INTEGRATING THE INFORMAL

Developing an integrative strategy for slum upgrading in Buenos Aires

P5 Presentation

28 June 2011

Hanne van den Berg
Delft University of Technology
Complex Cities Studio | MSc Urbanism

MENTOR TEAM:
Dr. D. A. Sepulveda
Prof. Ir. H.C. Bekkering
Dr. T. Kaminer
PHASE 3 - STRATEGY, ACTION PLANS & DEMONSTRATION PROJECT

INTRODUCTION

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

CONCLUDING REMARKS
Characterised by:

- lack of basic services
- substandard housing or illegal and inadequate building structures
- unhealthy living conditions and hazardous locations
- overcrowding and high density
- poverty and social exclusion
- insecure tenure; irregular or informal settlements

CARACAS

source: www.sustainablecities.dk

BUENOS AIRES

source: www.stateofthenation.ca
INFORMAL SETTLEMENTS WORLDWIDE

Percentage of urban population living in slums worldwide

INFORMAL SETTLEMENTS IN BUENOS AIRES

Vulnerability of informal residents aggravated by:

- marginality of sites (flood plains, pollution) (Soldano, 2008)
- social and spatial isolation from the formal city (Soldano, 2008)
- high socio-economic inequality (Pirez, 2002)
- exclusion from urban decision-making process; local needs not considered in planning (Janches and Sepulveda, 2009)

source: diagrams by author based on Lineamientos Estrategicos, 2010

source: Kozak, Urban Fragmentation in Buenos Aires Presentation, 2010

source: Berlage Studio, 2010
PROJECT HYPOTHESIS

Informal settlement upgrading needs to be considered in a wider framework of:

• integration into the formal city
• environmental interventions aimed at reducing vulnerability and risk
• larger urban developments

Considering local, municipal and metropolitan scale
and
considering both physical and socio-economic interventions
Existing Rio Reconquista Proposal by provincial government

2010-2016

[Map Image]

source: Programa de Manejo Urbano Ambiental Sostenible de la Cuenca del Río Reconquista, Subsecretaría de Urbanismo y Vivienda, Ministerio de Infraestructura, Gobierno de la Provincia de Buenos Aires

1. environmental interventions
2. road and public space improvements
3. housing construction and improvements, incl. slum upgrading
4. local and institutional development

BUT: existing Rio Reconquista project does not include local stakeholders or their demands sufficiently
Aim: to explore how a regional strategic project can be the carrier for local slum upgrading and integration and meet both local and regional demands.

Two components:
1. potential **planning framework** that incorporates local stakeholders in the planning process

2. potential **physical interventions** into the regional Rio Reconquista proposal
   - that meet both regional needs and local needs
   - that reduce physical and social vulnerability of the informal settlements
   - that stimulate the integration of the informal settlements into the formal city

source top image: Programa de Manejo Urbano Ambiental Sostenible de la Cuenca del Río Reconquista, Subsecretaría de Urbanismo y Vivienda, Ministerio de Infraestructura, Gobierno de la Provincia de Buenos Aires
New approach for planning framework and physical interventions:

**TRADITIONAL APPROACH**
existing situation

- **Provincial Government**
  - Design of project

- **Municipal Government**
  - Implementation of project

- **Local residents**
  - Users

**PARTICIPATORY APPROACH**
my proposal

- **Provincial Government**
  - Design & implementation of project

- **Municipal Government**
  - Design & implementation of project

- **Local residents**
  - Design, implementation & use of project

**PARTICIPATORY URBAN DECISION-MAKING PROCESS**

source: author's own diagrams
PROJECT LOCATION: BARRIO INDEPENDENCIA

RIO RECONQUISTA (INTERMEDIATE) BASIN

Total basin: 82km long (lower, intermediate and high basin) catchment area of 1738 km²

4 million inhabitants

source: author’s own diagrams (right image based on base map by Berlage Studio)

BARRIO INDEPENDENCIA INFORMAL SETTLEMENT

over 30 years old
5000-8000 residents
close to railway station
PROJECT LOCATION: BARRIO INDEPENDENCIA

- University of Buenos Aires & Berlage Institute (Rotterdam) - site visit
- Provincial Government of Buenos Aires
- Municipal Government of San Martin
- Local Research Group Barrio Independencia
### OBJECTIVES

- active participation of local (informal) stakeholders
- clear understanding of local needs and assets

- increase local ownership over project
- reach goal of ‘inclusive city’

### PHASE STEPS OUTPUT

<table>
<thead>
<tr>
<th>Phase</th>
<th>Steps</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PREPARATORY AND MOBILIZATION</td>
<td>DIAGNOSIS</td>
</tr>
<tr>
<td>2</td>
<td>COLLECTIVE VISION DEVELOPMENT AND MOBILIZATION</td>
<td>COLLECTIVE VISION + URBAN PACT</td>
</tr>
<tr>
<td>3</td>
<td>STRATEGY FORMULATION AND IMPLEMENTATION</td>
<td>STRATEGY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACTION PLANS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DEMONSTRATION PROJECT</td>
</tr>
<tr>
<td>4</td>
<td>MONITORING, EVALUATION AND CONSOLIDATION</td>
<td>EVALUATION AND RECOMMENDATION REPORT</td>
</tr>
</tbody>
</table>

#### EXAMPLES PHYSICAL OUTPUTS

- increase local ownership over project
- reach goal of ‘inclusive city’

---

**UN Habitat Participatory Urban Decision Making Toolkit, Nairobi, 2001**

**Typical Outline of an Urban Pact**

1. **Preamble**
   - Key events which preceded this meeting (e.g., earlier consultations, decisions)

2. **Mandates**
   - Recall formal mandates and agreements, going down from international level to local level (e.g., Agenda 21, Habitat Agenda, national poverty reduction plan, local development plan, local bylaws)

3. **Fundamental Principles**
   - Potentials and constraints concerning the development of the city (spatial, social, economic)
   - Take note of ongoing initiatives (e.g., investment plans, new policies)
   - Express a shared vision on the future (e.g., how do we want our city to be in 2015)

4. **Commitment Package**
   - Specify the measures agreed upon according to thematic categories; this is the largest part of the Urban Pact (e.g., to undertake a survey; to demonstrate a technology; to revise legislation)
   - Specify communication mechanisms (e.g., further mini-consultations; awareness campaign; relations technical - political officers)
   - Propose institutional set-up (e.g., advisory board; working groups)

5. **Resources**
   - List partners commitments to contribute resources (e.g., human, technical, information, financial)
   - Describe intention to mobilize resources at different levels e.g. rationalize municipal revenues; approach to external support agencies.

6. **Monitoring and evaluation**
   - Specify timing and modalities for review of agreements (e.g., frequency of review meetings; need to produce new version of Urban Pact: No.2, No. 3)

7. **Approval**
   - Date and signatures of key partners (on behalf of the consultation group)

**Source:** UN Habitat Participatory Urban Decision Making Toolkit, Nairobi, 2001

**Examples Physical Outputs**

- increase local ownership over project
- reach goal of ‘inclusive city’
SE VENDE
ESTA CASA

PHASE 1
**_PHASE 1 - PREPARATORY ANALYSIS AND STAKEHOLDER MOBILISATION**

**MAIN OBJECTIVES**

- Identify and capacitate stakeholders
- Increase local ownership and commitment
- Create a better understanding of key issues

**DIAGNOSIS**

**SPATIAL ANALYSIS**
- Metropolitan
- Regional
- Municipal
- Local

**STAKEHOLDER ANALYSIS**
- Detailed stakeholder analysis
- Conflicts & cooperation
- Asset vulnerability assessment

**OUTPUT**

- Diagnosis spatial analysis
- Stakeholder analysis
OVERVIEW SCALES

METROPOLITAN

REGIONAL

MUNICIPAL

LOCAL

source: author's own diagram

source: author's own diagram

source: author's own diagram

source: author's own elaboration of base map by Berlage Studio, 2010
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

INTRODUCTION

PHASE 1 - SPATIAL ANALYSIS METROPOLITAN SCALE - summary

NEW RING ROAD

GREEN RIVER BASIN

POTENTIALS

+ increased connectivity due to proposal middle ring road
+ governmental aim to recuperate river basin areas

PROBLEMS

- pressure on river basin areas
- flooding
- informalisation
- social segregation and spatial fragmentation
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

INTRODUCTION

LANDSCAPE

POTENTIALS
+ strong landscape potential (especially water structure)
+ existing Rio Reconquista proposal: funding, interjurisdictional support, multi-sectoral approach

PROBLEMS
- flooding
- spatial fragmentation
- conflicting land uses
- environmental concerns (waste, pollution)
- (precarious) informal settlements

source: author’s own diagram

river
canals
contour lines
informal settlement

source: author’s own diagram
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

BROWNFIELDS & SOCIAL FUNCTIONS

POTENTIALS
+ considerable amount of brownfield sites
+ strong focus on socio-economic development by municipality
+ extensive public transport network (bus)

PROBLEMS
- public transport network does not reach into informal settlements
- many open spaces within municipality have restricted access
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

STORM WATER DRAINAGE

SOCIAL GROUPS

PUBLIC SPACE WITHIN 500M

POTENTIALS
+ strong social networks and organisations within community
+ in process of legalisation
+ functional links with formal city
+ continuation of urban block structure

PROBLEMS
- flooding
- pollution
- lack of public space
- lack of space for existing social facilities
- spatial fragmentation and social segregation between communities
- high density within blocks

source: author’s own diagram based on base map by Berlage Studio, 2010
STAKEHOLDER ANALYSIS

Stakeholders: ‘those whose interests are affected by the issue or those whose activities strongly affect the issue; who possess information, resources, expertise and implementation resources’ (UN-Habitat, 2001)

SOME STAKEHOLDERS IN THE RIO RECONQUISTA PROPOSAL

Public
Municipality of San Martin
Provincial Government of Buenos Aires

Civil Society
Residents Barrio Independencia
Residents San Martin municipality
Centro de Madres y Familias

Private
Parque Suarez industrial park
Railway company
Private investors?

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

PHASE 4 - EVALUATION & RECOMMENDATIONS
### STAKEHOLDER ANALYSIS (example)

#### PHASE 1

<table>
<thead>
<tr>
<th>STAKEHOLDER DEFINITION</th>
<th>EXISTING SITUATION</th>
<th>EFFECTS OF PROPOSAL</th>
<th>ACTION REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stakeholder</strong></td>
<td><strong>Role</strong></td>
<td><strong>Scale</strong></td>
<td><strong>Influence/Power</strong></td>
</tr>
<tr>
<td>Residents BI</td>
<td>Users</td>
<td>Local</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents 3 de Julio</td>
<td>Users</td>
<td>Local</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents 5 de Noviembre</td>
<td>Neighbours</td>
<td>Local</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centro de Madres</td>
<td>CBO</td>
<td>Local</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miguitas de Amor</td>
<td>CBO</td>
<td>Local</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escuela 33</td>
<td>Educational Facility</td>
<td>Local</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociedad de Fomento 5 del Noviembre</td>
<td>CBO</td>
<td>Local</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parque Suarez</td>
<td>Private Company</td>
<td>External</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MAIN CONSIDERATIONS**

- **role**
- **stake**
- **current influence**
- **current legitimacy**
- **expected benefits/gains**
- **actions required**

**MAIN CONCLUSION**

Stakeholders in need of recognition, empowerment and inclusion in decision-making:

- Residents Barrio Independencia
- Residents 3 de Julio
- Centro de Madres
- Miguitas de Amor

---

**source:** own elaboration of Chevalier, 2004, in Cuenya, 2006 and UN-Habitat Participatory Urban Toolkit 2001
### ASSET VULNERABILITY ASSESSMENT

**PHASE 1**

**BASED ON C. MOSER, 1998**

<table>
<thead>
<tr>
<th>ASSET</th>
<th>OBSTACLE</th>
<th>EXISTING OPPORTUNITY</th>
<th>POTENTIAL SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMAN CAPITAL</td>
<td>health, education and skills contributing to the ability to work</td>
<td>- strong existing community-based organizations (CBOs)</td>
<td>- improve physical living conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- capacity building programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- health training</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- literacy programme</td>
</tr>
<tr>
<td>LABOUR</td>
<td>- lack of space for educational and health facilities</td>
<td>- cartoneria</td>
<td>- micro-credit schemes by NGOs to stimulate small enterprises</td>
</tr>
<tr>
<td></td>
<td>- environmental issues such as pollution, lack of access to clean drinking water leading to health issues</td>
<td>- functional and spatial link with Parque Suarez</td>
<td>- extend bus network into Barrio Independencia</td>
</tr>
<tr>
<td></td>
<td>- ineffective waste collection strategy</td>
<td>- station nearby</td>
<td>- extend use of employment centre to informal residents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- existing bus network in formal city</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- municipal employment centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRODUCTIVE ASSETS</td>
<td>- housing: lack of security of tenure</td>
<td>- ongoing process of legalization</td>
<td>- stimulate home-based enterprises</td>
</tr>
<tr>
<td></td>
<td>- low-quality self-built housing</td>
<td>- possibility for densification</td>
<td>- allow for extension of houses to include small businesses or rental opportunities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- provide security of tenure incrementally</td>
</tr>
<tr>
<td>HOUSEHOLD RELATIONS</td>
<td>- lack of space to allow for extended family support networks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCIAL CAPITAL</td>
<td>- lack of funding and space for existing CBOs</td>
<td>- strong family ties within the community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- social segregation between Barrio Independencia and surrounding informal settlements and between BI and formal city</td>
<td></td>
<td>- stimulate and capacitate local CBOs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- stimulate integration between different informal settlements and formal city</td>
</tr>
</tbody>
</table>

### INTRODUCTION

**PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS**

**PHASE 2 - COLLECTIVE VISION & URBAN PACT**

**PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT**

**PHASE 4 - EVALUATION & RECOMMENDATIONS**
Por favor no tirar basura al río.
PHASE 2  COLLECTIVE VISION DEVELOPMENT & STAKEHOLDER COMMITMENT

MAIN OBJECTIVES

- elaborate on issues to be addressed
- create consensus on future vision
- formalise commitment

COLLECTIVE VISION

- spatialised vision for the future
- to ensure sustainable development
- agreed upon by all stakeholders

URBAN PACT

- negotiated agreement between stakeholders
- commitments, main goals, priorities and next steps

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS
VISION - CURRENT SITUATION

MAIN CONSIDERATIONS

- inaccessible, undefined and marginal area
- many informal settlements
- fragmented area: river and highway as barriers
- limited number of crossing points
- canals connecting the urban areas with the river

source: author’s own diagram
VISION - FLOODZONE (BASED ON 1985 FLOOD)

PHASE 2 - COLLECTIVE VISION & URBAN PACT

MAIN CONSIDERATIONS

• flood zone based on major flood in 1985
• affecting particularly informal settlements but also formal urban areas

source: author's own diagram
VISION - EXISTING RIO RECONQUISTA PROPOSAL

MAIN CONSIDERATIONS

- intervention area by provincial government
- does not sufficiently address local needs
- does not address existing fragmentation
- does not make use of potential of landscape structure

source: author's own diagram
VISION - MY PROPOSAL

MAIN CONSIDERATIONS

- extend intervention area into urban fabric making use of potential of existing water structure (canals)
- open up and integrate river basin area
- create network of open spaces from ecological to urban/productive
- provide facilities on range of scales including local

source: author's own diagram
VISIONARY GOAL

to achieve sustainable development (socially, environmentally and economically), to reach the goal of the inclusive city and to reduce urban poverty and vulnerability
• Negotiated agreement between stakeholders

• Commitments, main goals, priorities and next steps

• Interjurisdictional

1. Preamble

2. Mandates & Vision

3. Fundamental Principles

4. Commitment Package

5. Resources

6. Monitoring and Evaluation

7. Approval

source: own elaboration of UN Habitat Participatory Urban Decision Making Toolkit, Nairobi, 2001
to formalise interjurisdictional commitment (national, provincial, 18 municipal authorities)

to formalise recognition of informal residents as active stakeholders

to set out institutional set-up (e.g. Steering Group, Working Groups, Advisory Board, facilitator)

source: own elaboration of UN Habitat Participatory Urban Decision Making Toolkit, Nairobi, 2001
PHASE 3  STRATEGY FORMULATION AND IMPLEMENTATION

MAIN OBJECTIVES

- formulate strategy to achieve vision
- negotiate actions to be taken to implement strategy
- demonstrate approach and increase commitment through demonstration project
- implementation

OUTPUT

A STRATEGY
regional & municipal scale

B ACTION PLANS
regularisation Barrio Ind.

C DEMONSTRATION PROJECT
local design interventions

source: author’s own diagrams

A

B

C
**STRATEGY REGIONAL SCALE - 3 LAYERS**

**MAIN INTENTIONS**
- open up river basin area and improve connectivity
- integrate and regularise informal settlements
- reduce risk of further informalisation
- reduce flood risk
- indicate areas for densification & development
- provide facilities on local, municipal & regional scale
- increase productivity

**VISION**

1. **GREEN STRUCTURE**
2. **BLUE STRUCTURE**
3. **URBAN STRUCTURE**

**source: author's own diagrams**
REGIONAL STRATEGY - EXISTING SITUATION

PHASE 3A

30
REGIONAL STRATEGY - PROPOSED GREEN STRUCTURE

PHASE 3A

INTRODUCTION

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

31

source: author's own diagram

- restricted open space
- water retention area (wetland)
- urban/productive green
- recreational green
- ecological green
- ecological corridor
- undefined open space
REGIONAL STRATEGY - PROPOSED GREEN STRUCTURE

PHASE 3A

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

INTRODUCTION
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

REGIONAL STRATEGY - EXISTING SITUATION

INTRODUCTION

2km

Rio Reconquista river

flood zone (based on 1985 flood)

canal

source: author's own diagram
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

INTRODUCTION

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

REGIONAL STRATEGY - PROPOSED BLUE STRUCTURE

PHASE 3A

ADDITIONAL WATER STORAGE CAPACITY: 5 DAYS OF HEAVY RAINFALL

source: author's own diagram

water retention area with flood basins
canal improvement
dike
local water retention measures
REGIONAL STRATEGY - PROPOSED BLUE STRUCTURE

PHASE 3A

WATER RETENTION AREA WITH FLOOD BASINS - SECTION AA'

CANAL IMPROVEMENT - SECTION BB'

LOCAL WATER RETENTION MEASURES

source: author's own diagrams
PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

REGIONAL STRATEGY - EXPECTED DENSIFICATION

Area for new development as indicated by provincial government

34

source: author's own diagram based on Lineamientos Estrategicos, 2010
REGIONAL STRATEGY - PROPOSED URBAN STRUCTURE

PHASE 3A

INTRODUCTION

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

source: author's own diagram
PHASE 3A

MAIN INTENTIONS

• public space network & provision of facilities
• improve connectivity river basin area
• reduce flood risk
• integrate and regularise informal settlements
• reduce risk of informalisation
• stimulate economic activity
• allow for densification

source: author’s own diagram
MAIN INTENTION

• green river basin area ties into existing urban public space network

source: Programa de Manejo Urbano Ambiental Sostenible de la Cuenca del Río Reconquista, Subsecretaría de Urbanismo y Vivienda, Ministerio de Infraestructura, Gobierno de la Provincia de Buenos Aires
### ACTION PLAN

**Example Action Plan:** regularisation of Barrio Independencia

**REGULARISATION**

- **[1]** Physical regularisation (spatial restructuring, providing basic services and infrastructure, reducing overcrowding and improving poor construction)
- **[2]** Legal regularisation (land tenure issues)
- **[3]** Socio-economic improvements (education, job opportunities)  
  (Calderon, 2006)

### Table: Example Action Plan

<table>
<thead>
<tr>
<th>Element</th>
<th>PHASE 1 - Immediate</th>
<th>PHASE 2 - Short term</th>
<th>PHASE 3 - Medium term</th>
<th>PHASE 4 - Long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste collection points</td>
<td>increase number of local waste collection points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REGULARISATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce flood risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve connectivity river basin area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce risk of informalisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularise informal settlements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUSTAINABILITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protect and restore water sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EFFICIENCY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase energy efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SECURITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase perceived security</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GOOD GOVERNANCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure transparency and accountability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUSTAINABILITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protect and restore water sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EFFICIENCY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase energy efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GOOD GOVERNANCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure transparency and accountability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Map: Municipal Scale Strategy

- **MAIN INTENTIONS**
  - Public space network & provision of facilities
  - Improve connectivity river basin area
  - Reduce flood risk
  - Facilitate integration formal-informal
  - Reduce risk of informalisation
  - Regularise informal settlements
  - Stimulate economic activity
  - Allow for densification
### EXAMPLE PHYSICAL REGULARISATION

<table>
<thead>
<tr>
<th>Element</th>
<th>Existing situation</th>
<th>PHASE 1 - Immediate</th>
<th>PHASE 2 - Short term</th>
<th>PHASE 3 - Medium term</th>
<th>PHASE 4 - Long term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CANAL</strong></td>
<td>• capacity reduced through rubbish and stolen cars</td>
<td>• clear out creek M</td>
<td>• improve and extend existing</td>
<td>• create rain gardens RR</td>
<td>• improve water drainage</td>
</tr>
<tr>
<td><strong>FLOOD WATER</strong></td>
<td>• degraded canal banks</td>
<td></td>
<td>open drainage system M</td>
<td>• relocate 3 de Julio residents</td>
<td>underneath highway RR</td>
</tr>
<tr>
<td></td>
<td>• houses built close to edge</td>
<td></td>
<td></td>
<td>• construct new profile of</td>
<td>• reinstate lagoon area RR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>creek with lowered wetlands</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• open drainage channels mixed with sewage</td>
<td></td>
<td></td>
<td>and allotment part RR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• open discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SEWAGE</strong></td>
<td>• collection: waste baskets along street and containers along creek</td>
<td>• increase number of local</td>
<td>• connection to communal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• disposal on paved streets by municipality; on unpaved streets by horse-drawn cart</td>
<td>waste collection points L/NF M</td>
<td>sewerage system RR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• pavement of streets</td>
<td>• education on waste disposal M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RUBBISH</strong></td>
<td>• strip along lagoon claimed by residents and developed by municipality</td>
<td>• pave streets and alleys (as</td>
<td>• consolidate municipal waste</td>
<td>• relocate recycling site to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• severe lack of public space</td>
<td>indicated by residents) using</td>
<td>collection points L/NF M RR</td>
<td>CEAMSE terrain to reduce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• many streets paved without adequate drainage or unpaved</td>
<td>porous paving</td>
<td>RR</td>
<td>local pollution RR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• introduce street lighting L/NF+M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• improve extend existing open</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>drainage system M RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• create rain gardens RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• improve quality of streets M RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• construct new public square M RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• relocate 3 de Julio residents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>to housing sites within municipality RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• relocate residents BI within</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>neighbourhood RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• upgrade existing housing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>currently below governmental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>standard RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• densification within Barrio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Independencia, construct new</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>profile of edge along settlement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• construction of new housing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>on designated sites within</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>municipality for relocation 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>de Julio RR RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• relocate 3 de Julio residents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>to housing sites within municipality RR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MAIN INTENTIONS

- improve local living conditions incrementally
- increase assets & reduce vulnerability
- facilitate integration into formal city

### RESPONSIBLE ACTORS

- **L/NF** - local/non-formal
- **M** - municipal
- **RR** - Rio Reconquista (provincial)
DEMONSTRATION PROJECT: small-scale project to demonstrate how a particular type of problem can be addressed in a participatory way.

URBAN DESIGN SETTLEMENT

DETAIL 1: NEW URBAN SQUARE

DETAIL 2: FLOOD MEASURES

source: author's own diagram

source: author's own diagram

source: author's own diagrams
DEMONSTRATION PROJECT: URBAN DESIGN

PHASE 3C

RECAP MAIN PROBLEMS

- flooding
- lack of public space
- social segregation and spatial fragmentation
- pollution
- lack of space for existing social and educational facilities
- high density, poor internal structure within blocks

EXISTING SITUATION

map of routes and alleys in need of paving drawn by local resident

source: author’s own diagram
DEMONSTRATION PROJECT: URBAN DESIGN

PHASE 3C

CONCEPT

source: author’s own diagram

PROPOSAL

source: author’s own diagram

MAIN INTENTIONS

- establish two main routes
- provide facilities & public space
- facilitate integration formal-informal
- create conditions for consolidation of the settlement
- improving flooding issues
- increase productivity
- provide entrance to river basin area
- local participation

DEMONSTRATION PROJECT: URBAN DESIGN PROPOSAL

CONCEPT

source: author’s own diagram

PROPOSAL

source: author’s own diagram

MAIN INTENTIONS

- establish two main routes
- provide facilities & public space
- facilitate integration formal-informal
- create conditions for consolidation of the settlement
- improving flooding issues
- increase productivity
- provide entrance to river basin area
- local participation
NEW SOCIAL ROUTE WITH SQUARE

New social route between school and community centre

Square on meeting point between social and (existing) commercial route, between formal and informal

Space for expansion existing social facilities

TO BE ELABORATED UPON LATER IN PRESENTATION
NEW CANAL PROFILE WITH ALLOTMENTS

Reduce flood risk through improved profile
Cleaning of water through constructed wetlands system
Increase productivity through allotment gardens (ProHuerta programme)
Improved public space along canal

Relocation 3 de Julio required

TO BE ELABORATED UPON LATER IN PRESENTATION
NEW URBAN PARK AND ENTRANCE

- Provide public space facilities on municipal scale
- Entrance to larger river basin metropolitan park
- New shared library for formal and informal residents
- Near station
DEMONSTRATION PROJECT: URBAN DESIGN

PHASE 3C

NEW EDGE TO SETTLEMENT

Housing for relocation within community
Prevent further informalisation towards lagoon
Provide more space for social facilities
NEW/IMPROVED ROUTES THROUGH SETTLEMENT

Improved connectivity with formal neighbourhood
Improved accessibility within Barrio Independencia
Improved access to area across canal
Introduction of paving, lighting, stormwater drainage - based on residents' own indication of needs
DEMONSTRATION PROJECT: NEW SQUARE

EXISTING SITUATION

source: Subsecretary of Housing and Urbanism, 2010
EXISTING SITUATION - SKETCH

source: author’s own diagram
DEMONSTRATION PROJECT: NEW SQUARE

PHASE 3C

INTRODUCTION

INTRODUCTION SOCIAL FACILITY INTO EXISTING BUILDING

source: still from video by Berlage Studio, 2010

source: author’s own diagram
DEMONSTRATION PROJECT: NEW SQUARE

INTRODUCTION

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS

PHASE 3C

MAIN INTENTIONS

- mark intersection social/commercial route and formal/informal
- providing facilities on local scale
- transformation existing building into social landmark
- facilitating integration formal/informal
- providing conditions for consolidation of settlement

RELOCATION REQUIRED

- 18-20 families
- relocated within neighbourhood

source: author’s own diagram
DEMONSTRATION PROJECT: NEW SQUARE

EXISTING SITUATION

PROPOSED BIRD’S-EYE VIEW OF THE SQUARE

source: author’s own diagram
DEMONSTRATION PROJECT: NEW SQUARE

PHASE 3C

[1] PROPOSED VIEW TOWARDS NEW COMMUNITY BUILDING

[2] PROPOSED VIEW ALONG SOCIAL ROUTE

[3] PROPOSED VIEW FROM SCHOOL TOWARDS SQUARE
ROLE OF DESIGN IN PLANNING PROCESS

ROLE OF DESIGN ITSELF

- based on talks with local residents, spatial analysis, consideration of wider effects
- creating conditions for consolidation and integration

PARTICIPATORY PROCESS & URBAN PACT

- active participation local stakeholders required
- communication & negotiation tool
- incorporating stakeholders' demands
- use existing social structures (e.g. neighbourhood associations)
EXISTING SITUATION

- regular flooding (>4x a year)
- heavily polluted, causing health issues
DEMONSTRATION PROJECT - FLOOD MEASURES

SECTION C1 - C1'

EXISTING SITUATION - HIGH WATER LEVEL
IMPROVED CANAL PROFILE

- reduce flood risk through increased water capacity
- reduce pollution of water through constructed wetlands
- improve public space
- increase productivity through allotment gardens
DEMONSTRATION PROJECT - FLOOD MEASURES

PHASE 3C

PROPOSED PROFILE - HIGH WATER LEVEL

30% Capacity increase
PROPOSED PROFILE - VERY HIGH WATER LEVEL

300% Capacity increase
DEMONSTRATION PROJECT - FLOOD MEASURES

PHASE 3C

VERTICAL FLOW WETLANDS SYSTEM

- CANAL
- WETLANDS
- ALLOTMENTS

INTRODUCTION

PHASE 1 - SPATIAL & STAKEHOLDER ANALYSIS

PHASE 2 - COLLECTIVE VISION & URBAN PACT

PHASE 3 - STRATEGY, ACTION PLANS, DEMONSTR. PROJECT

PHASE 4 - EVALUATION & RECOMMENDATIONS
**PHASE 3 - STRATEGY, ACTION**

**PHASE 3C**

**DEMONSTRATION PROJECT - FLOOD MEASURES**

- **TREE TRENCHES**
- **POROUS PAVEMENTS**
- **RAIN GARDEN**
- **PLANTED DRAINAGE CHANNEL**

**ACTION PLAN: PHYSICAL REGULARISATION**

**Element**

<table>
<thead>
<tr>
<th>Existing situation</th>
<th>PHASE 1 - Immediate</th>
<th>PHASE 2 - Short term</th>
<th>PHASE 3 - Medium term</th>
<th>PHASE 4 - Long term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STORM WATER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Tree trench: stormwater and overflow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rain gardens</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Porous pavements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Imagery proposed flood reduction interventions**

- **Clean drinking water**
- **Local water retention**
- **Planted open drainage channel**
- **Porous paving**

All diagrams: author’s own diagrams based on Watson and Adams, 2011.
PHASE 4
PHASE 4  MONITORING, EVALUATION AND CONSOLIDATION

MAIN OBJECTIVES

- monitor and evaluate process and outcomes
- investigate possibilities for upscaling and replication
- institutionalise process

OUTPUT

EVALUATION AND RECOMMENDATION
PHASE 4 MONITORING, EVALUATION AND CONSOLIDATION

Post-implementation evaluation (ex post):

Basic Unmet Needs

- access to water and sanitation infrastructure
- greywater discharge
- physical condition of housing
- head of household employment and size of household
- any children older than 6 not attending school

Approach-specific indicators

- perceived legitimacy & perceived inclusion by informal residents
- availability and use of public spaces
- productivity of the area
- health
- dependence on external sources
Replicability of approach - within Greater Buenos Aires
- within Latin American context
- to European context
Role of the urban planner

- facilitator
- negotiator
- enabler
THANK YOU