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Federal Department of the Environment,
Transport, Energy and Communications DETEC

Federal Office for the Environment FOEN
Division

The NCCS focus area «Hydro – CH2018: Climate Change and its consequences on Hydrology in Switzerland»



Petra Schmockler-Fackel, FOEN

Kick-off Workshop, 19.05.16, Olten



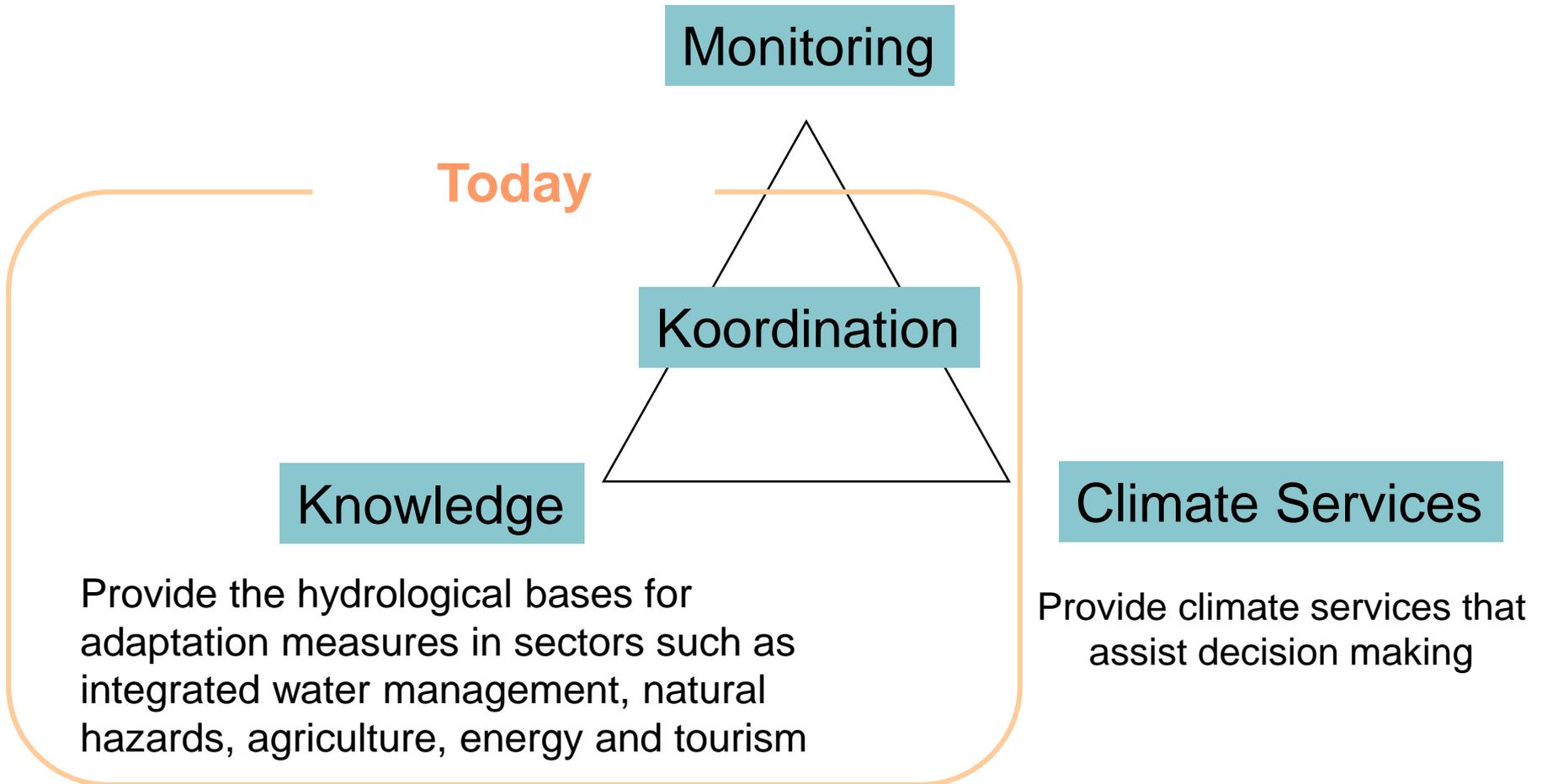
Climate Services

Providing **climate information (data, knowledge and products)** in a way that **assists decision making** by individuals and organizations. A service requires appropriate engagement along with an effective access mechanism and must **respond to user needs**.



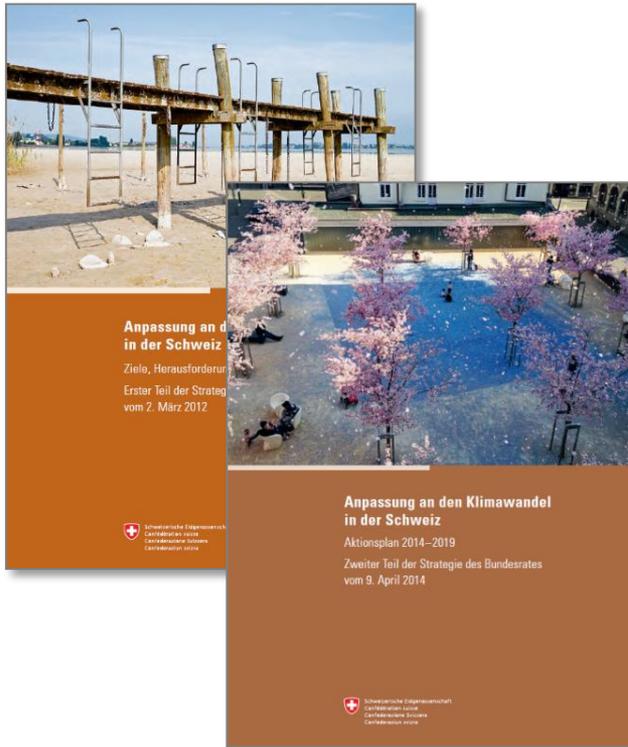
Hydro-CH2018 Focus Area

Ensure efficient and climate relevant hydrological monitoring





Mandat of the Federal Council for the Hydro-CH2018 focus area

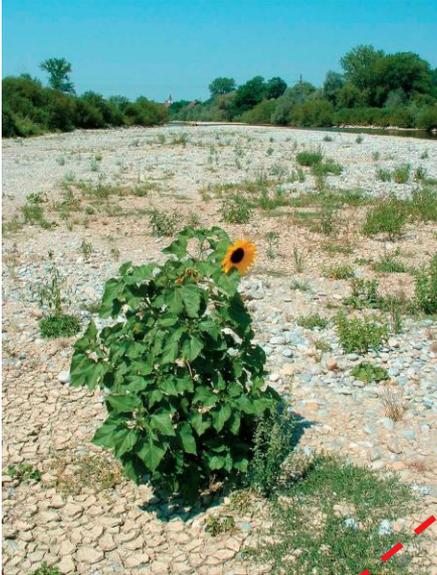


Action Wg2

Provide hydrological knowledge and scenarios as a basis for adaptation to climate change



«Water» goals in adaptation strategy to which Hydro-CH2018 wants to contribute



W 3

1) Improved knowledge about changes in water cycle



W 1

2) Assuring an optimal management of water resources



W 2

3) Assuring a good water quality and aquatic ecology



Objectives of the afternoon workshops

The following questions will be discussed in the three afternoon workshops:

- Information on **recently completed/ongoing/planned research (projects)** relevant for the Hydro-CH2018 project.
- **Missing points in the concept** and main **research gaps**
- **Research priorities** in the view of the experts



Workshop 1: Natural and artificial seasonal water storage - Effects on the Future Water Balance

- How will the **natural components of the water balance change**: Rain and water storage in snow, ice, soil and groundwater.
- How are the **feedback loops between the different storages**?
- How will the **water demand change** (e.g. for agriculture, natural vegetation, domestic and industrial use?)
- To which extent can these **changes in supply and demand be compensated** by reservoirs and river/lake regulations?



Workshop 2: Water temperature and quality in surface and groundwater

- How will the **water temperature develop in small and medium river systems**: these are very important for ecology (temperature-sensitive species)
- What are the **consequences of higher water temperatures for various species?**
- What are the **consequences on thermal utilization** of water bodies?
- What are the **consequences of low flows and increasing temperatures on water quality?**

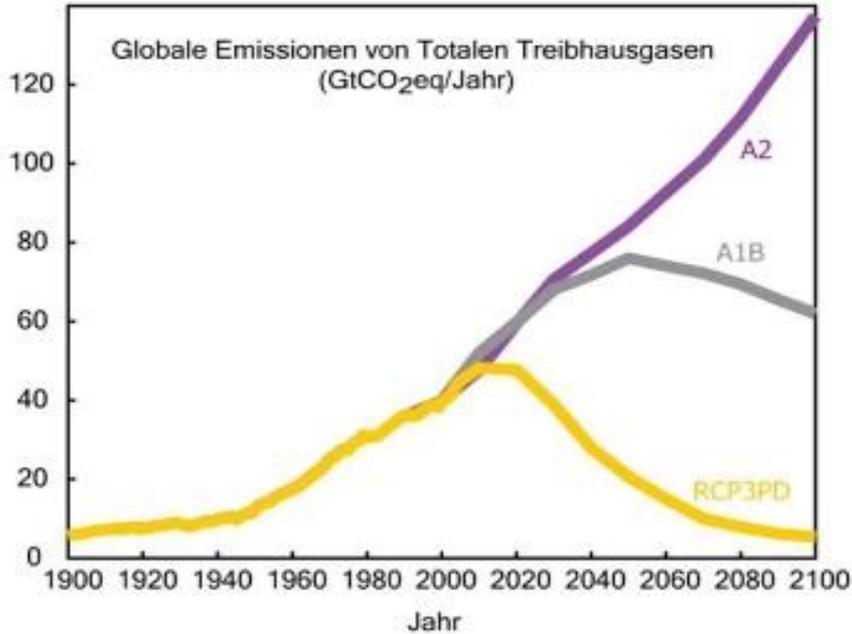


Workshop 3: Extreme events (floods and low flow events)

- What drives the **variability of extreme events**?
- What **changes in extreme events are expected** in the future?
- Assessment of **uncertainties**
- Consequences of **extreme low flow events**



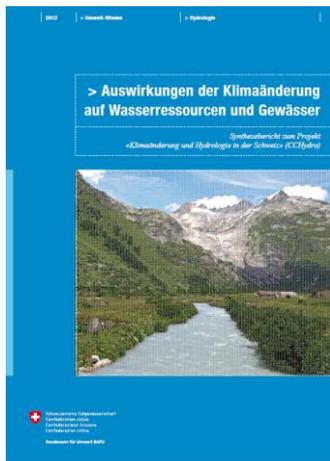
Cross-sectional area



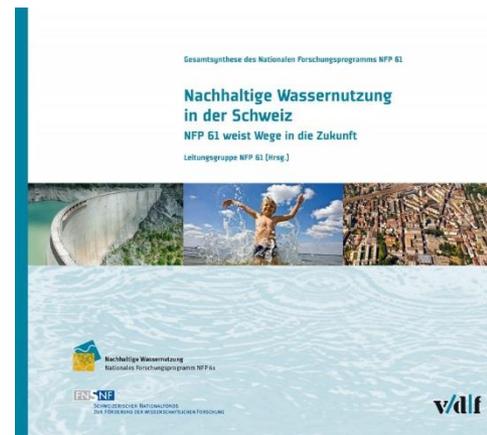
Hydrological Evaluation of CH2018 Climate Scenarios

Previous and ongoing projects

CCHydro



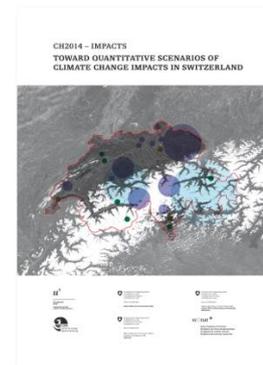
NRP 61



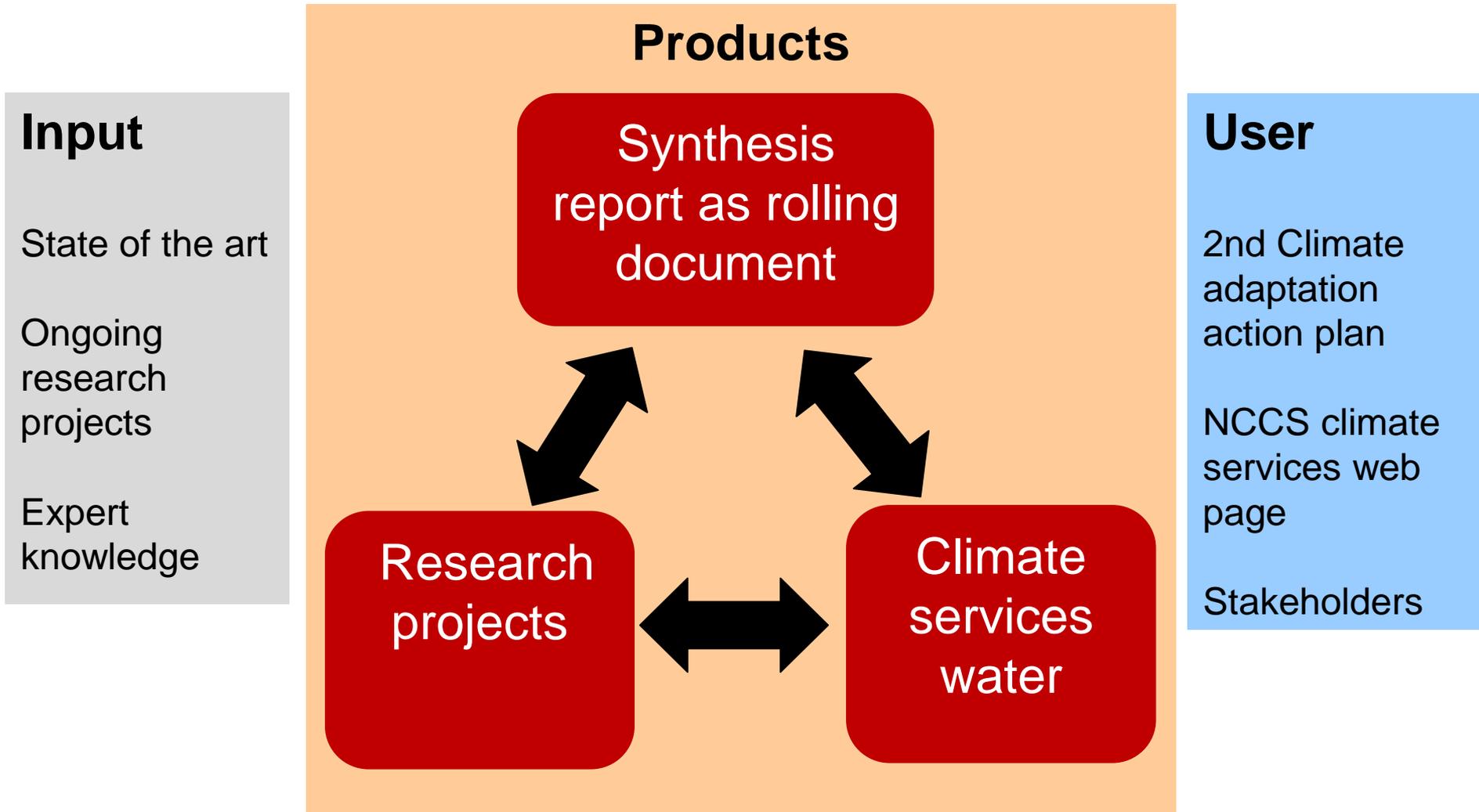
BAFU Projects

- Extreme precipitation events and floods (ETHZ)
- Low flow and groundwater (Uni NE, ZH and FR)
- Water temperatur (EPFL)
- Snow and glaciermelt (KHR, Uni ZH, WSL)

CH2014- Impact



Hydro-CH2018 Products





Where you can get involved

- **Compilation and integration of current research state (state-of-the-art) into synthesis report**
 - Adoption of responsibility for chapter (or part of chapter)
 - work funded by BAFU to 100%
- **Research projects**
 - BAFU will financially support research activities targeting research priorities
 - Priority is given to projects with additional external funds
 - Call in June 16
- **Development of climate services**
 - Ideas are welcome!
 - Further Information in 2017

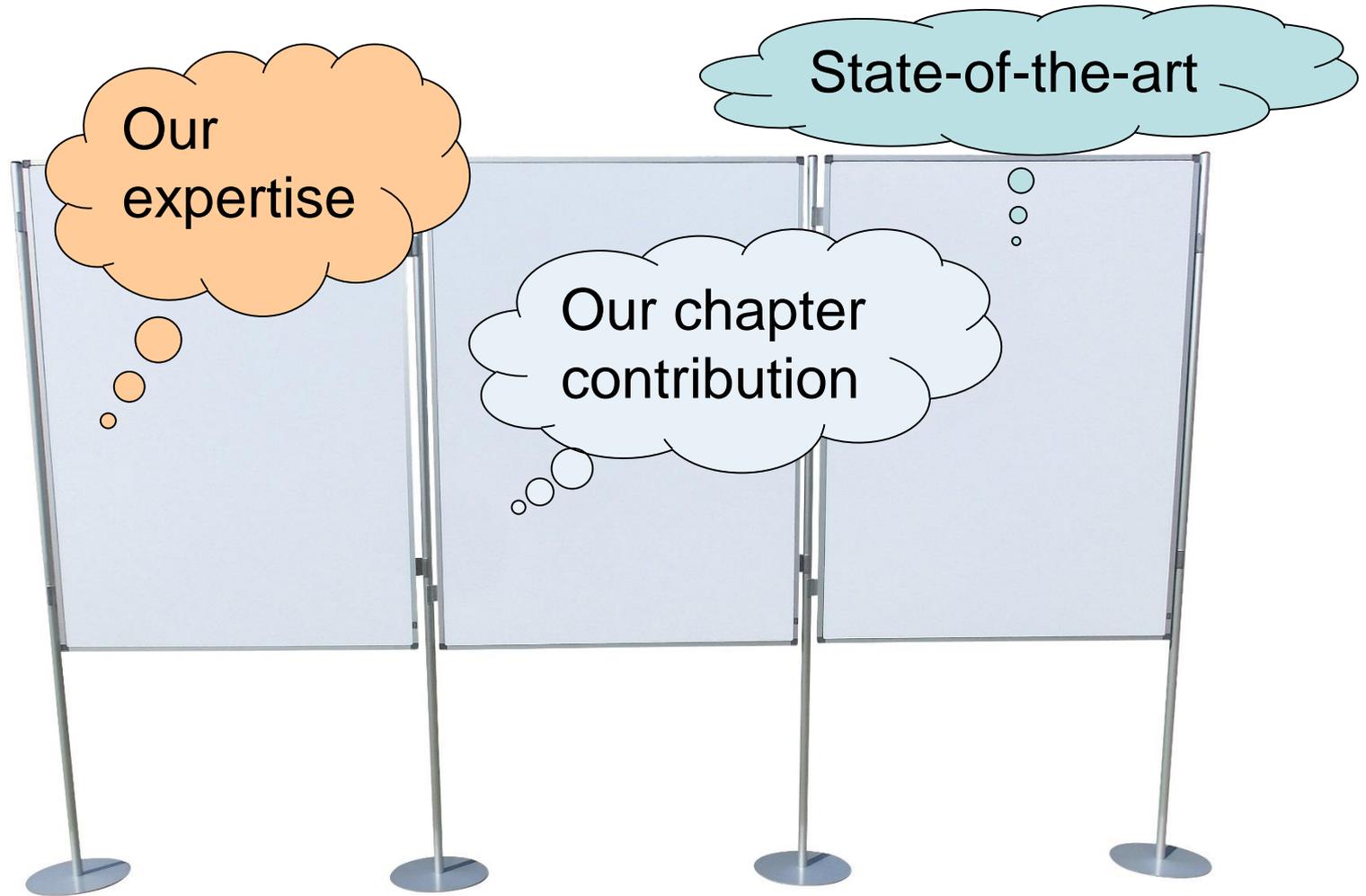


Milestones and timetable

19.5.16	Kickoff Workshop Olten
June 16	First call for <ul style="list-style-type: none">- authorship of chapters of synthesis report- research projects
September 16	Deadline for submission of proposals
Oktober 16	Project and author selection
2017	<ul style="list-style-type: none">• First version of synthesis Report• Second call for research projects• Evaluation of climate services
2018	<ul style="list-style-type: none">• Input to 2nd Climate adaptation action plan
2019	<ul style="list-style-type: none">• Publication synthesis Report• Publication of climate services



Your participation – Thank you!





Thank you!