

## Adaptive model of thermal comfort housing in Angola. Case study of Luanda and Huambo

### Summary

The aim is to evaluate the environmental conditions and thermal comfort inside the houses in Angola, in the cities of Luanda and Huambo, in order to develop an adaptive model for thermal comfort indoors. Search for thermal comfort housing in Angola, has caused an elevated consumption of energy and the use of air conditioning contradicts with the environmental concern regarding the excessive use of natural resources for production of electricity and the high emission of polluting gases.

The scarcity of information of housing thermal comfort in Angola, and the elevated level of housing discomfort are the main motivations for this study. The evaluation is made through a survey of functional typology and constructive solutions in Angola (data of construction and typology), and the identification and definition of adaptive thermal comfort for housing.

Taking into consideration the tropical climate, social and cultural features through the characterization of housing in periods before and after 1975. The study should be a great contribution of recommendations for adaptive thermal comfort in Angola. The conclusion of this study assembles the scientific knowledge needed for the future development, to adjust measures in construction, for climate and energy regulations in the perspective of sustainable building adapted to an Angolan reality.

### Keywords

Comfort, thermal comfort, housing, adaptive, climate, Angola.



Single Family Home in Ilha de Luanda, 2015.



Residential Building in Luanda, 2016.



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### Period

2018-2024

### Funding

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