



VERSUS
HERITAGE FOR TOMORROW
Vernacular Knowledge for Sustainable Architecture



GOALS & METHOD

SUSTAINABILITY IN VERNACULAR ARCHITECTURE

ENVIRONMENTAL SUSTAINABILITY IN VERNACULAR ARCHITECTURE

SOCIO-CULTURAL SUSTAINABILITY IN VERNACULAR ARCHITECTURE

SOCIO-ECONOMIC SUSTAINABILITY IN VERNACULAR ARCHITECTURE



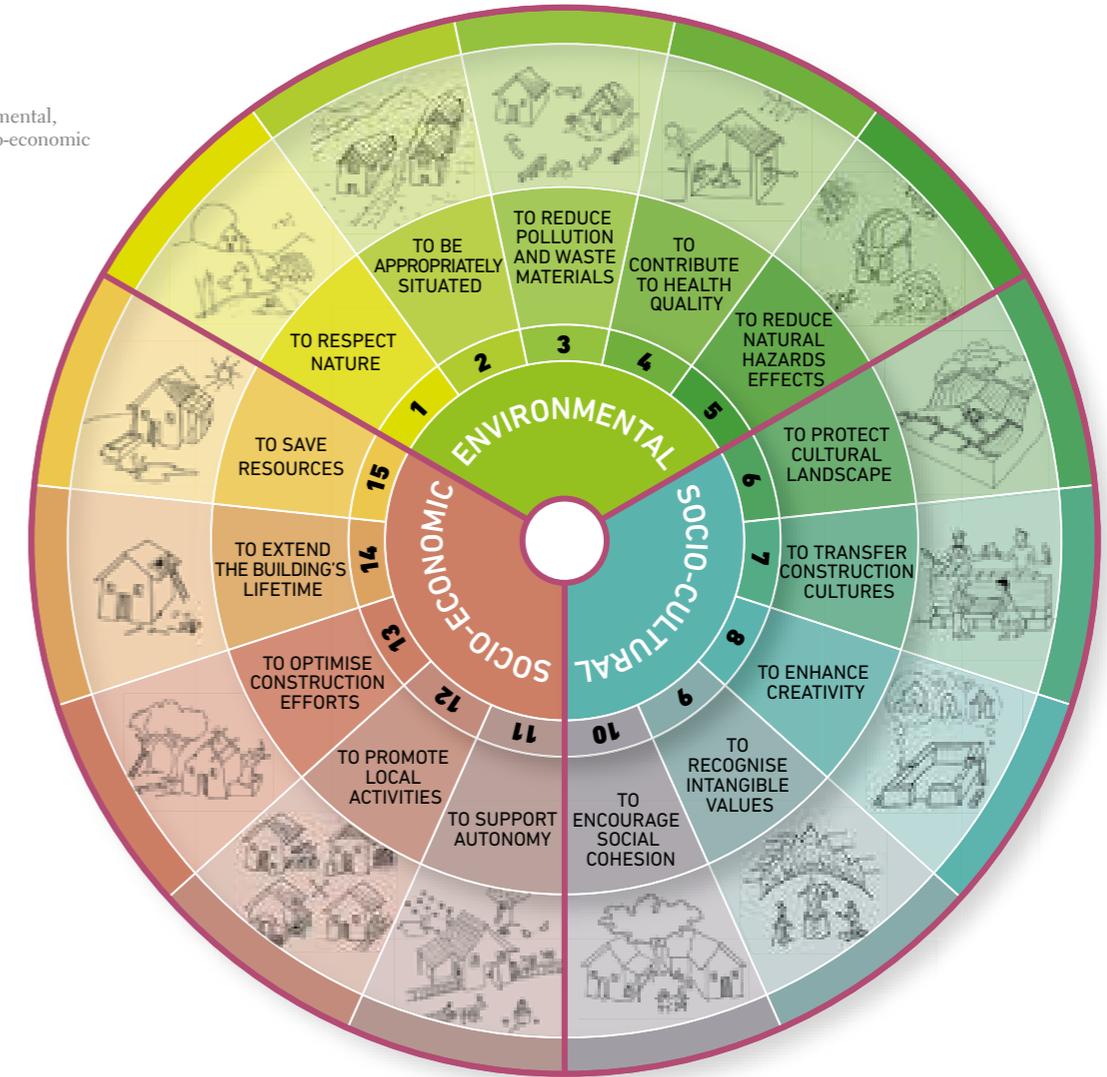
GOALS & METHODS

Versus Heritage for tomorrow is a guidebook with an operative approach aiming to assess the sustainability of built interventions. Their strategic guidelines are aiming to **assess existing built interventions** but also to **better prepare future plans**. It is an inclusive guidebook where the authors have gathered and analyzed **the literature linked to the concept of “vernacular architecture” and “sustainability”**.

The permanent evolution of the concept of sustainability was a challenge because it “contributes to the discredit of the concept” and make its potential difficult to grasp and to use in a field where it should be a requirement. The lack of scientific literature links the vernacular architecture was also challenge because of it is more problematic to link it to sustainability. The authors report that only the literature post 2000 able to link on a scientific way vernacular heritage and sustainability. “It was clear that after this period, relevant knowledge based on bioclimatic/ passive solutions was established, capturing the attention of the Vernacular Architecture specialists (Correia et al., 2014).”

After few preliminary **workshops** they decided for practical reasons (flexible data management, terminology conflicts) to divide their content in three “sustainable scopes”: Environmental; socio-cultural; socio-economic.

Fig 5 Wheel of environmental, socio-cultural and socio-economic sustainable principles.



ENVIRONMENTAL SUSTAINABILITY IN VERNACULAR ARCHITECTURE

Principles



“This scope addresses the human capacity of intervention, in order to decrease and even avoid negative impacts on the environment. It also implies the ability to compensate the consequences of any artificial action, and the recognition of the overall necessity to nurture the territorial regeneration (Neila, 2004).”

Strategies

<ul style="list-style-type: none"> • Assuring an appropriate choice of site • Minimising the impact of interventions • Ensuring conditions for site's regeneration • Integrating with the environmental morphology • Understanding the features of the site 	<ul style="list-style-type: none"> • Choosing appropriate building orientation • Considering the hydrography of the place and managing the water resources • Location buildings to take advantage of the natural landform • Incorporating solar energy into the overall design • Taking advantage of soil thermal inertia 	<ul style="list-style-type: none"> • Consuming local available materials • Using recyclable and recycled materials • Reducing loss of thermal energy • Using available energy resources • Planning maintenance and extending the durability of the buildings 	<ul style="list-style-type: none"> • Enhancing indoor temperature and humidity levels within acceptable values • Ensuring adequate natural ventilation • Guaranteeing adequate natural lighting and sun radiation • Improving natural and passive heating • Avoiding toxic materials 	<ul style="list-style-type: none"> • Providing practical guidance to anticipate and mitigate risks • Developing strong and flexible construction systems • Considering the specific characteristics of local risks • Integrating technical and behavioural measures for reducing vulnerability • Incorporating strategies for post-disaster recovery
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SOCIO-CULTURAL SUSTAINABILITY IN VERNACULAR ARCHITECTURE

Principles



Strategies

<ul style="list-style-type: none"> • Understanding the value of the place and its dynamics • Enhancing techniques of land use that guarantee and sustain biological diversity • Articulating spatial organization with productive needs • Optimising soil features and micro-climates through sustainable crop planting and land management • Regulating productive activities by environmental features, as well as by seasonal and economic cycles 	<ul style="list-style-type: none"> • Allowing practical constructive experiences to facilitate empirical know-how • Recognising the value of mastery and constructive memory • Involving younger generations in constructive processes • Acknowledging the value of roles in traditional activities and knowledge • Facilitating the participation of local communities in decision-making processes 	<ul style="list-style-type: none"> • Developing collective intelligence • Encouraging diversity in building system solutions • Integrating influences from other building cultures • Allowing in experimentation in building techniques and processes • Evolving building techniques from experience, through processes of trial and error 	<ul style="list-style-type: none"> • Transmitting cultural values and history • Incorporating social rituals • Building community character and sense of place • Recognising local symbolical expressions • Enhancing of building and productive processes as cultural values 	<ul style="list-style-type: none"> • Promoting inter-generational relations • Ascribing value to the development of collective welfare • Enhancing community engagement and participation • Encouraging places for community meetings • Building common infrastructures and market places
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“This scope should be considered as a milestone of relations, sense of belonging, identity, personal and communitarian development. It tries to gather all the Social and Cultural positive impacts observable on the vernacular solutions (Oliver, 2006). The related features are usually more linked to the processes than to the physic reality itself.”

SOCIO-ECONOMIC SUSTAINABILITY IN VERNACULAR ARCHITECTURE

Principles



Strategies

<ul style="list-style-type: none"> • Sharing resources • Using local and accessible materials and resources • Promoting indigenous workmanship • Encouraging local production • Enhancing community empowerment 	<ul style="list-style-type: none"> • Reinforcing urban farming and local production of food • Enhancing short circuits and local trades • Promoting collective use of spaces • Including spaces for productive activities at urban and architectural scale • Developing handicraft products made with local materials 	<ul style="list-style-type: none"> • Optimising the use of materials • Assuring appropriate scale of the building • Enhancing technical simplicity in building processes • Reducing transportation efforts • Encouraging the use of low-transformed materials 	<ul style="list-style-type: none"> • Predicting regular substitution of building components • Preventing erosion of building elements • Planning maintenance of the building • Designing flexible buildings for possible changes and extensions • Building strong and durable structures 	<ul style="list-style-type: none"> • Using recyclable materials • Promoting building densification and compactness • Assuring supply of renewable energy • Developing construction systems adequate to local conditions • Enhancing natural ventilation, heating and lighting systems
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“This scope constitutes the most quantitative scope of the sustainable sphere, conventionally adopting financial and monetary values as basic indicators. Due to the vernacular conceptual implications, the idea of cost is related to the concept of effort, which can be more adequate, when applied to circumstances, where no capital-intensive system exist (Zupančič, 2009).”