

DEVELOPING A MODEL VILLAGE IN RAUTAHAT-1

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ABSTRACT

The term “model village” refers to a balanced model of an actual village, where social, economic, political, cultural, administrative activities are existent in a well-balanced system. The concept note aims to develop a concept of a self-reliant community in Rautahat-1, where villagers living in a model village produce goods and services by themselves in their village area to sustain and foster their lives. In the model village the total area is physically divided into different cluster such as education, health, industry, market, Recreation Park etc. There is a culture of self-respect with strong social harmony, a conducive environment at work and is based on knowledge and capacity, and optimum utilization of locally available resources.

NOTES

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1. INTRODUCTION

In developing countries, a large number of people live in rural areas where access to basic services is non-existent. In the context of Nepal, among the 26.494 million total inhabitants, 83 percent live in rural areas. It is estimated that approximately 28 people in every 100, living in rural Nepal live below the poverty line. These large number of people live in an economically backward world with low level of agriculture productivity, low rate of resources mobilization, lack of investment, limited financial opportunities, high illiteracy, ill health, inaccessibility to power and resources, dependency and exploitation, as well as lack of infrastructure development and technology. They live in a vicious circle of poverty.

Therefore, rural development is a very critical issue in order to eradicate poverty from the world. In this regard, continuous efforts have been made in the past few decades. Among the many efforts that have been practiced around the world are Integrated Rural Development Approach (IRDA), Community Development Approach (CDA), Basic Need Approach (BNA), Cooperatives, Animation Rurale, Small Farmer Development Program (SFDP), and Participatory Development Program (PDP). In the context of Nepal, various approaches like IRDA, BNA, SFDP, PDP, Cooperatives, Afno Gau Afai Banau (Develop Your Own Village), Poverty with Biseswor, and Self Employment Program among many others were adopted. However, if we were to compare the changes that have been made, to the pace of development in the world, the livelihood condition of rural Nepali's hasn't changed adequately as most of the above mentioned development approaches have only addressed one component of rural development. Thus, if we are to bring about an overall development it is important to use the model village concept, which is holistic in nature, and has never been tried in Nepal.

The concept of model village was developed by philanthropists Titus, Salt, and George. They argue that the primary aim of a model village is to be independent in every aspect of a sustainable livelihood, a livelihood with quality of life. "Model" means "an ideal", which refers to being exemplary. The term "model village" refers to a balanced model of an actual village, where social, economic, political, cultural, administrative activities are existent in a well-balanced system. The concepts main focus is to develop self-reliant communities, in which the community themselves explore all development potentialities in a participatory way. In such a village all the physical facilities are provided like most cities; however it has distinct differences from the city life. The differences in the sense that city people are interdependent for their basic goods and services but villagers living in a model village are independent. They produce goods and services by themselves in their village area to sustain and foster their lives. In the model village the total area is physically divided into different cluster such as education, health, industry, market, Recreation Park etc. The houses are similar in design; there is a culture of self-respect with strong social harmony, a conducive environment at work and is based on knowledge and capacity, and optimum utilization of locally available resources. In sum, the people physically separated but live in closed community with integrated community facilities and attractive physical environments. Therefore, Nepal, a country with more than 3900 Village Development Committees housing 87% of the total population needs model villages to embark on a path for sustainable development, and conserve its immensely rich environmental, cultural and social heritages.

1. 1. GENERAL OBJECTIVE OF A MODEL VILLAGE

To develop traditional villages into modern model villages that have services to better livelihoods, save lives with health services, and conserve environmental, cultural and social heritages.

2. OBJECTIVES OF DEVELOPING A MODEL VILLAGE

Development of Rural Areas: Development here refers to the qualitative change of life in any village to a desired extent. For this, it is crucial to provide infrastructural facilities and other public services in order to enhance and develop productivity at local level. For overall development of a village there should be similar types of houses in a definite location, people should be able to work together in conducive environment, and there should be mobilization of all types of resources.

Creation of a Centre: Another objective is to create rural development focal centers attractive enough for the inhabitants to stay put in the village by providing urban-like civic facilities and livelihood avenues. The model village will have basic health center, quality educational center, and basic infrastructure services like transport, electricity, clean drinking water, information and communication.

Creation of an Effective National Development Programme: The model village development approach will include: bottom up participatory planning process on the priority basis, efficient and effective implementation, monitoring and evaluation in coordination with government organizations, and NGOs/INGOs. The process of prioritized implementation and optimized management will inspire others to see and follow, then replicate the model village approach in their own district.

Creation of a Positive Attitude/Behaviour: The project aims to bring necessary attitudinal and behavioral changes about rural life and tradition to postmodern mindset through community mobilization so that real and meaningful change in quality of life is possible.

Creation of Demonstration Effect: Another important objective of the Model Village Development Programme is to achieve holistic development of selected villages so that they can be replicated. Field visits to Model Village by villagers from neighbouring areas would expose them to the best practices in rural development and local governance, and motivate them to implement these viable strategies and doable interventions to uplift the quality of life in their areas.

3. SITUATION ANALYSIS AND PROBLEM IDENTIFICATION

Nepal's has a total area 147181 square kilometer. It is geographically divided into Terai, Hill and Mountain regions. Politically and administratively the country is divided into five development regions, 16 zones, 75 districts and 3915 Village Development Committee (VDC), and 58 municipalities. From the economic point of view Nepal has rural and urban areas. Rural areas refer to the VDCs and urban areas to municipalities. Among the 75 districts in Nepal Rautahat is one of the most backward. It is a boarder district located in central Terai region of Nepal that covers 1,126 area in square kilometer of land. It is divided into six electoral constituencies, 15 Ilakas, 96 VDCs and two municipalities. The total population of Rautahat is 686722 with an average household size of 6.44. Of the total population 94.84 percent of people live in rural areas. With 70% of its land arable, agriculture is the main source of income for people living in Rautahat. However, prevailing traditional farming methods have only achieved subsistence and haven't uplifted the human development status.

RAUTAHAT FACTS

Total area:	1,126km
Total Population:	686,722
Female:	335,643 (49%)
Male:	351,079 (51%)
Total VDCs:	96
Municipalities:	2
Total households:	106,652
Average household size:	6.44
Eligible people registered to vote:	267,108 (May 2013)
Female:	107,287
Male:	101,347
Human Development Index:	0.409
Literacy rate:	42%
Women's Literacy rate:	32%
Proposed budget per person:	NRs 4,100 for 2012/13
Foreign aid disbursement per capita:	USD 9.00
Foreign aid commitment:	USD 19million, 61% through GoN
Basic Education Schools:	501
Higher Secondary Schools:	30
Aged 10-24:	208,634
Campus:	1
Hospitals:	1
Health Posts:	8
Sub-Health Posts:	85

The above table shows that the district's human development indicators are in a very poor condition. The gap between the rich and poor is increasing, which means continued poverty trap for people living in poverty. Thus, in order to see Rautahat get out of poverty, and prosper, bringing development to the 94 people out of every 100 living in rural Rautahat is crucial. With the objectives put forth in this paper for model village development, the whole concept can play a significant role in Rautahat's rural development including reducing rural poverty.

4. IMPORTANCE OF A MODEL VILLAGE IN RAUTAHAT

To reach its aim of holistic development, the model village includes planning and implementation of projects in economic, social and infrastructure sector. Bringing such a concept to VDCs in Rautahat would mean availability of opportunities and hope for a better future for villagers in the verge of migrating to urban areas in search of opportunities. The primary aim of the model village would be to enable identified rural families to get out of poverty by providing productive assets. Because of an interrelation between all three components of the model village, it is important to guarantee equal attention to project implementation in all three sectors.

The village where the model village will be developed will be treated as a natural system, consisting of:

- Village residents and the community;
- Energy;
- Water, sanitation and Hygiene;
- Education and Protection;
- Transportation;
- Health and Sanitation
- Agriculture; and
- Livelihood and Women's Empowerment

After the success of the first project, the trust aims to replicate it in all VDCs of Rautahat district. The central and local government as well as NGOs/INGOs will fund the project.

5. COMPONENTS OF THE MODEL VILLAGE

5.1. SOCIAL SECTORS

SOCIAL HARMONY AND CULTURAL PRACTICES

The village will have an area for religious activities, namely worshipping areas like temples for Hindus, mosques for Muslims, and Stupa's for Buddhists among others. These places can be constructed close to each other and will be a place for anybody to enter so that social harmony can be built.

Components designated:

- An area for a Temple
- An area for a Mosque
- An area for a Stupa

COMMUNITY CENTER

A community center is of utmost importance in the model village. The center will be a place for people to have social interaction and discuss commerce. It will be place for social gatherings as well as economic activities.

A parking space will be part of the community center. It will be tourist attraction. It will house a shopping mall with various shops and entertainment spaces.

The center will include:

- Kindergarten for village children;
- Cultural center and library;
- A shopping mall
- Cinema hall
- Health clinic for residents;
- Hall for social events and other gatherings; and
- Telephones, televisions, computers, and Internet hookups.
- By housing computers with Internet connections, the community center can breed new economic opportunities for the villagers.
- The center will be built on energy efficient design techniques; will have passive solar building construction
- Photovoltaic (pv) panels for power production;
- Rainwater collection with cisterns;
- Heat pumps for heating, cooling, and water heating; and
- Electric vehicle charging outlet.
- Information center for the community center and the model village.

MUSEUM

The history of the village will be represented in a museum where not only tourist but also students and villagers can witness. A specific area for such a museum will be designated.

SANITATION

The ideal system for the model village would be a decentralized waste treatment system for all. In this system, each house processes its own waste in a waterless composting toilet system and a grey water drain field. The processed waste that the toilet has the capacity to process can be applied to parks as fertilizer, after treatment. The grey water collected from the composting toilet can be used to irrigate family gardens.

The works on the sanitation will be done along with road construction. Sewage water will pass below the roads like other major towns of Nepal. They will be planned

and maintained in a way that the odor doesn't bother the general public and doesn't require digging of roads to repair damages.

EDUCATION

The model village will have model educational institutions. It will have an aim to attract students from all over the country. There should be an education area for higher studies that will house:

- Research Centre and Colleges - To cater the need of the growing population it is important that the model village have two sites dedicated for primary and secondary education, which will house:
- Primary government schools and
- Public private partnership school – Maya Universe Academy

SECURITY

Security is one of the major elements for the functioning of the model village. Therefore the model will have road safety taken into considerations. There will be one major police station and other few local ones. For the safety of locals there will be 24 hours police service. Also to prevent any form of crime, security cameras will be put in place in specific areas of the model village.

RECREATIONAL PARK AND NATURE IN THE MODEL VILLAGE

Apart from the community center, there will be a recreation part built for residents, which will have space for sports and other activities. People can take walks around the part and enjoy nature while also enjoying social interaction.

Apart from the part and agriculture fields, for nature in the model village, the roads will have trees planted at a well-designed spacing between plants. It will have fruit trees so that birds can benefit from them. Flowers too will be planted along the roadside.

HEALTH

The healthcare scenario in Rautahat is challenging. In addition to natural disasters creating health hazards, there are limited healthcare facilities, a lack of awareness about appropriate health and nutrition practices, and limited financial resources.

The healthcare will have a strong curative health component, focused on:

- Reducing maternal and child morbidities and mortalities
- Improving general health amongst families;
- Increasing awareness of health and nutrition issues; and

Possible partnerships on this sector:

- Nyaya Health
- Partnership with the community center in the model village for a clinic

5. 2. INFRASTRUCTURE SECTORS

MAJOR GOVERNMENT INSTITUTIONAL AREA

This area in the model village will house most government agencies, and also will provide services on a fast track basis. The governance of the village will be done from this area.

An area with following institutions:

- Major government agencies
- Village leadership
- Fire Department

FINANCIAL INSTITUTION AREA

This area will house few major banks and most cooperatives that support local economy and people from the model village. It is important that the financial service provider be present in almost all areas of the model village. Thus, services for depositing and withdrawing money should be available at a walking distance. Financial service provider should guarantee service in each and every designated area of the model village, starting with the cottage industry to residential area.

IRRIGATION

An irrigation canal that brings water from Bagmati river will be built to facilitate growth of agriculture production.

- A reservoir will be built for water from Bagmati to be deposited.
- From Bagmati a canal that reaches almost all farming fields will be built.

DRINKING WATER

A community drinking water system will be built. The advantages of a common system are:

- Construction costs are low as it will be less expensive to lay water pipes than to dig unit wells,
- The water can be treated with beneficial chemicals, and
- Cheaper to treat water with beneficial chemicals in one reservoir than household wells.

In a central community system, Gaur authorities or the district government would make the initial investment. The customers/residents of the model village will be charged as per the use on a monthly basis.

The drinking water pipes won't be laid below the road or close to the sewage water system. The drinking water pipes will be laid down to make repairing and distribution easy.

HOUSES (CURRENT RESIDENTS SETTLEMENT)

For current residents of Hajminiya village, the model village will have a specific area for settlement where they will be housed in individual family houses. The residents of Hajminiya model village will have the freedom to choose the size and room configuration of their house depending on their preferences and income level.

Engineers will set the parameters for the houses in the residential area. The houses will have up to date safety requirements as per the law of Nepal. The houses will be energy efficient to provide indoor comfort throughout the year. They will be cool in summer and warm in winter. For this modern technology will be used in the design techniques of the houses.

MODERN HOUSING

As part of the plan a modern housing area will also be designated. It will be built in partnership with private enterprises. There will be apartment buildings. There will also be playing areas for the residents. The basic needs for the housing area will be guaranteed by the private agency.

BUS PARK

A bus park that is not inside the village will be built. Having the bus park outside would mean less noise and more convenience. Public transport will connect the bus park area with the centre of the village.

ROADS/TRANSPORT

In large measure, existing construction commitments and Nepalese regulations define the road network both in and around the village. It is expected that the model village

consist of two classes of roads. First, a wide road built according to the Nepali regulation that will span the whole village. This road will act as the primary connection that link Hajminiya with other villages. It will also connect cottage industry area with the national highway. Another class road, which is smaller in comparison to the first class, will run through the model village North-South, and East-West. The roads will be constructed using sand, stone, clay, and 18 cm of surface concrete (cement).

As the economy of Hajminiya village grows, people will start purchasing newer vehicles and other transport mediums. Thus, the village road designs will:

- Put major community needs close together. The objective is to minimize the door-to-door distance between destinations
- “Limit road speed. Bumps, which are a traditional way of limiting speed will not be part as they damage vehicles as well as cause more harm than benefit. The roads in the model village will be designed so that the forward line-of-sight from a vehicle is limited, blocked by trees or other structures. This will reduce accidents and increase safety for pedestrians and bicycles.
- Create pedestrian priority areas. We will designate areas where pedestrians are given priority.
- Bicycle lane/area will also be designated.
- Give sustainable modes the shortest route. Roads in the village will be designed with physically separate areas for walking and bicycles. Motorized cycles will be prohibited from using bicycle lanes. Separated routes are most effective, with the shortest routes reserved for pedestrians and bicyclists, while motorized vehicles would take a longer route, farther from community gathering areas.
- Introduce electric vehicles.
- There will be an area designated for paid parking on the road.
- A space will be designated with considerations for the development of a subway system in the future.
- Handicapped pick and drop area will be easily accessible.
- Handicapped people will have easy movement on the road.

ENERGY

The village will use local energy resources to the greatest extent practical, minimizing energy imports into the village and substituting renewable energy resources in the village for fossil fuels. An energy policy based on these principles will improve the local environment, reduce energy-related health threats, and promote growth of the local economy.

Hajminiya Village’s energy strategy must provide for the energy-consuming sectors and end uses in the village. These include households (lighting, cooking, water heating), an enhanced business/commercial sector, transportation, agriculture, and a new public lighting system along the promenade.

5. 3. ECONOMIC SECTORS

COTTAGE INDUSTRY AREA

A specific area for small scale industry will be designated away from the residential area but not too far, and connected by public transport system

TOURISM

Tourism will be an important economic activity in the model village. The village has four tourist attractions. Individually or packaged together, these sites can be a major source of income for villagers.

The challenge for planners is to package the museum, temple, resort, and model village together in the most effective way to attract more tourists.

SOLAR SUPPORT INDUSTRY

The model village will promote sustainable energy systems. From the proposal the community center will be fitted with solar arrays. Residential houses will also have infrastructure for installing solar water heaters. The families living in the model village will have the choice to install the solar water heaters and solar arrays. The public lighting along the road of the village will also use solar cells. Even industries in the model village will be required to use solar energy at a certain scale. Thus a solar support industry will be inevitable.

LIVESTOCK ENTERPRISES

With ground transport connecting major cities of Nepal to Rautahat already developed, Hajminiya can benefit a lot from animal husbandry, which is currently an important source of income for many existing households. Pigs, cows, buffalos, chickens (for eggs also), ducks (for eggs also), are the major animal that can be reared and supplied to different parts of Nepal.

The model village will have a designated area for livestock production in an integrated farming system called "Model Integrated Farm". In the model integrated farm pigs and chicken will be produced to benefit fish production, agro-forestry models will benefit buffaloes, goats, and cow production. In the model integrated farm, which will also be an education institution, will have biogas production plant and an agricultural research center.

- A model-integrated farm with profit orientation will be established.
- It will have livestock production area.
- Fruit farming area intercropped with other crops will be designated.
- Grain production area will also be designated.
- It will also house an agriculture research center.

INTERNET ENTERPRISES

Access to the Internet in the village's community center offers an opportunity for villagers to develop enterprises exploiting the Internet.

BIO-ENERGY ENTERPRISE

The waste stream from animals from farms and, to a lesser extent, agricultural waste will be used in an anaerobic digester to produce gas for household cooking and an energy source for the fuel cell. The waste will be purchased from the farm unit enterprises at a negotiated price. In turn, the gas will be sold to households and the fuel-cell operator at the economic cost of production: capital and operating costs, plus an allowance for profit. Here again, the activities of the digester operator suggest that an enterprise be created to manage the digester and administer the production and sale of gas in the village

INDUSTRIAL AREA

A specific industrial area will be designated in the model village where major industries that serve economic good to the village and fulfill demands in other parts of Nepal and the world will be based. Among them could be factories to process UNILEVER goods, and other industries that process agro-foods.

AGRO PROCESSING

With 70% of its land arable, Hajminiya village has the potential to provide new business opportunities in agriculture. Agro processing—turning primary agricultural products into other commodities for market— can bring economic growth to the model village. With Nijgad International Airport to be built nearby the model village can export high quality agro-products to various countries in the Middle East as well as other parts of Nepal and the world.

AGRO FORESTRY

Agro-forestry could conceivably support a number of different types of commercial

enterprises in this industry. Wood chips could be used for road construction. They can also be used in the housing/construction industry as fill for wallboards and panels. Wood can also be used as an input for electricity production. Finally, the tree plantation could support a lumber industry.

MANUFACTURING/SERVICES

Construction and habitation of the village can be a catalyst for creation of a vibrant construction industry in Hajminiya village.

6. SUCCESS ASSESSMENT FRAMEWORK

The success of Rautahat model village will be measured in its:

1. Promotion of sustainable economic growth by:

- Promoting the efficient use of all resources.
- Strengthening the physical infrastructure of traditional agriculture.
- Creating new industries from constructing the village.
- Creating new industries from inhabiting the village.
- Creating a promenade that promotes commercial activity.
- Using advances in technology to integrate the infrastructure of the village (energy, water, transport, and communications) to the greatest extent possible.

2. Minimization of damage to the environment by:

- Reducing environmental emissions to the lowest extent possible.
- Balancing consumption with existing resources in the village to the greatest extent possible.
- Maximizing re-use of waste of human and economic activity to the greatest extent possible.

3. Fostering a sense of community by:

- Allowing maximum flexibility for individual choice in living conditions.
- Constructing a “community center” that promotes the personal interaction of village residents.
- Accounting for the village’s cultural heritage in the design of the village.
- Using advances in Internet technology to promote the village’s cultural heritage.

7. WAY FORWARD

The Model Village Project under the Rautahat Development Trust Fund is a “bottom up” approach to eradicate poverty from Nepal, starting with a pilot village in Rautahat District. This project plans to provide early successes on achieving holistic sustainable development in Nepal. Social, Economic, and Infrastructure sector experts will work together with local communities, governments, and NGOs/INGOs to develop a model village that will later be replicated to different parts of Nepal.

7.1. CONSIDERATIONS FOR AN ACTION PLAN

- Model village will be developed as a rural center.
- A workable strategy and Action Plan for Model Village will be designed and operationalised in order to close the gaps in terms of specified benchmarks through technically and financially sustainable interventions.
- A village profile will be prepared of the Model Village.
- Household information of the target VDC will be gathered along with a household survey.

7.2. RECOMMENDATIONS

The Model Village should guarantee:

Promotion of sustainable economic growth by:

- Promoting the efficient use of all resources.
- Strengthening the physical infrastructure of traditional agriculture.
- Creating new industries from constructing the village.
- Creating new industries from inhabiting the village.
- Creating a promenade that promotes commercial activity.
- Using advances in technology to integrate the infrastructure of the village (energy, water, transport, and communications) to the greatest extent possible.

Minimization of damage to the environment by:

- Reducing environmental emissions to the lowest extent possible.
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Fostering a sense of community by:

- Allowing maximum flexibility for individual choice in living conditions.
- Constructing a “community center” that promotes the personal interaction of village residents.
- Accounting for the village’s cultural heritage in the design of the village.
- Using advances in Internet technology to promote the village’s cultural heritage.
- The implementation team should take into considerations the following:
- Seek for public private partnership while implementing several of the components like housing complexes, roads, agro-processing industry, bus-park, and tourism sector industry among others.

- o Government of Nepal – INGOs/NGO partnership should be sought for while working on components of Health, Irrigation, Drinking Water, Energy, Security, and Houses for Current Residents.
- o Education and Public Transport should be an investment from the government of Nepal.
- o There should be space for recreation developed by the government of Nepal and/or INGO.
- o The infrastructures in the model village should be built with expert advice and monitoring.
- o Disaster Risk Management and Preparedness should be part of the planning process with involvement of expertise from INGOs, Government and Private Sector.
- o For possible partnerships the team should consult the following:
- o Housing component of the model village should be developed either in private enterprise investment or public-private venture.
- o For hospital component it is recommended to seek for partnership with Nyaya (Possible) Health through the government of Nepal, which has formed a partnership to expand services of the Possible Health to 14 districts of Nepal.
- o For cottage industry enterprise training, mentorship and startup capital RDTF should seek partnership with Naya Ghar Program of Daayitwa Foundation and also mobilize public funds through the Sworojgar Program.
- o To develop the social harmony infrastructures, RDTF should talk to Pashupatinath Development Trust, Lumbini Trust Fund among others.

8. CONCLUSION

For a completely holistic development of rural Nepal in the present context, it is absolutely crucial to give priority to sustainable development. Without equal attention to each component – economic, social and environmental –, sustainable development cannot be achieved. Thus, while implementing the proposed model village it is absolutely crucial not to miss out on proposed elements. Other conclusions that are crucial in this research are the need to keep people at the center.

It is crucial that there be partnership between the local community and the implementation team along with the government. While this research looks in depth it is also important that we keep in mind the necessity to keep in mind cultural, social and environmental factors during implementation. Eliminating a culture or displacing people from any particular place is detrimental to the people of Rautahat and will also be detrimental for the environment.

