CHIC Catalogue of Hot Issue on Climate

An integrated collection of positions on hot issues of Climate Change Modelling and Forecasting

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Introduction

The tool is not meant to be a model to perform simulation; the aim is simply to provide a structured catalog of:

- key phenomena involved represented in form of boxes in a flow diagram
- interconnections among the different phenomena and
- interconnections among these phenomena and the anticipated outcomes.

For each phenomenon basic information is collected about data and about evaluations including discussion of controversial issues

Information can be accessed clicking (hypertext) on the label identifying each box.

Even if the presence of many feedbacks jeopardizes a distinction between causes and effects a lay-out is adopted which presents

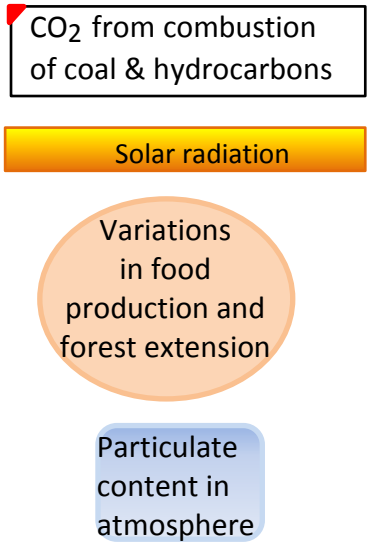
- on the left side phenomena usually considered as “cause type boxes” (rectangles);

  a small red triangle in the upper left corner of a cause type box indicates that human activities are significantly affecting this phenomenon

  orange color indicates that the box depicts a source of energy

- on the right side phenomena usually considered as “consequence type” boxes (light red ellipses)

- in the central part “content type” boxes; the writings indicate what is the content (CO_2, particulate, …) the color indicates what type of container matrix is involved (light blue for atmosphere, dark blue for oceans, green for plants and brown for soil)



The arrows interconnecting the boxes correspond to the following conventions:

- arrows entering a box indicate an action on the box, arrows leaving a box indicate an effect from the box
- color has a meaning

  red arrows indicate energy

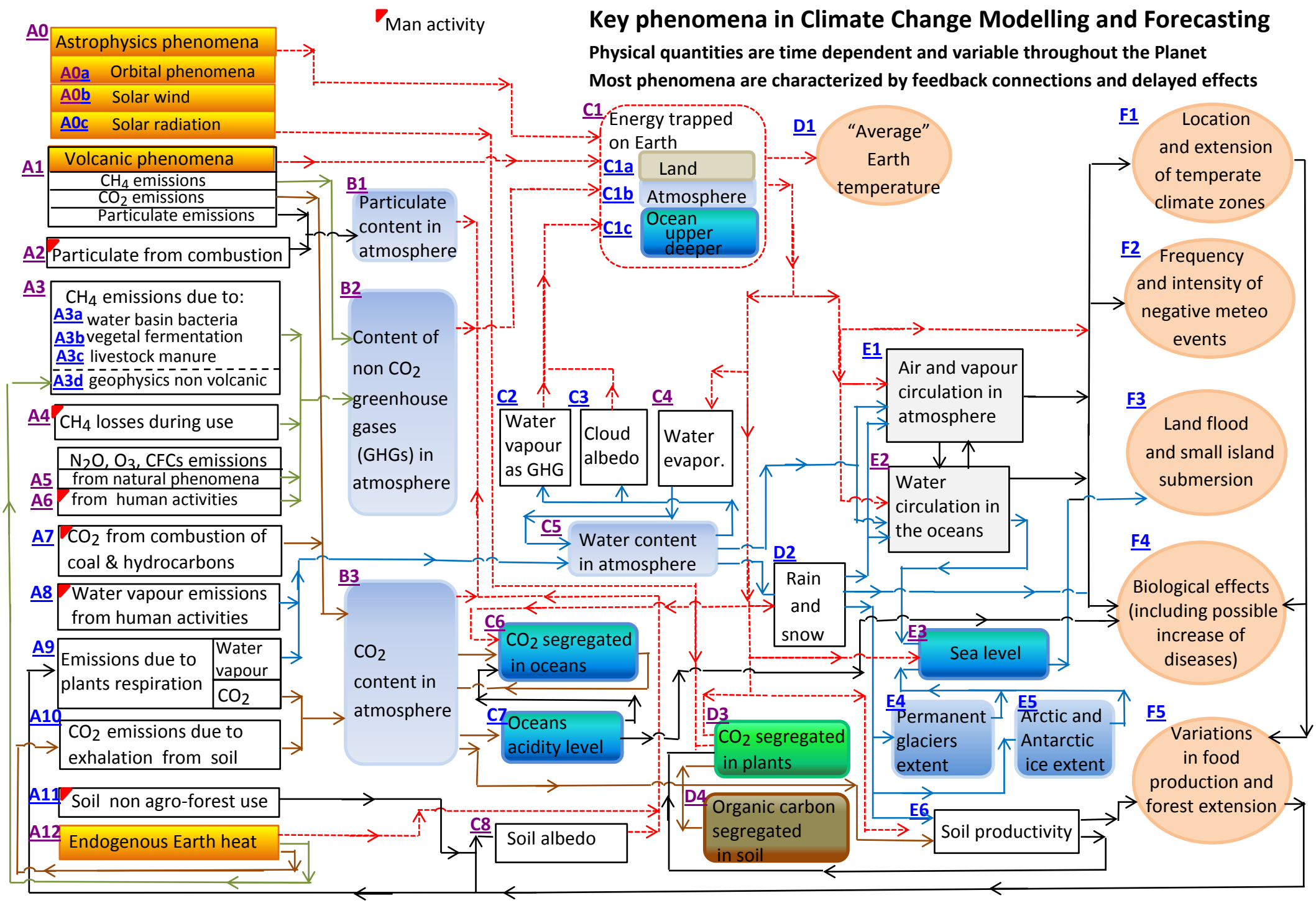
  brown arrows indicate CO2

  green arrows indicate CH4 and other GHGs different from CO2

  blue arrows indicate water

  black arrows indicate an interaction without transfer of energy or specific matter

Key phenomena in Climate Change Modelling and Forecasting

Physical quantities are time dependent and variable throughout the Planet

Most phenomena are characterized by feedback connections and delayed effects