

## 5 - Influence of the Garden skyscrapers:

Another aspect in the surface of is of this building is the influence of the Garden skyscrapers that provide **innumerable advantages, of that if detaches the energy effect Island of heat and acoustics, the protected of the structure of built or the improvement of the quality of interior air. These also important for the involving one, as in the reduction of the heat effect, in the increase of biodiversity, the improvement of the quality of air exterior, but because they provide to the Man a sensation of health and comfort, over all exclusive of the Nature .**

**The rank of trees throughout the surface of is of the building**, fed has as base the “Surface costed with vegetation”, that they will have to be applied, pondering the techniques to use, the benefits and disadvantages, the types of plants more adjusted to each system and each climatic situation, systems of irrigation and maintenance.

It consists essentially of conceiving buildings that provide urban spaces of quality, having in account the urban sustainable and the interrelation with the Nature. It aims at to oppose the unsustainable growth of the cities, where green areas are transformed into asphalt ways of access, tiled squares or buildings of hardened. **With the concept to improve the thermal comfort of the buildings during the not bearable hot months of Summer and in counterpart it protects them of undesirable storm of Winter, with the advantage to save immense energy, excusing climatization systems and improves the quality of ai r.**

This system has the advantage in giving use, to **the “technique of the hidroponia”, that it consists of the survival of the plants in ground absence, being the water the responsible one for its vitality.** In what it confers to the alive walls, that are a type of raised height garden, the hidroponia is basic, since the plants made use throughout the walls, supported for materials as, felt, geologic turf or fabric, if feed for the nutrients that the water makes to them to arrive. In such a way, the water is considered the vital support of the plants in “hidrópicas” solutions.

The irrigation blanket, already used in hortícolas greenhouses. Already ideal is presented to guarantee the necessities of durability of the system, stops beyond assuring the homogenate distribution of the water and its nutrients and thus to guarantee the survival of the plants on the walls of total “hidrópica” form.

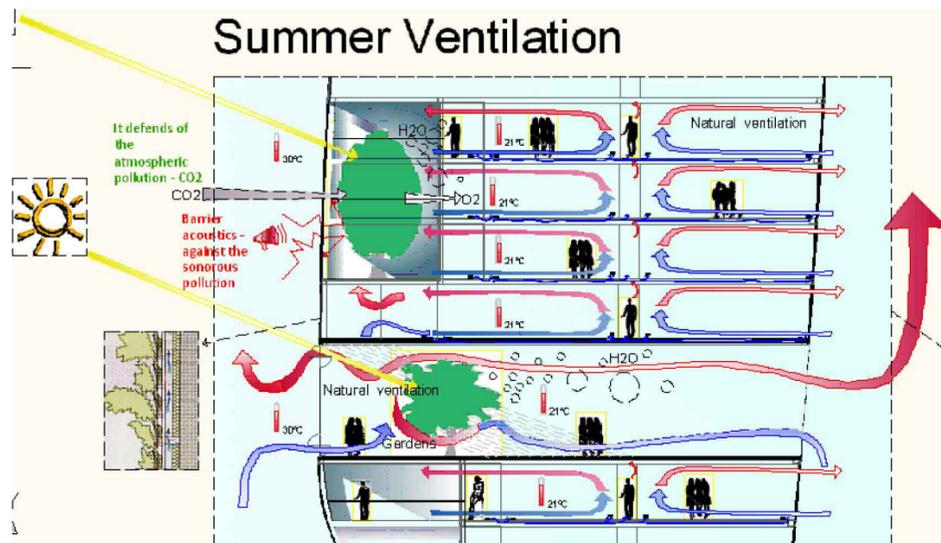
**The benefits of the use of trees, in the green façade conjugated with the vegetal surfaces or alive walls, can provide to the effect Island of heat (it promotes processes of natural cooling, it reduces the ambient temperature, it breaks the raised height draft that refreshes air to softens it it, produces shade for the people and the surfaces), water retention, thermal isolation (in the Winter and the Summer), sonorous absorption, absorption of dust and provide environment for the makes to appear of new the dead of the wild life .**

As the emissions that if concentrate derived from the circulation automobile they can be reduced by the presence of areas with great foliage of some floors. **A garden skyscrapers with great mass of foliage of plants can absorb carbon dioxides and metal particles heavy (figure 3).**

The aid for the energy efficiency is also distinguished, the protecting of the structure of the proper building (Protects the exterior finishing of radiation UV, the elements and fluctuations of temperature that consume the materials; It benefits stamping or the junction of the doors, windows and coverings, diminishing the effect of the pressure of the wind; And protects against storm), the improvements in the quality of interior air, the protecting acoustics, benefits as well as benefits in economic terms and valuation of the building.

It originates the increase of biodiversity, to makes to appear of new the dead a similar system the natural environments, to makes to appear of new the dead natural landscapes and forms an important shelter for biodiversity.

Improvement of the quality of exterior air, for the existing pollutant particle capture in air and atmospheric deposition in the foliages of the plants, filtering of harmful gases and particles in suspension, a raised height or skyscrapers garden obtains to absorb CO<sub>2</sub>, to the step that frees O<sub>2</sub> (One surface of is the 80m<sup>2</sup>, will be able to absorb about 60Kg/year of CO<sub>2</sub> - figure 3).



The raised height or skyscrapers garden, they allow to transmit in the house building, an improvement of the quality of in the house building air, for its capacity to filter contaminants that regularly are sent for are of other buildings through the traditional systems of ventilation and that they are conduction for this building. The filtration is carried through by the plants, and in the case of bio-filtration, micron organism, for it saw of the capture of pollutants in air such as dust and pollen; Filtration of harmful gases and COV's of carpets, furniture and other elements of construction. As well as it provides to the protection exterior acoustics and reduction of sonorous reflections (transmitted or they reflected through the wall) (figure 4).

This type of advantage can not express a value precision, therefore they are dependent of the type of climate or microclimate where if it finds the building, but over all of the type and games of structures to better choice (Trees and coated with vegetation Surface green surface of is of the building or alive wall).

(figure 4)