation of the TDEF. Residents' responses from the following interview questions are a qualitative measurement of how they perceive their participation in reviving the TDEF and living sustainably.

1. Do you agree that you are successfully carrying out Sadhana's mission to revive the native ecological flora of the TDEF?
2. Do you agree that you are living a sustainable lifestyle?
3. Do you agree that your life is better/worse than before taking residence in Sadhana?
4. Do you agree that there is an international application to your work at Sadhana? a. Would it be beneficial for others to follow this example on an international level?
5. Do you agree that you could improve your lifestyle in any way?

Table 1. Interview Questions

The audio recordings of the participants' responses to the interview questions were transcribed and analyzed using MAXqda Plus. This software is an interface for systematically coding text. The coding process helped to identify themes between interview responses from multiple subjects. MAXqda 10 Plus is compatible with Microsoft® Word and Excel and allowed simple data transfer necessary for generating a graph of consolidated data representative of the residents' responses. This process helped to provide a measure of how Sadhana residents individually perceive Sadhana Forest.

Results

1. *Carrying out Sadhana's mission*

All of the participants agree that Sadhana is fulfilling their mission to strive for sustainability while carrying out a reforestation initiative. The one, "no", response to the first question is from an individual that feels their roles within Sadhana are an indirect contribution to the community's mission. This participant feels that he has no responsibilities that directly impact Sadhana's mission, but is more focused on keeping the project funded and staffed. The

others feel similar to an extent, however, they all work in the forest planting and building earthen dams from time to time.

A founding member stated that there is a human connection that has become more important than the forest mission. As a founder of Sadhana, he has watched people “grow” within the community, even if only visiting for a short time. He sees that his family’s dedication to the project has positively affected the lives of foreign visitors and local families alike. The children in the local villages that visited Sadhana seven years ago when it was just beginning are now young teenagers that have a relationship with the land and for this reason, “...their families do not cut down the trees.” Connecting with children has become a very important addition to Sadhana’s mission because they have realized that children are the future residents and guardians of the forest.

2. *Living a sustainable lifestyle*

The results for question number two are split 50-50. There is debate in Sadhana regarding whether they are as sustainable as they could be. The 50% that feel Sadhana is not sustainable enough for these individuals to call their lives sustainable disagree with the use of solar panels, shelter, owning personal belongings and the use of anything other than walking or a bicycle for transportation. They agree that to be sustainable you must make do without modern conveniences and live within the natural environment, without separating human existence from the ecological system.

Basically these residents view Sadhana as a stepping stone that will eventually lead to more pure forms of sustainability. These individuals feel that they could be doing more and that Sadhana still makes too many accommodations for visitors’ sake. These participants understand that the outside world is very far from achieving this and that Sadhana will probably never fit

their idea of sustainability. They view this minimalist take on sustainability as a goal to work towards.

The other half of the group feels that their lives are sustainable relative to their lives before Sadhana. These participant's responses are strikingly similar. Their reasoning all seems to intersect with the need to evolve their personal commitment to sustainability. They use motorbikes to visit nearby villages, buy food products packaged in plastics when they want variety in their meals or a special treat, and most of Sadhana's produce comes from farms in India as far as 200 miles from Sadhana.

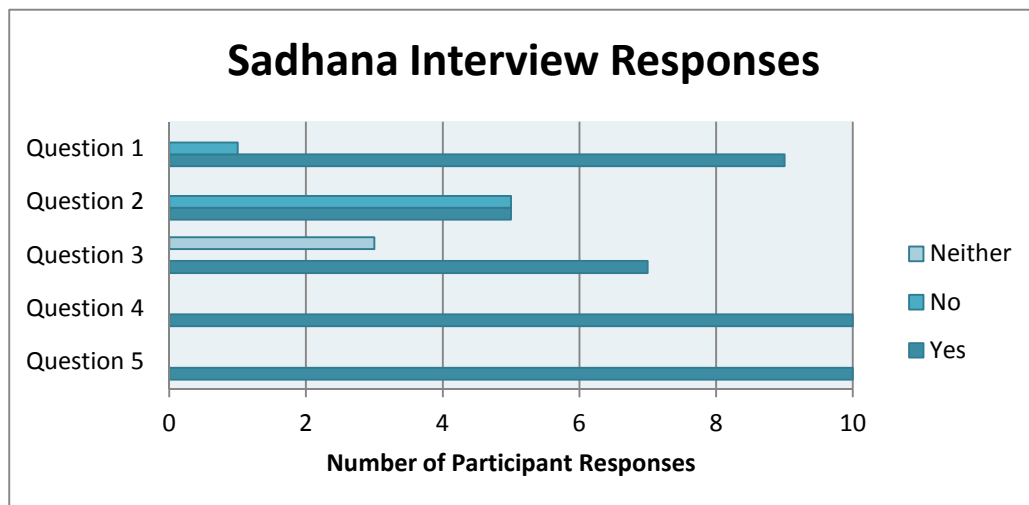


Figure 1. Interview responses

3. *Life before Sadhana*

Seven out of ten participants agree that their lives at Sadhana are better than their lives before committing to an ecovillage. In their interviews the residents explained that living in Sadhana has improved their health, helped them to become more conscious consumers, developed a newfound connection to the natural environment, and some feel that the community lifestyle has opened their eyes to human nature that they were blind to in the Western world. One resident shared that he is from a village not far from Sadhana and that the

community allowed him to eat well, sleep comfortably, and interact with new people from all over the world. Like many of the residents here, he has a work-exchange arrangement with the community.

Those who responded that their Sadhana experience could not be measured as either better or worse see it only as different. Living in the forest has helped these individuals appreciate how much they have in their home countries and how drastically different people in underdeveloped countries live. This tough reality is fuel for the people in Sadhana because the work that they do positively impacts a region full of many injustices.

4. *Sadhana's influence on the global community*

All of the interview participants agree that there is an international application to the work being done at Sadhana. One participant's hard work in water harvesting has become well known in India and has caught the attention of the Indian government. He is currently working on a large earthen dam in the province of Madhya Pradesh in central India. This dam is projected to bring water to hundreds of thousands of farmers.

Water harvesting is not the only important lesson to take from Sadhana. One resident views Sadhana as a model for ecovillages. He explained that changes would have to be made depending on the region of the world, culture, local traditions and lifestyles; however it is a working model that could easily be duplicated. Another very good point that the majority of participants share is the importance of creating a network. Sadhana has built a small network of people in the local area who lend their services to the community's daily activities.

The founders of Sadhana India have successfully developed a new community in Haiti. The sister community is modeled from India and has been operating since April 2010. This expansion is a test of the Sadhana model. It will help the Sadhana project observe just how much of their original plan can be reapplied and what needs to change. Each of the interviewees

agreed that the Haiti reforestation project is very good for Sadhana and promising for the Haitian community.

5. *Improvements*

There is consensus through the interviews that Sadhana is not perfect. Everyone has opinions about how improvements could be implemented and what could be removed from current practices. There have been issues in the past with sanitation and personal hygiene that has caused illness throughout the community during the monsoon season. Current solutions to this problem include compost toilet demonstrations for every single new visitor in the community and a reassessment of the dish washing routine.

Residents have also expressed that they would like to see a more “organic day-to-day experience” at Sadhana. The community has a fairly structured schedule through the day. A weekly meeting determines who will be responsible for what during the week. The day begins with a 6AM wakeup call. First work begins at 7AM and ends with a breakfast meal after a couple of hours of work. Second work begins at noon and soon after second work there is a lunch for everyone. Dinner is scheduled as well. The need for this structure is not necessarily accepted by everyone and some feel the community could function without it.

Other changes are also viewed as necessary as demands from the other local communities increase. Sadhana hosts an ecofilm screening once a week in their main hut that has attracted more people than the hut is able to carry. Because of this Sadhana is raising money for a projection screen large enough to present screenings outside. There are also plans to provide a new education hut for the growing number of student programs that are hosted at Sadhana through a number of universities and private organizations.

There is also a growing demand for more bicycles for the volunteers, expanding the gardens onsite, and a larger focus on what has been named, Children’s Land. Children’s Land is

an international project that Sadhana has jumped on board with. The idea is based around teaching children about nature and their local natural environment through unstructured activities and playtime. In Children's Land children are allowed to experience nature with the curiosity that comes effortlessly to children without the influence of adults. Sadhana has a relatively large area set aside for the children that come there to play and make music, earthen forts and do nature crafts but they would like to build additional infrastructure based off of the children's designs.

Discussion

Sadhana Forest is distinct in that it has not strayed from its mission, the community does not make profit from its work or their property, and they do not require any volunteers to contribute to purchases made by the community if they cannot afford to. Sadhana strictly relies on donations, and though this makes life difficult at times, this principle allows the community to remain focused on the TDEF. This distinction makes Sadhana an attractive subject for analysis because they have thus far avoided the complications of generating income in a non-profit business.

It is clear that through their interviews that not all of the long term residents of Sadhana agree with the decision to ignore the opportunities for creating revenue. As an organization, Sadhana Forest is always in need of donations so that they can move forward in their efforts. It became very evident early on in the interviews that each long term resident has different ideas about how the community could be conducted and while they all able answer the interview questions, the interviews become more about their positions in the community, what they are responsible for and their personal ideas about the need for change in the world.

The participant responses show strong support for the Daly and Goodland position that people must reject the industrial corporations that exploit natural resources¹³. The interview subjects agreed that the over consumption of resources in what they collectively refer to as "the Western world" is a

direct result of the contamination, short supply and unequally distributed use of the earth's precious resources. Interview responses also support Fowler and Hobb's conclusion that mankind will not be sustainable unless we intentionally make the decision to be¹⁴. The very presence of the individuals that have chosen to live in Sadhana Forest and live sustainably is strong support for the Fowler and Hobb's argument.

Further analysis of the data reveals that Sadhana has been able to uphold their mission by becoming a strong presence in the local villages. Their partnerships with schools bring children to the forest where they are free build in internal appreciation for the natural environment around them. In exchange for the opportunity to visit the schools and expand the Children's Land movement, Sadhana takes on small rehab projects within the schools so that the children have adequate facilities for learning.

This relationship allows Sadhana to learn from the children as well as encourage innovation in their young minds. This is the Parthasarathy et al. recommendation in action. The forest is being made available to the people in the region¹² once again and through the work of Sadhana the responsibility of the forest's future is being put in their hands. Residents of Sadhana report that students return to Sadhana to visit trees that they planted years ago and the cooperation of local farmers and families who refrain from cutting down trees in solidarity with Sadhana's work.

Conclusion

It is evident from interview responses that the participants agree Sadhana is operating according to its mission. Sadhana's mission supports sustainability, a concept the EPA has acknowledged as a solution for combating environmental threats. Our nations' leaders should be looking to Sadhana, and communities like them, as models for future development. These locations offer a unique opportunity to learn first -hand about sustainability.

As ecovillages continue to grow and expand across the globe, it is clear that there is an increasing interest in living sustainably and perhaps even that there is a preference towards the ecovillage lifestyle. These communities have a record of successful and failed projects that provide a knowledge base and can potentially save a government time and money while implementing sustainable practice and design. Further research in this field should investigate the logistics of how ecovillages can engage with local governments and what resources governments need as they include sustainability in their affairs.

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Poster

1. **Photo of India**

http://upload.wikimedia.org/wikipedia/commons/thumb/0/04/India_Tamil_Nadu_locator_map.svg/927px-India_Tamil_Nadu_locator_map.svg.png