With the support of the
Culture Programme of the European Union

VerSus International Student Competition:

Lessons from Vernacular Heritage for Sustainable Architecture.

PROJECT VERSUS OPERATIVE APPROACH

Project VerSus operative approach overall description

The Project VerSus operative approach has been defined in order to develop a conceptual approach which provides operational knowledge that might be integrated in the contemporary architectural design process. **Participants to the VerSus Competition have to apply this said methodology, Project VerSus operative research approach, in their proposals. They can also consider the VerSus booklet given as reference.**

The methodology is based on three main levels of reading:
1. Three sustainable scopes: environmental, socio-cultural and socio-economic;

2. General aims and needs or key questions, related to each sustainable scope;

3. Principles and strategies, learnt from vernacular heritage for the design of a more sustainable and eco-friendly architecture.

The Project VerSus approaches the concept of sustainability from a transversal, holistic and multidisciplinary perspective.
In this approach, the three dimensions of sustainability have been defined as follows:
• Environmental: this scope addresses the human capacity of intervention in order to decrease and even avoid negative impacts on the environment, which is very sensitive to changes. Human intervention is able to integrate nature and bioclimatic features, to control the production of pollution and waste, to preserve health and prevent from natural hazards impacts.
• Socio-cultural: the sense of belonging, of identity, of personal and community development. This scope tries to gather all social and cultural positive impacts observed on vernacular heritage. It concerns the protection of cultural landscapes, the transmission of construction cultures, the capacity to stimulate creativity, the recognition of cultural values (tangible and intangible) and the reinforcement of social cohesion.
• Socio-economic: the capacity of reducing the efforts invested during the construction process, the building performance, the maintenance of buildings and all the impacts that contribute to an improvement of living conditions. Here, the concept of effort and work replaces the idea of cost, specially in contexts where no capital-intensive systems were implemented. Vernacular solutions encourage autonomy and local activity, optimize construction efforts, extend the lifetime of the building and save resources.

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ENVIRONMENTAL

General aim: the habitat is a result of its integration into natural environment.

PRINCIPLES AND STRATEGIES

1. To respect nature: The habitat is integrated in the environment and does not harm other elements of the ecosystem

Integration
Harmony
Biodiversity
Understanding the place
Minimal intervention
Reintegration
Unchanged morphology
Minimal impact

2. To be appropriately situated: The habitat takes advantage of the site's bioclimatic features

Topography
Geology
Orientation
Soil thermal inertia
Wind protection
Adaptation to climate
Adaptation to watercourses
Considering water table

3. To reduce pollution and waste materials: The habitat optimises resources in order to avoid pollution and other impacts

Reuse
Recovery
Renovation
Recycling
Local materials
Slightly transformed materials
Less machinery used
Reduction of transport

4. To contribute to health quality: The habitat offers the opportunity to the inhabitants to live in a healthy environment

Healthy materials
Hygrothermal control
Thermal insulation
Comfort devices
Natural ventilation
Natural lighting
Natural shading
Buffer spaces

5. To reduce natural hazards effects: The habitat provides a safe and protecting environment for all its inhabitants

Aerodynamics
Flood damage reduction
Embankments
Channelling from floods
Seismic resistant elements
Reinforced stability
Wind barriers
Breakwaters

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SOCIO-CULTURAL

General aim: the habitat helps to preserve and transfer inherited values.

PRINCIPLES AND STRATEGIES

6. To protect cultural landscape: The landscape is shaped and conserved by inhabitants along the centuries

Terrace cultivation
Cultivated valleys
Enclosures
Wall protection
Channels
Ponds
Salt marshes
Dams and ports

7. To transfer construction cultures: The habitat expresses traditional skills and knowledge

Identity
Know-how
Expression of mastery
Culture preservation
Constructive memory
Adaptation to local resources
Response to needs
Evolution

8. To enhance creativity: The habitat encourages the provision of innovative solutions and creative expressions

Collective intelligence
Testing
Resourcefulness
Dexterity
Diverse solutions
Richness
Beauty
Singularity

9. To recognise intangible values: The habitat values territorial identities as a result of an accumulated experience

Collective memory
Cultural identity
Link to the place
Symbolic representation
Sacredness
Places for community meetings
Peace and well-being
History and mythology

10. To encourage social cohesion: The habitat facilitates exchanges among neighbours to feed a collective intelligence

Pedestrian zones
Arcades
Integration with neighbours
Co-responsible maintenance
Places for social activities
Enhancement of public spaces
Mutual aid
Shared facilities

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SOCIO-ECONOMIC

General aim: the habitat empowers communities and optimizes local resources.

PRINCIPLES AND STRATEGIES

11. To support autonomy: The habitat reinforces the community self-sufficiency

Integration of housing and production
Self-building
Gardens for self-production
Livestock breeding
Processing systems
Access to water
Food preservation
Collection and storage

12. To promote local activities: The habitat enhances local production, processing and trade

Local production
Local energy for local industries
Local processing
Skilled labour
Recognised quality products
Short circuits
Adapted transportation
Local construction

13. To optimise construction efforts: The habitat optimises the energy needed to build

Appropriate scale
Technical simplicity
Optimised use
Reduction of materials
Shared uses
Low transformation materials
Planning in phases
Progressive housing

14. To extend the building's lifetime: The habitat increases resistance through time and long-term use

Protection
Maintenance
Stabilisation
Reinforcement of weak elements
Replaceable elements
Resistant materials
Adaptability
Possible extension

15. To save resources: The habitat prevents local resources from waste and losses

Compactness
Shared infrastructures
Community sharing
Moderation
Renewable energy
Embodied energy reduction
Energy loss reduction
Passive systems

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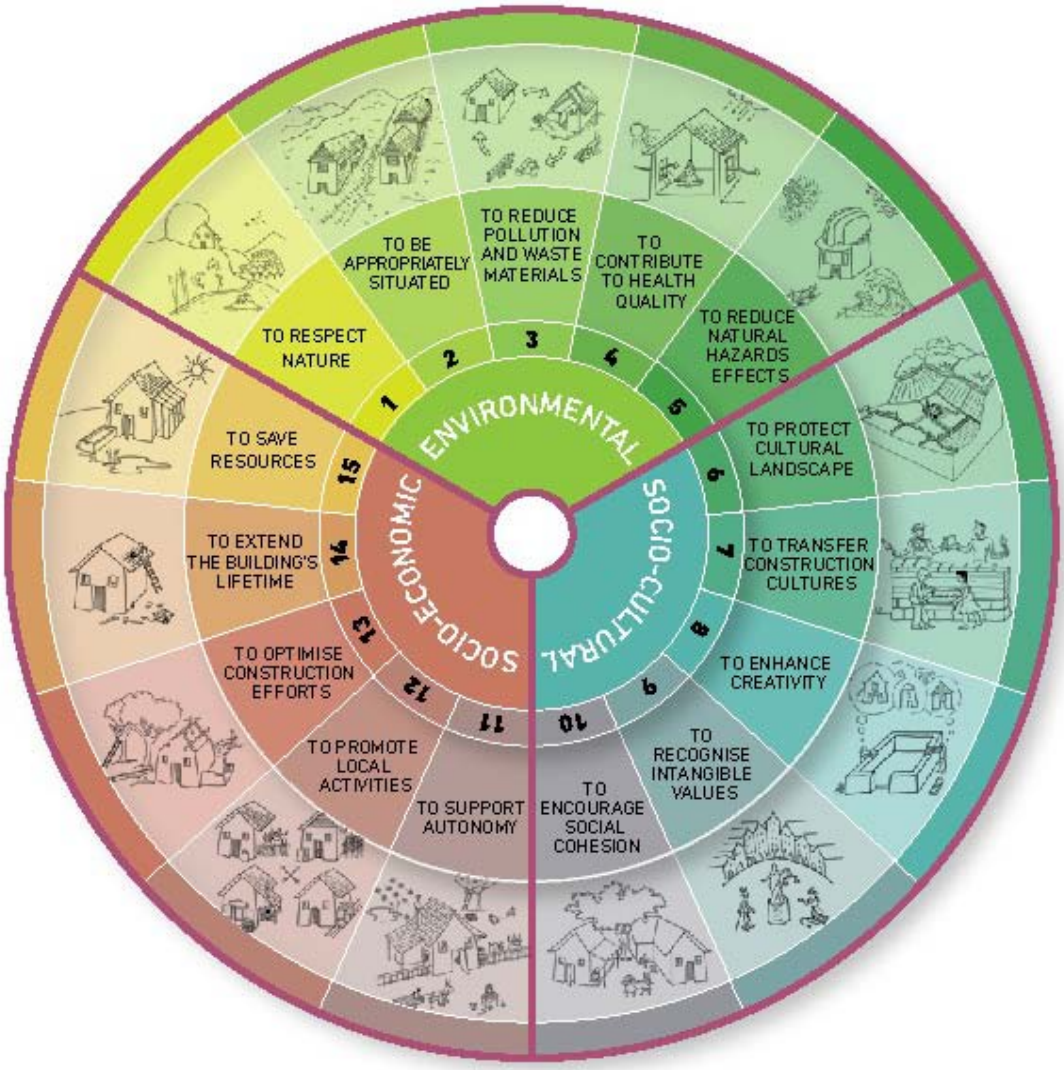
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Project VerSus operative approach schematic wheel



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