9

Realizing a PURA

IMPLEMENTING PURA

PURA is a socio-economic developmental tool that aims at the economic and social empowerment of people, rather than confining itself merely to the alleviation of poverty. Only empowerment is the sustainable solution to the problem of the urban–rural divide, societal bias and poverty.

But empowerment of the people is a complex and challenging process, and covers many dimensions of the economic, social and cultural domains. It requires a careful and customized analysis of a particular area and the development of an action plan which is sustainable and implementable. It takes time for empowerment to be complete and hence, a long-term commitment is required, with a high initial investment.

As discussed earlier in the book, India requires about 7,000 PURAs of different kinds. We have calculated that, for the entire global rural community, about 30,000 PURA complexes would be required. Each PURA would be a centre for vibrant economic activity and human development. The entire implementation of this sustainable development scheme would require a variety of contributors and initiators. We have already seen that with the Union and the state governments of India, organizations, universities, cooperatives and companies who are all engaged in the PURA mission. A mission of such a scale can indeed be accomplished only with the participation and partnership of multiple entities, including academic institutions, the private sector, non-government sectors, entrepreneurs, financial institutions and, of course, the government at both the Centre and the state levels. All these partners will have to work together, often sharing core competencies, to achieve a profile of vibrant development starting at the Indian villages, with a socio-economic focus and environmental concern.

REALIZATION OF A PURA

PURA is a model of customized connectivity with integrated action leading to sustainable development of the rural complex. PURAs can be realized in different sizes, covering various competencies and across different areas, under a range of individuals and institutions. It would require a sound focus on evolving four forms of connectivity along with action on the core competencies of the rural village complex for the attainment of sustainable development goals as depicted in Figure 9.1.

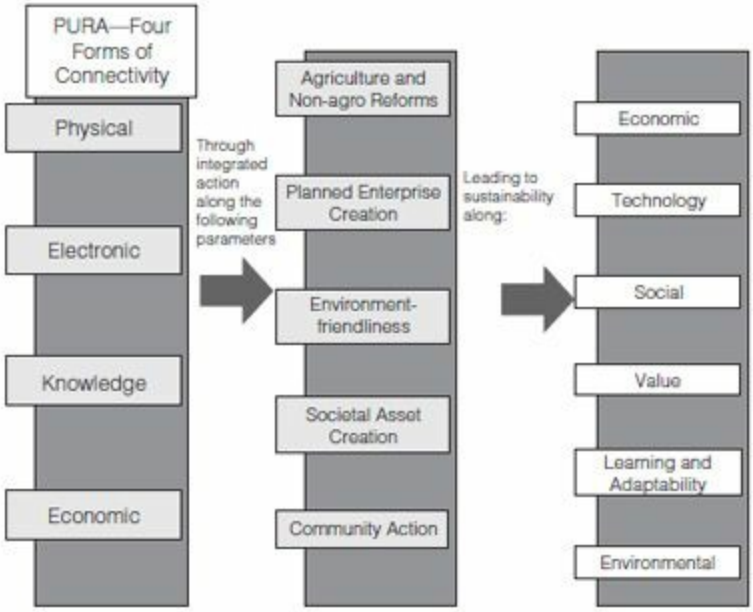

FIGURE 9.1: PURA, its four forms of connectivity, action and sustainability

The generic flow sequence for the realization of a PURA as shown in Figure 9.2 describes a comprehensive list of actions to be taken towards the creation of a PURA. However, there is always a scope and need for customization according to the local needs and challenges.

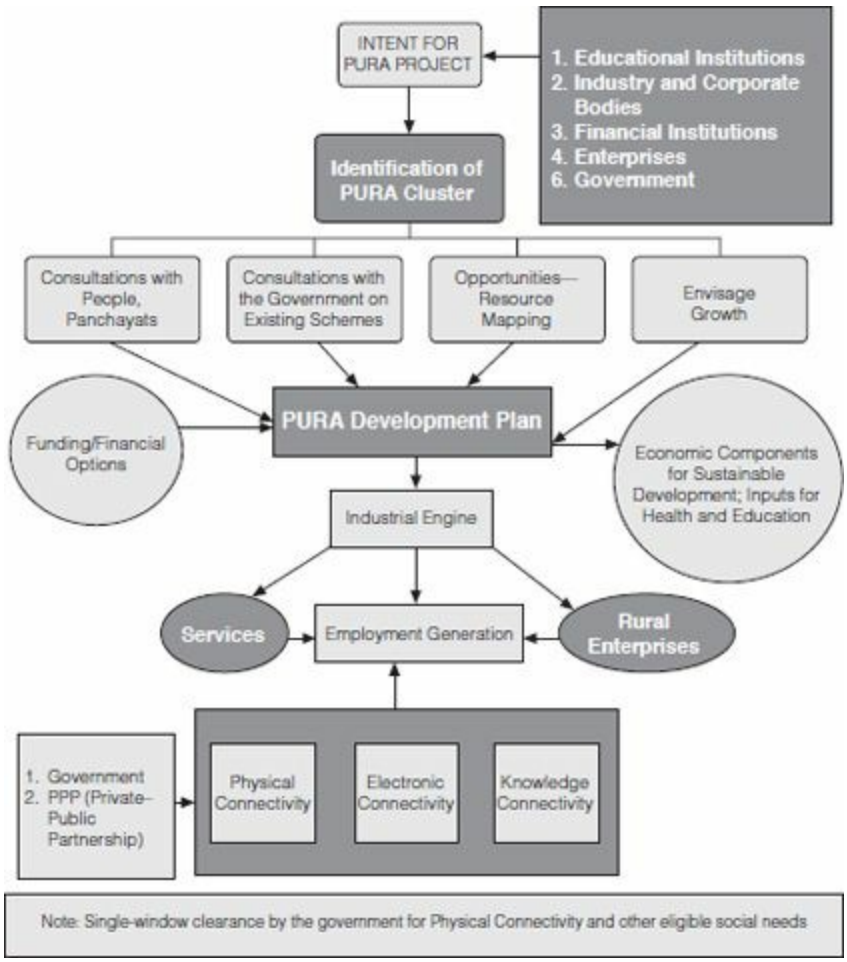

FIGURE 9.2: Flow diagram for realizing a PURA

We will now discuss the typical processes involved in the realization of a sustainable development

system in the form of PURA, and how such a sustainable development system can be realized by different stakeholders.

There is a variety of institutions and individuals who can set up a PURA (Figure 9.3), and the steps involved in creating and maintaining it are as follows:

1. An educational or financial institution, industry, societal transformers (NGOs), small-scale enterprise, corporate bodies, an individual or the government who intend to create a PURA cluster.

We have already seen that different stakeholders are capable of creating PURAs using their core competencies. This can also be done by a consortium which would bring in the core competencies of the different institutions—academic, NGOs, banks, cooperatives and industry. For example, a prominent academic institution may take the responsibility for building knowledge networks and imparting skills to the people by using their existing infrastructure. A bank may participate by providing easy loans to the PURA missionaries who are being trained. Then another partner—an industry—may take the responsibility for connecting the villages' products with the markets.

FIGURE 9.3: Who can set up a PURA?

Many of the PURAs which have been already realized or are in the process of realization across the nation have different initiators:

- Loni PURA has been initiated by a medical university.
- Warana PURA is run by a chain of cooperative societies.
- Chitrakoot PURA was started by an NGO under the leadership of a visionary leader.
- Periyar PURA is run by an educational institution.
- Bakhtara PURA was initiated by the state government of Jharkhand.
- Madurai PURA is being initiated by an alliance between a hospital, social organizations and corporate bodies.
- The Government of India's PURA mission is being pursued under a public–private–panchayat partnership.

2. The agency that desires to take action identifies the groups of villages in the chosen district, which are suitable for the creation of an economically empowered PURA cluster.

The selection of villages is an important step and has to be carefully conducted as it will determine the economic backbone of PURA. There must be a population of between 10,000 and 100,000 within a single PURA complex, and each complex would cover from about 10 to 100 villages depending on the size of the villages.

The guiding principle here is that each PURA has to operate as a fairly independent economic entity and hence would need to have a basic minimum of workforce, space and resources. This would determine the minimum number of people and villages. But a PURA complex has to be internally well networked for speedy movement of people, and this fixes the upper limit for the number of villages (or the maximum time required for movement from end-to-end in the complex), which a PURA complex can cover.

Besides the population and the number of villages, it is also important to select the villages so that they share a few core competencies on which economic assets can be built up, leading to economies of scale. We have already talked about the pressing need to evolve vertically integrated systems, and this would be possible only if the core economic potential were uniform.

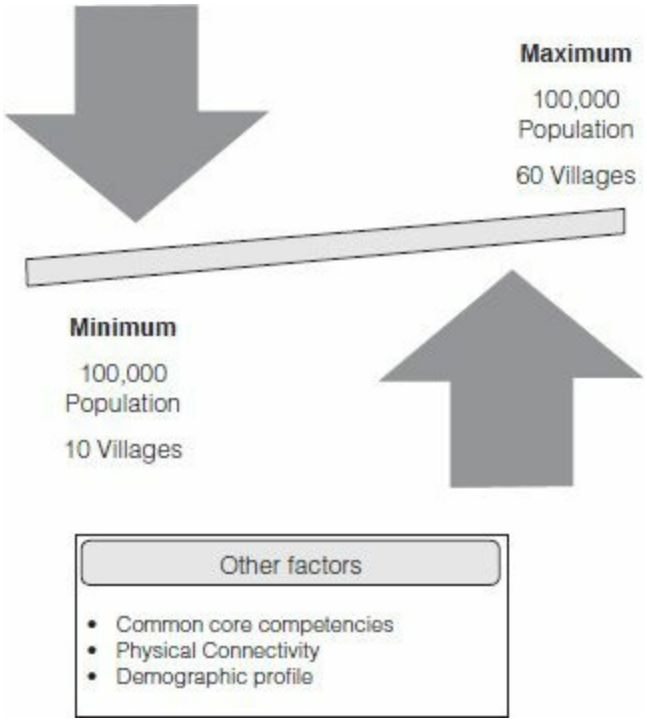

FIGURE 9.4: Factors that determine the choice of villages

3. Depending on the size and scale of the PURA, it would be necessary to establish a local PURA Complex Development and Facilitation Committee in a participative manner. It would also act as a local PURA champion.

CREATING A PURA: LEADERSHIP AT THE PANCHAYAT LEVEL

PURAs, at the lower end of the scale, can be started at the level of one or two panchayats (covering about ten villages) and expanded later. Many of the schemes under panchayats can be directly integrated with the PURA vision implementation.

Let us understand this with a case study of an innovative panchayat leader, Rangaswamy Elango, an engineer by education, who developed and implemented a model of village trade zones in the state of Tamil Nadu in south India.

Rangaswamy Elango is an example of how a successful and visionary panchayat leadership can lead to prosperity and development for a village. He is an engineer for whom the whole wide world was open. As the first technical graduate from Kuthambakkam, he was selected from the campus in 1982 by Oil India and posted on an exploration site in Orissa, but he chose to return to his village.

Kuthambakkam village is about 30 km from Chennai on the road to Tirupati. The panchayat covers a 36 sq km area and has a population of 5,000 people belonging to 1,040 households spread over seventy hamlets. Kuthambakkam is a delightful village with numerous ancient small temples.

In 1994, Elango contested the post of president of the village panchayat and won. He carried out a thorough study of the Tamil Nadu Panchayat Act (TNPA) and availed of all the possible schemes for his village. His thrust area was the empowerment of the village by creating employment through innovative ideas. In most cases, he ensured that local development was carried out by the local people and that contractors were avoided.

The panchayat asserted itself in the design and execution of the housing scheme of the Tamil Nadu government. It got the Housing and Urban Development Corporation (HUDCO) to design better houses, while the villagers pressed local soil into mud bricks to build their homes. The end result was—more wages for the local people, better and bigger construction because they constructed their own houses and cost-saving on the overall project.

Elango got a door-to-door survey done in the village and found that it consumed Rs 60 lakh worth of goods and services per month. He was amazed to find that nearly Rs 50 lakh of that could be produced at the village level. Since then, he has been evolving an economic theory of village clusters and gradually expanding the impact zone.

In simple terms, seven or eight villages form a free trade zone. They identify and produce goods and services without overlap and they consume each other's produce. The money stays back and gets invested in human development. In this way, the message and mission of Kuthambakkam is spreading to cover other villages around it. Village federations are being formed leading to economic clusters, each with a budget of about Rs 5–6 crore.

Rangaswamy Elango has proved that by innovative leadership, socio-economic development along the PURA model can be started on a smaller scale with a plan to integrate and expand with time. Visionary leadership at the local panchayat level is a crucial ingredient for the evolution of such models. The youths of the nation can look up to Elango as a model case of entrepreneurial leadership based on development of the villages.

Once the primary core competencies and societal goals have been decided, the next step is the development of a PURA facilitation committee. It has been stated earlier that PURA complexes have to act as vibrant investment-friendly economies which promote an entrepreneur-friendly environment. One of the primary goals of this committee would be to facilitate an environment where any new initiative that is proposed (based on the Triple Bottom-Line Assessment), and which matches local needs, is given full assistance and is integrated into the PURA mission. This committee may be evolved on the lines of a private–public–community partnership model, where each side brings in its own competencies and, according to them, shares clearly demarcated responsibilities.

One structure of the PURA Development and Facilitation Committee is suggested in Figure 9.5.

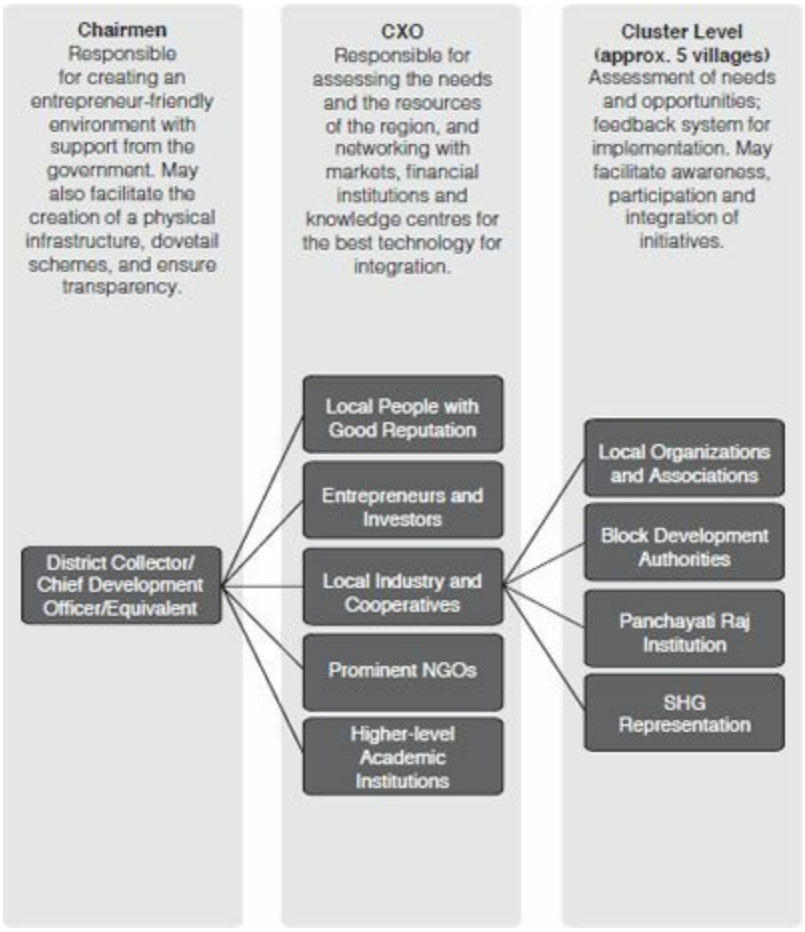

FIGURE 9.5: The PURA Complex Development and Facilitation Committee

It is important to ensure that the responsibilities of all the different stakeholders in the committee are clearly defined based on their respective authority, capital investment and location. Moreover, the facilitation committee would have to be customized according to the PURA implementation plan. In those cases where the PURA model is being implemented completely under private initiative, the role of the district administration would be primarily to assist the procedural issues and integration of schemes as object-oriented packages. Where the implementer is the government itself, the role of the district administration would be significantly towards implementation and delivery.

The PURA Development and Facilitation Committee would keep a track of the local competency and the societal indicator alterations resulting from the combined PURA initiatives in the locality, of whose progress they would keep a macroscopic track, and then devise further strategies for the respective areas. The PURA Committee would also determine the local PURA champion/s who could be individuals of reputation, primary sponsors and initiators of the PURA mission, or a locally respected institution or organization. They would be proactive facilitators of the PURA mission and ensure the day-to-day implementation of the PURA mission, empowered by the different authorities.

The PURA champion would coordinate with the different authorities present on the committee or otherwise, on behalf of the intended entrepreneurs, the implementer of the societal mission, the environmental missions, SHGs, or cooperatives looking to generate jobs or assist human development. It is necessary to have locally based PURA champions who would be a one-stop shop for the implementation of PURA, since they would act as a pivot for generating community ownership

and support for sustainable development.

4. The initiating institution identifies the core competency of the region and its current status of connectivity. At the same time, a human development plan is drawn up, based on the social needs of the local region.

The core competencies can be identified along the various dimensions as shown in Figure 9.6. Some of these dimensions are:

- Natural—rainfall, geological formation, insolation, wind, climate
- Traditional—crafts, arts, cultural heritage
- Skills and innovations
- Proximity-based—opportunities to be an ancillary supplier to a larger nearby industry

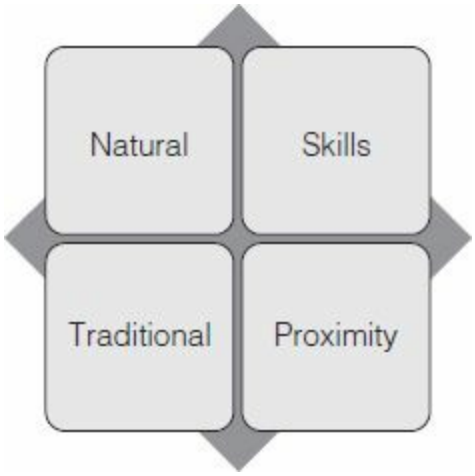

FIGURE 9.6: Competency mapping

In a similar manner, an analysis of social requirements has to be done, based on the development radar model (we have discussed this in detail in Chapter 5). Key problems and issues need to be identified along the parameters defined on the development radar map (Figure 9.7), and these should be urgently addressed to reach the targeted development profile.

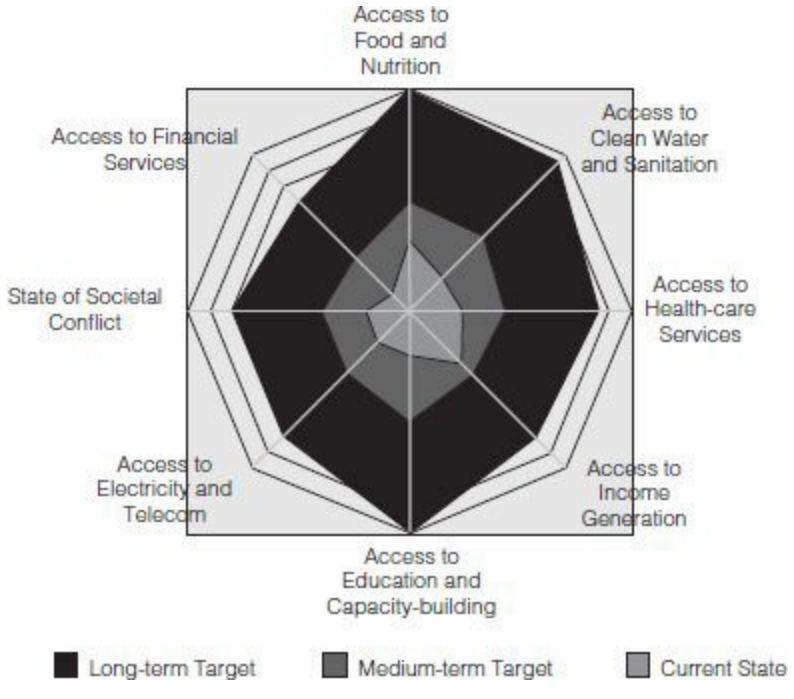

FIGURE 9.7: Development radar

A synergized plan has to be developed, based on the above competencies and the identified societal needs, with a focus on harnessing specific competencies, and on the targeted processes to meet with the socio-economic development objectives. This is depicted in the sustainability-potential matrix in Figure 9.8.

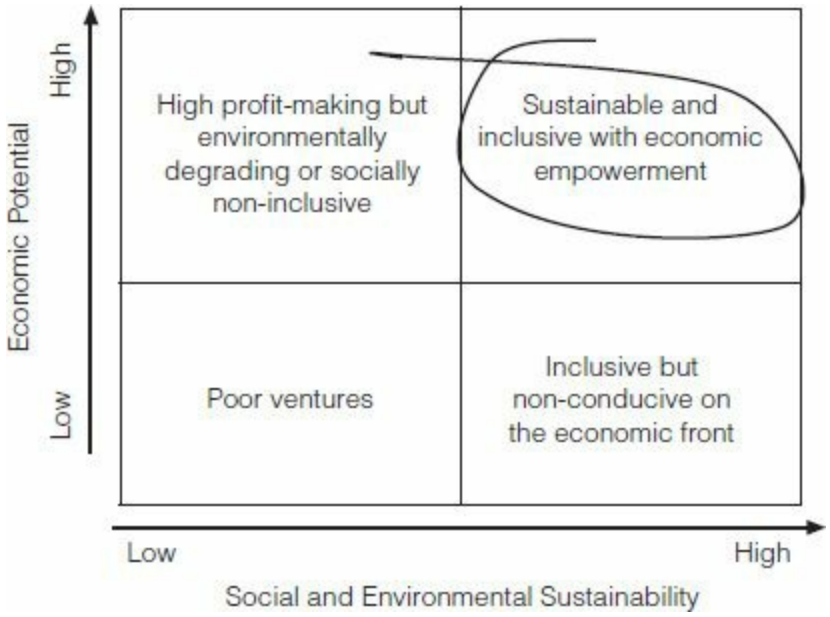

FIGURE 9.8: Sustainability potential matrix

FACILITATION OF THE WARANA PURA MISSION

As discussed earlier, the Warana PURA has been initiated and is managed by a cooperative set-up, largely emanating from the sugar cooperative which has about 20,000 members. The Sugar Parliament—as it is called in Warana Valley—is a collective meeting point for all the stakeholders (farmers) and the officials who have initiated the PURA mission. Here, the farmers and other cooperative members can openly discuss plans and put forth their suggestions and needs. This group of cooperative farmers, officials of the Warana project, local leaders and experts acts as the chief facilitators of the PURA mission, and it is in the Sugar Parliament that important decisions are taken on how to extend it.

The group acts as the central point for the facilitation of the PURA mission and reverberates with faith in democratic, economic, social and educational empowerment of the grass-roots level of the rural population. This is vital for the long-term sustainability and growth of the twenty-first-century socio-economic mission of PURA with enhanced enterprise value.

Each competency and the value-added socio-economic entity around it can be analysed on two parameters:

1. Its economic potential, which means its financial impact and employment opportunity; and
2. Its social inclusion and environmental sustainability. This means the overall benefits of the economic growth are able to reach the bottom of the pyramid in ways of participation and at the same time they preserve, if not enhance, the ecosystem of the region and its surroundings.

In fact, each PURA complex would comprise a set of three to four core competencies which will provide a spectrum of employment to the local population, present investment opportunities to the institutions and, at the same time, be sustainable from the environmental perspective and inclusive for creating an atmosphere of growth for all.

The next step would be a detailed and timeline programme which would act as a blueprint for the development of the region. This has to be according to PURA's initial objectives. The goals should be organized time-wise, while the complete vision for development may be broken into modules, and phase-wise implementation may then be carried out, leaving adequate leeway for future expansion.

The infrastructure has to be futuristic in approach and hence, should be designed for future usage pattern and expectations.

5. Determining the key challenges for achieving PURA objectives. The implementing agency, along with the local support channels, determines the key enablers required to achieve connectivity.

Once the core competencies and needs have been identified, and the desired development plan agreed upon, the next step is to assess the gap between the current state and the desired vision, and the interventions that would be required along each of the enablers to reach the desired state along the lines of each connectivity. The dimensions of the enablers are shown in a matrix (Figure 9.9).

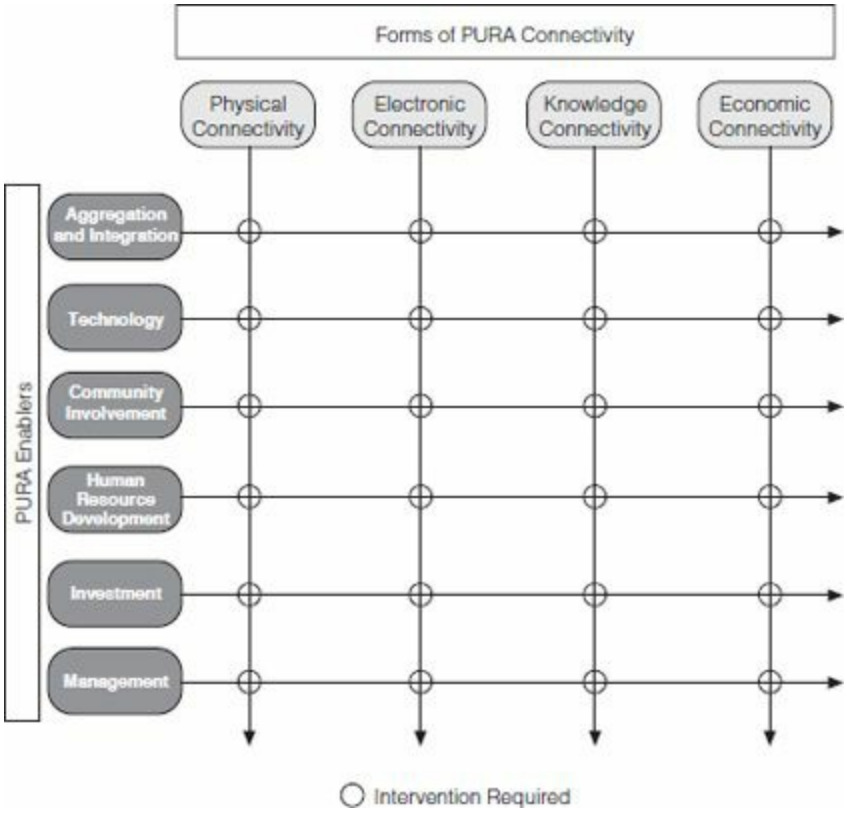

FIGURE 9.9: Enablers and forms of connectivity

Here is an example. Let us suppose that one of the key competencies identified is servicing an external market by focusing on medicinal plantation. The next question would be, which interventions have to be enabled to lead to a vibrant medicinal plantation in the PURA complex?

The value chain would flow from planting to processing and packaging and ultimately, sales, and the interventions would have to account for all these segments. We can see some of the enablers required in Table 9.1.

TABLE 9.1: Enablers required to achieve connectivity

ENABLER/ CONNECTIVITY	Physical	Electronic	Knowledge	Economic
Technology	Identifying cost-reducing technologies for storage and transport		Finding the most suitable processes given local conditions	Identifying the optimal technology based on market needs
Fixed Investments	Building for processing and storing the inventory and material	Additional Electronic Connectivity which needs to be established for facilitating business	Initial investment in training, market intelligence and quality control	Establishing connectivity with the market
Human Resource Development	Finding space for training the local people in the new business model	Enabling people to use the electronic interface for better productivity	Setting up the training facility for the local population	Enabling vertical integration through people empowerment
Community	Setting up the mechanism for the movement of people for training, sales and processing	Using Electronic Connectivity as a tool to connect inclusively, empower women in their homes and use e-connectivity for knowledge	Training some innovators first and enabling them to impart knowledge through community-initiated learning	Financial services which need to be extended for supporting local micro enterprises
Aggregation	Optimal connectivity needed to facilitate faster transport of raw material and storage	Formulating ways for Electronic Connectivity to help reduce transport cost and waste		Ensuring that the benefits flow back to the planter and first member of the value chain
Management	Managing the logistics and support infrastructure		Knowledge empowerment for enterprise creation	Finding the best value-market

6. The PURA initiator plans the services and the rural enterprises, and determines the total potential for generating employment and the expected societal change of the PURA complex, both during commissioning and subsequently, during its operation.

Since the fundamental principle behind the creation of PURA is income-generating activities for all, it is important to determine what the employment potential of the complex would be. In this context, it is necessary to look at a wide variety of support and service industries which would be additional employment-generators besides playing the role of capacity-builders. These would include technology, marketing, branding, quality control, financing and human resource development services as shown in Figure 9.10. It also shows how the harnessing of core competencies for economic goals needs to be managed synchronously with capacity-building to provide better skill sets to the employees and the entrepreneurs in the PURA design.

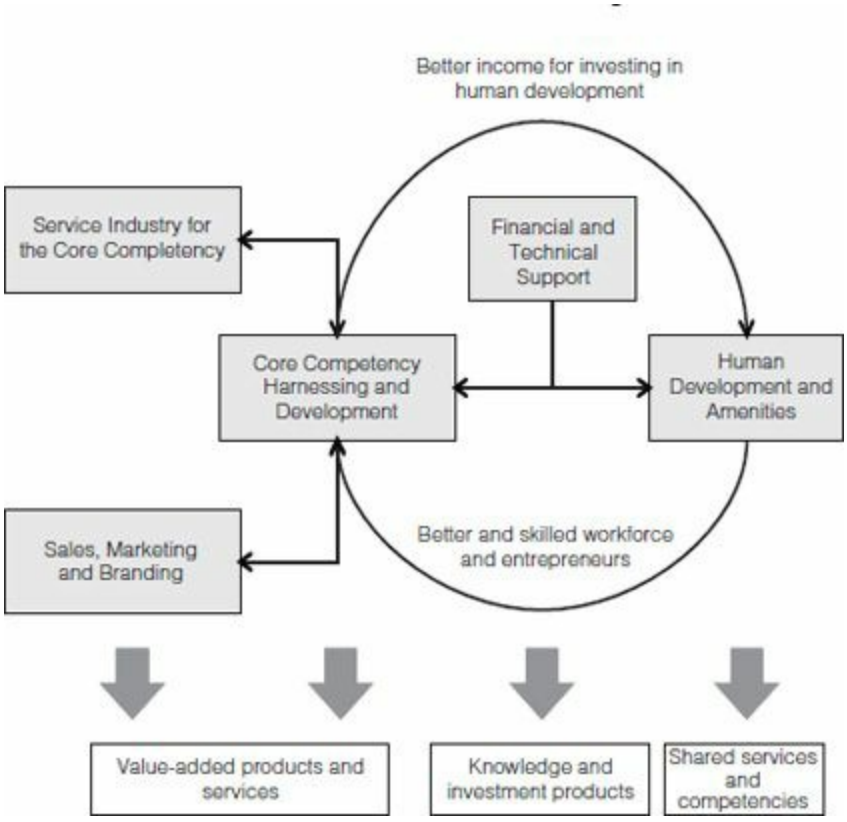

FIGURE 9.10: Industrial model of PURA implementation

A detailed listing of employment potential along these lines would need to be conducted and documented. This would help find the right balance between industry and services and facilitate their timely initiation.

7. The initiating institution would simultaneously work out the funding requirement, including those funds which have been allotted for the government's development schemes in the area.

PURA is an empowerment programme that targets permanent, self-sustaining solutions. The focus on employment-generation and capacity-building translates into significant investment requirements at the start. Of course, later on, the capital investments will yield returns and make the model sustainable.

The capital cost may be met by the creation of a PURA Fund (Figure 9.11), which would be a union of different kinds of financial assets—equity (investment), debt (loan) and development grants. To cut down on costs, government schemes may be dovetailed into PURA goals, and the panchayati raj institutions may step in to attract investment through the PURA mission by identifying land for the socio-economic development of their villages.

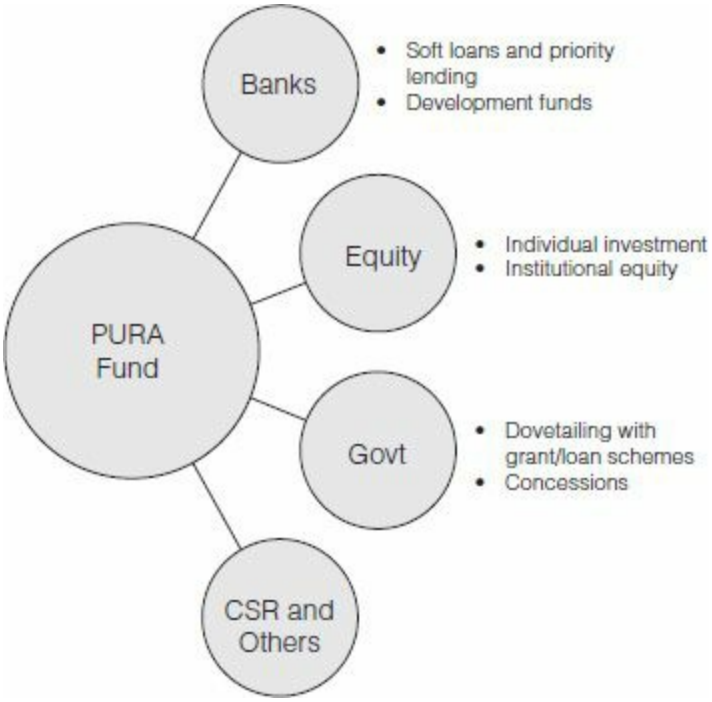

FIGURE 9.11: The PURA Fund

Typically, every average-sized PURA, with twenty-five to thirty villages, would require about Rs 100 crore ($20 million) of capital funding, which would be used to spawn a number of initiatives, which works out to about Rs 15,000–25,000 of investment per person in the complex. These investments would be spread over a period of time (about four to five years) and be dependent on the scale of operation.

Also, for non-government initiators, a significant portion of this funding can come by dovetailing with existing government schemes. Investments may also come from community ownership models like cooperatives and self-help groups, especially if economic empowerment has commenced within one to two years of operation. The panchayati raj institutions can also be a significant partner in the implementation, and help in channelizing government schemes towards the creation of assets for a PURA creation. The panchayati raj institutions can also actively partner PURA by helping with a grant of land for the establishment of centres to facilitate the Physical, Electronic, Knowledge and Economic Connectivity for the creation of PURA.

Since PURA is a tool focused on empowerment and economic development, after a while, the investment requirements would be met with from the profits generated. Figure 9.12 shows how a typical PURA investment flow would look, but the investment plan and the returns would be customized according to local conditions and needs.

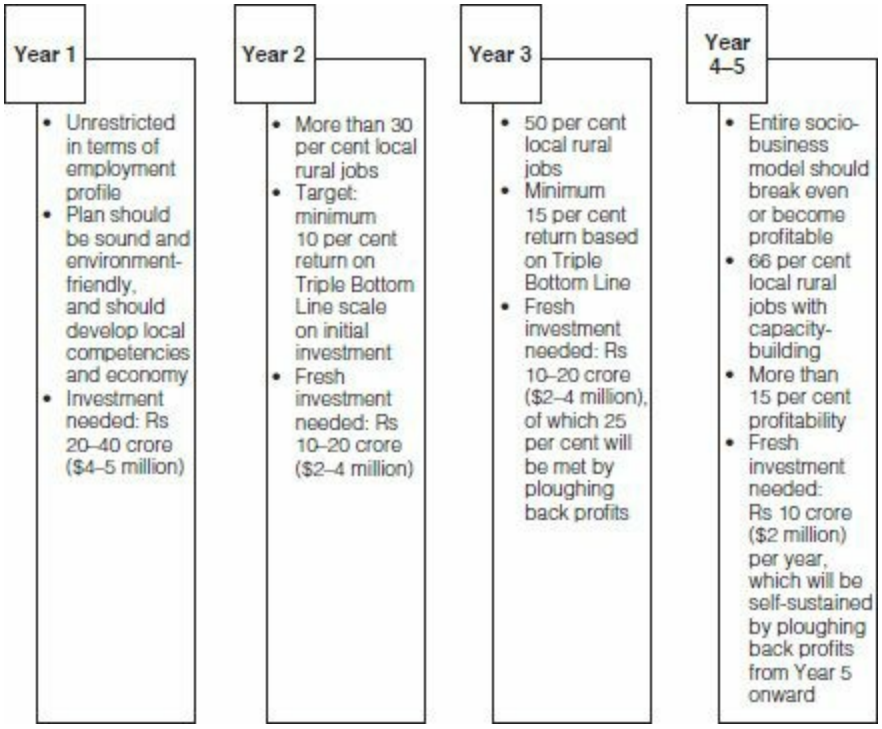

FIGURE 9.12: Typical investment and return targets on a PURA

The initial investment requirement would be quite high as the bulk of it would go into setting up the 'enablers'*; on which the 'growth engines' can later be created. Thus, the initial investment would largely be in the form of long-term loans and equity-holding, and grants. After one to two years of creating a sustainable network of enablers, there would be an influx of growth engines which would start yielding economic benefits and employment for the local people. At this stage, an increasing fraction of the investment would be in the form of putting back the profits into further development. From this point, the financial portfolio would change to shorter-term loans and institutional investing.

Towards the later phase of the implementation, the focus would gradually shift to the creation of 'sustainers' which would include the service sector, where the additional disposable income can be exchanged for improved living standards, and for developing ecological sustainability and a technologically advanced PURA framework. After four to five years, the PURA complex should be able to start working as an economically independent entity with little or no need for any external financial aid other than in the form of equity capital.

8. Once the master proposal has been developed, it has to be divided into a village or panchayat (or other local governance) level plan which would act as a blueprint for each of the villages and be integrated into the comprehensive PURA mission.

The village-level development plan for each of the villages (or a group of three to four villages representing a mini cluster) in that particular PURA complex would include specifications for residential, commercial and recreational areas; institutional areas (hospitals, schools, offices, KVKs or Village Knowledge Centres); rural industrial areas; and parks, through the community mobilization procedures.

The plan would also make it possible to approach the PURA implementation by a modular approach. The investment cost of a PURA can go as high as Rs 100 crore. By breaking up the PURA

implementation into village-level plans—which can gradually integrate into a comprehensive PURA implementation—it can be a viable option to start with a smaller total investment of about Rs 2–3 crore ($4–6 million) per village, a large part of which, again, can be dovetailed into existing schemes. This method can be an attractive option for smaller investors, small-scale industries and interested individuals who can get together and pool their efforts for developing individual modular villages which fit into the main PURA objectives.

The block diagram in Figure 9.13 shows how the integrated objectives of a PURA complex can be applied to individual villages. At each stage of implementation of the individual village layout, the overall PURA objective has to be kept in mind; the economic and social assets being created at the village level must meet the criteria of the PURA plan and suit the local competencies. The layout must determine the finer aspects of Physical and Electronic Connectivity, and the layout for them which best suits the intra-village connectivity. It must also serve the external market and connect with the knowledge resources outside the village. The Knowledge Connectivity—in the form of training, information and technology—must be futuristic in planning, and be capable of emerging as a shared mutual resource across multiple villages (or panchayats), since the PURA implementation will expand to cover more villages. In this way, a self-sustained village, which would also fit the overall PURA framework, will be realized.

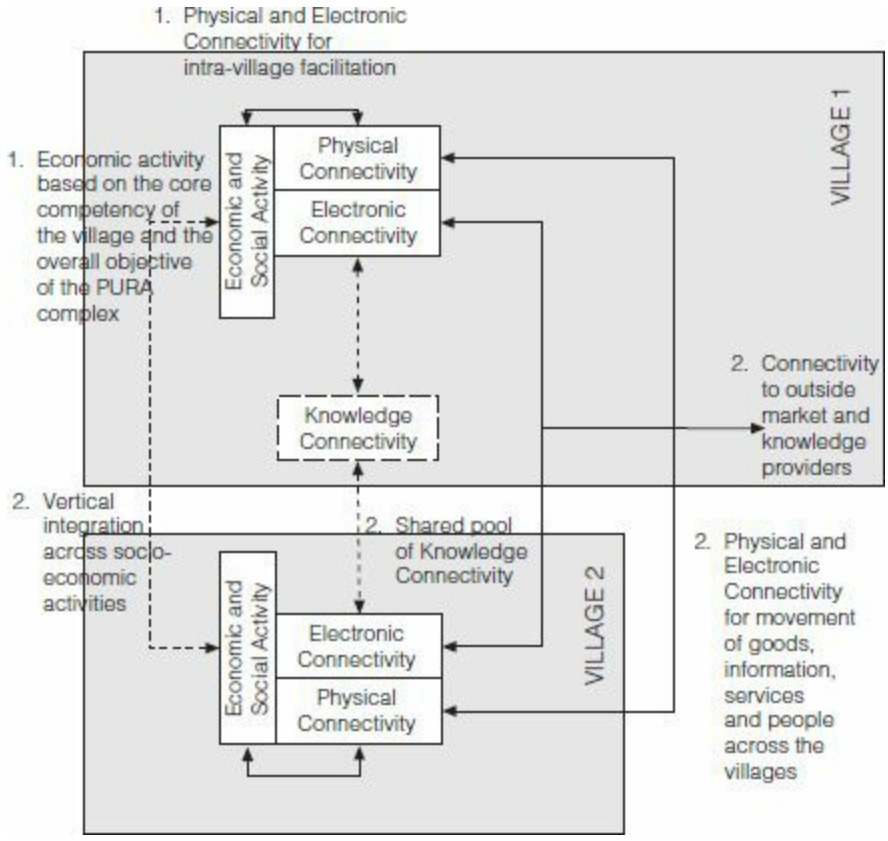

FIGURE 9.13: Village-level planning for PURA and integration across the different villages

As the PURA implementation occurs, expanding into many villages and panchayats, the same architecture can be employed with a provision for integration and sharing of resources and knowledge across the various villages.

9. A) Deciding on objectively measurable and accountable indices

B) Sensitivity analysis of the action plan

In the preceding chapters, we have continuously stressed the need to have objectively measurable parameters which can be used to assess the impact of any development initiative. In Chapter 8 we evolved a new Triple Bottom Line measure of performance which can be used to judge the projected impact of PURA implementation. Similarly, the development radar approach (Chapter 5) can be instrumental in judging the effect of the initiative over a period of time.

The PURA vision must be translated into these objective parameters and communicated to all the stakeholders—investors, the government, PRIs (panchayati raj institutions) and the community. A brief summary of certain parameters which can be employed is shown in Figure 9.14.

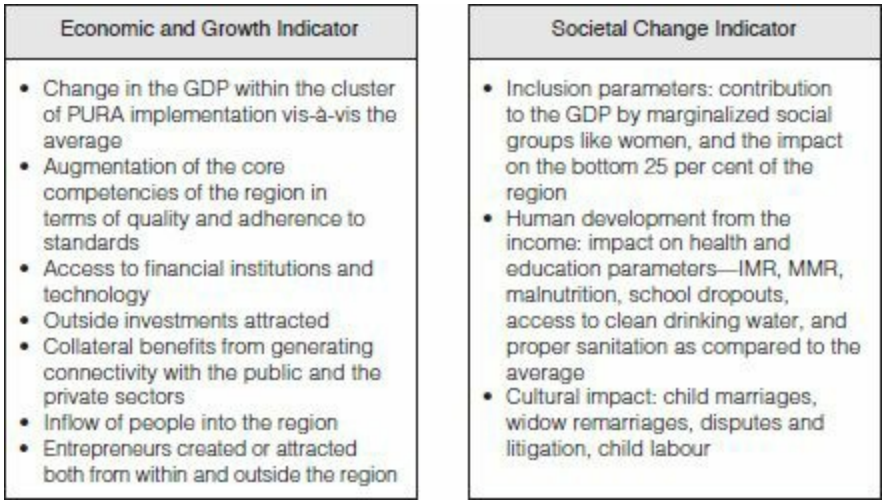

FIGURE 9.14: Setting the parameters for evaluating performance

VILLAGE-LEVEL IMPLEMENTATION

The Chitrakoot PURA, while setting overall objectives, distributes the master plan over individual villages and delivers and evaluates the performance using the Samaj Shilp Dampatis.

It also clearly defines deliverables at the level of each village. All these deliverables have to be fulfilled covering various dimensions—social, economic, cultural and environmental.

This is an example of how planning, delivery and evaluation of the PURA has to be broken down at the village level.

Next, the PURA implementation agency, with the help of the local PURA champion, should conduct a sensitivity analysis of the PURA plan. This may be based on:

- Sensitivity and inherent risks within the markets
- Dependencies on the input side—bargaining power of the supplier and the buyer
- Risk of substitutes
- Risk of technology obsolescence
- Weather-related risk
- Political risk

This analysis of sensitivity to dynamic situations will help establish guidelines for mitigating the vulnerability associated with external factors.

10. Implementation phase: key challenges and how to overcome them.

Even though the PURA plan may be described as robust with optimal technology and investment, when the actual implementation of the project begins in a village cluster, many unforeseen challenges

may crop up and need to be addressed.

These would have to be dealt with largely on an individual basis, but some broad precautions can be taken which would make it easier to overcome the operation-phase challenges.

First, PURAs should focus on developing self-sustainable models to the extent possible, with the maximum room for local entrepreneurship. The existing local entrepreneurs can be trained further to enhance their output. Moreover, the local youths would be a potent pool for developing into a world-class, skilled cadre. The empowered entrepreneurs would generate many independent jobs, which would lend stability to the system.

Second, it is of paramount importance to involve the community and to constantly interact with it. We have discussed various ideas and innovative examples of community-owned models which can be customized according to the needs of the local region. Once the community becomes the owner of the implementation, the socio-political stability will be enhanced and the needs, too, would be better matched.

Third, the creation of social and economic assets should be carefully implemented so that the needs of one are matched with the supply from the other. As the economic assets become more complex and demand better skills, the social assets should be able to fill the gap. This can be either in the form of capacity-building avenues or as better amenities that can attract and retain a better and more skilled workforce which may come from outside.

THE GOVERNMENT OF INDIA'S NATIONAL PURA PLAN

In May 2010, the Ministry of Rural Development, Government of India, launched a national PURA plan under a public–private partnership with an active role for the panchayati raj institutions. The scope of the scheme 'would be to develop livelihood opportunities, urban amenities and infrastructure facilities of the prescribed service standards and to be responsible for maintenance of the same for a period of ten years'. Under the private–public partnership mode, the selected private partner would have the choice of selecting the PURA project area and a revenue-generating project thereon. This has to be done in consultation with and with the approval of the local panchayati raj body. The cost of each project is estimated to be about Rs 110–120 crore and the government would be offering a capital grant of about 35 per cent of the total project cost for meeting the viability gap. The PURA area would have the following parameters:

- Areas of about 25 sq km
- Population of about 25,000
- Three to four adjoining panchayats (each panchayat usually has about five to six villages)

The selected private partner would be required to provide amenities like water supply and sewerage, village streets, drainage, solid waste management, street lighting, telecom, electricity generation, development of economic activity and skill development as part of the PURA project.

The private partner, in consultation with the local panchayati raj institution, may also provide additional revenue-earning facilities such as village-linked tourism, integrated rural hub, rural market, agro-common services centre and warehousing, and any other rural-economy based projects.

The key features under the scheme would be:

- 100 litres of water availability daily
- 16.75 km of roads and drainage
- Five pits for solid waste management (one for every 5,000 people)
- Skill development for 5,000 people
- Primary economic activity for 1,000 people
- 840 street lights
- Five Internet kiosks
- 1 MW biomass-based plant

The private implementer will enter into a tri-party concession agreement with the state government and the panchayati raj, which will commit to necessary approvals required for covering the construction risks, trunk connectivity of utilities like water, telecom and electricity. The private player would have to complete all the construction activities within the first three years of operation and thereafter it will be responsible for the operation and maintenance of all the amenities and services for a period of ten years. There would be a concession period agreement with the private party, covering all these terms and commitments from all the stakeholders, for a period of thirteen years (three years for construction and ten years for operation and maintenance). After the termination of the concession agreement, all the urban amenities and add-on facilities created, for which the land was provided by the gram panchayat, will be transferred to the respective gram panchayat, hence the ownership will pass on to the community.

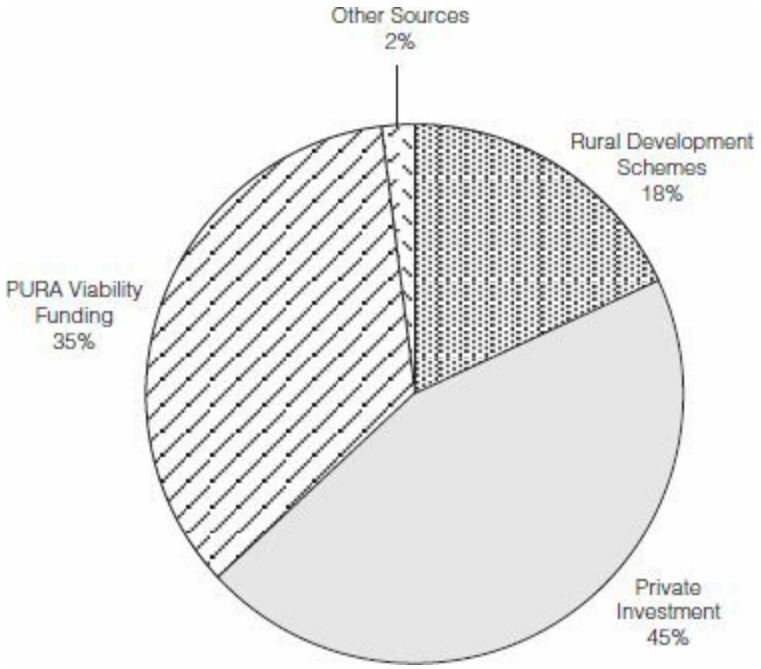

FIGURE 9.15: Sources of funding for PURA

The monitoring of the project will be done by independent engineers who will supervise and monitor activities during the life cycle of the project and check for compliance under the standards laid out in the concession agreement. Moreover, the gram sabha will also monitor performance of the development activities during the concession period.

The essential thrust of this PURA scheme lies in its inherent nature to make it a financially

sustainable model of development and facilitating the implementation by the private player in partnership with the government and the panchayat. The scheme also aims at finding a confluence of different development initiatives, often from different ministries and the state and Central governments under a common objective of integrated development through PURA. The scheme got a good response from ninety-three private players expressing their interest in being partners of the implementation.

FURTHER CHALLENGES

Some key challenges have to be considered here. The first is the fact that creating a single PURA means an investment running into many crores of rupees, which may be a difficult proposition for a small-scale investor.

Many of the stakeholders, entrepreneurs or companies might not be in a position to be able to create a complete PURA by themselves. But, there might be certain competencies across different stakeholders which, when combined, may yield a well-integrated solution for a PURA complex. The challenge lies in bringing all these stakeholders together at one common point.

I have met many people of Indian origin living abroad who are seeking an opportunity to contribute to the nation. In the case of the PURA mission, there are also stakeholders and individuals who are unable to engage in ground-level implementation but can certainly contribute by equity investments, access to markets and sharing knowledge. This is our second challenge.

Our third challenge would be how to integrate them in the mission of sustainable development by the creation of investment, marketing and knowledge networking.

PURAs would be established across regions that differ in terrain, rainfall, people and language. The final output coming out of PURA complexes would be a wide spectrum of products and services, each carrying the uniqueness of an Indian village. Thus, there would be diversity in both the inputs as well as the output from the PURA complexes. The opportunity would lie in identifying and applying the optimal technology with customization. On the output side, it would be a significant advantage if PURA were integrated as a national brand while the processes may still be decentralized. This aggregation of technology, investment and skills on the input side, and aggregation as a common brand on the output side would be our fourth challenge.

We will now discuss a sample PURA implementation plan that can act as a specimen of how PURAs need to be planned and the action flow to be developed.

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THE SANDESHKHALI PURA

Sandeshkhali-II is a part of the 24 North Pargana district in the Sunderban region of West Bengal in the eastern part of India. Sandeshkhali is marked by underdevelopment, poverty and poor human development indices. More than 80 per cent of the population is living below the poverty line according to the 2001 national census of India. The situation worsened after disaster stuck in 2009, with the cyclonic storm of Aila destroying flora and fauna and affecting the livelihood of the local people.

Sandeshkhali-II block consists of five islands with a huge number of water bodies. In fact, for the 27,000 families living there, the number of water bodies exceeds 60,000. With such a background, let us now discuss a potential PURA plan for the area.

1. Potential PURA initiator

Here we will consider that the initiation agency is a group of entrepreneurs who will draw support from the local self-help groups and panchayats.

2. Group of villages and size of PURA

The total population under the area is about 130,000 across five islands. Hence, we would break the Sandeshkhali PURA into five smaller PURAs, each with a population of about 25,000 and belonging to one particular island. Many of the resources would, however, have to be shared across all these five PURAs.

3. PURA Facilitation Committee and PURA champions

Each of the sub-PURAs will have one or more entrepreneur champions who will coordinate the economic activity and social asset creation with the help of the local panchayat and the people. These would be the CEOs of the PURA complexes. The chairman of the facilitation committee can be the development officer or the district collector of the 24 North Pargana district. At the cluster level, local village representatives and SHG champions will lead PURA in the individual villages.

For example, let us take the primary economic activity—marine products. It would entail the balancing of enterprises and SHGs along the primary procurement to the marketing chain in an integrated and balanced manner as depicted in Figure 9.16.

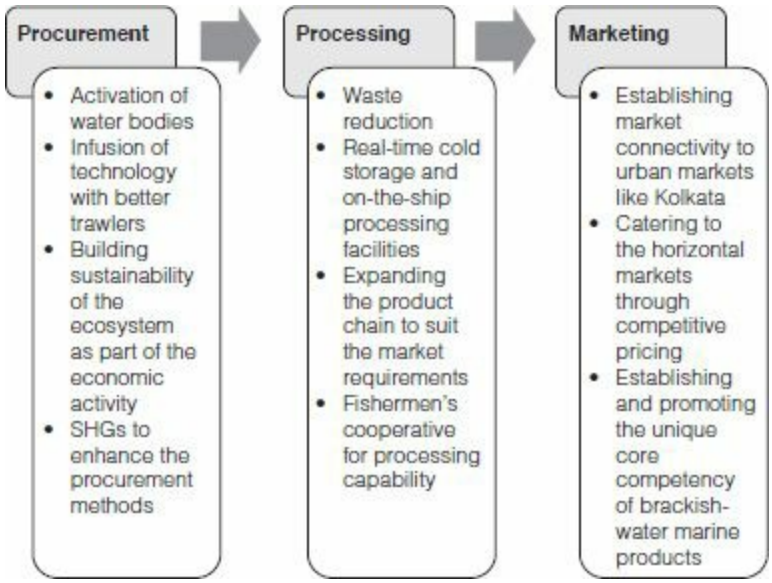

FIGURE 9.16: Flow of production chain for marine products

Moreover, the primary economic engine of fishing would also have to be evolved as a knowledge-based industry where the best practices of fishing, ecology protection, management of markets and processing are shared in a practically useful format with the fishermen groups. This can be done in the format of a KVK in collaboration with the Central Inland Fisheries Research Institute (Barrackpore) which is about 100 km from Sandeshkhali.

The economic activity needs to be diversified to include other activities core to the area like

bamboo crafts, animal husbandry, apiculture, sericulture, etc. Many of these can be done at the SHG level, dovetailing existing schemes and forward linking with markets.

Another economy booster would be the provision of a better credit extension facility in the form of banking and microfinance. The PURA entrepreneurs would have to find customized schemes for the requirements of the local people—much of the credit requirements, given the nature of the primary activities, would be very short-term loans of smaller sizes. This can be facilitated through the creation of multiple SHGs (and leveraging on the already existing SHG network in the area).

We also need to analyse the societal improvements needed to ensure that the added income levels do translate into a better life for the local people. This would include better health-care facilities customized for the local needs. Innovative ideas like the water ambulances and mobile dispensaries would be of great usage in the areas and service multiple islands. Another health-related requirement is that of the provision of safe drinking water for all. This can be achieved by using dedicated SHGs equipped with medium-scale equipment based on solar or biomass-based power, which can manage the provision of drinking water. One such equipment, which I analysed with my students at the Gatton College of Business and Economics at the University of Kentucky (USA), is called the 'Slingshot' water purifier invented by Dean Kamen, an American innovator, which runs on biomass fuel and can even purify sewage water. I am sure many such inventions can find use in the Sandeshkhali PURA. Similar innovations are needed in the construction of houses and the provision of sanitation facilities.

4. Identify core competencies and human development plan

The core competencies of the PURA complexes are:

- Richness in natural beauty with unique flora and fauna
- Presence of over 1,300 SHGs with almost 50 per cent of the families participating in them
- More than 60,000 water bodies, many of which have brackish water with unique varieties of fish, prawns and marine life
- Availability of workforce largely comprising the youth
- Large areas of cultivable wasteland, which can be used for a variety of purposes (more than 50 per cent of the cultivated area)
- Proximity to Kolkata, which is one of the metropolitan cities of India and the capital of the state of West Bengal

The key human development needs, which are largely derivatives of extreme poverty, can be enlisted as:

- Literacy levels and vocation training
- Lack of access to financial services, with only three commercial bank offices present in the area
- Lack of health-care facilities (there are no hospitals in the block and only three health centres) propels the demand for innovatively laid out health-care services

Based on these competencies, a range of product and service industries will find relevance in the area, which will be closely interlinked and vertically integrated.

Given the core competencies of the area, the primary activity for the PURA enterprises would be fish and marine products and marketing. However, we also need to diversify the portfolio of economic activities and hence improved agriculture, apiculture, sericulture and bamboo-based craft products would be of significance as well. For each of these products, procurement to processing to marketing chains will have to be established using the best available technology.

5. Total employment generation and targets for societal change

For each of the economic activities, the employment-generation potential and the skill requirement map would have to be estimated. In a phase-wise manner, within five years, the Sandeshkhali PURA should be able to generate about 8,000–10,000 jobs in fishing and fish processing and marketing alone. Additional 3,000 jobs would potentially be generated in other industries of sericulture, apiculture and other agricultural activities. The service industry, in the form of boat kiosks, boat maintenance, shopping centres, mobile health care and education would have a potential for the generation of about 3,000 additional jobs. Finally, the infrastructure industry, like solar plants and water body maintenance would have a potential of about 2,000 jobs. Besides this, many other small-scale industries based on the SHG model would spawn with time, bringing additional employment for the people. All of these workers would have to be knowledge empowered with globally competitive skills. This would need an additional focus on facilities for skill enhancement and upgrading.

The targets for societal development should closely map the income generation in the Sandeshkhali PURA. The first target should be to treble the nominal income of the individual household within the next five years. This should be accompanied with the target to bring every citizen above the poverty line in the area. Similarly, the IMR and MMR should be brought down to less than half of the present figure within four years. The nutrition levels, especially in children and women should see significant improvements and reflected objectively. Communicable diseases and those related to unclean drinking water should see at least a 50 per cent drop in incidence rate, with 100 per cent coverage of clean drinking water, using a variety of purification techniques and mobile boat-based health-care centres. Similarly, education with value-based learning should encompass all the youth and reflect objectively in not just the enrolment rate but also retention and quality of education. This should also include access to global standards of vocational training and a linked employment facility for the local youth, especially the women.

These and other objectively defined socio-economic goals should be mapped on to the developmental radar of the area with clearly defined annual targets and action plans.

Further, the PURA also needs to set clear environmental goals, which would include activation of water bodies and moving along the goals of energy independence through a mix of solar power and biofuel in its wastelands and wastewaters.

6. Key challenges and enablers needed to achieve the connectivity

The economic and societal plans mentioned earlier can be enabled only when the necessary connectivity is enabled. For that the PURA initiators would need to analyse the existing challenges and opportunities according to each necessary connectivity for PURA. Let us briefly evaluate them.

- **Physical Connectivity**: The main island of Sandeshkhali, called Dhamakhali, is well connected with Kolkata through road but the condition of the road is not good. This serves as the primary connectivity to the urban market and hence needs improvement. Inter-island connectivity is by boats, most of which are small. Intra-island connectivity is probably the poorest of all, by ad-hoc vehicles called ‘Jugaad’ which are somewhat like motorcycle-powered carts. Till today, all the villages have not been provided with electricity and even in cases where there is power, the availability is erratic, making it useless for business purposes. This situation needs significant improvement.
  Once the islands become vibrant socio-economic entities, with significant sharing of facilities and resources, the demand for transport across the islands would significantly escalate and hence transport based on boats would emerge as a significant

enterprise with value-added facilities of boat medical centres and even mobile centres of knowledge dissemination and water-based communication access facilities (like a boat-based cyber café). This would also require activating the various water bodies. Within the island, better roads, maintained by the local population, need attention and it can be done through government schemes like the MGNREGA and other panchayat empowered schemes.

The problem of power needs special attention as it would be the backbone of the value-adding industry in the area. The solution for this is two-pronged—solar and biomass-based power. Out of the 102 islands in Sunderbans, forty-eight are uninhabited and can be used as solar power centres. Typically, for each megawatt of power about 5–10 acres of land would be required and roughly 5–6 MW would be sufficient to power the Sandeshkhali PURA. This can be managed as an enterprise or through a cooperative. Many of the schemes of the Ministry of New and Renewable Energy Sources can be employed for acquiring the required capital and technology.

- **Electronic Connectivity**: While private mobile phone operators are already connected to most of the area, for enabling market connectivity and e-health and tele-education, high-speed Internet is a necessity. In this context, cabling would be a difficult proposition given the geography of the area and its size. Hence, WiMAX connectivity can be established across the islands. Similarly, mobile boat-based e-kiosks can be shared across the islands. Community radio across each of the islands can also be enabled.
- **Knowledge Connectivity**: Once the Electronic Connectivity is enabled in the area, facilities like tele-based education can be put to service. There is a specific need for improvement of higher education, especially for women, which has to be addressed. Vocational skills and enterprise development training needs to be enabled, and premier institutions like the Indian Institute of Management, Kolkata, can be instrumental in content development for the youth of the area in basic enterprise skills. There is a need for at least one vocation training institute for each of the five islands based on local competencies. Knowledge Connectivity also needs to handle the problem of a fragile ecosystem and its implications. People need to be knowledge empowered in fishing and agricultural practices that are eco-friendly and sustainable. Significant awareness and usage of metrological data needs to be used as a tool to empower the people. Knowledge networks also need to expand in enabling a service industry for the economic assets created—like boat servicing and solar power servicing.

Once these three connectivity forms are enabled, the Economic Connectivity based on the core activity of marine product processing and marketing, and other industries as discussed can be facilitated.

7. Funding and investment plan

The total funding, spread out over a period of two to three years would be about Rs 150 crore for the entire PURA structure. This would include the creation of economic assets, social assets and connectivity. Besides these, additional investments are needed for activation of the river bodies. Since the vision of any PURA is to be financially sustainable with balanced social and economic activities, the Sandeshkhali PURA would emerge as a financially feasible investment with returns on investments made being in excess of 12 per cent.

The investments can be made through a spectrum of sources that would include:

- Private investment from leading industries and people (15 per cent)
- Bank loans (25 per cent)
- Community investments and re-investment of profits (15 per cent)
- Dovetailing of existing schemes with the help of local panchayats and local government agencies (25 per cent)
- Social equity share investments (as explained under PURA Corporation) (20 per cent)

A clear and transparent mechanism needs to be established to ensure that investments lead to the asset creation with quality and relevance and this must be reported to the concerned shareholders.

8. Breaking down into village-level plans

The plan of the PURA needs to be broken down into an integrated island-and-village-level plan. Each island needs to contribute a unique product or value addition and the individual villages within the

island need to focus on one or two core processes that evolve into the island-level mission. The processes at the village level can be handled by SHGs and those at the island level can be undertaken under an enterprise or cooperative set-up.

A typical figurative representation is shown in Figure 9.17.

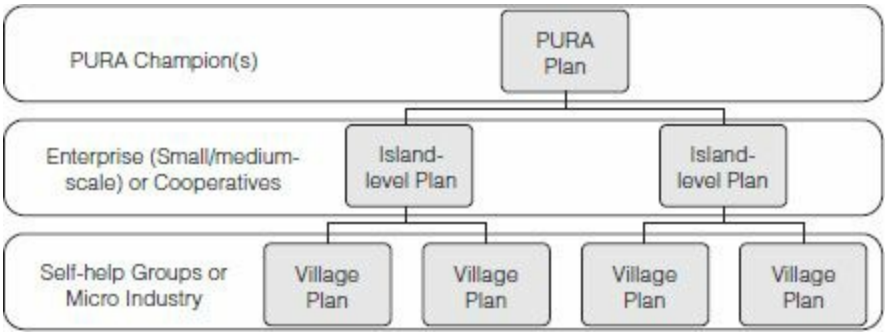

FIGURE 9.17: Village-level plans

9. Setting performance measures

The Sandeshkhali PURA would have to set comprehensive and objective targets for its performance evaluation on economic, social and environmental fronts and transparently report them over the community radio and the Internet.

It may include:

- **Economic**: Gross production of the PURA, people below the poverty line, value addition to the primary product, access to financial services, vocational skill levels, service industry quality and access, employment profile and employment levels of the local youth
- **Social**: IMR and MMR, enrolment and dropout ratio, societal conflict and court cases within the PURA complexes, access to health care and education, access to clean water and sanitation coverage, banking and telecom service penetration levels
- **Environmental**: Active water bodies, solar power resources, biofuel generated and usage, employment of wasteland and wastewater resources

Thus, we believe, that the Sandeshkhali PURA would be a vibrant zone of economy which generates income for the local people and all the stakeholders, and also improves the standard of living. It would thereby create disincentives for rural to urban migration, and lead to the creation of an urban quality lifestyle and income at the local rural levels. It would be an asset to the state and the nation. Furthermore, it would carefully balance growth with the environment, thereby bringing sustainable prosperity to all.

The authors would like to acknowledge the work of Mr Amlan Das, who prepared a detailed study on the Sandeshkhali PURA, which is one of the sources for drawing this PURA plan.