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Abstract

This paper seeks to examine the impact of SEZs on the livelihood of communities surrounding special economic zones (SEZ). Specifically, the study examines whether acquisition of land for SEZs destroys the livelihood sources of agrarian and landless households leading to their displacement. Do they voice their claims/protests against the acquisition? What new development opportunities emerge locally and who gains and who loses? Do the processes and impacts vary among different SEZs? These issues have been examined in the context of three SEZs, viz., Mundra, Dahej, and Reliance in Gujarat where different processes have been adopted for obtaining land. Such a comparative study would facilitate a nuanced understanding of the interplay between the processes of mainstreaming and marginalisation of local communities. Two major observations emerge from the paper. First, the scenario of SEZs and their impact in the peripheral region is mixed and still unfolding in several ways. Coming to a firm conclusion on mainstreaming or marginalisation, therefore, is pre-mature and also not strictly borne out by the available data. Secondly, one could make a fairly clear observation that significant adverse impacts, at least in the short/medium term, are likely to be felt by a sub-set (about 25-30 %) of the rural households in the study area. These households often comprise of the relatively more marginalised among the rural communities. In this sense the process of economic transition, if any, is likely to create further divide between those who benefit/not affected and those whose livelihoods are severely affected in the initial 10-15 years. Together these two observations call for (a) continued monitoring of the situation and (b) setting up of a process of appropriate compensation and mainstreaming of those having paid the price of such developments.

Keywords : land, displacement, livelihood, land use policy

JEL Codes : Q01, Q15, O25

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1. Context

1.1 Political Economy of Land Diversion

Land, the basic and more or less finite source for production as well as for human habitation, is one of the most contested issues in the realm of public policies in India. Decisions regarding appropriate land allocation and land use pattern involve a wide range of issues that go beyond the considerations of sectoral productivity and growth. The issue of land use is particularly crucial in the context of large populated agrarian economies such as India, where access to land, in absence of alternative employment-income opportunities and social safety nets, performs the most critical role of providing economic security and hence is accorded high premium in terms of social status[1]. Ideally, shifting of land from agriculture to non-agriculture sectors and uses ought to be preceded by a substantial shift of workforce and population outside these sectors/areas. In the absence of this, diversion for non-agriculture use is most likely to create resistance and protests among the rural communities, notwithstanding the promise of economic development to take place in the region. The legal framework of eminent domain (i.e. the power of the sovereign to take property for public use without the owner's consent) adopted since the colonial rule is not likely to work when the pressure on land is mounting in the wake of not only a growing population, but also growing sectoral as well as spatial inequality in economic growth and livelihood opportunities for the rural poor. Ecological considerations further add to the already complex situation with regard to diversion of land from the primary sector.

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[1] For a theoretical discussion on the issue of land preference in a developing economy like India, see, Patnaik (2007).

The scenario gets further accentuated when the state, being a custodian of land, tends to assume the role of a trader as has been borne out of the actual practice followed under the Land Acquisition Act (LAA). The newly enacted Special Economic Zone (SEZ)-Act goes a few steps further by permitting the state to transfer the land acquired through the LAA at lower prices to the private sector for developing the land and subsequently selling that for a profit[2]. Alternatively, land could be purchased by the private sector under the SEZ-Act. This is often accompanied by a number pressure tactics used by the private investor who is rich, powerful and patronised by the state to get the owner of the land agree to sell it often on terms adverse to the latter owing to his low bargaining power. By and large, the process involved in conversion of agriculture land, thus, signifies simultaneous failure of the state and the market; in fact in most cases both these form a strong nexus for indulging in 'primitive accumulation' by the state (Patnaik, 2008; Chandrashekhar, 2006).

What is, therefore, being questioned is the processes of obtaining land rather than the need for diverting the farm land for promoting alternative economic activities such as industry, infrastructure and urban growth (Shah, 2009). The experience also suggests that in fact the faulty processes invariably result in diversion of larger parcels of land, often more fertile, than what is actually required[3]. Much of this ends up in the hands of the real estate developers as against the productive sectors in industry and infrastructure[4].

The absence of land use policy and planning is often being viewed as the main culprit for haphazard conversion or diversion of land away from the primary sector. While a part of this is attributed to the federal structure of governance where land is primarily a state subject, the more serious concern is that of the nexus between the state and the private capital and more

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[2] For instance, it is reported that the state sold the land to Adani Group for SEZ in Mundra at the rate of Rs. 2-8 per sq. meter. The same land has been leased in the SEZ at the rate of Rs. 1000 by Adani Group. See, Asher and Oskarsson (2008).

[3] For details on land conversion around the city of Hyderabad, see, Reddy (2006).

[3] This is substantiated by the fact that only a small number of the SEZs in the country have started functioning; the rest are still waiting for the investors to put-in their plants in the SEZ. By March, 2009 only 91 out of the total of 578 formally approved SEZs were operational in India as discussed subsequently. The recent financial crisis seems to have further dampened the growth of operational SEZs in the country.

importantly that of the nature of the state and the political economy thereof (Banerjee-Guha, 2008). There is, of course, little doubt about the state's commitment under the neo-liberal framework for promoting growth, which, in turn, may help improving livelihood opportunities as well as basic amenities even among the poor in the hinterlands of the large industrial clusters including SEZs.

It is unclear whether and to what extent the industry/infrastructural development would benefit the local community, for how long and on what terms. Moreover, the expected welfare implications of most of these projects are realized in an indirect manner over a longer time period and at the macro level. All these impede the processes of public discourse and consensus building; the short term vested interest of the political parties may play it up further. Lack of clear and negotiated environmental policies, at times, also push the debate to another extreme whereby objections are raised only when the land is diverted out of agriculture, but not when the farm land is already being under or over exploited thereby perpetuating the poverty conditions in the primary sector.

The difficulty, therefore, is that the extreme nature of the discourse fails to get onto the centre stage where critical information is shared, analysed, and put in the public domain, eventually leading to a deadlock with limited possibility of exploring alternative paradigms and strategies that could work in favour of the poor - a scenario described as 'egalitarianism of nothing works' (Goswami, 2008). Misinformed and confused, the local communities get shunted between the two extreme positions devoid of any real options for them to discuss, negotiate and choose. The responses of the local communities, thus, get shaped up by not only the socio-economic and bio-physical characteristics of communities and resources such as land, but it also gets vitiated by the power groups operating within the arena of state, economy and social institutions. What one observes, therefore, is the differential response across states and also across communities within a micro setting.

1.2 The SEZ-Debate

The Special Economic Zones (SEZs) in India are of fairly recent origin. They came to existence in their present form only in 2005. SEZs are deemed to be islands of foreign territory with specific laws and provisions. This would imply that apart from a veritable feast of exemptions and

concessions they are entitled to, they are also governed by specific sets of laws and provisions perfected for their benefit. This not only creates duality in the operating environment but, may also further accentuate the gulf that already exists between high profit-high growth centres and the rest of the economy characterised by subsistence agriculture and/or petty production catering to the livelihood of a large proportion of the poor and vulnerable households in the country.

The recent controversy around SEZs has unfolded a number of issues pertaining to economic justification, size and spread, and above all, diversion of land from agriculture and other uses in the primary sector. While the experiences world over provide substantial learnings on why and what kind of SEZs should be set up, there is little understanding on how to tackle the issue of land diversion for industrial uses. The concern over diversion of fertile land is also important in the light of the fact that a lot more of agricultural land tends to get acquired or purchased than what is actually required, and that diversion of land for productive purposes is often accompanied by a huge proliferation of speculative land markets, especially in the urban fringe. All these may impinge significantly on the larger goal of promoting spatially balanced agriculture development as an important pre-condition for sustaining the overall economic growth in the country (Majumdar, 2006; Planning Commission, 2007).

In a recent development the Government of India has laid fresh emphasis on boosting up SEZs, primarily to promote industrial development in less developed areas and/or at a distance of about 50-100 kms from the urban conglomeration. The idea is to provide special tax concession to SEZs being set up in these areas. At the same time, the proposal is to discourage some of the existing SEZs that have only served the purpose of real estate development. The plan is to also cut down the minimum size prescribed for a SEZ to a quarter of the existing limit. All these seem to be steps towards rationalizing the SEZ policies, though not entirely.

It is expected that some of these large-scale industrial/infrastructural/mining projects would create new opportunities of livelihood in the local economy, notwithstanding the significant multiplier impact at the macro level. Some of the large industrial estates/zones in Gujarat do indicate substantial spill over effect in the periphery of such agglomerates. The pertinent issues, however, are long gestation period, limited employment opportunities, exclusion of local workers based on skill-requirement, preference for the

docile migrant workers and other socio-cultural aspects, dignity of work, sustainability of livelihood base, especially, in the absence of alternative forms (to land) of social security, and pricing/compensation mechanisms. These issues are particularly critical because the state is often party to the process of marginalisation of the local communities and that there is little by way organisational support from the civil society to help 'mainstreaming' rather than 'marginalising' the local economy and communities in the process of economic development.

The situation is fast worsening with the increasing nexus between private investment, illegal land grabbing and political patronage. 'This must end' is the message that one gets from the ever growing protests coming from different parts of the country. Whereas the policy makers have already started moving in this direction by proposing amendments in the two closely interlinked Acts, viz., Land Acquisition Act and the Resettlement and Rehabilitation (R & R) Act. The new policy framework, however, needs to be adequately informed about the ground realities of the twin processes of mainstreaming and marginalisation stemming from the industrial/ infrastructural developments in the region[5]. In the absence of this, the predicament of the local communities, not necessarily of those who lose/ sell their land, is likely to go from bad to worse.

The controversy around land diversion for a number of SEZs or industrial/ infrastructural projects like Nandigram is a pointer to the fact that the issue is not so much about diverting the requisite area of land for a particular economic activity (which is important for economic growth and for reducing population pressure on farm-land) as about vested interests getting built up over indiscriminate diversion of fertile agriculture land invariably without appropriate compensation and environmental safeguards. The central issue is about the type and quantum of land diverted and the pricing/ compensation mechanisms followed. Equally important are questions like who decides, through what processes, and how inclusive these processes are. Finally, the issue is of institutions and agencies essential for back-stopping

[5] It is essential that the state creates space for development of those who are likely to be excluded from a major leap towards economic growth. When the space for the difference of views or demands is shrinking, there is increasing pressure to confirm. Nevertheless, those left out are not likely to be silent spectators as the outbursts in Nandigram and similar events suggest. It is, therefore, noted that the 'solution is neither to abandon the development projects nor crush dissent, but recognize and negotiate with dissonance', TOI (2007).

the processes of land diversion so as to ensure that multiple developmental objectives, viz., sectorally and spatially balanced growth, environmental sustainability, and equity are addressed in a planned manner.

The recent experiences suggest that the communities have responded differently to the issues associated with SEZs or large industrial/infrastructural projects across states and locations within that. For instance, Gujarat till recently had witnessed relatively limited protests or resistance from the local community. This could be due to a range of factors such as long history of industrialisation and realised benefits thereof, large tracts of farm land with low natural productivity, faster pace of urbanisation, reversibility of some of the environmental damages caused by such projects, tradition of work related mobility, especially, from the large tracts of dry land regions, and, above all the nature of the polity and the democratic processes that characterise the state. It is quite likely that people, including the rural poor, see potential livelihood gains from the process of industrial growth at least in the medium and long terms given their plight as a small/marginal farmer or landless labourer operating under uncertain weather conditions. What is also plausible is that the community is not finding appropriate institutional support to voice their views and preferences and also claim their rightful share in the process of growth. The studies on SEZ in India and Gujarat are yet to get into the details of the immediate and long-term impacts of such development on livelihood in a micro setting. Understanding these realities under the rapidly changing policy scenario may help assessing the impact on rural livelihood and also exploring alternative mechanisms for safeguarding communities' rightful stakes in the process of development, if deemed necessary/desirable in a larger context. The present paper is an attempt in this direction.

1.3 Objectives and Methodology

This paper seeks to examine the impact of SEZs on livelihood of the communities surrounding the SEZs. The idea is to identify who are the gainers and losers in the short and medium terms and how do they perceive growth of SEZs in a long term perspective and why. Specifically, the study seeks to examine whether acquisition of lands for SEZs destroys the livelihood sources of agrarian and landless households and thereby leads to their displacement. If so, do they voice their claims/protests against the acquisition? What kind of new opportunities come up in the local economy and who gains and loses in the process of mainstreaming of local

communities into the development dynamics. Whether the processes and impacts vary between different SEZs located in a state is important to examine. These issues have been examined in the context of three case studies in Gujarat where different processes for obtaining land for the SEZs have been adopted. A comparative study capturing diverse scenarios of the nature of the projects, economic dynamics, and policy environment in three SEZs viz. Mundra, Dahej, and Reliance may bring out some of the nuanced understanding of the interplay between the processes of mainstreaming and marginalisation of the local communities.

The analysis is based mainly on secondary and primary sources - both quantitative and qualitative. Primary data have been collected by conducting a census survey of households in 7 villages around the three SEZs: two each in Mundra and Reliance and three in Dahej. Besides these, secondary data has been collected for examining the larger context with respect to land use, productivity of land, occupational distribution of workers etc. The analysis also draws upon discussions with various forums and with village leaders in order to gauge the nature of resistance/protests, if any, among the study villages.

An important methodological limitation of the study is that land acquisition has taken place over an extended period of time, often fairly recent, for the expansion of the same SEZ or setting up of other mega projects (for e.g., Dahej). Also the SEZs, especially, in Mundra is yet to start functioning in a full-fledged manner so as to be able to capture the complete impact - positive or negative - of the economic activities to be proliferated in the region. For instance, according to a recent report, Mundra-SEZ is likely to have an investment of Rs. One lakh crore and employ 5 lakh workers in the next 10 years (Arora, 2009). It is thus difficult to capture the futuristic scenarios, which could be fairly significant[6]. Non-availability of data on land-use and land productivity at disaggregated levels is yet another limitation. The village level land-use data have increasingly become difficult to access owing to the sensitivity of the issue in the study regions. We have, therefore, confined ourselves mainly to the secondary data available in the public domain.

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[6] This limitation, to an extent, is unavoidable since the state does not have many large SEZs already in operation. There are 15 operational SEZs in Gujarat; several of them are relatively small. Kandla is the oldest and the largest SEZ, but its impact is difficult to trace given the lapse of a fairly long period since the time it first came into existence.

The analysis is divided into six sections. Section 2 presents the broad scenario of SEZs in Gujarat. This is followed by detailed analysis of the three SEZs in sections 3 through 5. The last section 6 discusses the main findings and draws policy implications.

2. SEZs in Gujarat: Coverage and Likely Implications

2.1 Extent and Spread

Since adoption of the SEZ-Act in 2005, the number of SEZs approved and notified in India is 585 and 381 respectively (Sidhartha, 2012). Of these, Gujarat has about 31 SEZs in the category of notified (plus operational or functional), and almost an equal number in the category of approved (formal or in-principle). As per the latest information provided by the Commissionerate of Industries, Gujarat has about 60 SEZs in different categories as shown in Table 1. Of these, three SEZs, viz., Kandla, SURSEZ and Surat Apparel Park were already functioning prior to the SEZ Act in 2005.

Table 1: SEZs in Gujarat: A Profile

Status of SEZs	No.	Area in Ha.	Districts (No)
Functional Prior to SEZ Act	03	506.54	Kachchh(1); Surat (2)
Notified and Operational	12	14,600.62	Bharuch (2), Gandhinagar (1), Ahmedabad (2), Jamnagar (1), Kachchh (2), Surat (2) Vadodara (1), Amreli (1)
Notified	16	1,622.99	Kachchh (3), Ahmedabad (5), Bharuch (3), Gandhinagar (4), Vadodara (1)
Formal Approval	19	7,882.26	Jamnagar (1), Bharuch (1), Kachchh (4), Ahmedabad (7), Vadodara (3), Gandhinagar (2), Valsad (1)
In-principle Approval	10	4,811.4	Ahmedabad (3) Kachchh (5), Amreli (1), Valsad (1)
Total	60	29, 423.81	

Source: www.gswan.gov.in.

About 29000 hectares of land has been allotted to the 60 SEZs in the state. The average works out to be 490 ha. per SEZ. In fact, the area covered under SEZs varies significantly from 10 ha. in cities like Ahmedabad, Gandhinagar and Vadodara to 5000 ha. in Kandla. Obviously the SEZs in the proximity of major urban centres are likely to be smaller in terms of land allotted as compared to those in the coastal areas.

It may be noted that the area already diverted for SEZ in Gujarat account for nearly 0.34 per cent of the total net sown area in the state; this is substantially higher than that at the national level (Shah et al., 2008). Prima facie low productivity and desert proneness besides comparative advantage in promoting growth in secondary and tertiary sectors in the state could be seen as the rationale for the push towards land-based industrialisation/ infrastructural growth in the state. The same rationale may hold in the case of extensive development of ports in the state.

Another important feature is the variation in the size of land covered across SEZs in the state. For instance, of the 60 SEZs 10 have obtained larger than 1000 ha. of land. Together they account for 23,045 ha. of land. The large among these are Kandla (5000 ha.), Reliance (4494 ha.), Sterling Infrastructure (3380 ha.), Mundra (3110 ha.), and Dahej (1812 ha.). It is important to note that all these SEZs are in the coastal area.

Table 2 presents district-wise land allotted for SEZs in Gujarat. More than half of the land already allotted for the 15 operational SEZs in Gujarat is concentrated in two districts, viz., Kachchh and Bharuch. If we add Jamnagar, the three districts together account for 80.8 per cent of the total area under these SEZs. This pattern raises a number of pertinent issues pertaining to spatial concentration and agglomeration economies, intensive impact on environment, and damage to coastal ecology. It may be noted that a substantially large proportion of the land diverted for the operational SEZs in the state belong to the categories of revenue waste land, pastures under the village Panchayats and the forest land under mangroves on the coasts.

Table 2 : Area of SEZs by District

Districts	No. of SEZs	Area in Ha.
Kachchh	14	11924.89
Bharuch	7	6247.00
Jamnagar	2	5619.00
Ahmedabad	17	3177.26
Valsad	2	1120.79
Surat	4	447.54
Vadodara	5	364.35
Amreli	2	261.67
Gandhinagar	7	261.31
Total	60	29,423.81

Source: Same as Table 1.

The sectoral composition of the SEZs presents a fairly diverse picture. The single largest category refers to Electronics and ITES (17), followed by Engineering (10) products. Pharmaceuticals, Chemicals, and Apparel and Textiles have 4 SEZs each. Of the remaining 21 SEZs, a majority (i.e. 12) are in the category of multi-products. Table 3 presents important features of the 15 operational SEZs in the state.

Table 3 : Operational SEZs in Gujarat: Some Features

S.No.	Name and Promoter*	Product Type	District/ Taluka	Area in ha.
1	Surat Apparel Park, Gujarat Industrial Development Corporation (GIDC)	Textile	Surat/Vanj	56.64 (1)
2	Ahmedabad Apparel Park, GIDC	Textile	Ahmedabad	38.0
3	PHARMEZ, Zydus Infrastructure Pvt. Ltd.	Pharmaceutical	Ahmedabad/ Sanand	48.83 (3)

[Contd...

Table 3 Contd...]

S.No.	Name and Promoter*	Product Type	District/ Taluka	Area in ha.
4	Kandla, Ministry of Commerce and Industry	Multi-product	Kachchh/ Gandhidham	400 (1)
5	SURSEZ, Diamond and Gem Development Corporation	Multi-product	Surat/Choryasi (Sachin)	49.9 (1)
6	Dahej SEZ Ltd, GIDC	Multi-Product	Bharuch/Vagra	1812.0 (6)
7	RELIANCE SEZ, Reliance Petrochemicals Ltd.	Multi-product	Jamnagar/ Lalpur	4494.0 (5)
8	Mundra Port and SEZ Ltd-MPSEZL (SEZ-I), Adani Group	Multi-product	Kachchh/ Mundra	3110.94 (15)
9	Mundra Port and SEZ Ltd-MPSEZL (SEZ-II), Adani Group	Multi-product	Kachchh/ Mundra	1081.0 (15)
10	Sterling Infrastructure, Pvt. Group	Multi-product	Bharuch/ Jambusar	3380.0 (2)
11	Essar SEZ, Hazira Ltd., Essar Group	Engineering	Surat/Choryasi	267.0 (1)
12	Suzlon Infrastructure Ltd., Suzlon Group	Engineering	Vadodara/ Vaghodia	101 (2)
13	E Complex Pvt. Ltd., Pvt. Group	Engineering	Amreli/Rajula and Jafrabad	156.0 (2)
14	Electronic SEZ-GIDC	Electronics	Gandhinagar	37.85 (1)
15	Gujarat Hira House, Pvt. Enterprise	Diamond	Surat/Choryasi	74.0 (1)
	Total			15107.16

Source: Same as Table 1.

Note: The first 3 SEZs have been functioning prior to the SEZ Act, 2005, whereas the remaining 12 have been Notified and Operational under the Act. Bracketed figures are number of villages from where land was obtained for SEZ.

2.2 Select Issues and Likely Implications

Two important aspects emerge from the information presented above. First, a large number of SEZs have obtained fairly small area (i.e. <100 ha.) owing to high concentration of land in the 10 large SEZs with more than 1000 ha. of land. Second, most of the large SEZs are located in the coastal area, which could be attributed to factors like long coastline and the historical advantage enjoyed by the state in terms of trade. On the flip side, this may imply that the adverse environmental impacts have been shifted from agriculture/pasture land to marine resources/mangroves and from cultivators to fishing and other marginalised communities depending on these resources. The issue has been discussed subsequently in the paper.

Equally important are the issues pertaining to the processes and the tactics by which agricultural land has been acquired/purchased for SEZs. For instance, a large number of the operational SEZs in Gujarat, especially, in the earlier phase have obtained land through acquisition by the government. These include some of the larger SEZs such as Mundra Port and SEZ Ltd. (MPSEZL Phase I and II), Dahej and Kandla. These lands, therefore, have been acquired at a fairly low price from the farmers and subsequently passed onto the private companies as already noted (see Footnote 2). More recently, the land is being purchased in the market by private agencies or special vehicle government agencies like Gujarat Industrial Development Corporation (GIDC). While market purchase, especially by GIDC, could be seen as a better mechanism as compared to acquisition of land, the process is not free from other means of pressure tactics. What makes it worse is that once the market for non-agricultural land gets activated, it drives many more farmers to sell their land for a variety of reasons - the most important being receding interest in continuing with agriculture, especially, among the younger generation.

The larger implications of the land purchase, particularly, in the absence of a carefully calibrated dynamic land-use policy needs to be seen in a larger context of food security, ecological balance, urban crowding, and perhaps creation of a young cadre of rent seekers aspiring to move out of agriculture. Once set in the higher price of land for non-agricultural uses is bound to unleash a spiral of price rise even for agricultural land, which may then become unaffordable for those resource poor still willing to undertake cultivation as major source of livelihood. In this sense, activating the market

for agricultural land may push out a part of the labour force without the non-agricultural sectors being prepared to absorb them. Essentially, this may aggravate urbanisation outpacing the pace of industrialisation or sectoral diversification of labour. It is here that the issue of employment potential, both direct and indirect, of such industrial/infrastructural projects assumes relevance.

Agriculture in Gujarat, especially, in the vast tracts of dry land regions has been fairly stagnant during the 1990s (Kashyap, 2007)[7]. Subsequently, the state's agricultural scenario has experienced a phenomenal growth owing to a mix of factors such as consistently good rainfall for 5-6 years along with a massive campaign for rain water harvesting; significant increase in the area under BT-cotton; and the power sector reforms to pump ground water for irrigation (Gulati, et. al, 2009). How far the growth is sustainable and to what extent this may be applicable to the semi-arid and arid regions covered by the study remains unclear. This is also true for the talukas in which the present study has been carried out. As per the available data, the yield of the major crops in the study regions have been more or less stagnant or has experienced small increase till the early part of 2000 (Appendix 1). In any case, stagnant and/or uncertain agricultural production by itself may not be a justification for diverting a part of the crop land outside agriculture. Rather the implication should be more in terms of putting in the requisite investment and efforts for enhancing land productivity on a sustained basis.

A quick overview of the profile of the study area using the secondary data at the taluka level suggested a few common features[8]. These include: (a) relatively faster rate of population growth during 1991-2001 in all three talukas as compared to the previous decade; (b) substantially large presence of male migrants as reflected through lowering of sex ratio; and (c) reduction in community waste land. All these together may possibly imply that the regions surrounding the SEZs have already started experiencing some changes - positive or negative - in terms of declining importance of agriculture, employment opportunities and population mobility as also land use and other environmental consequences. The micro level enquiry from the selected villages around the three SEZs should, thus, be seen in this dynamic context already set-in.

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[7] The state's agriculture, however, has shown phenomenal growth in the five years during 2003-08. See, Gulati et al. (2009). The spread and sustainability of this growth needs further probing.

[8] For details, see, Shah et al. (2008).

The most critical among these, is the issue of divergence between the gainers and losers in this process of land alienation and boosting up of the income/employment opportunities in the economy at large. It has been often highlighted that even if there are larger economic gains realised at the macro level the gainers and losers do not cancel out. The moot issue, therefore, is to see to it that the losers at the micro level not only receive adequate compensation, but also have been made part of the larger developmental processes for which aspirations are raised and demonstration effects created. Failing to do this should imply changing the course of development itself. The contemporary discourse is poised with a challenge to carefully investigate and answer critical question such as this rather than merely highlighting the limitations of the present paradigm of development.

3. Mundra Port and SEZ Limited. Kachchh

Mundra Port and SEZ Limited (MPSEZL) is located in the coastal part of Mundra taluka in the Kachchh district, the only desert district in the state. Kachchh has a long history of maritime trade with the west and owes much of its prosperity to some of the thriving ports in its coast. Development of the Kandla Free Trade Zone, now turned into a SEZ, is quite in tune with the historical tradition of trade and large scale internal migration among communities from the district[9].

3.1 MPSEZL- Some Important Features

MPSEZL is one of the most ambitious projects as well as SEZs in the state. It has evolved from an already existing port in Mundra, which was expanded by 2000. MPSEZL consists of both the expanded port and industrial units. The SEZ, as noted earlier, is spread over 3111 ha. of land acquired over time from 14 villages (Table 3). While the state Government had already approved a plan for SEZ during 2003-04 (under the state SEZ policy), the project was given a fresh approval under the SEZ Act, 2005. The final notification had come during 2007.

[9] In fact it has been said that for every Kachchhi in Kachchh district there are three other residing elsewhere.

According to an alternative estimate the MPSEZL is spread over 5400 ha. though the sources of these estimates are not very clear (Table 4). Since most of this was revenue wasteland the direct impact on household's livelihood are likely to be on livestock.

Table 4 : Land under MPSEZL

Land under MPSEZL	In hectare
Gujarat Adani Port	2648
Adani Power Pvt. Ltd.	294
Rest of SEZ	1082
Area for development on 30 years lease	1400
Total	5414

Source: Asher and Oskarsson (2008).

Notwithstanding this, the diversion of land for the SEZ may have exerted significant impact on extraction of ground water implying further depletion of water resources. Also, presence of a major development project may have led to a steep hike in the land prices in the region. The most important impact, however, is likely to be on the coastal resources, especially the mangroves and also fish catch. Both of these may have resulted in negative consequences for the livelihood of the people who depend on these resources.

Given this backdrop, we may present some important aspects of the MPSEZL and its impact on livelihood among households in the peripheral villages.

3.2 Impact on the Area and the Communities

It may be stated at the outset that MPSEZL is one of the few SEZs/ development projects that has received sustained resistance from local communities and civil society organisations (CSOs). A number of media reports have been influencing what could possibly be termed as protest against the massive diversion of land and the potential damage to the marine ecology, especially, mangroves in the region.

There are three major concerns emerging from otherwise a fairly intense and active resistance emanating in the region. These include (a) loss of

pasture land and loss of livelihood, especially, among the landless; (b) adverse impact on fishing community having lost their access to the sea; and (c) damage to marine ecology, especially mangroves. While the first two aspects are relatively clearer for establishing a direct link between the loss of land and/or access to the sea and people's livelihood, the issue of damage to mangroves has been somewhat debatable, especially for want of appropriate information covering a longer period of time.

3.2.1 Damage to the Mangroves

According to a recent study the gulf of Kachchh is considered to be the richest gulf system in the western coast of India in terms of bio-diversity and fisheries (Geevan, 2008). Of the two gulfs in the state, the one in Kachchh accounts for about 96 per cent of the total mangroves. Of this 90 per cent is in the coastline of the Kachchh district. The remaining 4 per cent is in the gulf of Khambhat. Obviously, any additional human activity in the gulf is likely to disturb the ecosystem in the gulf. This has been borne out by the fact that mangroves in the state have been severely depleted overtime (Table 5).

Table 5: Change in Mangrove Habitats at the Core Area of the Marine National Park, Gulf of Kachchh (in sq. km.)

Category	1975	1982	1985	1988	1992-93
Mudflats	7.7	125.6	163.2	81.1	79.6
Mangroves	138.5	50.0	33.4	55.7	61.3
Dense mangroves	58.4	21.8	23.4	28.6	48.6
Sparse mangroves	80.1	28.2	10.0	27.1	12.7
Salt Pans	8.4	13.7	17.5	18.4	25.7

Source: Bahuguna et al. (1997).

It may, however, be noted that mangrove vegetation within the district is relatively better in the northern segment of the gulf (near Jhakhau) as compared to Mundra, Mandavi and Abdasa. This, *inter alia*, could be due to the fact that Mundra was already an important port and economically very active for long period. Similarly, mangrove in the southern part, including that of Mundra-coast, is likely to have been affected more severely by grazing practices among rural communities in the region.

We do not intend to probe further into this issue, as it calls for specialised scientific knowledge and expertise. It may, however, be noted that the gradual depletion of mangroves in the state has already almost disappeared; and that the severe depletion dates go back much longer rather than the past one and half decade. This, of course, does not imply overlooking the additional damage caused by the recent spate of industrial/infrastructural activities in the district.

Clearly, Environmental Impact Assessment (EIA) is a good legal tool for getting scientific assessment of the additional damage likely to be created by the SEZ and other projects coming up in the region. Unfortunately, the EIAs are often not made available in the public domain. Even if available, the information and the analyses are often subject to serious doubts, challenging which may require more accurate scientific information that are seldom accessible to the communities or NGOs and other professional bodies[10].

3.2.2 Impact on Land

The land, mainly 'waste land' from the revenue department, has been acquired from 15 villages in the Taluka. Of these, the largest areas of land have been taken from Tunda (540 ha.), Mundra (492 ha.), Sirach (425 ha.), Goresama (381 ha.) and Vadala (276 ha.), The land allotted to SEZs account for about 3.7 per cent of the total geographical area of Mundra Taluka, and about 6 per cent of the net sown area in the taluka.

It may be noted that some of the villages have lost substantially large chunks of land say about 400 ha. However, a part of the gauchar land in most cases is still kept with the village. Table 6 presents details of the gauchar land being diverted for the SEZ. It may be noted that out of the total of 897 ha. of gauchar land acquired, about 54 per cent has been taken from Mundra town, which has lost almost the entire gauchar land to the SEZ. It is not clear as to what was the actual use of the gauchar land in Mundra, which is an urban unit. Since the official data on acquisition of

[10] For instance, the issue of violation of the CRZs is still pending with the Government of India, which of late has set up the National Environment Tribunal which was to get operationalized from December, 2009.

gauchar land is not in the public domain, this information may be treated as tentative[11].

Table 6 : Diversion of Gauchar Land for SEZ (Ha.)

Village	Total Land Acquired for SEZ	Total Gauchar Land	Gauchar Land Allotted to SEZ	Gauchar Land Remaining	Number of Livestock
Mokha	41.77	139.49	41.62	97.87	3678
Navinal	238.52	135.08	93.15	50.00	6258
Tunda	539.93	156.05	85.08	71.77	3283
Luni	381.38	79.91	79.91	Nil	9324
Sirach	425.56	384.84	40.41	344.43	3608
Gundala	85.87	430.44	8.90	421.35	8256
Baroi	72.14	139.49	30.24	109.25	6231
Goresama	245.75	84.70	28.23	56.45	900
Mundra Town	491.72	NA	489.92*	NA	23129
Other villages	682.94	NA	NIL		
All	3205.58		897.3		

Source: SETU (2009).
Note: * Since Mundra is a town (an urban unit), this land is not classified as gauchar.

3.2.3 Impact on Fishing Communities

The present protest against the MPSEZL is concentrated mainly on the issue of loss of livelihood among the estimated 700-1000 households in the villages in Mundra and the nearby talukas. Table 7 presents distribution of fishing sites and communities among these villages.

[11] It is not clear as to what was the actual land-use of the gauchar land in Mundra, which is an urban unit. It seems that Mundra is governed by a gram panchayat, which keeps the record of the land-use. Unfortunately, sharing of information on land-use by the official agencies has become increasingly difficult in the recent years. This, in general, sets a limit to empirical probing of this kind.

Table 7 : Fishing Sites and Communities in Mundra

Harbour	Village	Taluka	No. of Families
Randh	Bhadreshwar	Mundra	316
Bavdi	Kukadsar	Mundra	40
Juna	Shekhadia	Mundra	40
Luni	Luni	Mundra	178
Bharudiya	Bhadreshwar	Mundra	30
Shekhadia	Shekhadia	Mundra	75
Zarapara	Zarapara	Mundra	101
Navinal Kutadi	Navinal	Mundra	30
Tragadi	Tragdi	Mandvi	35
Vira	Vira	Anjar	85
Veera Pagadiya	Sangad and Vandi	Anjar	90
Total			**1020**

Source: Same as Table 6.

Together the fishing households in Mundra operate 971 boats and 10,704 nets. These constitute about 23 per cent and 8 per cent respectively of the total boats and nets operated by fishing communities in the district (Geevan, 2008).

Though relatively smaller in number, fishing communities in the taluka face specific difficulties, particularly, after the development of MPSEZL. Essentially the predicament of the fishing communities is closely linked to the ecological damages caused by the SEZ. This emanates mainly from the fact that the SEZ-authorities, dishonouring the directives under the land allotment, have blocked natural drainages by constructing 15-20 km long bund on the coastline. This, in turn, has direct bearings on the marine ecology including mangroves and the fish catch. In the process it has also blocked the access for fishing communities that operate from various fishing sites (or bunders) on the coastline.

In fact, most of the fishing communities in the region shift to the fishing sites during 8-9 months in a year; fishing is by far the only economic activity this community has. Since their shelter along the fishing sites are transient in nature, they do not have any legal rights over the land at the

transient harbour. These communities face a threat of evacuation from the land from where they undertake the fishing activity, the sole source of their livelihood. This implies that these fishing communities are not entitled to any compensation from the state.

A primary survey of a sample of fishing households in the region suggested that the gross income per year is about Rs. 70,000-80,000 (Table 8). Apart from this, these households have to face harsh living conditions and lack of amenities including drinking water and sanitation and also education as well as health services (SETU, 2004). Moreover, they are dependent on middlemen for selling of the fish and for credit. As a result, indebtedness is fairly common among the small and marginal farmers. What, however, makes it more difficult for the fishing community is the absence of any skills, aptitude and confidence, perhaps owing to physical and social exclusion resulting from the nature of this activity.

Thus, rehabilitation is not only a legal challenge but, also involves socio-economic integration of these families. In the absence of this, the sudden threat posed by the SEZ to the livelihood of the fishing communities in the region may result in dire consequences in the next 2-5 years.

Table 8 : Annual Income among Fishing Households across Sites

Bandar	Without Boats		With Boats			
	No. of HHs	Mean Annual Income	No. of HH	Mean Annual Income	No. of Boats	Mean Annual Income per Boat
Shekhdiya	41	64,049	6	63,167	7	54,143
Juna	6	58,000	32	66,875	36	59,444
Bhareshwar	107	65,316	47	73,438	50	69,032
Luni	108	70,682	60	94,150	75	75,320
Vandi	39	70,554	25	78,720	26	75,692
Randh	7	67,286	95	90,381	112	76,662
Bavdi	3	59,667	20	90,350	20	90,350
Vira	22	57,182	63	1,03,827	73	1,03,662
All	333	66,835	348	87,707	399	79,068

Source: SETU (2004).

3.3 Absence of Rights and Local Protest

Responding to the grave scenario, a collaborative of local NGOs[12] has started several initiatives consisting of creation of data base, assessment of the impact on the fishing communities, launching protests and seeking legal help besides promoting livelihood base and provisioning of basic amenities for the communities, especially, at the transient fishing sites.

There are two critical issues: (i) the absence of a legal right; the Environmental Impact Assessment does not recognise any habitation in the coast line of the SEZ; (ii) the conflict between provisions of the Coastal Regulation Act and that of the SEZ. The movement has taken various forms including 'dharna' and public hearing. While these initiatives have picked up momentum in terms of widening the net of the participant/stakeholders, it has, in the process, shifted the focus merely from the specific SEZ and its likely impact to the larger issues of coastal environment, livelihood among the fishing communities, the sustenance of which is already under threat, and their overall welfare.

What has, therefore, culminated out of the long drawn movement is a specific set of demands listed as follows:

- The Bandar land should be allocated to the community and Bandar should be declared as a fishing Zone.
- 5-7 km wide and 4 km+ long stretch of industrial zone in front of each Bandar should be meant for fishing only and not used for any industrial development.
- The access road from the main road to the Bandar should not be blocked
- Creeks in the Mundra coast should not be filled or blocked as they are used by the fishermen community to navigate to fishing grounds.
- The sea routes to the fishing grounds should not be obstructed by ships anchored on the routes to the port.

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[12] The NGOs include Setu Mahiti Kendra (Bhadreshwar), Ujas Mahila Vikas Sangathan and Yusuf Maheraully Centre.

- Hazardous wastes and oil should not be dumped near the coast. Highly saline discharge from desalination plants can be treated and used for salt extraction, but should not be disposed in the sea near the shore as it affects fishing. No desalination plant or shipyard should be allowed near the fishing enclaves.
- Destruction of mangroves near the Mundra coast should be stopped as mangroves are crucial for the fishing livelihood.
- The East port of the Waterfront Development Project should be scrapped.

The movement is still on under the banner of Machhimar Adhikar Sangharsh Samiti (MASS[13]). The National Environmental Appellate Authority (NEAA) has passed a notification indicating that protecting the rights of the fishing communities is the responsibility of the state government. Meanwhile, the movement has also taken up another protest against the upcoming power plant located outside the SEZ blocks the access to the Bhadreshwar fishing site. Needless to say, the process of the protest is a long drawn legal battle. Meanwhile the mass mobilization of the directly affected fishing community seems to have been somewhat diluted, particularly, in the light of the 'divide and rule' policy adopted by the SEZ management and also by OPG-Power Plant[14]. Practiced world over by those having power to control, the policy has been effective in the region right since the beginning of the SEZ in Mundra. The very process of getting resolution from the gram panchayats for allowing the land to be diverted for SEZ is believed to be based on the policy of cooption and coercion by the state and the private companies.

It may be reiterated that the protest in the region is centred round the fishing community, though it has over time grown beyond the issues pertaining only to the interests of this specific community. It is, however, likely that the rest of the communities in the region, as of now, do not seem to have been adversely affected and hence appear to be indifferent to the massive investments likely to penetrate into the region thereby changing (if not disturbing) their livelihoods and lifestyles in the course of time. We

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13 For further details see, masskutch.blogspot.com

14 At the time of the survey, the High Court had decided in favour of the PIL filed by MASS holding that the claim by the OPG regarding 'no adverse impact' on the fishing community is not well founded. See, masskutch.blogspot.com.

tried to enquire this through the help of a primary survey covering all the 495 households in two villages viz. Luni (295) Navinal (200). Of these, 136 (27.5 per cent) of the households belong to the fishing community, which account for about 14 per cent of the total number of fishing households in the taluka. The main observations have been discussed below.

An important feature of the survey villages in Mundra is that nearly three fourth of the households in the villages are landless, which also include those from the fishing community. The landless may also include those who have a share in the family owned land, which is yet to get legally transferred to the households. Nearly 80 per cent of the households among Scheduled Castes (SCs) and Other Backward Castes (OBC) are landless. It is possible, however, that a small proportion of the landless may have land owned by the father or brother, which is difficult to trace.

Only 23 out of the 116 households reporting land had access to irrigation. Agriculture thus seems to assume limited importance in the study villages. This observation seems to be in tune with the assertion that drought prone regions may offer relatively better justification for diversion of land out of agriculture. What is, however, often overlooked is the fact that common property land resources (CPLR) exert greater influence over people's livelihood in such regions, provided these resources have been appropriately managed. Our field visits suggest that whereas much of the CPLRs have been taken away for the SEZ, parts of these resources are still accessible to the village communities. Also the CPLRs seem to be fairly degraded; losing the access to such resources therefore is not seen as having affected people's livelihood in a major way as has been discussed subsequently.

The pertinent issue, therefore, is initial neglect of the land resources, providing further justification for its diversion from its present use for grazing, fodder, and fuel wood to industrial and infrastructural development under SEZs. Ideally, therefore, one needs to create a counter factual for assessing the potential that such resources hold for supporting livelihood among the village communities, especially the poor. While an exercise such as this is outside the scope of the present study, it is imperative to keep this perspective while examining the field realities.

3.4 Implications for Livelihood: Findings from the Household Survey

The basic idea for conducting the primary survey was to know from the rest of the households (barring the fishing community) about the actual as well as perceived impact of the SEZs on the households as well as the village economy. This essentially should help in understanding people's expectations from the rapid industrial/infrastructural development that is likely to take place in the region. Given that the SEZ is yet to get fully established what we could capture is mainly the perceptions and the expectations from the rapidly changing scenarios in the region. Given this context, the important observations emerging from the survey have been summarised as follows:

i. Since agriculture land has not been diverted for the SEZ, the issue of the loss of land and livelihood did not emerge as a critical issue for majority of the households except those from the fishing communities about whom we have already discussed above. Only nine households reported that they had to lose their land which they had received earlier through redistribution of land by the state. On the other hand, a large majority of the respondents, barring the fishing communities, did not report any adverse impact owing to loss of gauchar land. It may be noted that nearly 72 per cent of the respondents knew about diversion of land for the SEZ.

ii. The survey of 495 households consisted of total population of 2621. Of these, 1098 were in the work force. This works out to be about 42 per cent of the total population (Table 9). The occupational profile of the workers suggest that cultivation, agriculture labour and livestock together occupy only a small proportion - about 18 per cent - of the main workers in the villages. For larger number of the households livestock is a subsidiary activity. Fishery workers account for 32 per cent of the total workers. Compared to this, casual workers and salaried persons along with self employed account for 19 per cent of the main workers in these villages. Of the 136 households belonging to fishing community, 41 households (or 30.1 per cent) reported that they may have to give up the fishing occupation owing to loss of access to the fishing sites.

We had probed further on changes in the use of CPLRs among the households. Of the 495 respondents, 109 (22 per cent) indicated that the loss of gauchar land will lead to reduction in income from livestock in future. The remaining households had reported no impact on their household livelihood owing to the diversion of land for SEZ. The responses were confined mainly to Luni and Mundra from where almost the entire gauchar land has been diverted for SEZ. For the remaining villages, the diversion of land is not so substantial as seen earlier.

Table 9 : Occupational Profile of Main Workers among Sample Households

Population	**Number**	**Percentage (%)**
1. Non-Workers	974	64.0
2. Only Household Work	488	32.0
3. Other	56	3.7
4. Unemployed	05	0.3
Sub-total	1523	100
3. Main Workers		
Cultivation	85	7.8
Agri. Labour	38	3.4
Livestock	75	6.8
Casual Labour	310	28.3
Salaried (including driving)	109	10
Self-Employed	81	7.3
Trader/Brokers	40	3.6
Fishing	351	32.0
Other	09	0.8
Sub-Total	1098	100
Total	**2621**	

Source: Primary Survey.

iii. About 112 workers had reported that their occupations have direct link with the activities at the SEZ. This works out to be about 10 per cent of the main workers. If we exclude the fishery workers, this amounts to about 15 per cent of the total main workers in the two villages. Whereas about 5 per cent of the households reported having got direct employment in the SEZ, about 76 per cent of the households said that the employment scenario has remained the same. It may be noted that these responses by and large capture the actual impact of the SEZs on employment.

iv. When enquired about the perceived impacts, it was observed that about 22 per cent of the households felt that the educated persons would benefit in terms of employment. Another 18 per cent reported that there will be an increase in employment (Table 10).

Table 10 : Perceived Impacts

	Perceived Impacts	**% of HHs**
1	Increase in transportation activities	23.8
2	Increase in employment for the educated	14.8
3	Increase in industrial jobs	22.0
4	Increase in land prices	10.0
5	Employment for outstation workers	17.1
6	Total	100
	No. of HHs responded	222

Source: Primary Survey.

v. While a majority of the households reported using the gauchar / waste land, they did not perceive much of adverse impact on the livestock. This may imply that such lands have only marginal influence on the livestock economy given the already high levels of degradation.

vi. Among the various environmental impacts, nearly 40 per cent of the respondents indicated that the SEZ will have adverse impact on mangroves in general, and on reduction of the fish catch, in particular. About 55 per cent of the households did not have any specific response to this question. Only a small minority of the respondents

reported increase in soil salinity or depletion of water table due to the SEZ. It is of course difficult to gauge the future impact especially in the absence of the requisite information on the nature, extent and terms of industrial growth in the region.

vii. Lastly, we tried to specifically enquire about the negative impacts that the SEZ may generate in future. A substantial proportion of the respondents (about 40 per cent) said that fishing communities and those dependent mainly on livestock may face the most adverse impact. This may lead to migration among some of the households facing the adverse impact. About 15 per cent of the respondents said that the SEZ would bring impoverishment and anarchy in the village economy and community.

Overall the observations from the household survey bring out two important aspects. First, the fishing community is clearly a loser in the process of development of the SEZ. And second, most of the households from non-fishing communities do not seem to be clear about the likely impacts and the net outcomes of the SEZ in the region though there is some hope about additional employment generation. Given the already thin agricultural base in these villages, people seem to be at a loss as to how the economy is going to unfold; almost a total lack of information sharing and consultation makes the scenario worse while the protest of the fishing community continues to gain momentum in the region.

4. Dahej SEZ, Bharuch

This section presents a case study of Dahej SEZ (in Vagra taluka in Bharuch district) and Reliance SEZ (in Lalpur taluka in Jamnagar district) representing a scenario where agricultural land has been acquired/purchased by the state promoted organisation and a private firm respectively. The scenario in these two SEZs depicts a contrasting picture to that of MPSEZL in Kachchh where agricultural land was not allotted for the SEZ. Both the SEZs viz. Dahej and Reliance have been operational since 2006 and 2007 respectively, and are the extensions of already existing spatial clusters of industrial units in the respective areas. An important common feature between MPSEZL and these two SEZs is their coastal location. The basic idea of the analysis in this section is to draw a comparative picture of the alternative means of obtaining both agricultural as well as non-agricultural land for setting up

industrial units and SEZs in the state. In what follows we present a brief profile of the area in which Dahej and Reliance SEZs are located.

Vagra, located in the eastern tribal belt of Gujarat, is one of the most backward talukas in the state. About one third of the population in the taluka is tribal and has received special efforts under the policy for promoting industrial development in backward regions within the state. This has been attempted by mainly setting up industrial estates in and around the taluka.

The industrial development in the region seems to have contributed to increased population including migrants from different parts of the region. Agriculture is mainly subsistence in nature; pushing many of the rural workers to seek alternative employment in farm as well as non-farm activities in and around the region. Development of a major industrial agglomerate such as an SEZ may, therefore, open up the much needed alternative source of livelihood, provided additional employment is generated at a substantially large scale, and that the opportunities reach out to the local communities.

4.1 Dahej SEZ: A Brief History

Dahej SEZ, spread over 1812 hectares of land has been operational since December 2006. In fact the SEZ is proposed as an extension of one of the major industrial estates in the state that was already in existence developed by Gujarat State industrial Development Corporation (GIDC)-. The estate has two large industrial complexes in the public sector viz. Indian Petrochemicals Corporation Ltd. (IPCL) and Gujarat Alkali and Chemicals Ltd. (GACL). There are a few other large industrial units such as Birla Chemicals and Copper in the same estate. It may be noted that the industrial development in the region was initiated under the policy of backward area development during the 1980s, suggesting a long history of state promoted industrialisation in the region, which has now become a part of the Golden Corridor of industrial development stretching from Ahmedabad to Vapi in Gujarat and extended further up to Mumbai.

The region is characterised mainly by dry land agriculture, with increasing coastal salinity and a relatively large tribal population. All these made it 'suitable' for diversification of land, economy and labour force from primary to secondary sector. Its geographical location provided further impetus for faster industrial growth over the past three decades.

4.1.1 Land Acquisition

Deemed to be 'suitable' for industrial development, GIDC had initiated the process of acquiring land for the industrial estate way back in the early 1990s. The land was acquired over a stretch of 4-5 years during which the maximum price paid was Rs. 3.2 lakh per hectare. This, for a land which was already at a low level of productivity and devoid of irrigation, was seen as a somewhat welcome opportunity for many of the farmers reeling under the burden of uncertain and non-viable agriculture.

Another important aspect is that of the predominance of large scale public sector units such as IPCL and GACL being set up in the estate. This worked as a favourable feature for settling the terms of land acquisition and compensatory employment for those losing land. For instance, IPCL had made the commitment to provide employment to one educated youth in Ambheta village; those not having educated persons in the family were offered manual work related to the unit.

This is what one gets as recollection of the people in the villages from where land was acquired. On enquiring as to what has been the economic outcome of the diversion of agricultural land, several among the village community indicated that they have already diversified their livelihood base from farm to non-farm employment as a number of opportunities came up after the setting up of the industrial estates in Dahej and the surrounding areas.

4.1.2 Present Scenario

Of late additional land is being acquired for setting up of the Dahej-SEZ. The land is being acquired from six villages surrounding the estate. These are: Dahej, Ambheta, Luvara, Suva, Lakhigam and Jageshwar. Besides this, GIDC is also acquiring land for an ambitious project under the Petroleum and Chemicals and Petrochemical Investment (PCPIR) at Dahej. For this, about 45,300 ha. of land is being earmarked and the process of land purchase has started. This will be spread over 44 villages, including all the six villages covered under the SEZ.

More recently, GIDC has acquired land from some of these 44 villages by paying market price of the tune of about Rs. 17.3 lakh per ha. By now all

the land in several villages including Ambheta, Jolva and Vadadala has been acquired. Nearly 150 households in the three villages have received this price. Whereas a large part of the land in Ambheta had been acquired in the early part of the 1990s, in the other two villages, land was acquired subsequently. Several of the landed households still continue to cultivate the land. These three villages form part of the primary survey conducted for the study.

In what follows we present some of the important findings from the primary survey of 457 households in the three villages of Ambheta (147), Jolva (196) and Vadadala (114) in Dahej.

4.2 Observations from Household Survey

i. As large as 42 per cent of the households belong to SCs (13 per cent) and STs (29 per cent). About 36 per cent of these were landless at the time of the survey. This implies that although the land has been already acquired, they continued to retain the right to cultivate till the monsoon season of 2009. Of the total 292 households having reported land at the time of the survey, 265 did not have access to irrigation, suggesting low economic returns from the land.

ii. While the land price has been fairly substantial, many farmers may have been prompted to sell their land. As large as 34 per cent of the landed households reported absence of irrigation or salinity as the main reason for selling the land, whereas about 52 per cent of the households reported that the land had to be sold because of acquisition. When probed further, nearly 85 per cent of the respondents indicated higher prices as an important reason for selling the land.

iii. Of those who reported selling of land, about 15 per cent had purchased another piece of land, whereas several more are planning to buy agriculture land in near future. The price for buying agriculture land varies from about 1.25 lakh to 12.5 lakh per ha. Most of the land purchased by these farmers is irrigated.

iv. Of the total population of 2195, 843 persons reported as workers (Table 11). This works out to be 38.4 per cent of the total population. The largest proportion of the workers (26.1 per cent)

is salaried employees, whereas 25.4 per cent are cultivators. Besides this, 72 persons are industrial workers and 64 are agriculture labourers. Livestock is reported by only 14 workers as the main occupation. In all, 372 workers (44 per cent) had reported that they are engaged in activities related to industry, transport and associated services.

Table 11 : Occupational Profile of Main Workers among Sample Households

Population (2195)	**Number of Respondents**	**% of BPL**
1. Non-workers	864	63.9
2. Only household work	488	36.1
Sub Total	1352	100
3. Main workers		
Cultivation	214	25.4
Agri-labour	64	7.6
Livestock	14	1.8
Casual labour	92	10.9
Industrial labour	72	8.5
Salaried (including driving)	220	26.1
Self-Employed (including artisans)	66	7.8
Salt workers	23	2.7
Trader/brokers	9	1.1
Fishing	24	2.8
Other (including those engaged in having household plus other work)	45	5.3
Sub-Total	843	100
Total	**2195**	

Source: Primary survey.

v. Only a small minority, i.e., 43 households had reported long term migration from their families.

vi. When asked about the change in the economic status of the households having lost the land, over one third of the households indicated increase in income. Another 57.1 per cent reported having created assets in the form of houses, vehicles, land etc.

vii. More than 60 per cent of the households reported that they have lost their land. On the other hand, more or less the same proportion of the households reported that they have got new employment, and also that there has been an improvement in infrastructural facilities/amenities (Table 12). Nearly 56 percent of the households also reported loss of livestock or fishing. Of these about 24 per cent of the households reported adverse impact on income from livestock due to diversion of CPLRs for the SEZ.

viii. A significantly large proportion of the households reported increase in their income and 64 per cent reported that land prices had increased due to industrial development in the region. About 55 per cent of the households also reported that they have benefited from the support received from some NGOs working in the region; the support is mainly in terms of provisioning of drinking water and educational facilities for children.

Table 12 : Impact as Perceived by the Respondents

Households (457)	**No.**	**Percentage (%)**
1. Loss of agriculture Land	290	63.5
2. Got new kind of employment	293	64.1
3. Increase in land prices	292	63.9
4. Loss of income in livestock and fishing	255	55.8
5. Increase in soil salinity	64	14.0
6. Decrease crop production	145	31.7
7. Increase in salinity in drinking water	133	29.1
8. Increase in infrastructure facility/amenities	287	62.8
9. Increase in income	328	71.8
Help from other NGOs for drinking water and educational tools	253	55.4

Source: Primary Survey.

Overall, the responses from the village community suggest a fairly positive scenario. In fact we came across a number of cases where people in the

surrounding villages were keen on selling their land and benefit from the industrial development in the region. On the other hand, a small number of respondents indicated influx of 'anti-social' elements in the village, increase in pollution etc.

5. Reliance Petrochemicals Ltd., Jamnagar

The story of Reliance SEZ in Lalpur taluka in the coastal area of Jamnagar district in Saurashtra region in the western part of Gujarat presents a fairly different picture as compared to that in Dahej. The SEZ is spread over a large area (approximately 4500 ha.) for which land has been purchased/ acquired land from five villages viz. Kanalus, Derachhikri, Navagam, Kanachhikri, and Padana. Initially, land was acquired during the early 1990s for setting up the petrochemical unit. This consisted mainly of government waste land.

The Reliance Petrochemicals Ltd., one of the largest industrial complexes in the private sector in the state, was set up in the early 1990s. Other major units that came up subsequently in the region include ESSAR Industries Ltd. The region has developed fairly rapidly since then, which along with the development taking place on the coastal region in Kachchh, got acclaimed as the 'Silver Corridor' of industrial development in the state.

The rapid industrial growth along the 'Silver Corridor' has brought-in fresh flux of economic vibrancy in Saurashtra-Kachchh regions that have been suffering from frequent droughts, severely depleted ground water, and poor connectivity with the rest of the state. These developments, like that in the already developed 'Golden Corridor', however, have brought into fold massive challenges of environmental degradation, especially, of the marine ecology.

5.1 Purchase of Land for the SEZ

Reliance Petrochemicals SEZ has been notified and operational in 2006. The land for setting up the SEZ has been purchased by the Reliance Industries Ltd. (RIL). Most of the land has already been acquired and purchased in the five villages listed above. Only a few farmers seem to have escaped/ missed the opportunity of selling the land.

While in the early 1990s, the land was purchased at the rate of Rs. 30,800 per hectare, it subsequently increased to Rs. 14,51,000 during 2002. According to the information collected from the villages, the land price during 2007-8 to 2009-10 was around Rs. 25,00,000 per hectare. It may, however, be noted that a part of the agricultural land (about 25 per cent) was irrigated through wells/bore wells and a river passing by these villages. The abnormally high land price, thus, became the main attraction for the people to sell their land to the industry. It is important to note that a large proportion of the farmers have purchased parcels of land in the nearby villages so as to retain their rights as farmers. Moreover, this being a private sector, direct employment was not being promised to the families having lost the land.

This, however, does not mean absence of additional economic/opportunities being created in the area. According to the available information, RIL employs about 30,000 persons. Most of these employees live in a residential colony developed in the outskirts of the RIL. The colony is at a distance of about 10-12 kms. from the study villages. The large influx of people, mainly from outside the region and state, may have created additional economic opportunities for people in the villages surrounding the colony. At the same time, spill over effects of the new developments, especially that for construction, housing, services, and other ancillary activities seem to have been realised in Jamnagar city, about 20 kms. away from the RIL, which has started wearing a new look. So is the case for Khavadi village where the plant is located. It is likely that some of the persons from the villages have got work in Jamnagar or nearby villages and moved out of their native villages. We did get such information about 30 persons from Kanalus village while conducting the survey. There may be several other such workers from the villages from where the land has been acquired.

5.2 Major Findings from the Survey Villages

A primary survey of all the households in Kanalus and Derachhikri has been conducted. This consisted of about 377 households 187 in Kanalus and 190 in Derachhikri. An important feature of the study site is that agriculture, unlike that in Mundra and Dahej has been fairly remunerative given the predominance of commercial crops such as groundnut and cotton and access to ground water irrigation in the region. Nearly 243 out of 377 households owned land prior to the acquisition of land. The proportion of

landlessness is found to be very high (nearly 58 per cent) among the OBCs. Several of these households belong to the category of traditional livestock owning communities. This implies significant impact on their livelihood due to loss of CPLRs.

What is also important to note is that nearly 74 per cent of the households had access to irrigation facility. A rough estimate suggests that one hectare of irrigated area under cotton may yield a net return of Rs. 30,000. In addition, there may be benefits in terms of post-rabi crop and/or fodder. Losing such productive land with irrigation facility is a major loss not only to the individual households, but to the region as such. Of course it is not clear as to how long the flow of benefits from cultivation may sustain given the depleting ground water resources in the region.

Fortunately, several of the farmers have already bought land in nearby villages. But the challenge faced by many is that the younger generation among the farming households is in the first place not interested in pursuing farming as the main occupation. Sudden influx of large amount of monetary compensation for the land may distance them further from agriculture. On the other hand, those not having invested in land elsewhere may face more serious challenges for finding productive employment for the younger labour force within the households. Some of these issues have been discussed below.

1. Nearly two thirds (243) of the households in the study villages owned land prior to the acquisition/sale of land for the industry. Of this, 185 households had lost their land fully or partly. The loss of land is more widespread in the case of Derachhikri where the entire land of the village including the gauchar has been taken up for the industry. In Kanalus a part of the land on the other side of the railway track has not be taken up by the industry. This land is owned by about 30 households in the village. It may be noted that many of the households had sold land with irrigation. Nevertheless a large number of households reported that they have benefited from the significantly high land prices paid by the company. Since several of them have already purchased new land, their economic status seems to have been improved.

2. At present 36 per cent of the workforce still continue to have cultivation as the main occupation and another 7 per cent works as agriculture labour. This is followed by about 20 per cent of the households reporting livestock as the main occupation. Whereas direct salaried employment in industry is reported by 6.4 per cent of the workers, 11.5 percent of the workforce is self-employed. Several of them have started small shops in the villages. In addition, renting out of housing and shops is also found as an important source of income among a few households in the two villages (Table 13).

Table 13 : Occupational Profile of Main Workers among Sample Households

Population (1944)	Number of respondents	Percentage (%)
Main Workers		
Cultivation	192	36.1
Agri. Labour	40	7.5
Livestock	107	20.1
Casual Labour	84	15.8
Salaried (including driving)	28	6.4
Self-Employed	61	11.5
Other	15	2.8
Total	**532**	**100**

Source: Primary Survey.

3. Out-migration, especially, to Jamnagar and Lalpur has been a fairly prevalent phenomenon in these villages. For instance, in Kanalus 30 out of the 187 households have shifted out of the village almost completely; these people visit the village only occasionally. Most of these people have shifted out of the village in search of work in industry and service sectors in the city/town.

4. The scenario however, varies across land holding and landless households. For instance, about 50 per cent of the households in Derachhikri are landless, mainly belonging to the livestock herder communities. It appears that several of these households have benefited from non-farm employment especially in transport, security and casual labour related to the industrial activities in the region. Besides these, the company has been providing support of the tune of Rs. 30,000 per month for provisioning of fodder and drinking water for the livestock. Drinking

water is provided in the villages through tankers. Kindergartens have also been set up in these villages. Essentially, the adverse impact on livestock is linked to the loss of gauchar land in the study villages. In fact, a cluster of households in the outskirt of Kanalus village depended significantly on the gauchar land in the village. Now these households are forced to depend on the alternative support provided by the industrial unit. Many of these households are likely to either shift to other locations, or reduce their livestock as reported by the respondents in the primary survey. According to the primary survey, 78 per cent of the households had reported decline in income from livestock in future owing to loss of CPLRs.

5. On the other hand, very few households i.e. 17.2 per cent reported having got direct employment in the unit. This, in fact has been a major source of discontent among the village communities. It seems that most of the newly created jobs have been sought by people from outside these villages.

6. The details of the impact on households in the study villages have been presented below. It is observed that a majority of the respondents have reported adverse impacts in terms of loss of income from livestock (82.5 per cent), declining quality of drinking water (70 per cent), increased soil salinity (45.4 per cent), and loss of agriculture land (49 per cent). Against this, 60 per cent of the households have reported benefits from increased land prices (Table 14).

Table 14 : Impacts on Households

Households (377)	**Number of respondents**	**Percentage (%)**
1. Loss of agricultural land	185	49.2
2. Increase in land prices	227	60.2
3. Loss of income in livestock	311	82.5
4. Increase in soil salinity	171	45.4
5. Increase in salinity in drinking water	264	70.0
6. Increase in infrastructure facility	061	16.2
7. Increase in income	78	20.7
Help From other industry for fodder and cattle-shed; land levelling; nursery; tankers for drinking water on demand	In both villages	

Source: Primary Survey.

7. Of the total 243 landed households, 86 (i.e. about 35 per cent) have already purchased agricultural land. Another 24 (i.e. 10 per cent) are planning to purchase land at the time of the survey.

8. On the one hand people in the study villages, seem to have received economic benefits in terms of very high land prices, additional opportunities for self/casual employment, and arrangement for fodder and cattle-shed, especially, for the landless. On the other hand, a large proportion of the farming community face the challenge of resettling elsewhere by purchasing farm land. Those with large number of livestock have become entirely dependent on the support received from the RIL. It is not clear how long this arrangement may last. On balance, many in the villages feel that they may have to migrate out from the village unless opportunities for alternative occupations are made available to them. Even with that the problem of deteriorating air and water quality may pose a serious challenge for the village communities that, by and large, have been pushed to periphery of this mega industrial project. The state appears to be a silent spectator to such a grave scenario of marginalisation of the community having lost on their basic resource and source of production - both public and private.

9. Another important issue is air pollution damaging the agricultural crops and also resulting in depletion of ground water. It was reported that the impact of air pollution is felt in the villages in the radius of 5 kms where many of these farmers have purchased land. According to the official information air pollution level is lower than the permissible limit. The impact is felt in terms of quality of air which is marked by coal dust in the air, especially, during the evening time when the dust is released from the chimneys. Also the impact is felt on health and overall living conditions in the nearby villages. This, according to many of the respondents was quite unexpected. Hence, they seem to have been regretting the decision of selling the land for the industry, especially, when these households have not been able to shift their economic base from farm to non-farm activities. Alternatively, they tend to realise that shifting away from these area (covering a radius of about 10 kms.) may be inevitable for avoiding the negative externalities of the industrial growth in the region.

There is also fair amount of resistance due to the continuous damage to the coastal ecology emanating from discharge of effluent from the industry.

What is still worse is that the village communities do not have any channel to voice their concerns for most of the villagers feel that the state apparatus works almost completely in connivance with the industry. They feel completely voiceless.

Overall, the above scenario suggests that whereas communities in the region, including the farmers, have gained substantial economic benefits and have made futuristic investments in land and other assets besides getting indirect employment in the activities related to industries, such development has brought into its fold several negative implications about which many of the villagers were unaware. Not being adequately informed and, hence, not prepared for making a major shift in their economic base and physical location they are at a loss in terms of shaping up their lives in a rapidly changing socio-economic-environmental milieu. Voicelessness becomes a major impediment in a transient scenario such as this. It is in this context that a more transparent and well planned strategy for industrial development within a regional context assumes critical significance.

6. Summing Up

The foregoing analysis of diversion of land for industry/infrastructural development, especially for SEZs, presents a diversified scenario at three different locations in Gujarat. Of course, it is methodologically quite challenging to compare and assess the impact of the land diversion on people's livelihood, since the process of land acquisition/purchase has been going on over a long period of time, prior to the SEZ-Act. What we therefore get is a cumulative impact of the land-diversion over a period of nearly two decades. It is thus difficult to segregate the impact of the process of land-diversion for SEZ alone, since several of the large SEZs are in fact extension of the existing projects (like Mundra port), or industrial estates (like Dahej) and industrial complex (like Reliance Petrochemicals). What we therefore get is a comparative picture of the impact of three types of land: waste land, un-irrigated agricultural land, and agricultural irrigated land in Mundra, Dahej and Jamnagar respectively. Also, what we get to understand is a comparative picture of three sets of projects/agencies for which land has been acquired/ purchased. These include private and public sectors represented by Mundra and Reliance on the one hand, and Dahej on the other.

Some of the important observations that have emerged from the study can be summarised as follows:

1. In Mundra the direct impact on livelihood is confined mainly in the case of fishing communities for whom the issues are two-fold: one, that of losing access to the traditional transient fishing sites, and two, that of the absence of any legally recognised right to the fishing sites and hence an absence of entitlement to compensation.

2. The other major issue that emerges in the context of both Mundra and Reliance is that of environmental damage. It seems that while environmental clearances have been obtained, there is little by way of a systematic planning for minimising the damage and/or compensatory measures for regeneration etc.

3. With respect to economic benefits, the responses were found to be somewhat positive in Dahej and Reliance (Jamnagar), especially, among farmers whose agricultural lands have been obtained at fairly high prices. Nevertheless, in terms of direct employment gains, the impacts are fairly low in Jamnagar, followed by Mundra and then by Dahej. It is difficult to gauge the spread and spill over of the economic activities in the SEZ once they become fully operational. This is particularly true of Mundra, where substantial amount of investment is yet to get realised. In this sense, Reliance appears to have the least impact in terms of mainstreaming as compared to the other two SEZs under the study. In Mundra the impact is fairly unclear as of now. It may, however, be noted that these responses are fairly pre-mature.

4. The impact of loss of CPLRs is found to be very severe in the case of the Reliance SEZ, where about 80 per cent of the households fear a major decline in the livestock economy in spite of the support provided by the Company for cattle sheds and funds for purchasing fodder. Loss of gauchar land in the study villages is likely to have significant adverse impact for those dependent mainly on livestock for their livelihood. A similar scenario may prevail in the case of Luni and Mundra, though the overall impact does not seem to be significantly adverse as yet. The most significant impact in the case of Mundra-SEZ appears to be on the fishing community. Presently a sub-set of the fishing community seems to have been affected, but the impact is likely to be larger in the years to come.

5. Obviously, losing highly degraded waste land or low productive agricultural land like that in Mundra and Dahej may not exert any

significant direct adverse impact on the livelihood among the village community. Nevertheless the loss of land has to be seen against the direct benefits that people may derive out of the industrial/ infrastructural development in the region. In this sense, getting direct employment in the case of Dahej appeared to be the most significant benefit, followed by receiving substantially higher land prices in the case of Jamnagar. In Mundra the benefits are not so substantial.

6. The above scenario is more or less found to get reflected in terms of people's resistance to the industrial/infrastructural developments. It is observed that whereas the protest in Mundra is fairly systematic and strong (though limited only among the fishing communities), in Jamnagar it is subdued, and in Dahej people by and large seem to perceive the impact as positive.

7. It is an issue of great concern that the dissent is fairly restrained because most of the people find the space for expressing their voices almost non-existent. This, *inter alia,* is stage-managed by those with economic-political power in order to suppress any possible moves of negative campaign spearheaded by NGOs or other political parties. This creates a perfect vicious circle of mutual distrust between the people and the state/industrial groups. Obviously, suppressing the voices, rather than opening up an informed constructive dialogue becomes easier to handle at least in the short and medium terms. The scenario may continue as long as the flow of benefits in the short and medium terms outpace that of the loss among a major segment of the community, especially, the landed community in the region. Sustenance of the present political scenario is an essential pre-condition for this 'delicate balance' to survive.

8. It is, however, likely that the scenario could be improved by planning alternative and less hazardous livelihoods for all those who (a) lose land; (b) purchase new land; (c) make alternative investment; (d) look for new job opportunities; and (e) shift out from the present livelihood base (such as fishing, salt pan work, or cultivation on marginal land).

9. Overall, the limited empirical investigation among the selected villages in the periphery of the three SEZs suggest that whereas the impact till now is mixed and moderate in terms of loss of livelihood, the long term impact especially on fishing, livestock and agriculture is

likely to be fairly severe unless adequate steps are taken for supporting the process of economic transition taking place in the study region.

By way of conclusion two major observations emerge. First, the scenario of SEZs and their impact in the peripheral region is mixed and still unfolding in several ways. Coming to a firm conclusion on mainstreaming or marginalisation, therefore, is pre-mature and also not strictly borne out by the data collected at this stage. Secondly, one could make a fairly clear observation that significant adverse impacts, at least in the short/medium term, are likely to be felt by a sub-set (about 25-30 %) of the rural households in the study area. These households often comprise of the relatively more marginalised among the rural communities. In this sense the process of economic transition, if any, is likely to create further divide between those who benefit/not affected and those whose livelihoods are severely affected in the initial 10-15 years. Together these two observations call for a) continued monitoring of the situations, leading to b) setting up of a process of appropriate compensation and mainstreaming of those having paid the price of such developments.

A scenario such as this can be developed only when there is an environment of mutual trust, an assurance that certain amount of benefits will be shared with the local communities, and institutional spaces for the local communities to enter into a meaningful dialogue with the various stakeholders about the local resources and the development thereof. The next phase of land-diversion will have to shift towards this framework where the issue is more about the processes and recognition of the stakes rather than that of losing the 'requisite' amount of land for development outside the primary sector.

References

Allen, Adriana (2003), 'Environmental Planning and Management of the Peri-Urban Interface: Perspectives on an Emerging Field', *Environment & Urbanization*, Vol. 15, No. 1, pp. 135–148.

Asher M. and P. Oskarsoon (2008), 'Se(i)zing the Coast and the Countryside', *Seminar,* 582, pp 39–43.

Bahuguna, A., H.B. Chauhan and Shailesh Naik (1997), 'Coastal Vegetation in Gujarat', paper presented at the *Workshop on Integrated Coastal Zone Management*, Space Application Centre, ISRO, Ahmedabad.

Banerjee-Guha, S. (2008), 'Space Relations of Capital and Significance of New Economic Enclaves: SEZs in India', *Economic & Political Weekly*, Vol. 43, No. 47, pp. 51–59.

Bhadra, D. and Brando, A.S. (1993), 'Urbanization, Agricultural Development and Land Allocation', *World Bank Discussion Paper 201*, The World Bank, Washington D.C.

Chandrasekhar, C. P. (2006), 'Primitive Accumulation', *Frontline*, Vol. 23, No. 20, October 7 – 20, pp. 24–26.

Geevan C.P. (2008), 'Kutchh Fisheries: Netting Livelihood Between the Ranns & the Deep', Centre for Environment & Social Concerns, Ahmedabad.

Goswami, O. (2008), 'Why Only a Few will Make It?', *Seminar*, No. 582, pp 23–25.

Gulati, A., T. Shah and G. Shreedhar (2009), 'Agriculture Performance in Gujarat Since 2000', International Water Management Institute, Anand and International Food Policy Research Institute, New Delhi.

Hirway, I. and Goswami, S. (2007), *Valuation of Costal Resources: The Case of Mangroves in Gujarat*. New Delhi: Academic Foundation.

Kashyap, S. P. (2007), 'Agriculture and Irrigation: Development Strategies and Issues', (Draft) Gujarat: State Development Report, Chapter 4, Gujarat Institute of Development Research, Ahmedabad.

Lobo, L. and Kumar, S. (2009), *Land Acquisition Displacement and Resettlement in Gujarat 1947-2004*. New Delhi: Sage Publication.

Majumdar, N. A. (2006), 'Centrality of Agriculture in India's Economic Development', *Economic and Political Weekly*, Vol. 41, No. 1, pp. 51-61.

Morris, S. (2007), 'Towards Reforms for Land Acquisition Framework in India', *Working Paper No. 2007-05-04*, Indian Institute of Management, Ahmedabad.

Patnaik, P. (2007), 'Land Preferences and Productive Investment: A Theoretical Note', in A. Vaidyanathan and K.L. Krishna (eds.), *Institutions and Markets in India's Development: Essays for K.N. Raj*. New Delhi: Oxford University Press.

Patnaik, U. (2008), 'Imperialism, Resources and Food Security with reference to the Indian Experience', *Human Geography*, Vol. 1, No. 1, pp. 40–53.

Reddy, V. R. (2006), 'Land Alienation from Agriculture: Use and Misuse of Land for Non-Agricultural Practices', Centre for Economic and Social Studies, Hyderabad (unpublished report).

Sampat, P. (2008), 'Special Economic Zones in India', *Economic & Political Weekly*, Vol. 43, No. 28, pp. 25–30.

SETU (2004), 'Implication of SEZ on the Fishing Community of Kutchh (Gujarat)' along with Yusuf Maheraully Centre (YMC) and Kutchh Mahila Vikas Sangathan (KMVS), Bhadreshwar.

SETU (2009), Impact of the Industrial Development in Mundra Coast & Peoples Demand.

Shah, A. and Kumar, A. (2008), 'Diversion of Land and Displacement in India: Review of Evidence and Issues', in S. M. Dev and K. S. Babu (eds.), *India's Development: Social and Economic Disparities.* New Delhi: Manohar/IDPAD.

Sidhartha (2012), 'Govt. Mulls New Norms, Sops to Revive SEZ Boom', *Times of India*, April 23, p.1 (Ahmedabad Edition).

Government of Gujarat (various years), *Area Production Yield*, Directorate of Agriculture, Government of Gujarat, Gandhinagar.

Times of India (2007), 'The Missing Dissent: Maoist Salwa Judum and the Orgy of Violence', Editorial, p. 10 (Ahmedabad Edition).

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   Studies under this theme relate to employment, labour, diversification of economic activities and migration. International migration has emerged as an additional theme along with urban services and aspects of urban economy and governance.

4. **Poverty and Human Development**

   Issues examined include access, achievement and financing of education and health sectors. Studies on poverty relate to conceptual and measurement aspects, quality of life, livelihood options and social infrastructure. There is an increasing interest in understanding urban poverty, rural-urban linkages and issues in microfinance.

5. **Regional Development, Institutions and Governance**

   Recent studies enquire into regional underdevelopment and the dynamics of local level institutions. Tribal area development mainly relating to livelihood promotion and human resource development has been a focus area. Recent analyses have also looked into Panchayati Raj Institutions, Forest Rights Act, MGNREGA and Right to Education Act.

Much of the research informs national and regional policies. The Institute also undertakes collaborative research and has a network with governments, academic institutions, international organisations and NGOs. A foray into specialized training and doctoral programme has just been made.

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