Ecotowns in Pelluhue:
Housing development and water management
Aula HMW / Ecotowns: Sustainable communities
Integrative framework
Multidisciplinary Teaching + Research

- Architecture
- Urban Studies
- Engineering
- Geography & Sociology
Integrative framework
Alliances: Academy, Government, Private sector, NGOs and Community

Academy: PUC (Architecture, Design, Engineering, Geography, Forestry)
Research centers (Public policy, Wood, Heritage)
International network (US, Germany, Norway, Brazil, Mexico, Colombia, Perú)

Local governments
Foreign govts (British Embassy, US Embassy)

Private sector: IBM, Chamber of Construction, Institute of Construction, ENERSIS

NGOs and Community: Ciudad Viva, Fundación para la Superación de la Pobreza

X.lab
Applied Urban Research Laboratory
Integrative framework
Multidisciplinary Teaching + Research

Regeneration & Social Cohesion
- Slum prevention & neighborhood prevention (WB, GIZ, IDB, Habitat, CA)
- Quality of life index and public policies (CONICYT CL)
- Prevention crime in commercial districts (CONICYT CL*)
- Street markets & public transport (MTT CL)
- Mixed income and uses communities (UC CL)
- Painted bikelines (UC CL*)

Risk Catastrophe & Reconstruction
- Multihazard analysis and planning recommendations (Govt CL)
- Center of integrated risk management (CONICYT CL)
- Pelluhue’s Sustainable Reconstruction Plan (Govt UK)
- Curanipe’s Master Plan (UC CL)
- Tsunami’s modelling and prevention actions (JICA)

Climate Change & Sustainability
- Carbon footprint calculation - Easter Island & J. Fernandez – (Govt UK)
- Carbon footprint offset plan - Easter Island- (Govt UK)
- Water efficiency and energy strategies (CONICYT CL)
- Urban sustainability analysis through urbanization patterns of two Chilean cities (IDB)
- Center of Urban Sustainable Development (CONICYT CL)
Integrative framework
Multidisciplinary Teaching + Research

Teaching activities
- Postgraduate theoretical course (Urban Studies)
- Postgraduate Studio (Urban Studies)
- Undergraduate Studio (Architecture)

Research activities
- Basic Research
- Applied Research
- Consultancy

Thesis
Water Management and Ecotowns
Water efficiency research (Storm waters, Green areas) & Housing developments

Partnership: PUC (Engineering and Architecture)
Urban Hydraulics Engineering Course
⇒ HMW (Housing Manufacturing Water) TU Berlin

Researchs
• Instruments for the intelligent management of cities and territories. Mechanisms for water management efficient provision of landscaping at municipal and regional (*)
• Experimental Analysis and Modeling of a Stormwater related to land use planning

Teaching research
• Ecotowns studio at School of Architecture as part of HMW project. Linked to Urban Hydraulics course at School of Engineering
Chile: 7%
>7º Richter (200 years)
Plan PRES Pelluhue

Plan de reconstrucción estratégico sustentable
IEUT UC + UTPCH + IMP

Emb. Británica
Un Techo para Chile
Undurraga & Deves Arquitectos
Posch Ingenieros
IEUT UC
Taller Postgrado
Taller Arquitectura
Habiterra Consultores

Estudio de Riesgos
Plan Regulador
Plan maestro Curanipe
Parque Urbano Curanipe
Obras Curanipe

Plan maestro Pelluhue
Proyectos Pelluhue
Municipalidad
Presidencia
Min. Interior
Min. Obras Públicas
Min. Vivienda y Urbanismo
Gob. Regional
Privados
Architecture Aula
Graduation project

1º semester
Draft projects

- **Understanding**: ecotowns, urban context
- ** Exploration**: programmes, alternative configurations,
- **Development**: master plans, housing complex and units

2º semester
Final projects

- **Consolidation** of strategy (placement and landscape, programme, structure, housing types)
- **Development** of complex and housing units, water proposals
- **Development** of public realm and collective areas
Aula HMW

Housing

Manufacturing

Water

Housing

Manufacturing

Water
ANALISIS

Housing Manufacturing Water

Teacher: Roberto Moris
Student: Catalina Pollon
LÍNEA DE REUTILIZACIÓN DE MATERIALES

Reciclado de materiales. Colocar foto del esquema de reciclado.

Transporte de escombros como recurso.

Especificaciones de reciclado de escombros según calidad.

Prototipo final de construcción

Terminaciones de la construcción

Construcción prototipo

Escombros dentro de la estructura constructiva

Uso de escombros para la reconstrucción
Utilización de Aguas Grises en el Paisaje
Senderos “Campomar”

Corredor Ecológico
Scottsdene`\textapos;s workshop
Existing Proposal

To much inner fragmentation and “waste” spaces.
Proposal group 1

- Main Central Area
- Perimetral street and parking
- On both sides “open facades” for control
- Business possibilities in the edges
Proposal

- 3 interconnected smaller areas for community
- Parking pockets and inner pedestrian uses
- Incorporate pavement differences for pedestrians and cars integration
- Business possibilities in selected edges and informal business possibilities
- On both sides “open facades” for control
- Community garden administration
Proposal

SECURITY THROUGH
CREATION OF "OWNED
SPACE"

PERMANENT ROOMS FOR
SMALL BUSINESSES / ALTERNATIVE USE
IN GROUNDFLOORS

PERMANENT ROOMS FOR
SMALL BUSINESSES / ALTERNATIVE USE

SMALL BUSINESSES
EXPANSION INTO PUBLIC SPACE