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From Earthquake Reconstruction towards Sustainable Cities and Regions in the Post COVID-19 Era
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Earthquake and green building: prospects for resilience Case study Municipality of Camerino

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1) Internal areas settlement structures of the Marche Region

The inland areas of the Marche Region have shown extreme fragility, especially since the 2016 earthquake. The buildings of the historical centres show structurally a high vulnerability and a progressive loss of economic value.

2) The construction question in Italy

In Italy, the construction of buildings lacking or not in conformity with the administrative authorizations is discouraged by means of civil law. In particular, the legal negotiation of the rights on the building that does not comply with the authorization for construction is null and void.

3) Reconstruction and traditional building

However, for the territories of the internal areas, a special discipline has been provided for buildings with building difference. The rehabilitation of buildings bearing differences with respect to the building permit for the original construction is encouraged.

4) Method:

Study of the correlation between green construction and the reduction of disaster risk in the internal areas of Central Italy. **Case study**: urban fabric of the Municipality of Camerino, considering the period following the 2016-2017 earthquake, to date (August 2016- September 2022). Collection from the Municipality of Camerino and analysis of data relating to the reconstruction of privately owned buildings.

5) Criticality

- **Criticality**
  - *60% of public and private buildings built over 45 years ago*
  - *climate change accelerates ecosystem transformations, reducing extreme natural phenomena more and more frequent*
  - *high seismic risk*
  - *progressive loss of value of the properties*

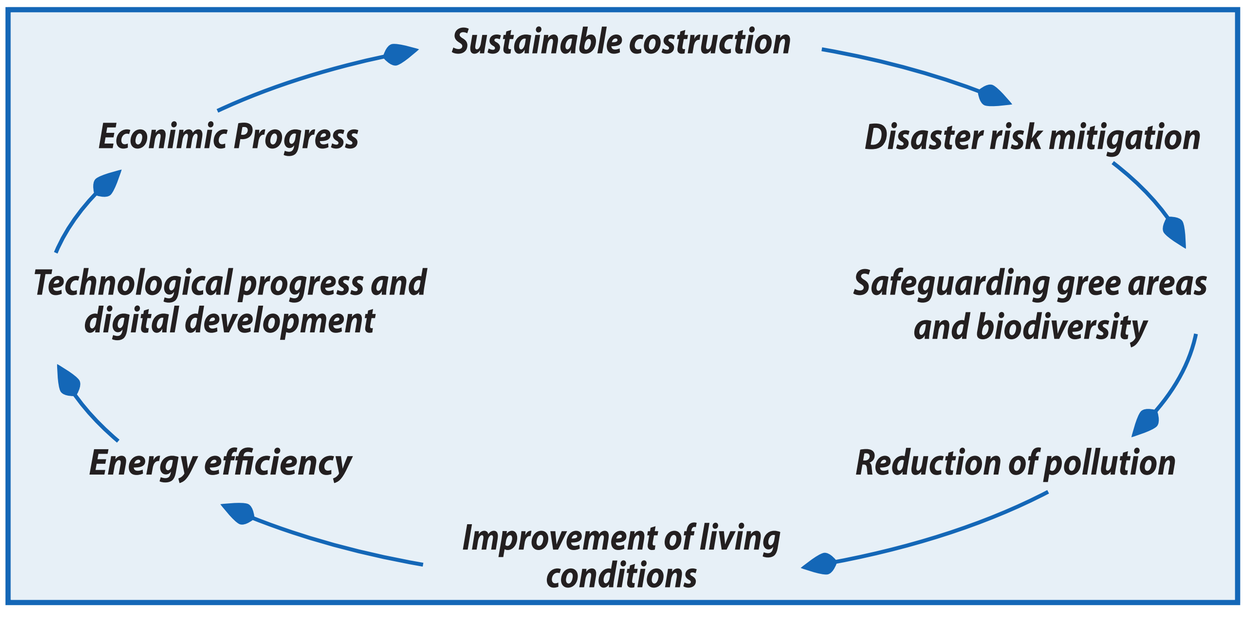
Conclusions: An intrinsic characteristic of the rehabilitation and reconstruction of urban settlements must be that of resiliently withstanding the numerous stresses prevented by natural disasters. The use of green building as a sustainable building able to exploit technological knowledge could not only improve the living conditions to avert the danger of new disasters and trigger a resilient process of social-economic development. It is a question of achieving a conformation of the right of ownership, according to a collective interest in living in a healthy environment and of reshaping the regulatory provisions that discourage the use of green building.

6) Data relating to construction in the inhabited centre of the Municipality of Camerino

- **Recostruction Data**
  - *No of buildings in the municipality territory deduced from parcels__* ***3833***
  - *No. of unusability orders resulting from the 2016 earthquake_____* ***2593***
  - *No. Contribution requesting paperwork for reconstruction presented*
    - *Presented **482***
    - *Instructed by Municipality __ **466***
    - *Financed _____ **339***
  - *No. buildings usable, to date, after the restoration work _____* ***193***

Data kindly provided by the Technical Office for private reconstruction of the Municipality of Camerino. Updated as of August 26, 2022

7) Sustainable construction:



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- World green building Council https://www.worldgbc.org/what-green-building
- European Green Deal https://www.consilium.europa.eu/it/policies/climate-change/paris-agreement/