

INDIRECT IMPACT OF LARGE SCALE PROJECTS

EAST CAPE REGION, BAJA CALIFORNIA SUR, SEPTEMBER 2018

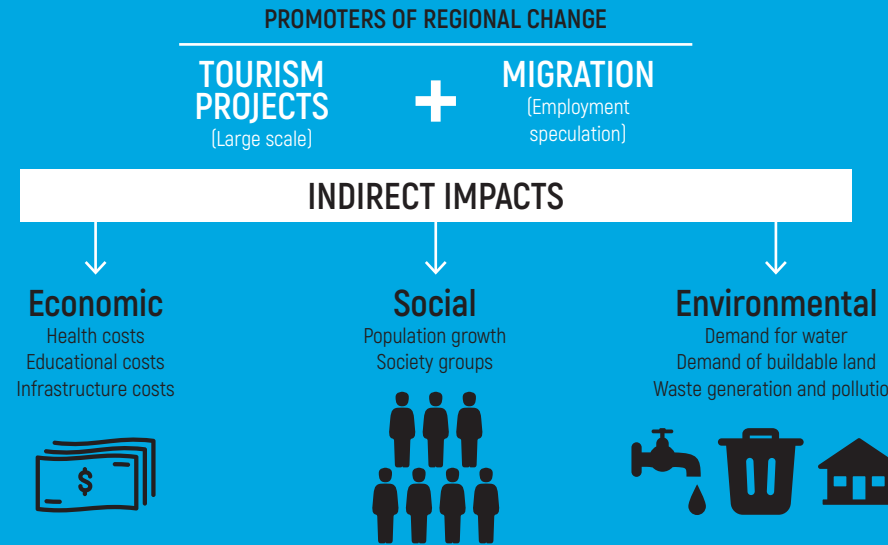
The information shown here is part of the study conducted by GeoAdaptive in 2016 in collaboration with the municipal institute for planning (IMPLAN - Los Cabos). This study focused on the indirect impacts on public services due to population growth derived from the growing tourism development and services in the region of East Cape. (Source: GeoAdaptive, 2016. Rapid Assessment of Indirect Impacts Caused by Tourism Development, "Evaluación Rápida de los Impactos Indirectos del Desarrollo Turístico" in Spanish).

ASSESSMENT ZONE



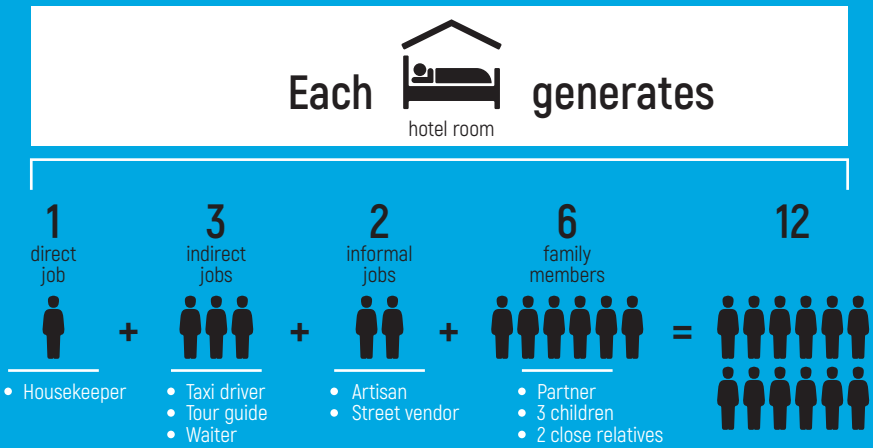
WHAT IS INDIRECT IMPACT?

Large scale tourism development projects have an intended and unintended influence on economy, environment and the social fabric of a region. Traditional assessments of these projects focus on the direct impact inside the project sites themselves, without taking into account the indirect impact on the social structure, changes in the population, economic activity and the natural environment of the region.



WHY DOES THE POPULATION GROW?

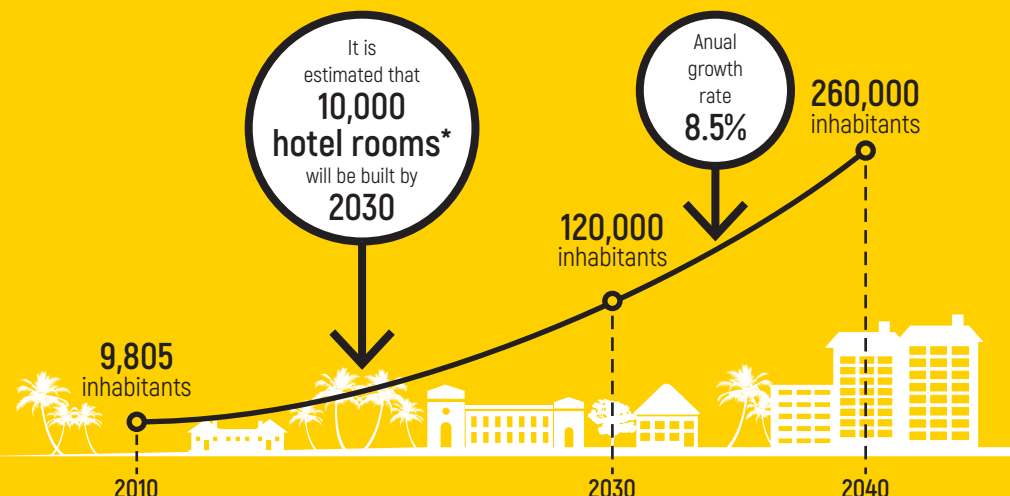
The building of new tourism facilities boosts migration driven by job speculation. According to the assessment of other case studies in other regions of Mexico with a similar profile to Cabo del Este, it is estimated that each new hotel room attracts 12 new people into the area. This number represents the amount of direct, indirect and informal jobs, as well as the family members that usually come along with the worker.



EAST CAPE

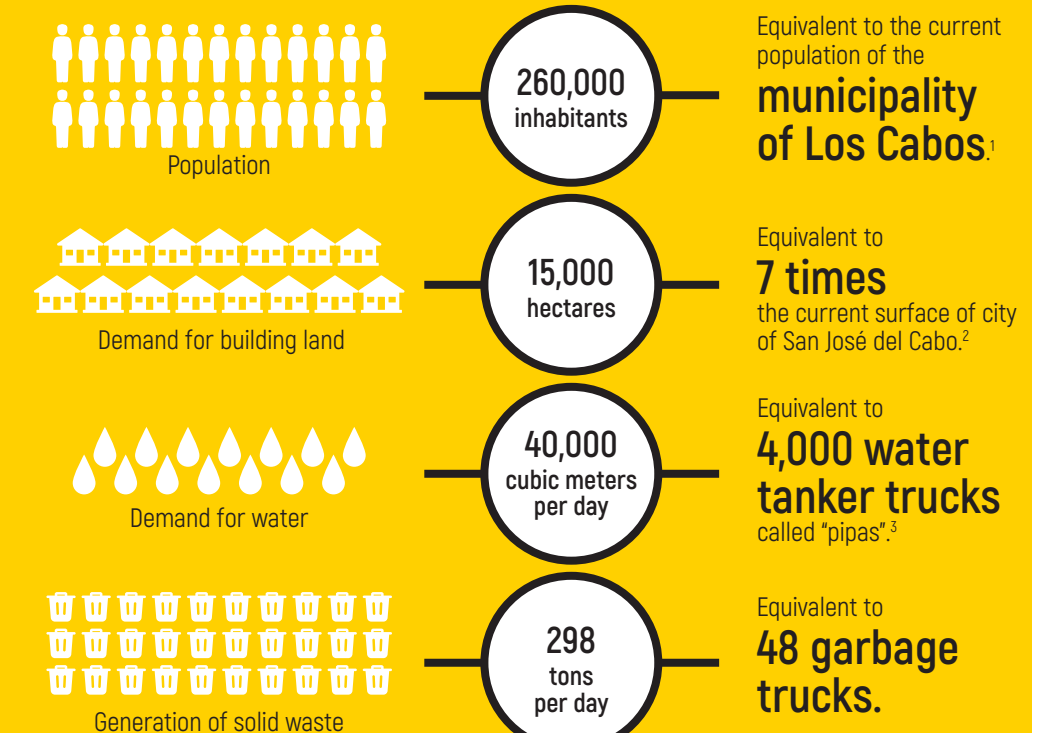
The East Cape region is located southeast of the state of Baja California Sur, between the border Gulf of California and Sierra La Laguna mountains. The assessment zone is located to the North of this region, in the municipalities of Los Cabos (97%) and La Paz (3%).

According to the INEGI's (Mexico's Geographic and Statistical Institute) census of 2010, there are 9,805 inhabitants living in 217 communities, most of them home to less than 500 people. It is projected that 10,000 new hotel rooms will be built by 2030, and an annual growth rate of 8.5% from 2030 to 2040.



* This number is based on a series of projects proposed for the region during the last 15 years.

SCENARIO 2040



1. Population in the municipality of Los Cabos, 287,000 inhabitants. INEGI 2010.
2. Surface of San José del Cabo, 1,959 hectares. INEGI 2010.
3. Water tanker trucks with capacity for 10,000 liters.



What is the cost of the population growth?

Geoadaptive conducted economic estimations in order to determine the investment needed to support the estimated population, based on the construction 10 000 hotel rooms. The main services assessed were:

- **Infrastructure**
electrical installations, drinking water, sewage system and roads
- **Medical attention**
health centers and hospitals
- **Education**
education centers

Covering the cost of these services is the responsibility of a specific institutions and agencies (at the municipal, state or federal levels), but mostly of the local authorities.

It is important to point out that these estimated costs do not take into account the the staffing, equipment, or the maintenance of each of these services; they only represent the physical facilities.

These numbers are only a quantitative indicator of the various expenses that will be triggered by a large scale tourism projects in the region.



MEDICAL ATTENTION

24 Health Centers



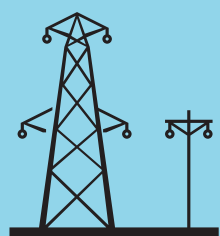
Building of health centers that comply with basic equipment regulations (SEDESOL)

- 15 Health centers (hospitals) (SSA)
- 4 Urban health centers (SSA)
- 2 General Hospitals (IMSS)
- 2 Family medicine units (ISSSTE)
- 1 Clinical hospital (ISSSTE)

\$ 30 million USD
Federal and state investment

\$ 110 USD per inhabitant

INFRASTRUCTURE



Electrical installations

\$ 1 billion USD

Federal and municipality investment



Tap water

\$ 52 million USD

Municipality investment



Sewage system

\$ 84 million USD

State and the municipality investment



Roads

\$ 25 million USD

Municipality investment

\$ 4,000 USD per inhabitant

EDUCATION

1,240 Classrooms



Building of schools that comply with basic equipment regulations (SEDESOL)

- 189 Kindergartens
- 679 Elementary schools
- 106 Junior high schools ("telesecundarias")
- 165 Regular junior high schools
- 66 Technical junior high schools
- 33 Senior high schools

\$ 42 million USD
State investment

\$ 500 USD per student*

* It is estimated that 32% of the population will consist of students

CONCLUSIONS

Unplanned tourism projects will cause an impact on the population, the quality of life, the environment and the physical stability of the region.



If there are no new water sources, the Santiago aquifer may run dry in the next 15 or 20 years.

The increased population will locate in areas where it is easy to build, near the formal settlements and the main roads and high risk areas, creating a demand for public services at a very high cost.

The building of new infrastructure (public electrical installations, drinking water system, sewage system and roads) will represent a cost that will need to be covered by the municipality.



The rapid growth of the population resulting from the arrival of newcomers who expect to find a job in tourism translates into an informal growth of areas lacking infrastructure and basic services.