

Developing India

Conference: Providing Urban Amenities in Rural Areas (PURA) - Conceptualisation, Impact, Assessment and Implementation Issues

Introduction:

A one-day conference was held at IIM Indore on June 10, 2010. Dr. Abdul Kalam gave the inaugural address detailing the concept over the years. Prof. Vaibhav Bhamoriya coordinated this effort by IIM Indore.

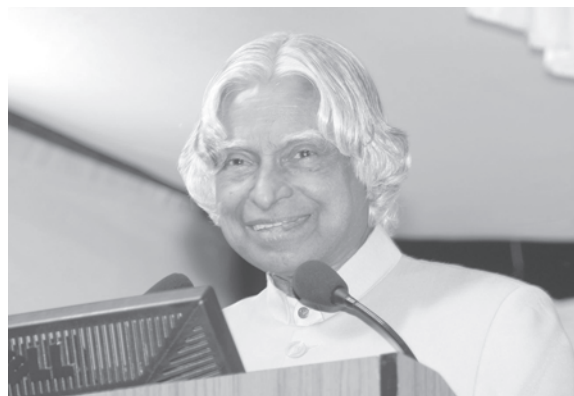
As a socially responsible institute, it was an endeavour to bringing together professionals, Central and State Government employees and NGO professionals with experience and success at catalysing social change and development. A set of papers is presented here with a view to reaching a wider audience

Bringing Smiles to Billion People

A. P. J. Abdul Kalam

'Rural prosperity through integrated actions'

**Address at the commemorative dinner
in memory of late Shri K. R. Narayanan,
on the occasion of third London School
of Economics and Political Science (LSE)
Asia Forum 2006, 07 December 2006**



New Delhi

I am delighted to address the third LSE Asia Forum 2006 organised in memory of late Shri. K. R. Narayanan.

Rashtrapati Bhavan has had a dynamic history. Post-independence, Rashtrapati Bhavan was ennobled by the stature and standing of its occupants. My illustrious predecessors, 10 presidents were all men of rare distinction, personalities of nobility, intellectual and academic giants, men of political sacrifice and above all statesmen of the highest calibre. When I

Indore Management Journal gratefully acknowledges the permission to print this Speech by Dr. A. P. J. Abdul Kalam.

go through the annals of Rashtrapati Bhavan's history post-independence, I feel humbled. My salutations to all of my esteemed and illustrious predecessors.

When I took over the presidentship from Mr. K. R. Narayanan, the tenth President, I had a unique link with him for the reason he was very much interested in the Developed India Vision 2020. He had a passion for the upliftment of the underprivileged in the society and for directing science and technology for the betterment of human lives. Whilst evolving the Vision 2020, I used to meet him frequently and brief him the progress. He used to say that value addition is important for agriculture produce, so that the agriculture field will be competitive with the other two sectors, manufacturing and services. This was the very important economic input which I got from Shri K. R Narayanan. As a tribute to this great leader with an economic acumen with a human touch and in view of the strong relationship between the LSE and India, I would like to discuss about one of the key growth drivers of Indian economy when India is in the process of transforming itself into a developed nation before 2020.

I. Ambience in the Nation

In the Indian history, very rarely our nation has come across a situation, all at a time, an ascending economic trajectory, continuously rising foreign exchange reserve, reduced rate of inflation, global recognition of the technological competence, energy of 540 million youth, umbilical connectivities of 20 million people of Indian origin in various parts of the planet and the interest shown by many developed countries to invest in our engineers and scientists including setting up of new research and development centres. The distinction between the public and the private sectors and the illusory primacy of one over the other is vanishing. India, as the largest democracy in the world, has a reputation for its democracy and for providing leadership for the one billion people with multi-cultural, multi-language and multi-religious backgrounds. And also our technological competence and value systems with civilisational heritage are highly respected. Foreign institutional investors are finding investing in India attractive. Indians are also investing in abroad and opening new business ventures. Indian economy is growing with an average annual growth rate of 8% gross domestic product.

2. Economic Development: Transforming India Into a Developed Nation

However, there is a need to lift up the economic conditions and lifestyle of over two hundred and twenty million people out of the one billion plus population. One of the reasons for this situation is that large part of the growth comes from manufacturing and services sector. The agriculture has been growing just at 1.6%. If we have to uplift the two hundred and twenty million people living below poverty line and provide improved quality of life, we have to ensure that the agricultural sector grows at least at 4% per annum. For providing this growth, we have to spread the development process to the rural sector. That is what the PURA (Providing Urban Amenities in Rural Areas) programme involving four connectivities, namely physical, electronic and knowledge leading to economic connectivity, envisages. Hence, the entire country should have 7,000 PURAs encompassing over 600,000 villages.

The theme of PURA, apart from concentrating on reinforcing agriculture, will emphasise on agro-processing, development of rural craftsmanship, dairy, fishing, and silk production, so that the non-farm revenue for the rural sector is enhanced, based on the core competence of the region. Also the rural economy will be driven by renewable energy such as solar, wind, bio-fuel and conversion of municipal waste into power. In this approach, the aim is to make sustainable development using the core competence of the rural sector.

In India, the development of a rural sector is very important. Government, private and public sectors have been taking up rural development in parts. For example, starting educational institutions and healthcare centres, laying roads, building houses, building a marketing complex, giving a communication link in a particular rural area have been taken up in the past as individual activities. During the last few decades, it is our experience that these initiatives start well, just like heavy rain resulting into multiple streams of water flow. As soon as the rain stops, few days later all the streams get dried up because there are no water bodies to collect the surplus water and store it at the right place. For the first time, PURA envisages an integrated development plan with employment generation as the focus, driven by provision of the habitat, healthcare, education, skill development, physical and electronic connectivity and marketing.

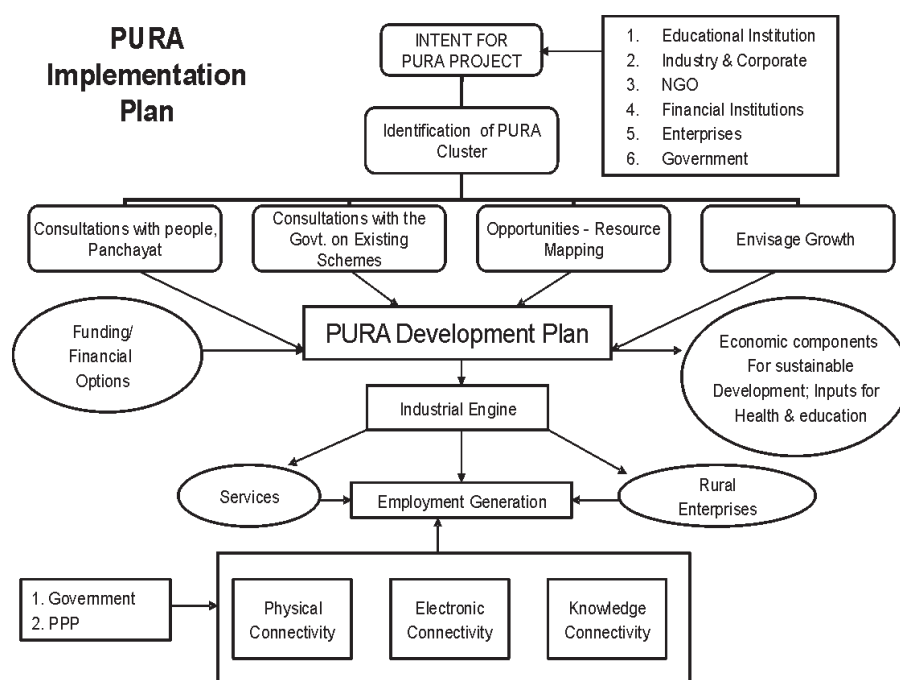
Hence, I would like to concentrate for today's discussion on how to implement PURA in Indian setting for the consideration of this audience.

3. PURA Mission

PURA envisages economic empowerment to a cluster of villages through the provision of physical connectivity, electronic connectivity and knowledge connectivity leading to economic connectivity. I would like to share with you the sequence of actions needed to realise a PURA cluster from the intention of an individual, non-government organisation (NGO), industry, educational institution or financial institution to its completion.

3.1 Profile of PURA mission

On the basis of the terrain and climatic conditions there could be four types of PURA in our country. They are plain terrain PURA, hill PURA, coastal PURA and desert PURA. The population in the plain terrain and coastal region PURA may be in the region of 20,000 to 100,000 in a cluster of 20 to 30 villages, whereas in the Hill or desert PURA may have a population of 7,500 to 15,000 people in a cluster of 30 to 50 villages or hamlets.



Note: Single window clearance by government for Physical Connectivity and other eligible social sector needs
PURA should be built and operated on the lines of SEZ

Figure 1. PURA implementation plan

3.2 PURA realisation - flow sequence

The flow sequence for realisation of PURA is described.

As soon as decision is made to create a PURA, there is a need to identify the PURA cluster with the villages which are to be included. Simultaneously, consultation must commence with panchayat members, government on existing scheme, opportunities resource mapping and the envisaged growth with the business community. This consultation will lead to PURA development plan with emphasis on employment generation through an industrial engine. Parallely, government can consider development of physical, electronic and knowledge connectivity through a public-private partnership. Integrated action in all the areas is the key to the development of PURA as a business proposition.

The steps involved in creation and maintenance of PURA are:

- An institution, such as educational institution/industry/societal transformer/financial institution/small-scale enterprise/government, intends to create a PURA cluster.
- Desiring agency identifies the groups of villages in the district, which are suitable for creation of an economically empowered PURA cluster.
- Consultation with the panchayat board members, resource mapping, envisaged

growth path and study of planned existing government schemes in the area are carried out in parallel.

- The institution determines the industrial engine for the PURA development based on the core competence and natural resources of the region.
- Simultaneously, the institution works out the funding requirement including the funds, which have been catered for government's development schemes envisaged in the area.
- The industrial engine plans the services and the rural enterprises and determines the total employment generation potential of the PURA complex both during commissioning and subsequently during its operation.
- The economic empowerment of the PURA is supported by the establishment of ideal physical connectivity, electronic connectivity and knowledge connectivity for the whole complex.
- The district authorities discuss the whole PURA plan with the intending institution and arrive at an implementation plan which may include the following:
 - (a) Government will be responsible for provisioning of the land required for the complex in consultation with local bodies.
 - (b) The government may make the funds allotted for the regional developmental schemes available to the implementing agency to enable implementation of the PURA programme as a turn-key project with single-point responsibility.
 - (c) The implementation agency will create all the connectivities envisaged for the cluster and establish financially viable enterprises leading to provision planned employment opportunities.
 - (d) The implementation agency will also take the responsibility for continuous provisioning of quality healthcare and education to all people living in the PURA complex. The government will be required to provide the subsidy element to all the eligible categories of people.

3.3 Assessment of initial conditions

- Survey the land availability and land use pattern, housing conditions, roads, drinking water system, water bodies, energy systems, population characteristics including skills available, schools, vocational training centres, primary health centres and existing occupational opportunities in the proposed PURA cluster.

- Establish the development indicators for the PURA cluster for various socio-economic parameters such as poverty, safe water, infant mortality, pucca house, literacy, formal education, life expectancy and per capita expenditure.
- Examine the availability of higher educational institutions including engineering colleges in the proposed PURA cluster, which can take lead role in implementation. Existing sanctions by the central and state governments for the common facilities in the village cluster such as roads and other infrastructure facilities.
- Identify the native strengths such as availability of unique raw material, special skills and craftsmanship, which have the potential to become a wealth-generating enterprise with the infusion of technology and marketing opportunities.
- Establish optimum grouping of the villages relating the potential strengths or core competence.
- Create awareness and consensus amongst the people of the cluster of villages about the proposed PURA in the region with panchayat participation.
- Finalise a lead agency such as educational institution to plan and implement the PURA.

4. Content of the Master Plan for PURA

- Master plan: will include defining gross land-use pattern, plan for physical connectivity, plan for electronic connectivity, plan for knowledge connectivity and a plan for creation of enterprises including business plan.
- Village level layout plan: will include specification of residential areas, institutional areas (hospitals, schools, police stations, offices, village knowledge centres), rural industrial areas, commercial areas, parks, recreational areas and so on through community mobilisation procedures.

5. Thrust Areas for PURA:

Thrust areas for PURA would be the following:

- Creation of employment opportunities for all the employable people, particularly the youth.
- Capacity building in education - school, value-added employable skills and knowledge.
- Provision of quality health and timely healthcare, safe drinking water, quality-reliable electric power, energy-efficient and water-efficient pucca houses.

- Typical examples of PURA connectivities - physical, electronic, knowledge and economic - to be included in the PURA project report are given in annexure I to IV.

6. Evolution of PURA Project Report

- On the basis of PURA development plan evolves the PURA project report.
- Identify the nodal village and its cluster villages.
- Specify the development objectives based on the development indicators and means for achieving that objective as given in the master plan stated above.
- Interact with possible funding agencies and specify the funding methodology.
- Prepare a management structure for implementation of the PURA cluster specifying the linkages with agencies including NGOs, financial institutions, local bodies, district authorities and other government agencies.

7. PURA as a Business Model

It is a business proposition of Rs. 100 crores with public and private partnership over a project period of five years. Government (Bharat Nirman Programme, Rural Development Ministry, Prime Minister Sadak Yojana, Prime Minister Rozgar Yojana, Sampoorna Graha Yojana, Navodaya Schooling, 100 days Employment Guarantee Scheme and State Government Employment programmes); banks (National Bank for Agriculture and Rural Development, Asian Development Bank, World Bank, United Nations Development Programme, United Nations Children's Fund, United Nations Educational, Scientific and Cultural Organisation (UNESCO) and venture capitalists can fund PURA components. However, initially the rural development ministry is planning to create two PURA clusters in each of 600 districts in the country with seed funding. This may attract the public-private participation for providing value-added services in the three sectors of the economy and run as sustainable business propositions. Already, certain states such as Chhattisgarh, Karnataka and Kerala have taken up the PURA as a programme for implementation because government initiatives and also certain private initiatives have established working PURAs in Tamilnadu, Maharashtra, Madhya Pradesh and Andhra Pradesh.

8. Typical Working PURAs

It is possible to get an insight of PURA by studying few of the operational PURAs, which are functioning in different parts of the country. They are Periyar PURA, Loni PURA, Chitrakoot PURA and Byrraju PURA. Let me highlight some of the operational PURAs.

8.1 Periyar PURA (Tamil Nadu)

Periyar PURA complex (Figure 2.1) pioneered by Periyar Maniammai College of Technology for Women, Vallam, Tanjore is functioning near Vallam with a cluster of over 65 villages in Tamilnadu, which involves a population of one lakh. This PURA complex has all the three connectivities - physical, electronic and knowledge - leading to economic connectivity. The centre of activity emanates from the women's engineering college that provides the electronic and knowledge connectivity (Figure 2.2). Periyar PURA has healthcare centres, primary to postgraduate-level education and vocational training centres. This

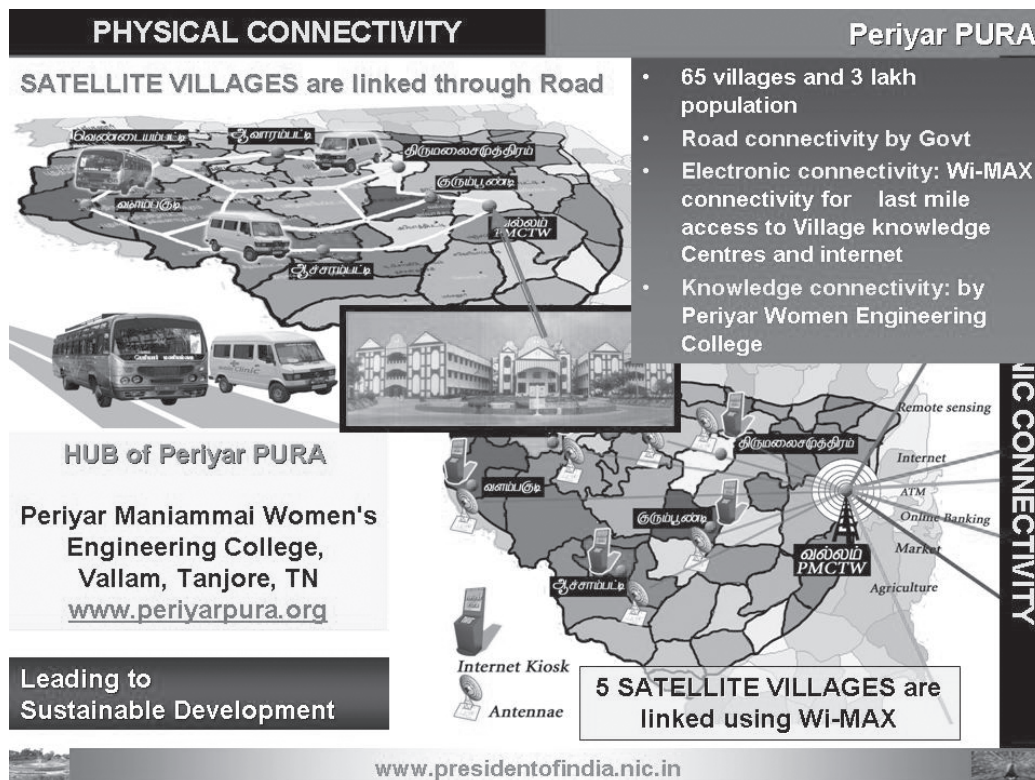


Figure 2.1 Periyar PURA

has resulted in large-scale employment generation and creation of number of entrepreneurs with the active support of 850 self-help groups. Two hundred acres of waste land has been developed into a cultivable land with innovative water-management schemes such as contour ponds and water sheds for storing and irrigating the fields. All the villagers are busy in cultivation, planting Jatropha, herbal and medicinal plants; power generation using bio-mass; food processing and above all running marketing centre. This model has emanated independent of any government initiative. The committed leadership has been provided by the engineering institution. Recently, five of the Periyar PURA villages are connected through WiMAX wireless and have minimum 4 megabits per second connectivity with the Periyar PURA nodal centre. It provides a sustainable economic development in that region.



| Knowledge Connectivity Leading to Economic Connectivity | Periyar PURA |
|---|---|
| <p>Periyar PURA Hollow Block training unit – PMCTW, Vallam</p>  <p>Fiber Door making training to Periyar PURA villagers – PMCTW, Vallam</p>  <p>www.presidentofindia.nic.in</p> | <ul style="list-style-type: none"> • Created 850 Self Help Groups in 65 villages • Provided Vocational and Skill Development training on <ul style="list-style-type: none"> – Dairy Farming, Biomass – Vermi Composting, Dry Land Cultivation – Entrepreneurial Training to create SSI Units – Bio-Mass Power and Solar Lighting • Established Renewable Energy based units • Six percolation ponds and five check dams to harness the rain water amounting to 2.73 lakh cubic meter per year – supporting the irrigation of 300 acres of land • More than 5000 farmers are benefiting • It has brought number of employment generation schemes – such as <ul style="list-style-type: none"> – Tiles making, Sanitary items – Alternative building blocks, Hollow blocks • Health Care services through Mobile Medical Van facility to 65 villages |

Figure 2.2 Periyar PURA

Participative Model of Integrated Rural Development PURA: LONI Model (Maharashtra)


| | | |
|---|---|---|
| <p>Vision Improve the productivity of the rural people through increased quality of life</p> <ul style="list-style-type: none"> • Health • Education • Employment |  | <ul style="list-style-type: none"> • Rural education complex • Rural medical complex • Industrial complex • Sahakari Bank • Rural & agricultural development complex |
| <p>Concept People centered development for social transformation</p> | | <p>Operational PURA</p> |
| <p>Thrust Areas</p> <ul style="list-style-type: none"> • E-connectivity to farmers • Comprehensive medical & health care (Particularly women and children) • Need based health education • Fundamental & interventional research | <p>Sustainable Development (20 years)</p> <ul style="list-style-type: none"> • Rural connectivity to 44 villages(12000 sq. Km.) • 80,000 people benefited • Increase in literacy from 63% to 83% • Reduction in crude birth rate from 2.3% to 2% • Reduction in mortality rate <ul style="list-style-type: none"> – Infant mortality decreased to 3.5% from 7% – Maternal mortality rate decreased to 1.8% from 4% • Child immunisation up to 85% compared to 60% all over the country • 15-20% better standard of living than overall Ahmednagar Distt. | |

Figure 3. Loni PURA

8.2 Loni PURA (Figure 3) (Maharashtra)

Loni PURA in Maharashtra where a participative model of integrated rural development has come up amongst 44 villages with a population of 80 thousand. The Loni PURA model has been pioneered by Pravara medical trust. It is improving the productivity of the rural people through improved quality of life with healthcare, education and employment. The concept is people-centric development for social transformation. The thrust area of development has been on comprehensive medicare, particularly for women and children, need-based health education and e-connectivity to the farmers. The complex has created 27 educational and vocational institutions consisting of schools, colleges, polytechnic and industrial training institutes (ITIs) including medical and engineering colleges. They have created a sugar factory, bio-gas plants, chemical plants and power projects. They have a large number of self-help groups for providing low-interest loan for the weaker sections of the society. Because of the co-operative effort of the people, literacy in these villages has gone up from 63 to 83%, birth rate has come down, infant mortality has decreased to 35/1,000 from 70/1,000 and the standard of living of the people has gone up by over 20% compared with other villages in the neighbouring areas.

8.3 Byrraju PURA (Figure 4)

Byrraju Foundation of Satyam near Bhimavaram has undertaken the mission of establishing 32 Ashwini centres, benefiting 116 villages with a population of around 500,000 people. It has provided the electronic connectivity through wireless (512 kilobits per second - 2 megabits per second) and knowledge connectivity in co-operation with National Academy of Construction, Hyderabad and other domain experts, thereby creating economic connectivity in these villages.

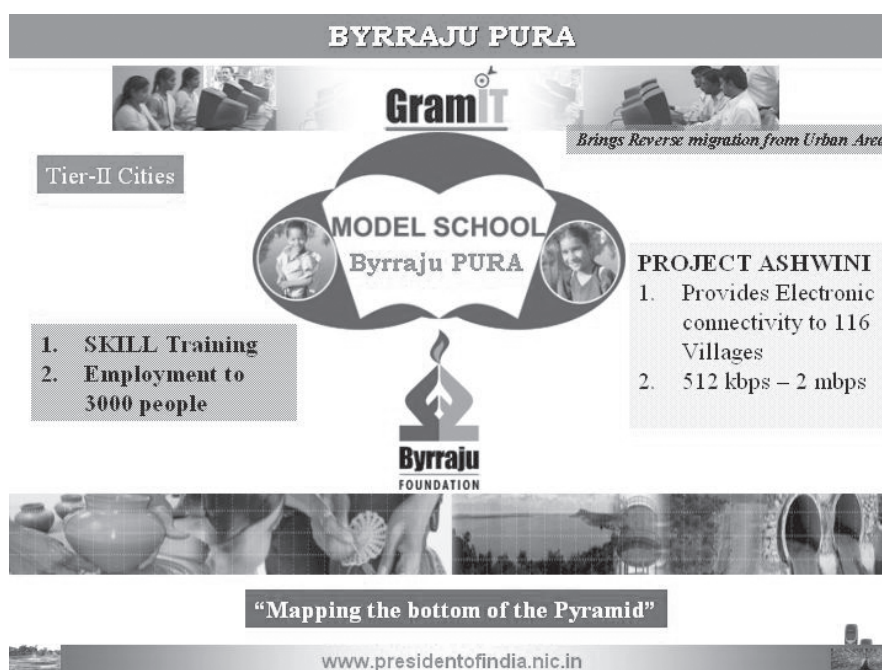


Figure 4. Byrraju PURA

8.3.1 Economic connectivity

During the last 4 years of its operation, it has skill-enabled and knowledge enabled-people in areas such as construction, tailoring, garment production, Information technology (IT) and spoken English skills. This programme resulted in 3,000 jobs with the minimum earning of Rs. 3,000 per month, which is three times that of their earlier earning potential. A rural business process outsourcing (BPO) Gram IT, established in Jallikakinada centre, has trained the unemployed graduates in IT skills and spoken English and employed 100 people for the BPO operations such as transaction processing of Human Resource data of Satyam Computers as a back office processing; data processing of 1 million self-help-group members of Andhra Pradesh such as financial data, accounting data, spending pattern, cultural aspects under the programme of 'Mapping the bottom of the Pyramid'. This Gram IT BPO has effected the 10% reverse migration from Hyderabad to Bhimavaram. This model can be replicated by many of our IT companies in the rural sector to create PURA clusters and bring rural transformation.

9. Technology-driven PURAs

In all the four operational PURAs technology and application of scientific methods of working have played a very important role. For example, power through bio-gas and solar energy is used for household lighting and also for the farms; vermicomposting; check-dams and water purification plants; Jatropha plantation to extraction and esterification; medicinal and aromatic plants cultivation, extraction and manufacture healthcare products through self-help groups; low-cost housing using alternative building blocks; dairy farming; healthcare and education services; connectivity using wireless and WiMAX technologies and enabling the sustainable development and business processing taking place amongst the village clusters. In all these operational PURAs, employment generation was the focus using technology experiences from the colleges and educational institutions and through assessment of markets, which can absorb the products and services. With the emergence of PURA clusters in different parts of the country, what is now required is to establish the linkage to PURA clusters by setting up of domain service providers through PURA nodal knowledge data centres.

10. Conclusion: PURA in 2012

This PURA complex would have transformed into a dynamic rural complex with focus on employment potential for all the families of PURA cluster with all the connectivities. This PURA complex will have its umbilical connectivity with the nearest university. Let us visualise how the PURA cluster will transform, by the year 2012, based on the already operational PURA we have discussed:

- Provide to all the village citizens dwelling units with clean water supply and sanitation facilities.

- The village complex will have 100% literacy.
- Apart from upgrading existing schools, the complex will have a few colleges; world-class vocational training institutions in construction, carpentry, welding, and natural art; computer maintenance and services; IT-enabled services; BPO and a call centre. The 'Sakshat' programme a one-stop education portal, will be used through Internet for capacity building in this region,
- People in the PURA complex will be able to get quality healthcare through telemedicine and mobile clinics via primary health centres. They will be brought under a corporate medical healthcare scheme.
- Each PURA village complex will be free from diseases such as polio, TB, leprosy and malaria and other waterborne diseases. The infant mortality will be less than 10.
- The PURA complex will promote horticulture and floriculture products, apart from agriculture in collaboration with nearby agricultural universities and research institutions.
- There will be agro-processing industries in each PURA complex for value addition to horticulture produce.
- Creation of dairy and fish farms in each PURA complex for providing additional non-farm revenue to farmers. They can also produce other dairy products.
- Revival of all existing water bodies in the PURA cluster.
- Provision of employment to all employable people of the village through additional jobs in dairy, agro-processing, construction, handicraft and tourism enterprises.
- Overall, per capita income of the PURA cluster should increase three times and people living below the poverty line should come down to zero in 6 years.

Of course to achieve the above performance, a dynamic, empowered PURA management board structure is very vital. This has to be evolved with the active participation of state governments, district authorities, societal transformers, educational institutions, small-scale industries or an enterprise in association with the panchayat. Finally, it will be managed as a viable and sustainable business proposition through the local entrepreneurship.

I would request the participants of LSE Asia Forum to study this model and offer suggestions, which will enable us to further refine the implementation process. PURA model may also be useful to other developing countries that have large population living in rural areas. My best wishes to all the members of LSE Asia Forum.