# Introduction

**« Abiotic ressources »** *Définition*

- Firstly, ***biotic resources*** refers to ressources coming from living things, or more precisely, organic matter. Ex: animals, plants.
- Consequently, **abiotic resources** refers to all ressources but biotic ones. So, it encompasses minerals, but also air, water, sunlight, etc.
- Fossil fuels can be classified either as biotic or abiotic resources, depending on the timescale considered. Indeed they're coming from living things, resulting of bio-geo- chemical cycles, but were definitvely formed milllion years ago. In EV14, we'll consider them as abiotic.

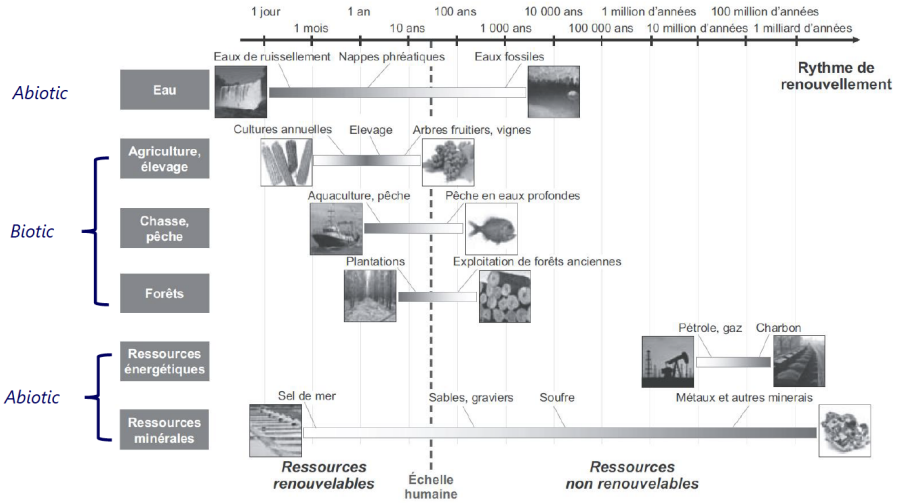
**But what even are « resources »?** [1]

- Surprisingly, it is not often explicitly defined, even in major texts. Ex: ISO 14040 norm (giving framework for all Life-cycle analysis), or the classical 1983 report of the United Nations.
- Analysis of varied definitions highlights some converging points: a resource is considered as such if :
    - It has an value or utility (from material properties for an industrial process to cultural valorization of precious stones)
    - For a certain subject (generally considered: the humans)

## 1. General caracterizations

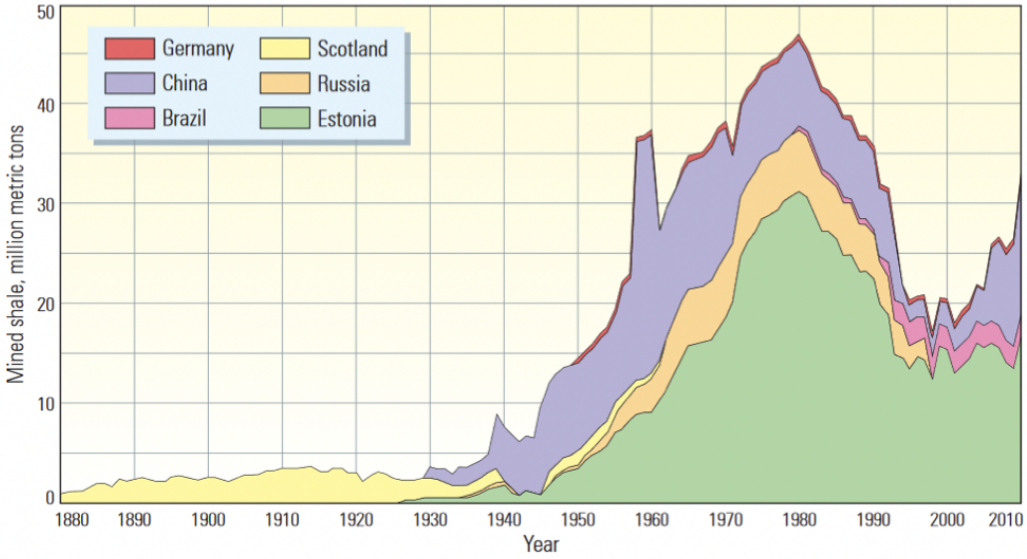
### 1.1. The renewable/non-renewable polarity [2]

- Renewable when the stock reconstitutes itself at a « sufficiently quick rate ». Usual threshold: timespan of a human life.
- Non-renewable when they constitute themselves on a long period of time, way longer than a human life. Their use is always a depletion in available stocks.



## 1.2. The availability/non-availabilitypolarity

- Available when concentration and position let them be technically AND economically usable by humans.
- More or less available according to the variation of these dimensions. Ex: Oil shale in the XXth, depending on stocks' concentrations and competition with conventional crude oil. [4]and [5]




^More than a century of commercial oil shale mining. Tonnage of mined shale rose dramatically in the 1970s when oil prices were also rising; it peaked in 1980, but declined as oil prices made shale oil noncompetitive. Several countries continue to mine oil shale as a source of heat, electricity, liquid fuel and chemical feedstock. Since 1999, mined shale tonnage has started to increase again.

## 1.3. Medias

https://pod.utt.fr/video/3943-ev14-abiotic-resources-1-intro/