Understanding the Urban Growth Along the Spondylus Route

Socio-Spatial Transformations in the Central Coastal Region of Ecuador by the influence of Globalized Tourism: Puerto Lopez, 1990-2010

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Paper Title: Understanding the Urban Growth Along the Spondylus Route
Session Title: Smart Enterprise Urban Planning Strategies
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Room: SDCC - Room 28 D
OUTLINE

FUNDAMENTALS

Situation and problem
Research proposal

MAJOR FINDINGS

Models of transformation
Social transformations
Spatial transformations
New urban forms

MAIN CONTRIBUTIONS

Scheme and method

Source: https://adventurousliving.files.wordpress.com/2013/02/puerto-lopez-fishing.jpg
DICHOTOMY OF DEVELOPMENT

Source: http://www.puertolopez.gob.ec (1,2,3,7), Pozo 2012 (4,5), http://www.booking.com (6,8)
3500 B.C. – Port city from the Mantenos
1840 – La Ensenada, fishing village
1974 – The first bus arrived
1979 – MNP was created / 80% of the PL canton surface
1992 – Creation of the Ministry of Tourism
1994 – Puerto López is a canton
1994 – First boat tour to observe the humpback whales
1990s – Troncal del Pacífico – Ruta del Sol (Spain)
2000s – Ruta del Spondylus (shell used as gold by tribes)
2003 – Tourism Marketing Plan (Costa Rica)
2007 – PLANDETUR 2020
2012 – PL was designated as pilot project of the ATP program

Source: Own draft, 2017

Based on: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
“What is the nature of the socio-spatial transformations related to domestic and international tourism deployed during the last 20 years in Puerto Lopez, Ecuador?”

RESEARCH QUESTION

Suspicion: Tourism could also trigger inequalities (social and spatial fragmentation) in the context of a weak urban planning.
Why is it necessary to visualise and understand the social and spatial transformations?

Why?

Biodiversity hotspots / Poverty exposure

New ruralities Globalisation

Tourism / Panacea of development

Dependency / Extractivism

Archeological heritage / Identity

Quality of the built space / Exposure

Dependency / Extractivism

Globalisation

Tourism / Panacea of development

Archeological heritage / Identity

Quality of the built space / Exposure

Source: Own draft, 2017
Problem  Weak knowledge about the socio-spatial transformations

Objective  Understanding the nature of the socio-spatial transformations

Sub-Objectives

- Geographic restructuring
- Social and spatial transformations
- Quality of the social and built space
- Role of urban planning
THEORETICAL FRAMEWORK

GLOBALISATION
- TRANSFORMATIONALIST
  - Harvey, De Mattos, Boisier
  - ILPES/CEPAL

- NEW RURALITIES
  - Swyngedouw / Kay
  - Barton & Román

- TOURISM ENCLAVES
  - Britton, Smith, Vorlaufer

URBAN MORPHOLOGY
- SPATIAL TRANSFORMATIONS HISTORIC/DESCRIPTIVE
  - GIS – Urban Grain & Townscape Analysis
  - Wheeler / M.R.G.Conzen-ISUF

URBAN SUSTAINABILITY
- SOCIAL TRANSFORMATIONS
  - UN- Habitat / ILPES-CEPAL

- Indicators – SDGs

BIBLIOGRAPHY
1990 - 1827 - 1892
Cartography of Ecuador

1990
National Census

2000
National Census

2001
Census map

2003
Orthophoto

2006
Orthophoto

2010
Orthophoto

2010
Census map

2012
Shapes

2012
Autocad map

2010
Economic Census

2010
National Census

2012
Orthophoto

2012 Shapes IGM

2014
Orthophoto

2013
Atlas IGM

2009
New Constitution

2007
PNBV

2007
PLANDETEUR

2008
Census map

2007
COOTAD

2010
LLOT + PDOT PL

2012
Orthophoto

2014
Oil’s price fall

2013
Atlas IGM

2015
Orthophoto

2015
Shapes

2015
Orthophoto

2016
Earthquake

2017
Presidential elections

1994
PL is a canton

1997
El Niño ENSO

1992
Creation of the Ministry of Information and Tourism

2000
Economic crisis, dollarization and massive bankrupt in Ecuador.

2007
Correa’s government 21st century Socialism

2010
Highest oil’s price

2010
Economic crisis, dollarization and massive bankrupt in Ecuador.

2014
Oil’s price fall

2016
Earthquake

2017
Presidential elections

Source: Own draft, 2017
MAJOR FINDINGS

Sectors 1990

Poverty
- 0.0% - 83.5%
- 83.6% - 95.7%
- 95.8% - 98.4%
- 98.5% - 100.0%

National Poverty: 84.30%
Population: 5,675
Houses: 984

Source: Own draft, 2015

Sectors 2001

Poverty
- 0.0% - 89.7%
- 89.8% - 93.7%
- 93.8% - 97.5%
- 97.6% - 100.0%

National Poverty: 69.30%
Population: 7,720
Houses: 1,610

Source: Own draft, 2015

Sectors 2010

Poverty
- 72.7% - 78.4%
- 78.5% - 84.4%
- 84.5% - 89.4%
- 89.5% - 97.3%

National Poverty: 60.10%
Population: 9,854
Houses: 2,403

Source: Own draft, 2015
New ways of life, new urban space
Model of the time – spatial development of the hospitality business „backward linkages“ in an island state of low resources
Source: Vorlaufer 1996

Stage 1
PRE-TOURISM DATUM
No tourism
Settlement in some cases

Stage 2
SECOND HOMES
First tourism development
Low-budget tourism
Second homes along and near beach
Rolets defined
Strip development

Stage 3
FIRST HOTEL
Visitor access improved
First hotel opens
Ad hoc development
High-budget visitors
Jobs in tourism

Stage 4
RESORT ESTABLISHED
More hotels
Strip development intensified
Some houses displaced
Residential expansion
Hotel jobs dominate

Stage 5
BUSINESS AREA ESTABLISHED
More accommodation
Visitor type broadens
Non-hotel business growth
Tourism dominates
Large immigrant workforce
Cultural disruption
Beach congestion and pollution
Ambience deteriorates

Stage 6
INLAND HOTELS
Hotels away from beach
Rapid residential growth
Business does not dominate
Inland erosion damage potential
Tourism culture dominates
Traditional norms dismantled
Entrepreneurs drive development
Government master plan

Stage 7
TRANSFORMATION
Urbanised resort
Rehabilitation of natural ambiance
Accommodation structural change
Visitors and expenditures change
Resort government fails

Stage 8
CITY RESORT
Fully urbanised
Alternative circulation
Distinct recreational and commercial business districts
Lateral resort spread
Serious pollution
Political power to higher government

Model of beach resort formation Source: Smith 1991 in Williams 2009
“Urban Morphology refers to the study of the form of human settlements, and the process of their formation and transformation” (Kropf, 2014)
(1) Downtown, (2) Beach, (3) Fringe belt, (4) Macro plots, (5) Social housing, (6) Informal housing

Source: Own draft, 2016
Vulnerability and exposure
- Poverty > 89.36%
- Illiteracy > 6.8%
- Unemployment > 55%
- Houses in poor conditions > 15%
- Bamboo walls > 19%

Identification of vulnerability and exposure hotspots by overlapping 5 shapes with the same colour (Poinsettia red) and 75% of transparency.

1 criterion
2 criteria
3 criteria
4 criteria
5 criteria

Source: Own draft, 2016
Urban grain identified in residential areas of Puerto Lopez

<table>
<thead>
<tr>
<th>1</th>
<th>Street pattern (Block)</th>
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</thead>
<tbody>
<tr>
<td><strong>Shape</strong></td>
<td>A</td>
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<th>2</th>
<th>Plot pattern</th>
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<td><strong>Shape</strong></td>
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<tr>
<th>3</th>
<th>Building pattern</th>
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<tr>
<td><strong>Construction area</strong></td>
<td>A</td>
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<tr>
<td><strong>Distribution</strong></td>
<td>A</td>
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<td>B</td>
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</tbody>
</table>

Source: Based on the hierarchy of elements in urban form: urban grain in (Kroff, 2014: 44-45).

\[1 \ (A + B + A) + 2 \ (C + B) + 3 \ (B + A)\]

Source: Own draft, 2016
LAND USE

Source: Own draft, 2016

EXPOSURE

Source: Own draft, 2016

URBAN GRAIN

Source: Own draft, 2016
### Colour
- F-1 Densification downtown
- F-2 Densification fringe-belt
- F-3 Governmental social housing
- F-4 Macroplots
- F-5 Private tourist infrastructure
- F-6 Low income housing

### Urban form

<table>
<thead>
<tr>
<th>Colour</th>
<th>Urban form</th>
<th>Code</th>
<th>Share of urban form (has)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1</td>
<td>Densification downtown</td>
<td>F-1a</td>
<td>16.75</td>
<td>5.12%</td>
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<td></td>
<td></td>
<td>F-1b</td>
<td>16.75</td>
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<td>F-1c</td>
<td>16.75</td>
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<tr>
<td>F-2</td>
<td>Densification fringe-belt</td>
<td>F-2a</td>
<td>69.91</td>
<td>21.35%</td>
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<td></td>
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<td>F-2b</td>
<td>69.91</td>
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<td>F-2c</td>
<td>69.91</td>
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<tr>
<td>F-3</td>
<td>Social housing and lotizaciones</td>
<td>F-3a</td>
<td>46.86</td>
<td>14.92%</td>
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<td></td>
<td>F-3b</td>
<td>46.86</td>
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<td>F-4</td>
<td>Macro plots</td>
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<td>34.67%</td>
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<td>F-4i</td>
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<td>F-5</td>
<td>Private tourist infrastructure</td>
<td>F-5</td>
<td>11.70</td>
<td>3.57%</td>
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<td>F-5a</td>
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<td>11.70</td>
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<td>F-6</td>
<td>Low income housing</td>
<td>F-6a</td>
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<td>20.36%</td>
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</table>

Source: Own draft, 2016
F-1 Parcelling and densification in the downtown

Source: Own draft, 2016

Source: Pozo, 2016
F-2 Densification at the fringe belt

Source: Own draft, 2015

Source: Pozo, 2015

Source: Pozo, 2012
F-3 Governmental social housing and *lotizaciones*

- **Source:** Own draft, 2016
- **Manta**
  - Source: Pozo, 2015
- **Santo Domingo**
  - Source: Pozo, 2015

**Diagram:**
- Densification downtown (F-1)
- Densification fringe-belt (F-2)
- Governmental social housing (F-3)
- Macroplots (F-4)
- Private tourist infrastructure (F-5)
- Low income housing (F-6)

**Legend:**
- **PACIFIC OCEAN**
- **Machalilla National Park**

*Note: The diagram represents the distribution of different types of urban planning in the regions of Manta and Santo Domingo.*
F-4 Macro plots and gated communities

Source: Own draft, 2016

Source: Pozo, 2015

Source: Pozo, 2012
F-5 Tourist private infrastructure

Source: Own draft, 2016


Source: http://www.booking.com
F-6 Low income housing (rural slums)

Source: Own draft, 2016

Source: Pozo, 2012
INEQUALITIES

1. Access to affordable land and basic services
2. Access to the formal tourism market (capacity of investment)
3. Access to the formal labour market (opportunities)
4. Quality of the built space (public investment)
5. Exposure to natural disasters (informal construction)
TOURIST DESTINATION
Low density urban growth
Overpassing urban limit
Not affected by earthquake, but realizing vulnerabilities
Expecting increase of tourism
Source: Own draft, 2016
CONCLUSIONS

1. A social and spatial fragmented urban space (in rural region)
2. Urban growth was not sustainable and not resilient
3. Urban forms are dynamic, always mutating
4. Rural-urban process is destroying heritage
5. Rural slums?
CONTRIBUTIONS
PROCESS AND OUTCOMES

1. The method
2. The scheme
3. Quality of the urban space
4. Sustainable urban growth
673 died
9 missing
6,274 injured
28,775 affected*
113 rescued alive.
THANK YOU!

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