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## Regional Centre for Urban & Environmental Studies (RCUES), Mumbai (Fully supported by Ministry of Housing and Urban Affairs, Government of India)

Established in 1926, the All India Institute of Local Self Government (AIILSG), India is a premier autonomous research and training institution in India. The Institute was recognized as an Educational Institution by Government of Maharashtra in the year 1971. The Institute offers several regular training courses in urban development management and municipal administration, which are recognized by the Government of India and several State Governments in India.

In the year 1968, the Ministry of Housing and Urban Affairs (MoHUA), earlier Ministry of Urban Development), Government of India (GoI) established the Regional Centre for Urban & Environmental Studies (RCUES) at AIILSG, Mumbai to undertake urban policy research, technical advisory services, and building work capabilities of municipal officials and elected members from the States of Goa, Gujarat, Maharashtra, Rajasthan and UTs of Diu, Daman, Dadra & Nagar Haveli. The Ministry of Housing and Urban Affairs (MoHUA), Government of India added States of Assam and Tripura from February, 2012 and Lakshadweep from August 2017 to the domain of RCUES of AIILSG, Mumbai. The RCUES is supported by the MoHUA, Government of India. The MoHUA, Government of India has formed National Review and Monitoring Committee for RCUES under the chairmanship of the Secretary, MoHUA, Government of India. The Principal Secretary, Urban Development Department, Government of Maharashtra is the ex-officio Chairperson of the Advisory Committee of the RCUES, Mumbai, which is constituted by MoHUA, Government of India.

The RCUES was recognized by the Ministry of Urban Development, Government of India as a National Training Institute (NTI) to undertake capacity building of project functionary, municipal officials, and municipal elected members under the earlier urban poverty alleviation programme-UBSP. The RCUES was also recognized as a Nodal Resource Centre on SJSRY (NRCS) and Nodal Resource Centre (NRC) for RAY by Ministry of Housing and Urban Poverty Alleviation, Government of India.

The AIILSG, Mumbai houses the Solid Waste Management (SWM) Cell backed by the Government of Maharashtra for capacity building of municipal bodies and provide technical advisory services to ULBs in the State. The Water Supply & Sanitation Department (WSSD), Government of Maharashtra (GoM) established Change Management Unit (CMU) in AIILSG, Mumbai from 13th January, 2010 to 30th June, 2014 and also selected AIILSG, Mumbai as a Nodal Agency in preparation of City Sanitation Plans for 19 Municipal Corporations and 15 A Class Municipal Councils in Maharashtra State, under the assistance of Ministry of Urban Development, Government of India. The WSSD, GoM also established Waste Management & Research Centre in AIILSG, Mumbai, supported by Government of Maharashtra and MMRDA.

In August, 2013 Ministry of Urban Development, Government of India empanelled the AIILSG, Mumbai as Agency for providing technical support to the Cities / Towns of States / Urban Local Bodies (ULBs) in the field of Water Supply and Sanitation, Sewerage and Drainage systems.

In July 2015, Ministry of Urban Development, Government of India empanelled the RCUES & AIILSG, Mumbai an Agency for technical support in Municipal Solid Waste Management under Swachh Bharat Mission (SBM) programmes.

In February, 2016, Ministry of Housing and Urban Poverty Alleviation, Government of India empanelled the RCUES of AIILSG, Mumbai for conducting training and capacity building programme for experts of SMMU, CMMUs, COs, Key Officials and other stakeholders of the State and Urban Local Bodies (ULB) level under Deendayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY – NULM).

In December, 2017, AIILSG has been empanelled as a training entity regarding implementation of new Integrated Capacity Building Programmes (ICBP) under Urban Missions, viz. Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission (SBM), Smart Cities Mission (SCM), National Urban Livelihoods Mission (NULM), Housing for All (HFA), Pradhan Mantri Awas Yojana (PMAY) and Heritage City Development and Augmentation Yojana (HRIDAY) for Elected Representatives and Municipal Functionaries.

At present, RCUES and AIILSG, Mumbai is involved in providing capacity building, research and technical support to number of State Governments and ULBs for implementing various urban development missions and programmes launched by the GoI.

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17. Resource Material on Urban Poverty Alleviation.
18. Laws of Meetings.
19. Resource Material on Preparation of City Sanitation Plan (CSP) & Capacity Building for Urban Local Bodies.
20. Implementation of 74th CAA, 1992 in Urban Local Bodies and Impact Assessment of Training of Women Elected Members.

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# Editorial

## **Curb vehicular emissions for cleaner city air**

Among the twenty most polluted cities in the world, thirteen are from India, states a WHO report (2014). PM 2.5 and PM 10 (airborne particulate matter of diameter less than 2.5 microns and 10 microns respectively) levels in the ambient air in most cities which monitor air quality is way beyond 'safe' levels prescribed by WHO. In addition, the high prevalence of SO<sub>2</sub> and NO<sub>2</sub> in the air puts people at severe additional health risks. Vehicular pollution is a major contributor to poor air quality in our cities.

While India is the top two-wheeler producer in the world with annual sales of over 17 million units (over 48000 units each day), its passenger car sales are quite modest having reached 3 million annually. Several countries sell much larger quantities of cars. However, the problem of vehicular emissions in India is particularly severe due to a number of factors. Plying of very old vehicles (with older engine technology), poorly maintained engines, lax enforcement of emission laws on non-compliant vehicles, adulterated fuels, poor road conditions, traffic congestion resulting in greater idling and slow moving traffic, all add up. Government has over the years put in place progressively stricter emission norms for vehicle manufacturers starting Bharat Stage II in 2005 to the currently prevailing Bharat Stage IV. The next standard to be adopted would be Bharat Stage VI, skipping Stage V in view of the need to quickly improve emissions by adopting a stricter regime sooner. Stage VI, which is to come in force from April 2020 calls for significant fuel quality upgrade in addition to vehicle technology upgradation. There are efforts to advance the schedule for Stage VI implementation in the NCR to April 2018.

As regards upgraded fuel, oil companies are working towards production of upgraded BS VI compliant fuel by April 2019 pan India, a year ahead of the rollout of BS VI vehicles. While the huge number of older vehicles on roads will delay the improvement in ambient air quality, use of this superior BS VI fuel in the older vehicles could improve the situation somewhat.

The proposed accelerated migration to BS VI standards is a noteworthy effort and will contribute to improving ambient air quality in our cities. Government's encouragement to the automobile industry to move towards electrification (battery operated automobiles) also bodes well. These, especially the latter move will have disruptive effect of the dynamics of the industry which is a major economic driver. The auto ancillary, financing, spares and after sales service sectors have huge opportunities for employment and self-employment. The move to electric vehicles will call for re-skilling of a large workforce and new downstream investments. The migration will have to be managed well.

## Editorial

In the end however, cities will need to greatly upscale the efforts to develop public transport in their efforts to achieve safe and clean urban mobility. Road congestion and road safety are issues apart from emission/air quality that plague our cities. While BS VI, electric vehicles, etc. will address air quality, other concerns can only be addressed by persuading citizens to shift to public transport options. We need a number of fiscal and non-fiscal measures in this area. Regulations need to make public transport more affordable while making personal transport less so. A fuel cess and higher parking charges can be used to fund any deficit in the income of public transport operators while making private vehicle use more expensive. Restricting private transport vehicles near hubs like railway stations and bus termini could coax more to use public transport. Making public transport the faster option by for example, reserving main thoroughfares for public transport vehicles could also help.

Alongside, use of non-motorized transport (Pedicabs, for example) and walking need to be encouraged by reserving roads and building wider footpaths. Several additional innovative measures will be required surmount urban mobility challenges and make our cities more livable. For in the business-as-usual scenario we could soon have chaos on city roads. We cannot let that happen.

In this issue of Urban World, among other papers, we carry one which discusses the effect of vehicular emissions on air pollution and related issues.



# Development of Tourism Infrastructure in Maharashtra

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## Introduction

Potential of Tourism as one of the most effective drivers for the development of regional economies has been acknowledged by government of Maharashtra. It is one of the key sectors of the economy which makes a positive contribution to government revenues, generation of employment and contribution to regional development. At Travel and Tourism Summit-2005 in New Delhi; Shri. Lalit Suri, Chairman of World Travel and Tourism Council India Initiative stated, "Synergy in India should mean central state and private sector working together to maximize tourism promotion and experience, with greater involvement of state authorities". Augmentation of quality tourism infrastructure throughout the country is a key area of functioning of the Ministry of Tourism. More than fifty per cent of the Ministry's expenditure on Plan schemes is incurred for development of quality tourism infrastructure at various tourist destinations and circuits in the States/ UTs.

## Highlights of the 2016 Maharashtra Tourism Policy are as follows:

1. Designate Tourism as a priority sector since it holds the potential to usher in economic development and generate high employment opportunities in Maharashtra – change—the policy will establish.
2. Achieve sector growth of 10% per annum and share of 15% in GSDP through tourism and tourism related activities.

3. Generate fresh investments in the tourism sector to the tune of INR 30,000 crores by 2025
4. Create 1 million additional jobs in the tourism sector by 2025
5. Incentivize tourism units in the state by linking it to the Package Scheme of Incentives, 2013 of Industries, Energy and Labour Department or any modifications thereafter. The incentives under this policy are designed as per the needs of the tourism sector in the state.
6. Key strategic interventions are identified and special incentives for respective intervention have been laid out.
7. Strengthening of tourism infrastructure especially in the form of PPP model, special tourism infrastructure Tourism Infrastructure development fund, CSR, etc. are defined in this policy.

The Department of Tourism has created 'Maharashtra MICE (Meetings, Incentives, Conferences, Exhibitions Bureau' on lines of Dubai Convention Bureau, as a Public / Private Sector initiative. This has its own budget and Personnel to market Mumbai as a MICE Destination. The bureau also performs the following functions:

1. Invite interested private parties through PPP mode for establishing MICE centers across Maharashtra.

2. Simplification of procedures and single window clearance mechanism for Conference / Exhibitions.
3. The bureau will recommend to the Department of Tourism on qualification criteria for disbursement of additional fiscal benefits under this policy.
4. Other key measures will include:
5. Encouraging tourists coming to Mumbai for MICE to bring their families – A tailored itinerary for MICE tourists.
6. Speedy Immigration for tourists traveling for MICE.
7. Recommendations on procedures for rationalization of Aviation Turbine Fuel (ATF).
8. Action plan for initiating MoU-s with airlines to promote Mumbai as a hop-over destination.
9. Recommendations on rationalization and simplification of Conference visa regime.

### **Hotels**

Hotels are an important component of the tourism product. They contribute in the overall tourism experience through the standards of facilities and services offered by them. With the aim of providing contemporary standards of facilities and services available in the hotels, the Ministry of Tourism has formulated a voluntary scheme for classification of operational hotels which will be applicable to the following categories: Star Category Hotels: 5 Star Deluxe, 5 Star, 4 Star, 3 Star, 2 Star & 1 Star Heritage Category Hotels: Heritage Grand, Heritage Classic & Heritage Basic.

The Ministry of Tourism has a scheme for granting approval to hotel projects from the point of view of this suitability for international tourists. Travel Trade Division has A classification committee set up by the Ministry classifies the functioning hotels under the star system into six categories from star one to five star deluxe.

Similarly, the Ministry has a scheme of approving Travel Agents, Tour Operators, Adventure Tour Operators and Tourist Transport Operators, the idea being to encourage quality, standard and service in these categories so as to promote Tourism in India. This is a voluntary scheme open to all bonafide agencies.

It has been the endeavour of the Ministry of Tourism to put in place a system of training and professional education with necessary infra structural support capable of generating manpower sufficient to meet the needs of the tourism and hospitality industry, both quantitatively and qualitatively. As of now, there are 29 Institutes of Hotel Management (IHMs), comprising 21 Central IHMs and 8 State IHMs, and 5 Food Craft Institutes (FCIs), which have come up with the support of the Ministry. These institutes were set up as autonomous societies with specific mandate to impart / conduct hospitality education / training in hospitality skills. Universities have been conducting degree/diploma and certificate courses on Travel and Tourism.

### **Training Programmes**

Tourism management and catering education programmes gained tremendous popularity and the profile of students seeking admission to these courses also underwent a transformation. As a result, courses offered by the National Council are of international standard which have been recognized by the hospitality industry. At present, there are 41 Institutes of Hotel Management comprising of 21 Central IHMs, 8 State IHMs and 12 Private IHMs and 5 Food Craft Institutes following National Council's course curriculum. The National Council has its own website, which can be accessed at [www.nchmct.org](http://www.nchmct.org)

Task Force for steering and monitoring the skill development effort of the Government of India is marked by Ministry of Tourism providing lodging facilities to the trainees from all parts of India. Travel Agents are important stake holders in

tourism infrastructure as they make arrangements of tickets for travel by air, rail, ship, passport, visa, etc. They also arrange accommodation, tours, entertainment and other tourism related services. Inbound tour operators make arrangements for transport, accommodation, sightseeing, entertainment and other tourism related services for foreign tourists. Tourist Transport Operators provide tourist transport like cars, coaches, boats etc. to tourists for transfers, sightseeing and journeys to tourist places etc. Adventure Tour Operators engage in activities related to Adventure Tourism in India namely, water sports, aero sports, mountaineering, trekking and safaris of various kinds, etc. In addition to that he may also make arrangements for transport, accommodation, etc. Domestic tour operators make arrangements for transport, accommodation, sightseeing, entertainment and other tourism related services for domestic tourists.

### **Publicity**

As part of its marketing / publicity activities, the Ministry of Tourism brings out brochures, leaflets, maps, films, CDs, etc. on various topics. Each heading given below details the theme on an all India basis, based on availability of the respective products. In case of the destination folders, the leaflet / folder / brochure gives the information about the place or the destination with various facets of the facilities available, sightseeing around the place, important telephone numbers and the contact points of India tourism officers. Similarly, the films deal with the subject in its entirety covering all destinations of the country.

### **Overseas Marketing**

Overseas offices of GoI are created by The Ministry of Tourism, Government of India, through its 14 offices overseas endeavors to position India in the tourism generating markets as a preferred tourism destination, to promote various Indian tourism products vis-à-vis competition faced from various destinations and to increase India's share of

the global tourism market. Through an integrated marketing and promotional strategy and a synergized campaign in association with the Travel Trade, State Governments and Indian Missions. The specific elements of promotional efforts undertaken overseas include Advertising in the Print & Electronic Media, Participation in Fairs & Exhibitions, Organising Seminars, Workshops, Road Shows & India Evenings, Printing of Brochures and Collaterals, Brochure Support / Joint Advertising with Travel Agents / Tour Operators, Inviting the Media and Travel Trade to visit the country under the Hospitality Programme etc.

### **Incredible India International Campaigns**

Ministry of Tourism commenced its International TV Campaign (2009-10 - Extended to 2010-11) for Europe and Americas region, which finished in the first half of the 2010-11.

In December, 2010, the Ministry launched its International TV Campaign 2010-11 - Europe. Leading TV channels of pan-regional reach are part of the Media Plan of the Ministry.

### **Participation in Travel Fairs and Exhibitions**

India tourism offices overseas have participated in the major international Travel Fairs and Exhibitions in important tourist generating markets the world over as well as in emerging and potential markets to showcase and promote the tourism products of the country. These include Arabian Travel Market (ATM) in Dubai, PATA Travel Mart in Macau, World Expo 2010 in Shanghai, China International Travel Mart in Shanghai, ITB – Asia in Singapore, World Travel Market (WTM) in London, IMEX in Frankfurt, FITUR in Madrid and ITB in Berlin.

India tourism, Beijing was awarded the “Best Tourism Promotion Award” at the World Travel Fair in Shanghai. India tourism, Tokyo was awarded the “Best Booth Operation Award” at the Korea World Travel Fair and the “Best Tourism Promotion Award” at the Busan International Tourism Fair in South Korea.

### **Some Major Promotional Activities Undertaken for Overseas Promotion**

The Ministry of Tourism, Govt. of India undertook a series of promotional initiatives to aggressively promote tourism to India.

As part of the promotional initiatives undertaken, Road Shows were organized in important tourist generating markets overseas with participation of different segments of the travel industry.

- Road Shows, in collaboration with the Indian Association of Tour Operators were organized in CIS Countries, during the months of September-October 2010. Road Shows in collaboration with the PATA India Chapter were organised in May 2010 in USA and Canada. The Road Shows comprised presentations on India followed by one-to-one business meetings between the trade delegation from India and the travel trade in the respective countries. The delegation for the Road Shows was led by the Secretary (Tourism).
- India tourism Toronto undertook massive advertising and outdoor publicity during the Vancouver Winter Games 2010 in Vancouver and also Paralympics Games 2010 from February to March 2010.
- India Tourism Paris participated and supported the 3rd France-India Business Cup Golf Tournament held at St. Tropez, France during 13th - 17th October 2010. A high level delegation led by Hon'ble Minister Tourism, Joint Secretary (T), Regional Director, India Tourism Frankfurt attended the event. Hon'ble Minister of Tourism inaugurated the France-India Business Cup Golf Tournament on 14th of October and there was a meeting held with various Stakeholders for promotion of Golf Tourism.

- India tourism, Dubai organized the Golf Tournament at Ras Al Khaimah, United Arab Emirates. Indiatourism Johannesburg organised “Know India” seminar to the group of 12 people travelling to India and for the group of 6 ladies travelling to south India giving information about shopping, hotels, Ayurveda and spas and safe travelling for women.

### **Market Research**

Statistical data is an important tool for the planners and policy makers not only for planning/policy formulation but also to monitor the progress of the schemes and evaluate their impact. The Ministry of Tourism brings out an Annual Publication called “India Tourism Statistics” every year giving details of international and domestic tourism, including details about the classified hotels etc. In addition, a small brochure called “Tourism Statistics at a Glance” is also brought out, giving updated and latest key statistical data. The Ministry also estimates month wise Foreign Tourist Arrivals (FTAs) figures and Foreign Exchange Earnings (FEE) from tourism, and this is brought out within a time lag of just 4-5 days.

### **Cooperation with International organizations**

International Co-operation Division is one of the important divisions of the Ministry of Tourism, which engages in various consultations and negotiations with the international organisations such as United Nations World Tourism Organization (UNWTO); Economic and Social Commission for Asia and the Pacific (ESCAP); Bay of Bengal Initiative for Multi Sectoral Technical and Economic Co-operation (BIMSTEC); Mekong-Ganga Co-operation (MGC); Association of South East Asian Nations (ASEAN) and South Asian Association for Regional Co-operation (SAARC) and South Asian Sub-regional Economic Co-operation (SASEC). This Division holds consultations and negotiations with other countries for signing of

Agreements / Memorandum of Understanding (MoU) for bilateral/multilateral cooperation in the field of tourism, organizes Joint Working Group Meetings with other countries and attends Joint Commission Meetings in coordination with the Ministries of Commerce, Culture, External Affairs, Civil Aviation, Finance, Petroleum, etc. for development and promotion of tourism.

### **Niche Tourism**

Tourists who are interested in natural tourism for recreation which includes a wide range of activities skiing, paragliding, swimming, water rafting, fishing, hunting, horse riding, trekking, safaris, etc. Rural natural tourism is attractive for three reasons it will cost effective and pollution free environment and lots of greenery. Some of the adventurous game requires operational skills to help the tourist. According the respondents, the trained tourist guide is very important for rural natural tourism. They have the responsibilities to understand the customer need and use his experience and skill to keep them safe and happy.

**Cultural tourism** is concerned with the culture, history, and archeology of local people. They are interested in visiting culturally significant places in India. The places with historical evidence attract tourists. Since most of these places do not have proper accommodation facilities people generally prefer to go for a day trip. In southern part of India there are large temples made in ancient period or medieval period. Forts of different Nizams or the rulers in remote areas could be the area of interest for many tourists. Lots of forts and palaces of Maharajas from medieval period and modern period are available in northern and western of India. Temple from all the periods, archeological excavation of ancient period is available in northern and western of India. In eastern part of India, we find temples from all period and British architectural evidence in different places, an evidence of modern period. Making the historical site a center of attraction, we can provide other services to attract the attention of the tourist.

India's fairs and festivals, some of which are already well established such as the Pushkar mela of Ajmer, the Desert Festival at Jaisalmer, the Kumbh Mela, Navchandi mela in Meerut, Shantiniketan Mela in Bolpur etc. should be promoted as unique products of Indian culture. Different festival of India like Holi, Diwali, Durga Puja, Ganesh Utsav, Navaratri, etc are some of the festivals of India should be more organized to attract Domestic as well as International tourist. Melas and festivals are needed to be promoted to attract tourists. According to the respondents, the tour operators have to be organized programme for the tourist to encourage rural tourism.

### **Film Tourism, Lit Fest Tourism**

In the recent times, International Film/literary Festivals also attract thousands of tourists. Hundreds of Event Management companies are involved in the organization of the mega events. Proper standards of health and safety need to be put in place so that tourists are not duped, cheated, defrauded and women tourists do not face sexual violence.

**Health Tourism**, which is concerned with health, yoga and Ayurveda treatments. Tourists believe that Health Tourism could be a good option for rural tourism. Many people are suffering from various physical and mental illness like chronic headache, loss of sleep, mental tension, rheumatic pain, muscular strains, sprains, nervous pains of muscular origin, obesity or excessive fatness and muscles weakness. Many respondents are interested for health tourism. Yoga, Ayurveda and spa treatment are time-tested and trusted methods to improve your physical and mental activity irrespective of the age group. Ayurveda is the only system of medical treatment Rural Tourism It's an Alcove that India can offer in the world which uses botanical treatment for the body and mind. All three have been accepted global today. The World Health Organization recognizes it as an alternative medicine. Yoga, Ayurveda and spa treatments are

the world's most eco-friendly medicine, none of them have any side-effects. Moreover, India is a major supplier of doctors, nurses, health management personnel to several industrially advanced as well as developing countries. Why not use this great human capital for India's economic growth by developing health tourism infrastructure?

**Ecotourism** is a socially responsible type of tourism which preserves natural resources as well as maintaining the well-being and social values of the local population. Eco tourists are interested in visiting those sites famous for their natural resources. Mangrove in Sundarbans of West Bengal, Hot spring in Rajgir in Bihar, Gir forest in Gujarat, Thar Desert in Rajasthan, Lakes in Udaipur in Rajasthan, Chilka lake in Orissa these are some of the famous sites visited by the tourist regularly. But there are many other sites which are neither well-connected nor have the basic facilities to attract the tourist. Many tourists like to visit places of natural beauty like native bush, caves, fossils, bird sanctuary, waterways, natural forest, natural park, desert, wildlife, marine life, snowfall etc. Tourists expect to learn something from this type of trips. They expect a skill interpretation with necessary knowledge to guide them and answer to all their curiosities. Brochures and books could be made available to the tourists for better understanding of the site. Video films of those sites with proper explanations could act as a guide where an experience guide is not available.

**Village-based tourism**, in which tourists share in village life, and rural villages gain economic and other benefits from tourist activities, people are interested in village-based tourism. Most of them are not interested because, according to them, basic facilities will not be available there. Accommodation could be a problem. Public administration is weak in villages, they are not safe and secure. Tour operators can make the village-based tourism attractive by arranging different types of accommodation to make the village stay

comfortable. It could be a holiday accommodation with parks and hostels. Hotels with motor lodges, bar and restaurant facilities. Motels and self-catering without bar and restaurant facilities. And lastly, host accommodation with bed and breakfast, home stays, farm stays, camp stay. Each of the four categories has shown facilities and the quality of the service which contribute towards the quality of the experience. Rural self-catering units i.e. self-accommodation e.g. quarters and other types of under-utilized farm accommodation often can be upgraded to meet tourist requirements. Demand for this type of accommodation is growing. In some places like Goa, different parts of Kerala and Rajasthan this type of accommodation is given to the tourist. Rural ambience may be natural or created to provide a rural lifestyle to the tourist. Monitoring mechanism to ensure safety of tourists as well as hosts is a need of the hour.

**Agro tourism**, in which tourists watch or take part in traditional agricultural practices, without disturbing the ecosystem or the productivity of host areas. Some are interested in agro tourism. Agro tourism refers to visiting a working farm or any agricultural, horticultural or agribusiness operation for the purpose of enjoyment, education, or active involvement in the activities of the farm or operation. It could be an overnight stay, for the purpose of participating in or enjoying farm activities and/or other attractions offered. The tourist can move around the farms or orchards where they can themselves collect or harvest the fruits or products. The prices they pay for the volume harvested will be usually higher than what the grower would get from a broker. The activity of visiting a farm for short periods of time for the purpose of participating in or enjoying farm activities and/or other attractions offered. Farm stay is the most well-known of these, and consists of bed and breakfast and, in some cases, an evening meal, along with activities or attractions centered mainly on the traditional, pastoral, farm or farmhouse. Properties which use the land in other ways e.g.

horticulture or forestry are also included. Successful farm stays to a Rural Tourism It's an Alcove that India can offer very large extent depend on the well-developed hospitality skills of the host and their capacity to make visitors feel as though they are part of the family.

### **Conclusion**

For providing state of the art tourism infrastructure, the state needs to attract private sector participation for infrastructure development projects and access the operational expertise of private companies under public private partnerships (PPPs) model for implementing infrastructure projects efficiently. For this,

identification of suitable private partners for projects in the state is a must. Structures and mechanisms need to be created to provide advice on project marketing and deal structuring, Transaction Advisory Services for the public sector to engage private investors, bid management services for Investors, identify optimal capital structures and financing strategies for PPP projects, assist clients in packaging projects in order to raise capital through various debt or equity structures and instruments, create business plans, secure financing for infrastructure projects as per the safety standards, valuation and business modeling, divestitures and carve-outs and Feasibility Studies.



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# Migration and Health Care

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## **Key words:**

Migrants, Interstate and Intrastate Migration,  
Health care

## **I. Background:**

Migration is very important phenomenon from economic, political and public health point of view. Interstate and intrastate migration is common in India. Individuals either alone or with their families shift to urban or semi urban area for the purpose of job/occupation or for family / personal major events are considered as migrants. Census 2001 shows that 33% in India were classified as migrants. There is increase in migration among women (both with their families and independently) and this makes significant rise in population of migrants. Interstate population is 85% and 15% across states. India's economic output is almost 2/3 rd from urban areas. Migration is common from rural to urban areas.

Migration represents an important livelihood diversification strategy for many people. Internal migration is of considerable importance in India.

Migrants are of two types, one who migrate with family and family live together and another where family is at rural place and an individual alone stays in city.

## **Why do people migrate?**

- 1) Poverty
- 2) Unemployment at rural place

- 3) Drought/natural disaster at native place
- 4) Better service provisions/options at city place, Employment potentials at city place
- 5) Attraction of city life.
- 6) For health care.
- 7) For survival
- 8) Landlessness / advanced debts at rural place.
- 9) Lack of educational facilities at rural place.
- 10) Major life event such as marriage, shift / transfer of family member / parents / earning member of family. For women, Sociocultural and psychological reasons such as marriage, divorce, widowhood, dissatisfaction, domestic violence or migration of family' s earner / parents
- 11) Displacement by development projects.

Major occupations of migrants are, construction work, fish processing, transport services, hotel work, tourism industry, garment factory, rickshaw drivers, hawkers, domestic servants, sex work.

Migration shows impact on Indian society, culture, politics and environment and on health of individuals and of the community.

## **Implications of migration:**

- 1) Migrants can not cope up with urban life style/conditions and become vulnerable in new atmosphere. They have to adapt to city culture.



- 2) Women are at double disadvantage and to violence and abuse. They do not know or have an access to redressal system.
- 3) Migrants do not have proper health care coverage. Unavailability / inadequacy of governmental health facilities. Lack of primary health care centres.
- 4) No proper housing and sanitation facilities
- 5) Insecurity in jobs, majority work in informal / unorganised sector, do unskilled work. They are often exploited by overwork or under payment .
- 6) Work atmosphere for female workers is not proper as do not provide facilities of toilet / creche, etc. and they are vulnerable to sexual abuse by contractors / employers or coworkers.
- 7) Migrants lack identity at city as do not have any documents / proof of belonging to city place. Lack of ration card or identity card/voter card,
- 8) Illiteracy and unawareness about own legal rights.
- 9) Poor nutrition.
- 10) Vulnerable to infections, occupational hazards.
- 11) Risk to sexual and reproductive health of women. Prolonged standing at work place, overwork, exposure to chemicals may lead to premature delivery, fetal malformation, abnormal postnatal development.
- 12) Risk to mental health. Stressful work and living conditions, insecurity in job, poverty, pressure of earning for livelihood, unhygienic housing, lack of recreational activities, feeling of unacceptance by city people and feeling of isolation may lead to mental stress, relationship problems, alcoholism and substance abuse.
- 13) Loss of friends/relatives/social contacts at rural place, may lead to loss of support and own culture.
- 14) Lack of access to basic rights of right to education, right to food security and livelihood, and right to health, right to shelter.

Migrants are vulnerable as they work in informal structure, hazardous work conditions no job security, long working hours, exploitation by overwork and under payment by employer. Women are additionally vulnerable to sexual abuse and violence by employer, they are paid less than men though do the same job, unhealthy work environment and conditions.

## **II. Research methodology and major findings:**

The present research study was conducted at Nalasopara, District Thane in Maharashtra State.

Migrants were interviewed with the help of semi structured interview schedule.

This is a qualitative research study. Data was collected during December 2013 to May 2014.

The present researcher was resident of Nalasopara during 1990 to 1995. And have observed changes in population at the said location over the last two decades. The number of migrants have increased noticeably and hence the said geographical location was selected to conduct this study.

Nalasopara is western suburban area close to Mumbai city, with greater accessibility by railway local trains and by local buses. There are certain concentrated pockets of migrants. Some of them do stay in scattered places along with host families in this area (especially those who had migrated more than 10 years ago).

Purposive sampling method was used to select respondents. Migrants who had migrated 2 to 3 years ago were selected. Majority of them had their wives and children staying with them. Cross sectional study of 100 migrants was done.

The data was collected about their origin, reason for migration, family members and marital status, education, occupation, family income per month, nature of residence, conditions at residence and workplace, health status, availability / accessibility / affordability / use of kind of health services, their experience after migration.

Migration has impact on mental and physical and social health of migrated individual and their family and community.

The correlation of occupation, income, education status with their health conditions was observed in this study. The strong correlation of education with health status was seen. Higher the education, higher is family income and better is health condition.

The study also gives data on working and living conditions, difficulties faced by them, reasons of migration. Kinds of health problems and aids or services available to them were also studied. The different and specific issues of migrant women were also studied.

### **Findings**

Migration is a coping strategy .

Most of migrants work in informal sector as unskilled workers and live on meagre wages and unable to afford a proper housing and are exposed to hazardous living conditions which affects their physical, mental and social health.

Majority of male migrants came for employment .Majority had someone in city who helped him in initial period to search a job and find place to stay, later on they got their family (wives and children).

Average age of these migrants was between 28 and 36 years.

Average monthly income of family ranged between 3500 and 5500 rupees.

Majority had studied upto SSC, few were illiterate. Few had completed their graduation.

They understand and speak hindi language for communication. Majority had bengali as their mother tongue. Some of them had hindi as mother tongue. Very few could read and write and speak english language.

Majority were married and had two kids.

Their living place was like hut (kaccha house) having one room with no water and toilet facility.

A few had kitchen platform but majority were cooking on stove on the floor.

They had very few vessels mainly of aluminium metal or of plastic.

Almost all had a tank to store water.

There was no water connection and these people were bringing water from tap of nearby residential societies.

They take bath once in 3\4 days and wash clothes once in a week.

Majority were working in garment or chemical informal companies, and were getting daily wages.

Some women were working in construction work, sex work, some were housewives.

Many of them expressed that once they continue to live here, after 8-10 years they can manage to arrange for proper residential place, as some of their known persons are staying in rental flats.

As far as physical health is concerned, majority of them generally neglect the illness unless it is severe. Simple health issues remain unattended. Some use traditional home remedial measures .

In case the condition is serious, majority of them prefer to go to private doctor though he charges about 50 rupees per visit. This is because the govt hospital is far (at Virar) and is crowded so they will have to spend more time which will result in loss of dalily wages. Many of them use self medication by bringing medicine from chemist by telling their problem. Pregnant women go for delivery at governmental hospital as their housing conditions are bad and hospital is better place after delivery. Many prefer to go back to their native place for delivery as have support system over there.

Health problems such as, infectious diseases (malaria, tuberculosis, typhoid, respiratory disorders, HIV), chronic fatigue, cold, gastro intestinal disorders, hypertension, skin disorders,

low birth weight, anemia, vitamin deficiencies, premature delivery, risk of abortion, alcoholism and drug addiction, stress leading to mental disorders.

Women did mention about sexual abuse by employer, other men. But they prefer to keep quiet as they said there is no redressal system.

Some men were alcoholic and do not see it as medical illness.

Children were studying in municipal school and also do household work when their parents are out for work.

Majority were staying with family.

Majority had migrated for better employment opportunities.

Majority send some amount per month to to their parents at rural place.

Some women came here after their marriage, with their husbands and are housewives.

Some women brought their children, came here for job as faced domestic violence at their rural place.

Local people hate them and call as outsiders and the reason to make their city dirty.

Though migrants have to face many difficulties in city, they shared some positive aspects such as,

Women shared that they feel free and flexibility as far as cultural rigid norms at their rural place are concerned.

Here women have freedom to decide about cooking, dressing, social contacts. (like one woman said she was daughter in law at rural place and was under control of mother in law at rural place but here she feels free).

New way of life at city, new ways of dressing, food habits, entertainment means, new outlook towards life at city is enjoyed and migrants get adapted to this. They may not remain rigid towards their rituals/ceremonies/celebrations.

Mobile phones keep them connected with each other and with members at rural place.

New city atmosphere shape their self identity, interact with diverse culture, develop new friends and social network.

### III. Conclusions

Migrants are at disadvantage compared to the native population regarding health care and other services.

We have law for Protection against Sexual Harassment of Women at Workplace, but many women are not aware about it, their legal rights and polices. Therefore, awareness programmes should be arranged.

We need to have urban planning migrant friendly and inclusive. Proper assistance to migrants, support system, help line and network, social security, temporary ration card, short term shelter homes.

Majority of times migration is viewed negatively, as carrier of diseases and as a unwanted mass and burden on host community. Actually migration can be seen positively as different people of diverse culture coming together can enjoy and live healthy life. However, in reality the migrant's health concerns fall out for host community. Migrants come with their own health status, culture and lifestyle of their origin. One needs to accept migrants and plan for proper management so as to enhance its positives and reduce negatives in order to achieve healthy, productive and happy population.

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# Air Pollution on account of Vehicular Emissions and Bharat Stage (BS) Norms

*Efforts for India to breath easy*

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Science of physiology tells us that we take in the air, it goes to our lungs and oxygen contained in it is exchanged for carbon dioxide, which is given out. It is estimated that an average person breathes 8 litres of air every minute, and in a day he inhales about 11,520 litres of air. What would happen, which actually happens, if along with the oxygen that is taken in, other pollutants of air namely, carbon monoxide, sulphur, nitrogen oxides, lead, particulate matter, etc. are also taken in our body every minute? Pure air for breathing is a rarity. As more and more and population is now living in urban areas they have to bear the hard reality of taking in loads of toxins in their body. Air pollution control, along with other pollution controls is a matter of deep concern for the governments of all the nations. The concern of pollution control and environment protection came late on the national and international attention, i.e. during and after 1970s and its importance is increasing by the day.

Over the years, on account of various policy measures high polluting industries like large-scale chemical industries, power plants and refineries are set-up or moved out outside the city limits. The major cause of air pollution in the cities is vehicular emissions responsible for about two-thirds of air pollution. The energy for vehicles is produced by internal combustion with a mixture of fuel and air, and the burnt gases are the pollution causing emissions. These emissions mainly contain carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>), sulphur oxides, hydrocarbons, lead and suspended particulate matters (SPM). There are other polluting contents and smoke also. Modern life moves on vehicles. Hundreds of thousands of vehicles are on the move 24x7, round the year, and their number is increasing sharply. The following table briefly depicts their increasing number over the years.

## Number of Vehicles

Total number of registered motor vehicles in India (As on March, 2015)

(In thousands)

Year	All vehicles	Two-wheelers	Cars, jeeps and taxis	Buses	Goods vehicles	Others
1992	23507	15661	3205	358	1514	2769
2000	48857	34418	6143	562	2715	5319
2015	210023	154298	28611	1971	9344	15799

Source: *Compendium of Environment Statistics (2016)*, Ministry of Statistics & Programme Implementation, Government of India.

Vehicular emissions are the necessary output of the mechanism of internal combustion and production of energy to propel the vehicle. In the engines made for vehicles running on petrol, the emissions comprise mixtures of carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>) and unburnt hydrocarbons (HC). In case of diesel engines the concentration of carbon monoxide and unburnt is comparatively low, but there is high concentration of oxides of nitrogen.

Machines work on a precise mechanism. The second equally important part of the issue is the quality of the fuel that is fed to the machine. Quality depends upon the degree of refinement of the crude. Taking into account these facts, the thrust of the pollution control strategy has been on reducing and gradually minimizing these particular emissions, which account for larger share of pollution caused by vehicular emissions.

#### Measures taken for Control of Air Pollution from Vehicles

The emission norms for vehicles at the manufacturing stage as well as for in-use vehicles were notified for the first time in India in 1991 for petrol and in 1992 for diesel vehicles, under the Environment (Protection) Act and the Air (Prevention and Control of Pollution) Act, 1981. In April, 1999 the Supreme Court of India ruled that

all vehicles in India have to meet Euro I or India 2000 norms by 1 June, 1999 and Euro II will be mandatory in the National Capital Region by April 2000. The National Auto Fuel policy was announced in 2003, which inter alia, laid the roadmap for implementation of the Bharat Stage norms till 2010. Each stage specifies a certain limit on the pollutants released, which requires oil refineries to produce the specified type of oil and requires the automobile industry to modify and upgrade the engines to further bring down emissions of the pollutants from vehicles.

The policy also created guidelines for auto fuels, reduction of pollution from older vehicles and R&D for air quality data creation and health administration. The vehicular emission norms are related to European Norms. After their adoption they are notified as Bharat Stage Norms. They have been revised phased wise on the basis of the available technology at any point of time and also because of the time needed by the automobile industry to make changes in the make of the vehicle engine. Similarly, this also requires upgradation in the refining standards. Thus, there are two broad aspects of emission control, **i.e. through engine make and fuel quality**. The period of their implementation and the norms laid down by them are shown in the following table.

**Emission Norms for Passenger Vehicles (Engine make)**

Norms	Corresponding European Norms	Year of Introduction	CO(g/km)	HC+NO <sub>x</sub> (g/km)
1991 Norms		1991(petrol) 1992 (diesel)	14.3-27.1	2.0 (Only HC)
1996 Norms		1996	8.68-12.40	3.00-4.36
1998 Norms		1998	4.36-6.20	1.50-2.18
India Stage 2000 Norms	Euro 1	2000	2.72	0.97
Bharat Stage II	Euro 2	(4) 2003--NCR, 11 cities (4) 2005 Nationwide	2.2	0.5

Norms	Corresponding European Norms	Year of Introduction	CO(g/km)	HC+NO <sub>x</sub> (g/km)
Bharat Stage III	Euro 3	(4) 2005-NCR, 11 cities (4) 2010-Nationwide	2.3	0.35 combined
Bharat Stage IV	Euro 4	Phase wise (selected cities) from April 2010 to April 2017 (nationwide)	1	0.18
Bharat Stage V	Euro 5	This stage is skipped		
Bharat Stage VI	Euro 6	April, 2020 Nationwide (proposed)	(To be notified)	(To be notified)

Source: *Compendium of Environment Statistics (2016)*, Ministry of Statistics & Programme Implementation, Government of India.

### **Jump in upgradation of norms- BS-IV to BS-VI**

It can be seen from the above table the BS-IV norms are gradually introduced in Indian cities from the year 1991. In this series of phase-wise upgradations, in January, 2016, the Government of India decided to skip the BS-V norms in the series and directly jump from BS-IV norms to BS-VI norms from 1st April, 2020. Upgradation of norms comes in phases and takes place with a gap of few years, because it requires substantial changes in the whole gamut of engine manufacturing, refining standards of crudes, which among other things pushes cost. As estimated shift of technology from BS-IV to BS-VI will cost refining industry anything between Rs.50,000 crores to Rs.80,000 crores. Major changes that manufacturing vehicles include:

(a) For petrol cars Electronic Control Unit will have to be fitted.

(b) For diesel cars engine calibration, diesel particle filter and selective catalytic reduction system will have to be fitted.

(c) Length of bonnet will have to be increased. This will increase length of cars.

Petrol cost will be dearer by Rs. 10,000 to 20,000; diesel cars will be dearer by Rs. 80,000 to 1.2 lakhs and increase in prices of trucks will be around Rs. 1.5 lakhs-2 lakhs. What is significant is that the benefits reduction in emissions are huge in terms of reducing harm to the health of the people from the pollutants that enter their bodies day in and day out. This is also a part of India's commitment made in Paris Climate Change Conference, wherein it committed that India would reduce carbon emission intensity of its GDP by 33-35% from 2005 levels. How this leapfrog in BS norms will reduce particular emissions are depicted in brief in the following tables:

### **Petrol Emission Norms (Engine make)**

*Gram per km*

Norm	Carbon monoxide (CO)	Hydrocarbons (HC)	Oxides of nitrogen (Nox)	HC+NO <sub>x</sub>	Particulate Matter
BS-III	2.30	0.20	0.15	-	-
BS-IV	1.00	0.10	0.08	-	
BS-VI	1.00	0.10	0.06	-	0.005

## Diesel Emission Norms

*Gram per km*

Norm	Carbon monoxide (CO)	Hydrocarbons (HC)	Oxides of nitrogen (Nox)	HC+NOx	Particulate Matter
BS-III	0.64	-	0.50	0.56	0.05
BS-IV	0.50	-	0.25	0.30	0.025
BS-VI	0.50	-	0.06	0.17	0.005

Source: *The Automotive Research Association of India*

([https://www.araiindia.com/pdf/Indian\\_Emission\\_Regulation\\_Booklet.pdf](https://www.araiindia.com/pdf/Indian_Emission_Regulation_Booklet.pdf))

### **Controlling emissions from fuel quality Reduction of emission of sulphur dioxide**

Like other vehicular emissions, emission of sulphur dioxide, whose health hazard is attempted to be reduced through fuel quality. The sulphur level in diesel is proposed to be brought down to 10

ppm from a level of 500 ppm in BS II which will reduce a continuing health hazard.

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/2020-indian-refineries-on-fast-track-to-meet-bs-vi-emission-norms/51525764>





# Status of Land and Implications: After Conversion of Land to Non-Agriculture

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## **Keywords:**

Agriculture, Non-agricultural conversions, vacant non-agricultural land

## **Introduction**

Agriculture is the backbone of any developing country, not only in terms of employment and monetary measure but in fact, it is one of the basic needs that a country requires for a sustainable development and economic growth. Today, agriculture in the world is facing many challenges, one of the major threats or challenge that agriculture faces is due to change in climatic conditions. Climate change has significant impact on land, water and air, and thus it threatens the agricultural productivity, dragging millions of people involved in agriculture into grinding poverty. Besides climate change, Urbanization is predominantly replacing the rural culture with urban culture, which has affected the demand and supply of agricultural land. As the cities provide better standard of living, the cities have seen a massive inward migration after industrialization which has led to increase in city limits around its periphery encroaching the fertile hinter land. This phenomenon has led to conversion of agricultural land for non agricultural purposes. Hence land, a scarce natural resource, has been utilized haphazardly solely for the economic gains caused by rapid urbanization and industrialization. The reasons for loss of agricultural land to urbanization is the low monetary return from agriculture and

growing pressures of urbanization and economic development which has resulted in the drastic acceleration of land prices. This phenomenon is mostly observed in peri urban areas because of increase in proximity to urban centres and transport connectivity which has led to increase in opportunity cost. Thus, due to insufficient monetary returns from agriculture and in search for an urban lifestyle, the farmers tend to sell their agricultural land. The policies governing and regulating the agricultural land benefits more towards economic development over protection of farm land and farmers interest, which has led to a side effect of vacancy of non-agricultural lands. Hence, there is a need for effective and efficient regulatory policy which balances the food, shelter and employment equitably and in a sustainable manner.

## **Problem Statement**

“Urban expansion on agricultural land is associated with changes in the level of land scarcity and off-farm opportunities” (Li Jianga, 2013). The increasing urbanization has resulted in expansion of city limits. This expansion of the city is often seen as encroachment of the surrounding fertile land. But sometimes though temporarily, agricultural land deters unwanted urban expansion. As long as remuneration from cultivation offsets the sale price to estate agents and land speculators, the cultivator does not dispose of land. As long as the off-farm opportunities are higher than

agricultural returns and the lack of incentives for farmers persists, it will eventually widen the gap between demand and supply of agricultural land, which will put even greater pressure on the supply side i.e. fertile land.

The current environment of making agricultural land conversions easy outside city limits also has noxious consequence of vacancy i.e. zero development in converted agricultural land, as investors buy plots solely for the purpose of investment. This ineffectiveness of land conversions has serious negative implications on food security, farm lands, and socio-economics of the agriculture.

### **Research Area**

The present research study was conducted at 4 villages of Karjan taluka of Vadodara district in Gujarat State. Non agricultural land parcels were identified and mapped and farmers were interviewed to know the reasons of conversion. Policies were analyzed relating to non agricultural conversions.

Karjan taluka was selected as it has the rural nature, where the main occupation of the people is agriculture. 83.78% of total geographical area is cultivable area which is the highest percentage share in Vadodara district. Due to rapid urbanization the 23 villages out of 93 villages has witnessed the conversion of agricultural land for non agricultural purposes in the taluka.

Out of those 23 villages, by normal quantitative analysis method, 4 villages were selected. The quantitative data regarding number of land conversions obtained was analyzed and based on number of conversions and proximity to urban center, 4 villages from karjan taluka was selected.

### **Research Methodology**

Identification of issues and validation has been directed with the literature review of food security, loss agricultural lands, vacancy in agricultural land, causes and consequences of loss of agricultural land and case studies of food insecurity due to loss

of agricultural land. Scope of the research is limited to the non-environmental aspects of loss in agricultural land of 4 villages of Karjan taluka, Vadodara. Analytical framework is provided to assess the vacancy of agricultural land after the conversion of land to non-agriculture purposes by conducting land use survey and data presentation. The mapping of the villages was carried out and simple Google earth analysis was carried out for identification of vacant land i.e. identifying the vacant non-agricultural land from land parcels with non built-up. Further the research tries to look into finding policies gaps and recommending mitigation measures.

### **Major Findings**

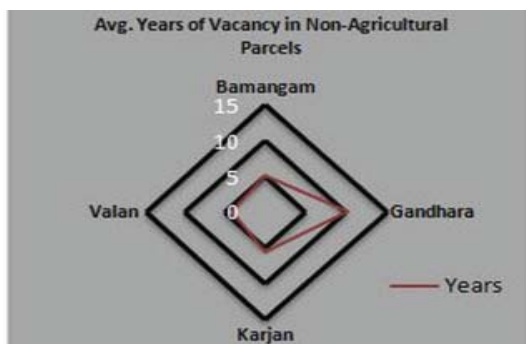
In the period from 2002 to 2005, nearly 37,385 hectare of land has been converted to non agricultural use, as industries began acquiring agricultural land in peri-urban areas of Vadodara. This led to increase in land prices as a result of land speculation, which further increased the opportunity cost.

Through random sample survey where 25 households per village were interviewed and focused group discussion was carried out with Panchayat officials and farmers to unveil the reasons for conversion. It was found out that the opportunity cost of land was almost 41 lakhs per hectare as compared to 40 thousand per year return from the agricultural land. Also, proximity to urban centre and connectivity was the driving factor in land conversions as the price of the land increased with increase in opportunity cost. Land speculations by real estate agents led to accumulation of agricultural land for economics gains only after converting into non agricultural land as the land was kept vacant for a significant number of years.

As per the primary survey, more than 50% of the converted agricultural lands in Bamangam, Gandhara and Karjan are lying vacant, which clearly shows the ineffectiveness of agriculture and land policies regarding the protection of agriculture land and agricultural produce. The reason of the

comparatively below 50% vacant agricultural land in Valan is due to its proximity to urban centre. The table below shows the percentage of vacant land and occupied or utilized land that has fulfilled the intended use, out of the total number of converted non-agricultural land.

Sr. No	Village	Occupied %	Vacant %
1	Bamangam	29	71
2	Gandhara	30	70
3	Valan	52	48
4	Karjan	27	73



The figure shows the average year of vacancy of converted agricultural land. The converted agricultural land has been lying vacant for an average of 5-10 years in Bamangam and Gandhara, while the minimum average 4 years of vacancy has been found in all the 4 villages.

Hence due to non-use of converted agricultural land, the quantum of loss of resource in the form of fertile land and food production due loss of agriculture has been quantified based on interviews of farmers, focused group discussion with the stakeholders. It shows that the major crops that are harvested over the years are Tuver, Cotton, sugarcane and paddy were known. Also, the yield per Viga (0.16 ha) has been determined from year of vacancy which is almost 300-500 quintals in Tuver and Cotton and 15000-24000 quintals in Sugarcane and Paddy every year due to the vacancy of the converted land. This loss is the result of inefficient planning and haphazard development and land management.

## Conclusion

There is significant percentage of Non-Agricultural lands that are lying vacant for an average of minimum of 4 years in all the 4 villages. The reasons for the conversions were gathered from focused group discussion and farmer's interview were related to opportunity cost, investments and urge to shift to urban centre. Therefore, the conversion rate is higher in villages with good proximity to urban centre. Land speculation is one of the reasons in which investors who invest in the agricultural land and keep it with zero development until they get good returns for the vacant converted land. Further, the land speculation and proximity to urban centres and transport connectivity implies higher opportunity cost, which leads to selling of the farm land to industries or the investors, also due to lack of sufficient regulatory measures for farm land protection made the process of conversion easy. The policies protecting the farmlands and farmers interest are deterrent to regulate the negative implications of economic development i.e. higher opportunity cost and a higher vacancy period of converted agricultural lands. . Due to non agricultural lands lying vacant without being utilized for any purpose implicates a clear loss of resources in terms of agricultural produce and fertile land. The land policies for close proximities should be more stringent towards protection of agriculture land and promote more efficient and sustainable development.

## Recommendations

The laws governing the tenure and transfer of land are mainly three of the following:

- ✓ The Bombay Land Revenue Code, 1879
- ✓ Bombay Tenancy and Agricultural lands Act, 1948
- ✓ Gujarat land Ceiling and Agricultural Act, 1961

The Bombay land revenue code 1997 of Gujarat was primarily amended to govern the transfer of ownership, permissible uses and other legalities of agricultural land.

According to Section 65A 65B of Bombay land revenue code any land that can be converted to commercial, residential, industrial or to any non agricultural use regardless of whether it falls under Development Plan or Town Planning scheme areas, under Gujarat Town Planning and Urban Development act. This clearly represents the utilitarian approach towards agriculture as there is no regulatory measure for the time limit in execution of the intended use of converted farm land. Hence, for a sustainable development, there is a need for an additional clause or regulatory measure i.e. if the land that has been converted to residential, commercial or industrial purpose and the use of land is not utilized until a specific period should be liable to lose its permission of using the land for non-agricultural purposes.

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## ROUND & ABOUT

### **New Rules for Wetlands Conservation and Management Notified**

The Ministry of Environment, Forests and Climate Change notified the Wetlands (Conservation and Management) Rules, 2017 on 26 September, 2017 by superseding the 2010 rules. The detailed recitals of the rules inter alia say:

Whereas the wetlands vital parts of the hydrological cycle, are highly productive ecosystems which support rich biodiversity and provide a wide range of ecosystem services such as water storage, water purification, flood mitigation, erosion control, aquifer recharge, microclimate regulation, aesthetic enhancement of landscapes while simultaneously supporting many significant recreational, social and cultural activities, being part of our rich cultural heritage;

And whereas many wetlands are threatened by reclamation and degradation through drainage and landfill, pollution (discharge of domestic and industrial effluents, disposal of solid wastes), hydrological alteration (water withdrawal and changes in inflow and outflow), over-exploitation of their natural resources resulting in loss of biodiversity and disruption in ecosystem services provided by wetlands;

These rules decentralize the wetlands management by giving powers to States to identify and notify wetlands within their jurisdiction and to protect the wetlands from prohibited activities. The prohibited activities include all kinds of encroachment, solid waste dumping, discharge of untreated wastes and effluents from industries, cities, towns and villages, setting up or expansion of any industry, poaching, any construction of a permanent nature except for boat jetties within 50 meters from the mean high flood level observed in the past 10 years. The States are now required to identify and notify all the wetlands within a year. Their task of identifying wetlands has become easy because in 2011, the ISRO mapped over 201,503 wetlands across India. They occupy around 4 % of India's geographical area. Inland wetlands are spread over 10.56 million hectares and coastal wetlands have an area of 4.14 million hectares.

### **Revised Guidelines to Notify Silence Zones**

In pursuance of amendment to the Noise Pollution (Regulation and Control) Rules, 2000 made by the Central Government in August 2017, the Maharashtra Government (Environment Department) issued revised guidelines on 20 November, 2017. Under the new guidelines, the Urban Development Department will notify the silence zones for urban areas coming under municipal corporations or municipal councils. In respect of rural areas, such an action will be taken by the Rural Development Department. The new guidelines divide silence zones into four categories- industrial, commercial, residential and silence zones. Decibel limits for each of the category are prescribed. The Competent Authorities are required to seek report from the local bodies as to recommendation of a category for notifying the zones. If an area falls under two or three categories, then the authorities can declare it in one of the four categories according to the local situation.

## SURAT SHOWS THE WAY

### How Surat gets two-wheeler and auto users to switch to city buses

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New Delhi: Surat municipal corporation has set an example in achieving the tough task of getting more and more users of autos and two-wheelers to opt for city buses.

A combination of savvy pricing and smart technology has meant that the service, Surat Sitilink Ltd, launched less than a year back, has succeeded in attracting 50% passengers, many of whom were earlier using auto-taxis and two-wheelers.

Surat's stellar show comes at a time when most city bus operators, including Delhi Transport Corporation, are facing huge challenges to increase bus ridership. In November 2016, the Surat Sitilink got only 2,000 riders per day. It increased to 65,000 by August this year — an over 20-fold increase. Average daily revenue also increased from Rs 40,000 to Rs 1.5 lakh.

Last week Surat Municipal Corporation got the 'Best City Bus Services' award from the Central urban mobility conference in Hyderabad. The city has also started work to introduce a fleet of 25 electric buses, which will ply only in the core city area covering 25 km.

#### WHY SURAT SITILINK BUS SERVICE HAS CLICKED SO WELL

##### SHIFT OF PASSENGERS TO BUSES

93% of bus passengers were users of auto-rickshaws and two-wheelers

0.52% earlier travelled by four-wheelers

##### DEPENDENCE ON PRIVATE VEHICLE HAS REDUCED BY 7%

using our BRTS system have shifted from cars. While all our Sitilink buses are normal ones, the BRTS buses are air-conditioned and both these services are in sync with their operation and routes," Surat municipal commissioner Thernarasran told TOI over telephone.

Headed prior to the launch of Sitilink service, private operators used to run buses on 30-40 routes. "Surat is growing at 7%-8% annually and the municipal body needed a good public transport system, which is affordable and efficient," the municipal commissioner said.

While Surat Sitilink is incurring losses of Rs 7 crore annually, which is expected to increase as the number of buses

increase, the municipal corporation has a solution. "We collect one-time 'vehicle tax' from each new vehicle, which is 2% of the vehicle cost. We get Rs 60-70 crore and this amount is meant for improving transport system. We are going to keep a share of the revenue generated from the sale of additional FSI on properties along the transit corridors. We are also looking at getting additional revenue from advertisements," Thernarasran said.

##### Passenger satisfaction

65%

PASSENGERS GIVE 1 OR ABOVE RATING ON A SCALE OF 0-10

Technology intervention & monitoring

100% ticketing, 0% missed stops, 100% trip and schedule adherence

Real-time monitoring of buses, automatic vehicle location, incident management system, monitoring of all equipment

Check on violations | real-time tracking of speed, missed stop and route violations

Besides keeping Rs 4 as the minimum ticket amount to compete with polluting shared autos, the city administration has also introduced intelligent transit management system for real time monitoring of buses, emergency and other department vehicles. A robust live IT system has been put in place for

monitoring from the control centre. The Surat Sitilink has also deployed system for IT-based monitoring of transit violations. It also has a central message publication system in case of any emergency.

"It's very tough to shift people from four-wheelers to bus system. Only 2% of the people

Among the problems that cities in India are grappling with are traffic congestions adversely affecting mobility and the pollution resulting from vehicular emissions. A solution to the problem in the form of increasing dependency upon public transport system and thus reducing other modes of vehicle traffic has proved to be difficult to be achieved in the cities for variety of reasons. Surat Municipal Corporation has achieved this tough task. Here is a brief report of this success story. (Courtesy: Times of India, Mumbai, dated 12 November, 2017)

## Annual Climate Change Conference concluded

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environment treaty among nations (called Parties) as well as a decision making body of the countries of the world formed for *stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interface with the climate system commonly believed to be around 20 C above the pre-industrial global average temperature.*

The 23rd annual Conference of Parties was held in Bonn, Germany from 13 to 19 November, 2017. The main agenda before the UNFCCC, continued from the previous COP is to frame rules for implementation of the Paris Agreement (2015) post 2020. The countries agreed to discuss the issue of making rich nations to help developing countries adapt to challenges of climate change in the form of finance to achieve the goal of keeping global average temperature rise within 2 degree Celsius by the end of this century and make efforts to keep it below 1.5 degree Celsius. At the beginning differences arose over implementation of pre-2020 obligations under the Kyoto Protocol under which only rich nations were obliged to take emission cut actions. The nations had agreed in 2012 to cut emissions by at least 18% below 1990- levels, most of them failed to do so. According to the approach paper adopted by all the Parties, the 'Talanoa Dialogue' would inter alia consider the efforts of the Parties on mitigation action and financial and technical support as appropriate in the pre-2020 period. 'Talanoa' is a traditional approach used in Fiji and the Pacific to engage in an inclusive, participatory and transparent dialogue. (Courtesy: Times of India, Mumbai dated 19 November, 2017).

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