

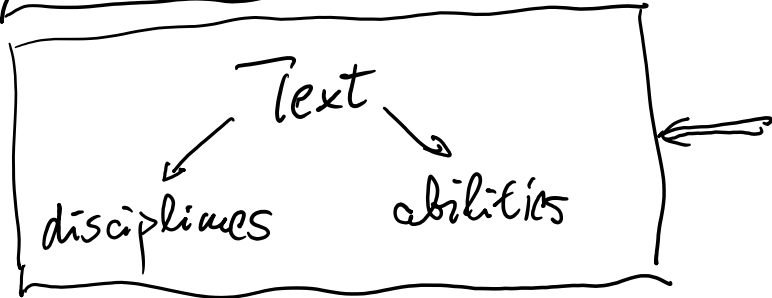
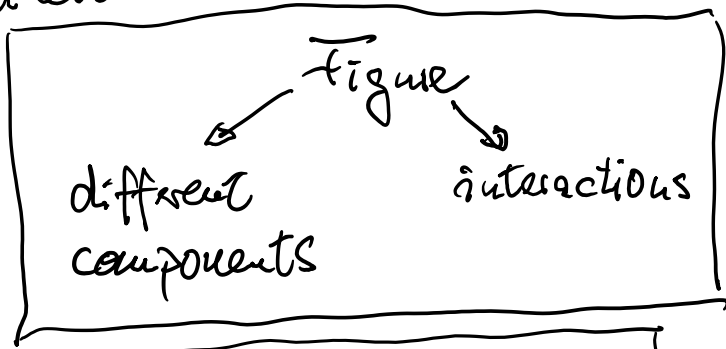
5.	Emphases of the Programme.....	16
E-0.	Climate science in support of sustainable development .....	18
E-2.	The atmosphere in the climate system.....	19
E-1.	The ocean in the climate system (move to 2nd position - E-2).....	20
E-3.	The land in the climate system .....	20
E-4.	The cryosphere in the climate system .....	21
E-5.	The regions in the climate system .....	22

Provide the glue between Objectives and the Imperative

"Fundamental Climate Sciences for Society"

Scientific Roadmap  
very high level

Path forward?



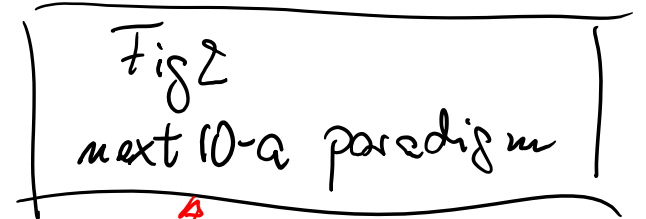
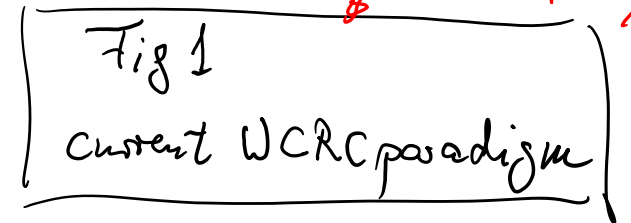
Earth System vs. Climate System  
Climate vs Climate Change

narrative, not title:

"Use Earth Systems Science for Understanding Climate"

What is the unique contribution of WCRP

Section 2: 40a of successful climate science



new

WCRP → Paris Agreement → needs fundamental science  
 e.g. nature of tipping points  
 adaptation, regional + global measures

→ IPCC  
 ↓ policy agreements  
 ↑ technical bodies

- Figure 2: next 10-a paradigm ~ delicate balance between
- Text
- tipping points
  - extreme weather + direct variables
  - seamless prediction
  - Paris background: CO<sub>2</sub> long term
  - judging progress in light variables
  - geoengineering: informing society
  - biogeochem. cycles

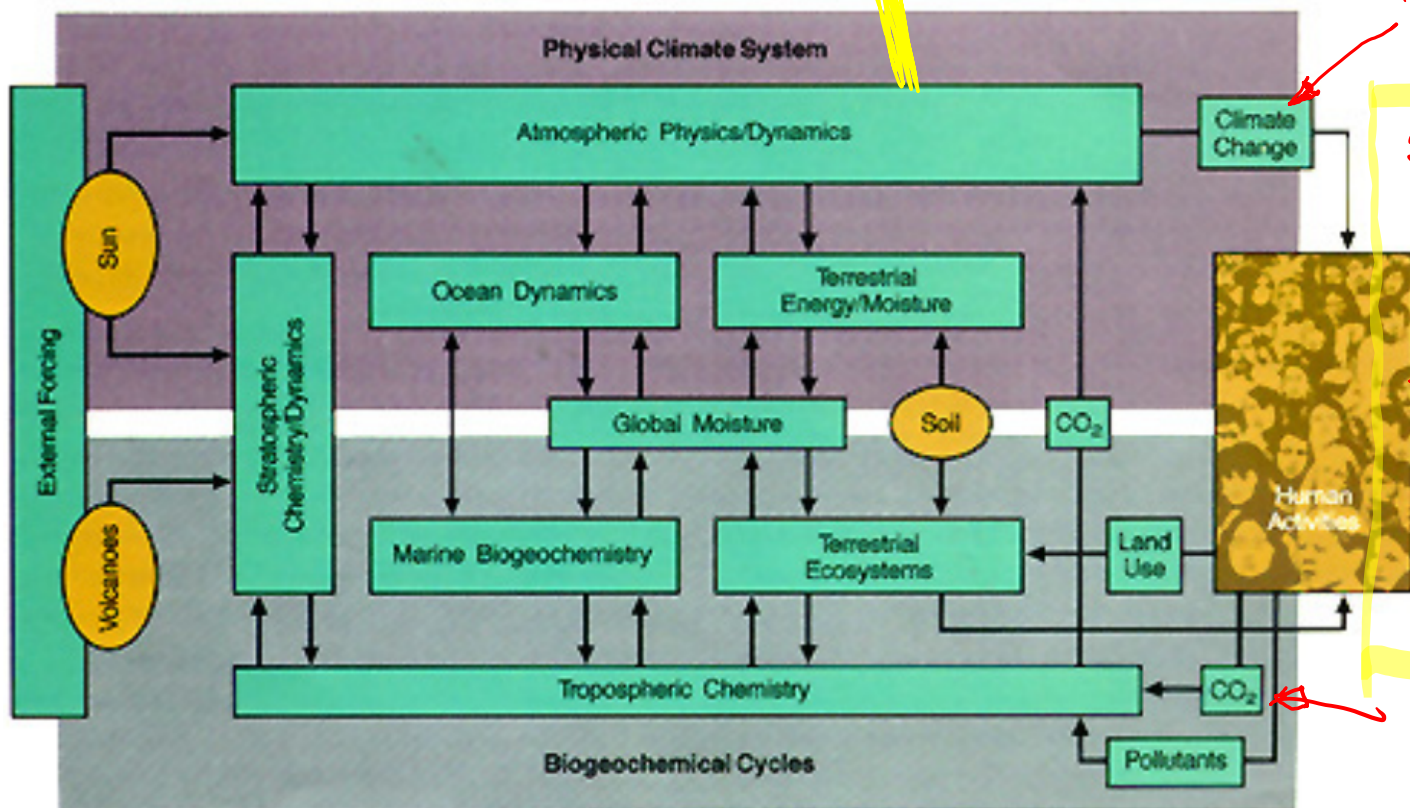
glue from the objectives to the imperatives

Fig 2: pick up wording from Objectives; color boxes according to WCRP "ownership" or not

Bretton diagram

WWRP

Radiative forcing  
energy water BGC



multi scale climate variab + change

Informing society

society, communication

Paris ← MIP5 focus in whole doc

REGIONS

Feedbacks Partnerships

CH4, N2O, ... aerosols + clouds

cryosphere

ocean also acts on society

GIAW

Future Earth