

For a better and more efficient use of wood energy in the Intercontinental Biosphere Reserve of the Mediterranean (The case of the province of Chefchaouen)

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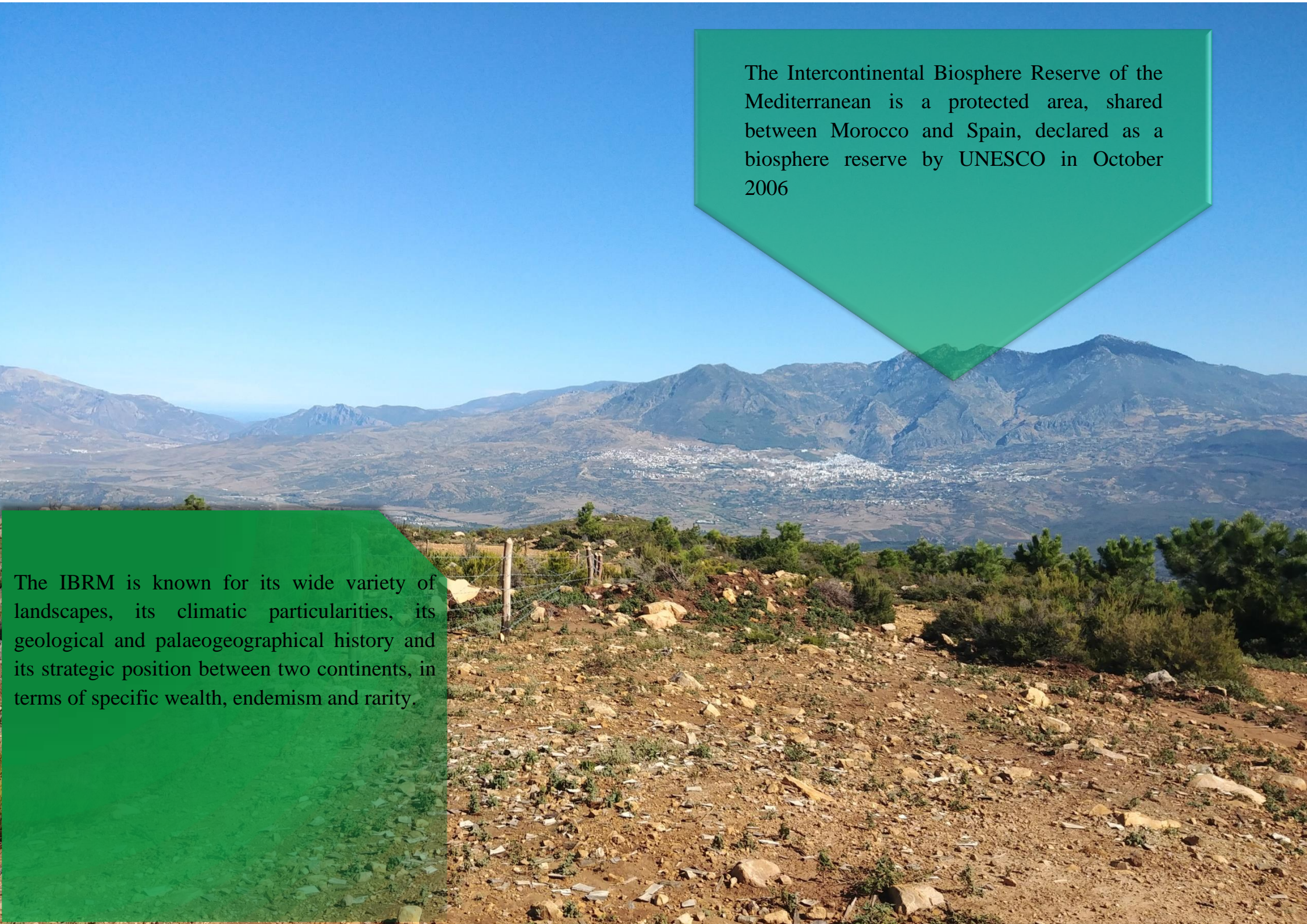
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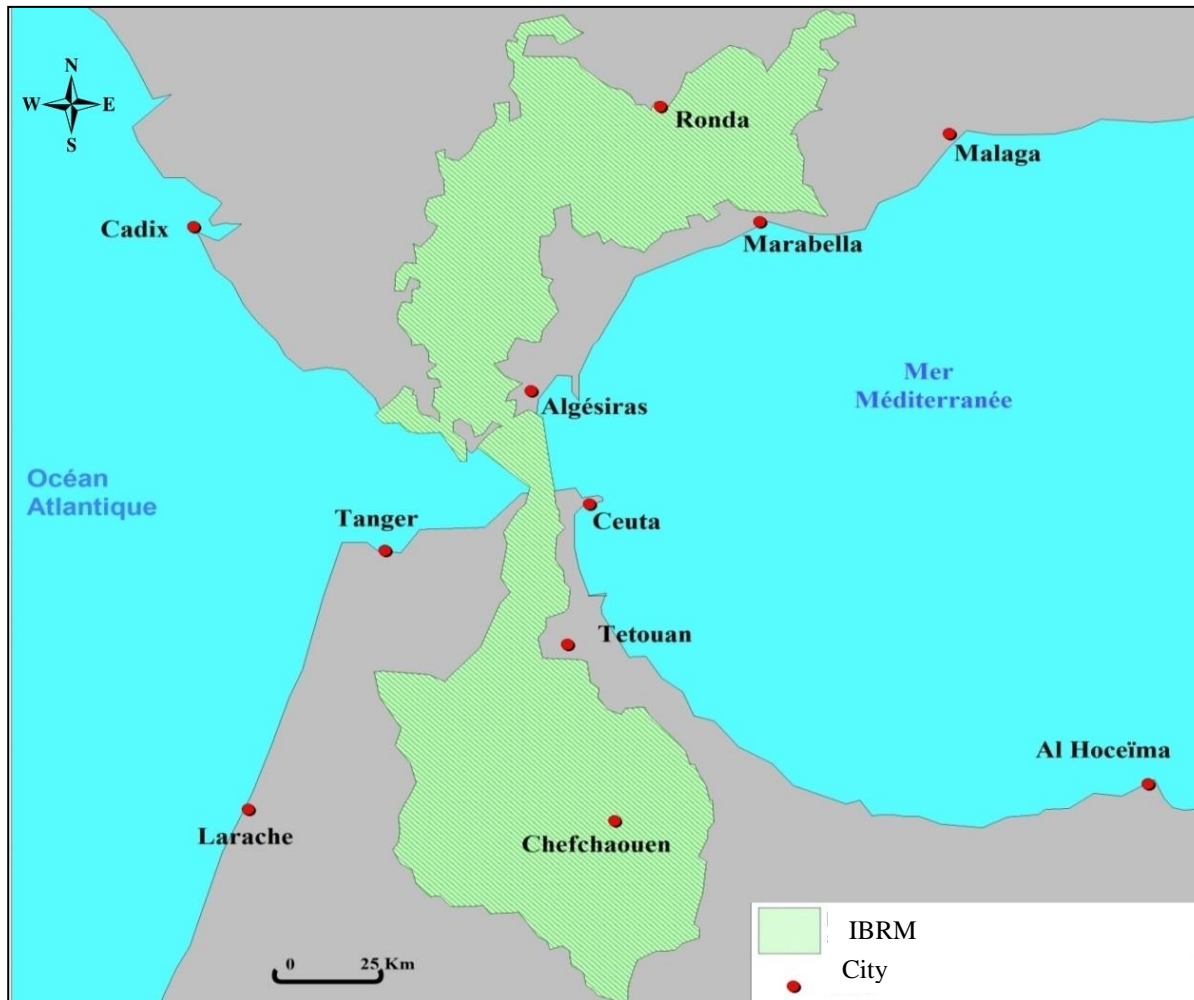
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The Intercontinental Biosphere Reserve of the Mediterranean is a protected area, shared between Morocco and Spain, declared as a biosphere reserve by UNESCO in October 2006

The IBRM is known for its wide variety of landscapes, its climatic particularities, its geological and palaeogeographical history and its strategic position between two continents, in terms of specific wealth, endemism and rarity.

The Intercontinental Biosphere Reserve of the Mediterranean

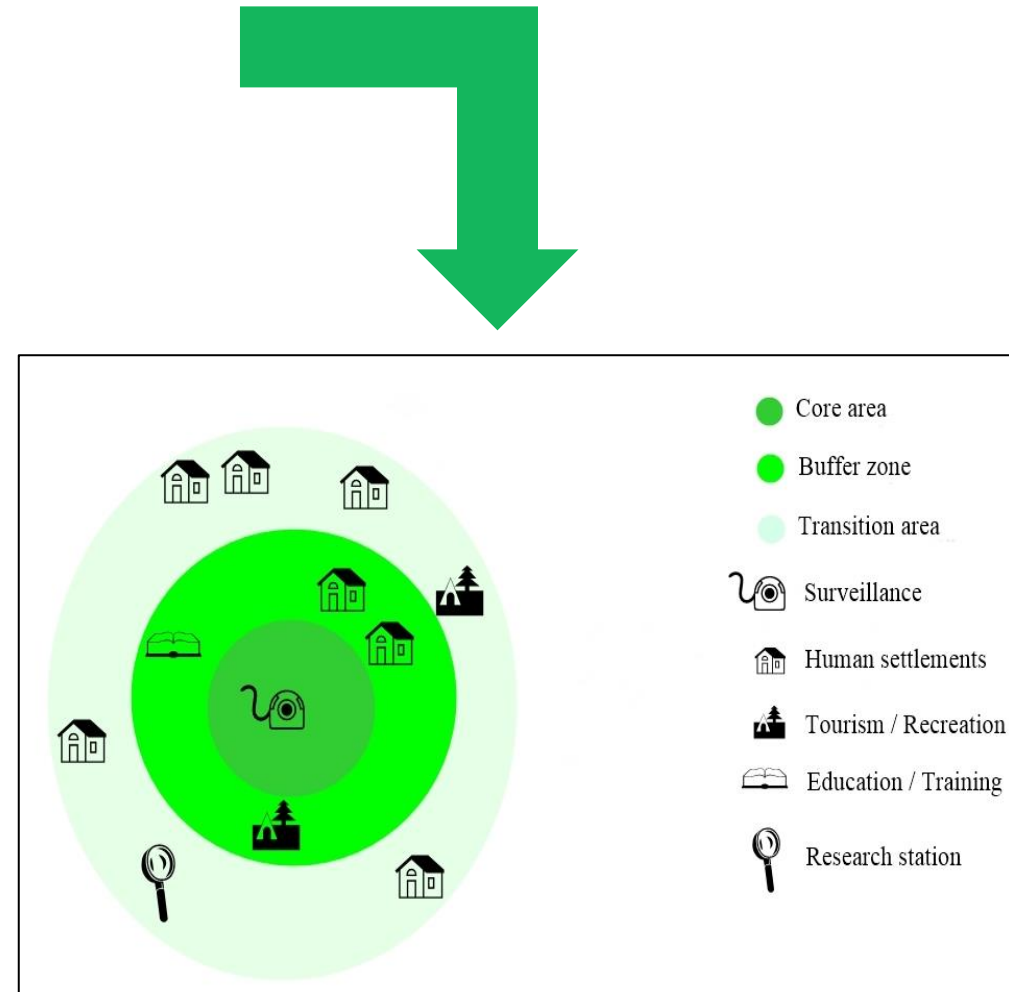
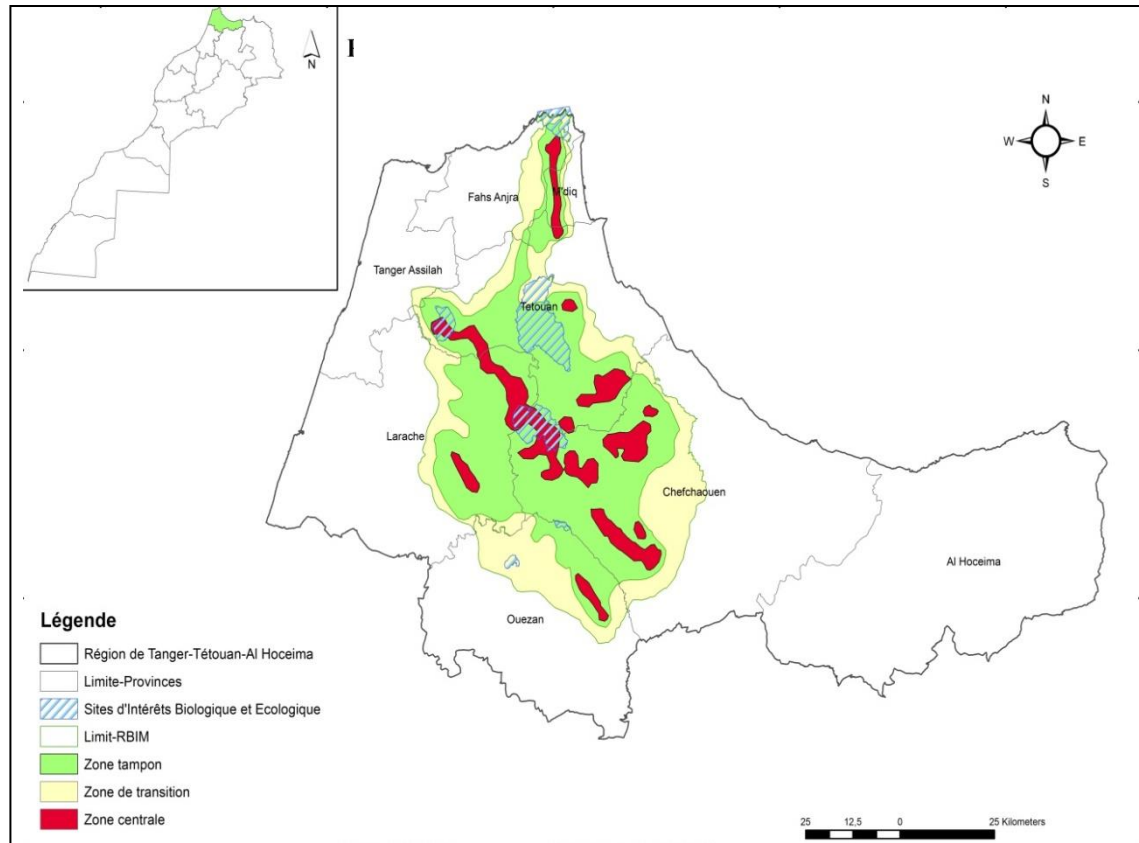


The objective of the IBRM is to

- Conserve shared natural resources in large transboundary ecosystems;
- Promote a sustainable development model;
- Support cooperation between Spanish and Moroccan institutions;
- Provide management tools to support the development and consolidation of the natural reserves network

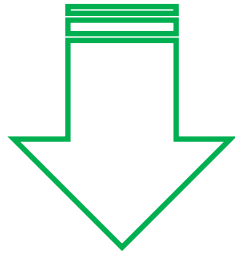
Zoning of the Biosphere Reserve

The Intercontinental Biosphere Reserve of the Mediterranean (Morocco)



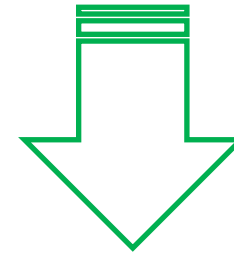
What is wood energy ?

Energy wood (or fuelwood) refers to the use of wood as a fuel, used in various forms (chips, pellets, charcoal, sheets and sawdust) and in different installations (domestic, tertiary, industrial or collective). In Morocco, 6.35 million tonnes of firewood are harvested annually from the forest. The deficit is estimated at 3.1 million tonnes, resulting in the disappearance of more than 20,000 hectares per year. Consumption is mainly rural at 88%.



Urban consumption

Wood-energy is used mainly by commercial establishments such as Traditional hammams (Moorish baths) and traditional ovens.



Domestic consumption (rural)

Wood is a very important source of energy for the daily life of rural households and is mainly used for cooking and heating.

In the province of Chefchaouen, the two main causes of direct degradation of forest capital are clearing for cannabis cultivation and cutting for firewood.

Example of clearing in Bab Taza



Source : Google Earth



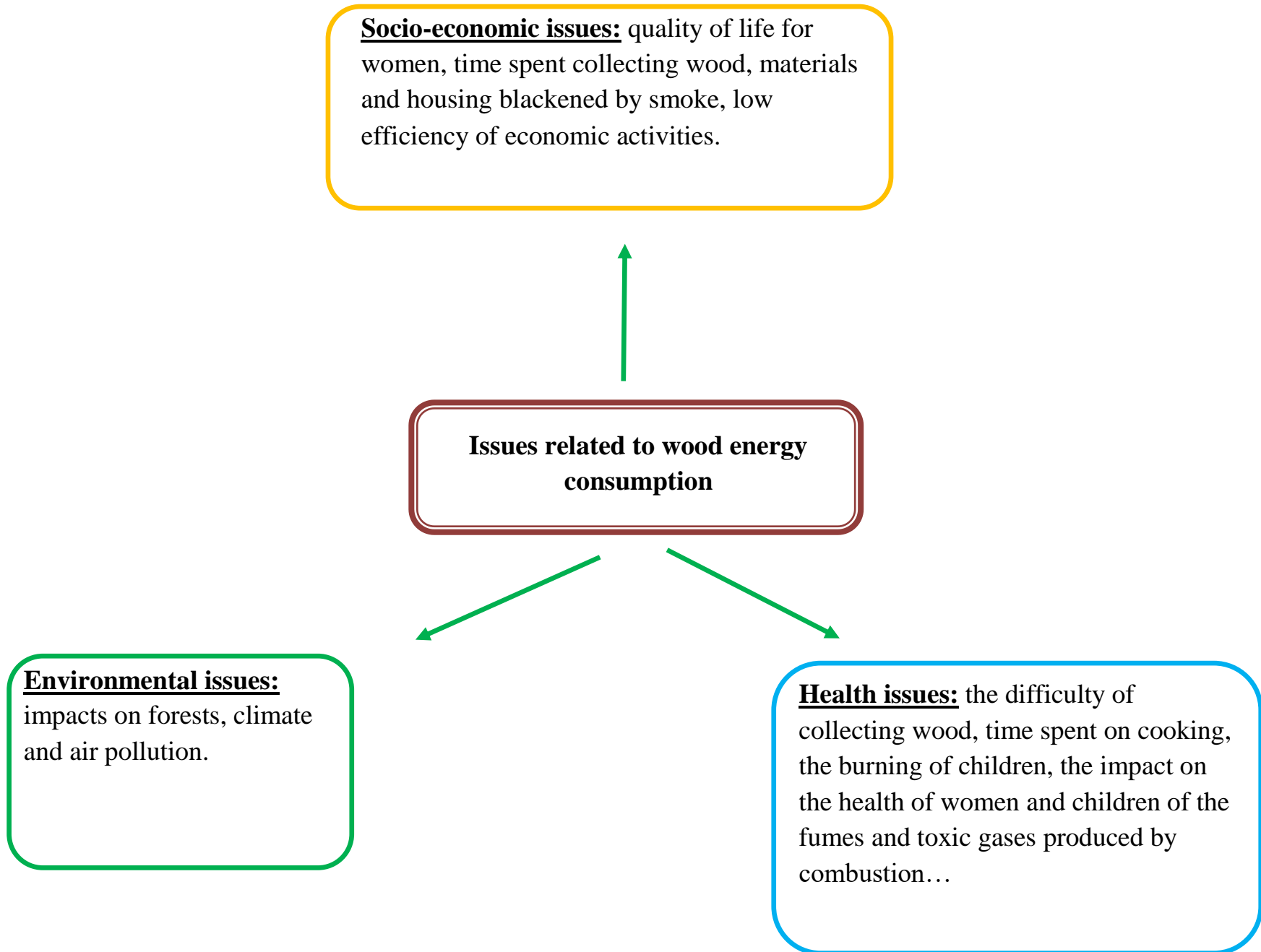
Cutting live wood is one of the main causes of deforestation in Chefchaouen (more than 300 ha/year)

Socio-economic issues: quality of life for women, time spent collecting wood, materials and housing blackened by smoke, low efficiency of economic activities.

Issues related to wood energy consumption

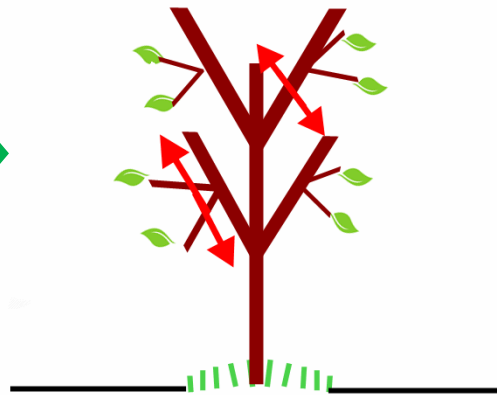
Environmental issues: impacts on forests, climate and air pollution.

Health issues: the difficulty of collecting wood, time spent on cooking, the burning of children, the impact on the health of women and children of the fumes and toxic gases produced by combustion...



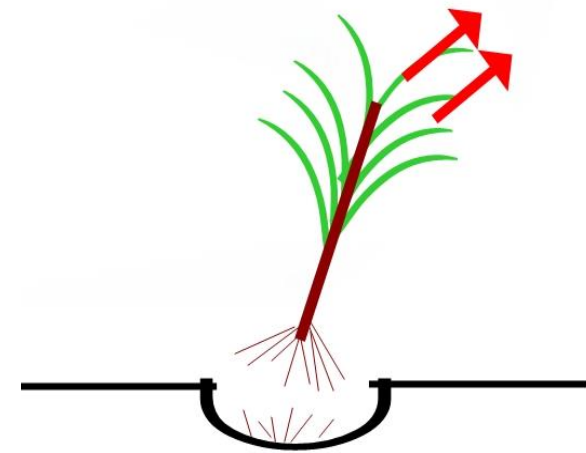
Illegal and unsustainable logging

Trimming: cutting branches and removing small twigs.



Grubbing-up: is an operation carried out in the land to be cleared.

Clearing is defined as removing and disposing of all unwanted surface material, such as trees, brush, grass, weeds, downed trees, and other material. Grubbing is defined as removing and disposing of all unwanted vegetative matter from underground, such as stumps and roots.



In addition to the above, the firewood collection is the cause of forest degradation and soil erosion.

How to rationalize our wood-energy consumption?

There are many alternatives and low-cost solutions for a more efficient use of wood energy



The average volume of dead wood in the forest is sufficient to cover the wood energy needs of the population in the Intercontinental Biosphere Reserve of the Mediterranean. The collection of dead wood also protects the forest from the risk of fires.



The improved ovens will reduce deforestation, indoor air pollution and improve the health of women and children.



To effectively dry your wood, collected your firewood in spring or early summer, the best place to dry freshly-cut firewood is outside in a place exposed to sun and wind. Also, space your logs well enough to allow moisture to escape.



The introduction of an alternative system will reduce the effect of logging on the forest. The introduction of natural gas, biomass and solar energy can contribute effectively to reducing the intensity of this activity and ensuring the maintenance of ecological balance while ensuring the energy needs of local populations.