EU-China
FAB Task Force
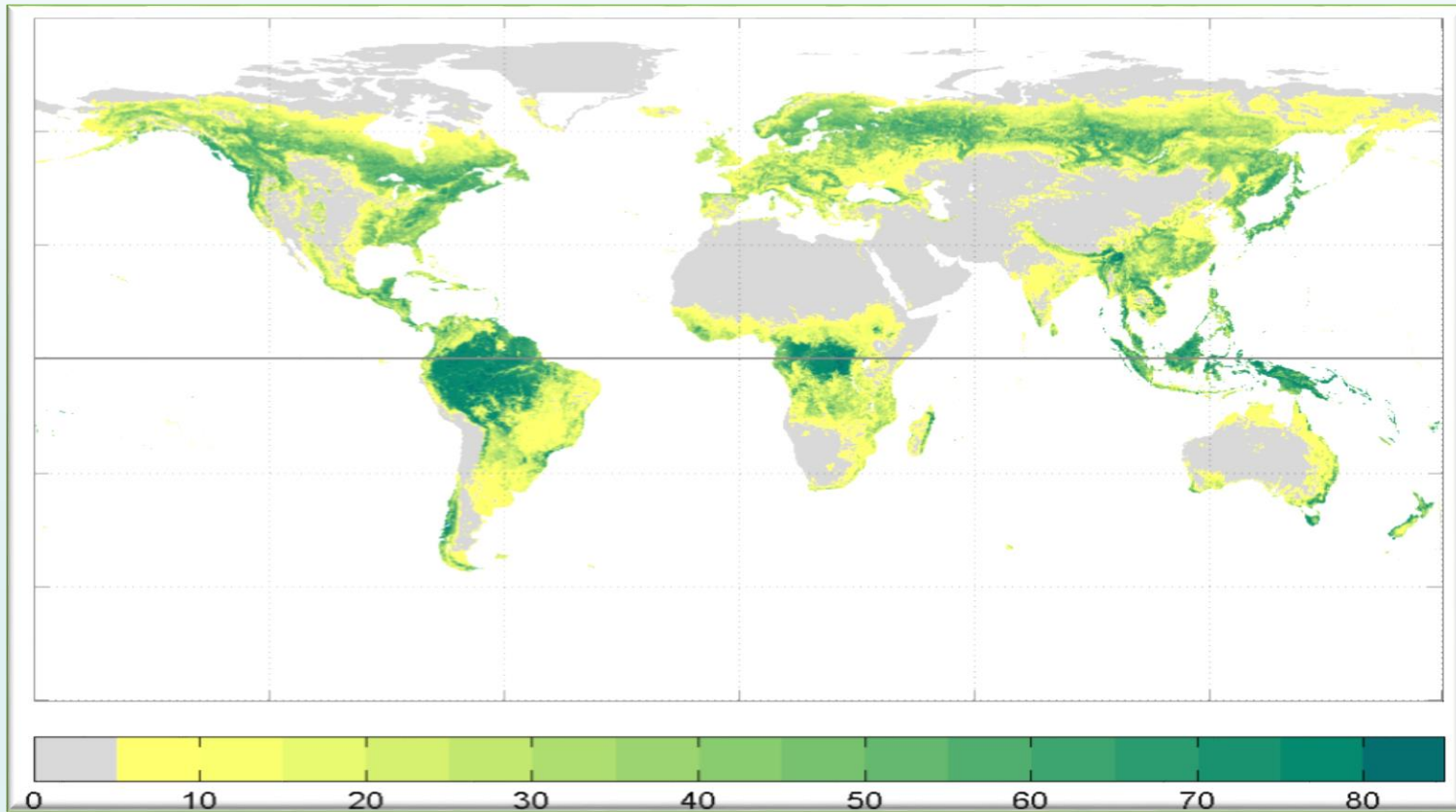## 26/03/2019

Report session on Forestry

Rapporteur: Ms Gu Yali

Three questions...

1. **Common challenges (EU–China)**

2. **How R&I can address them**

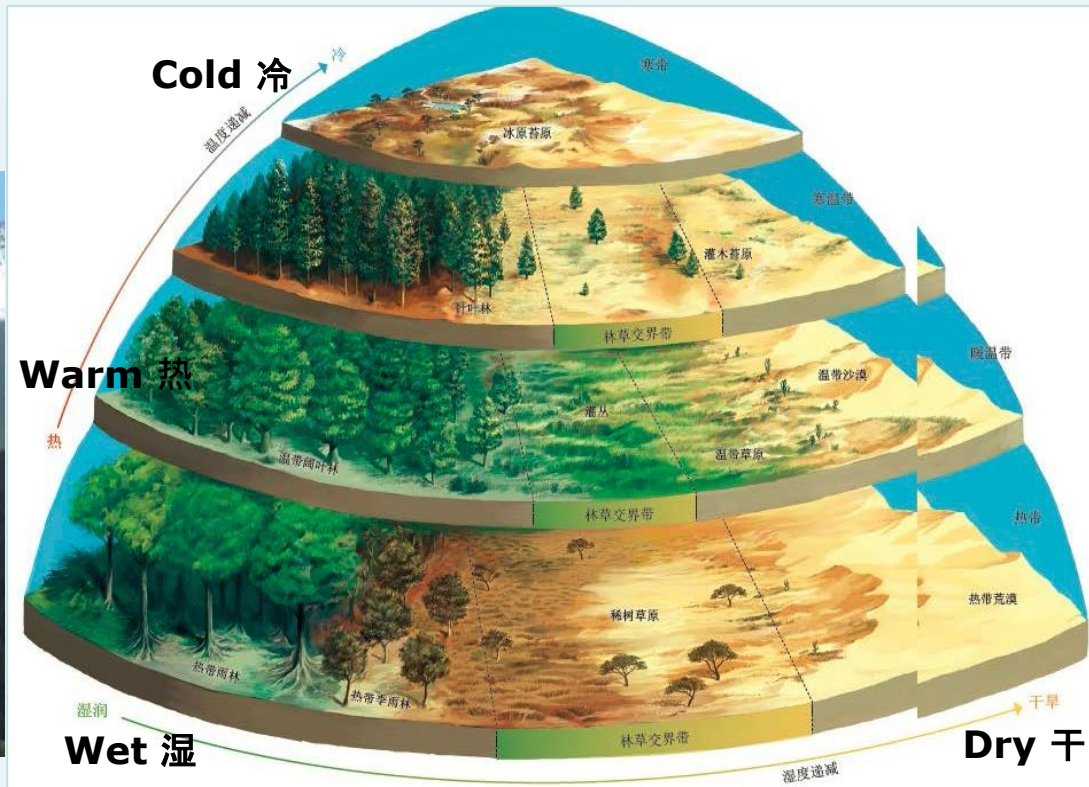3. **Best way of jointly tacking these challenges**
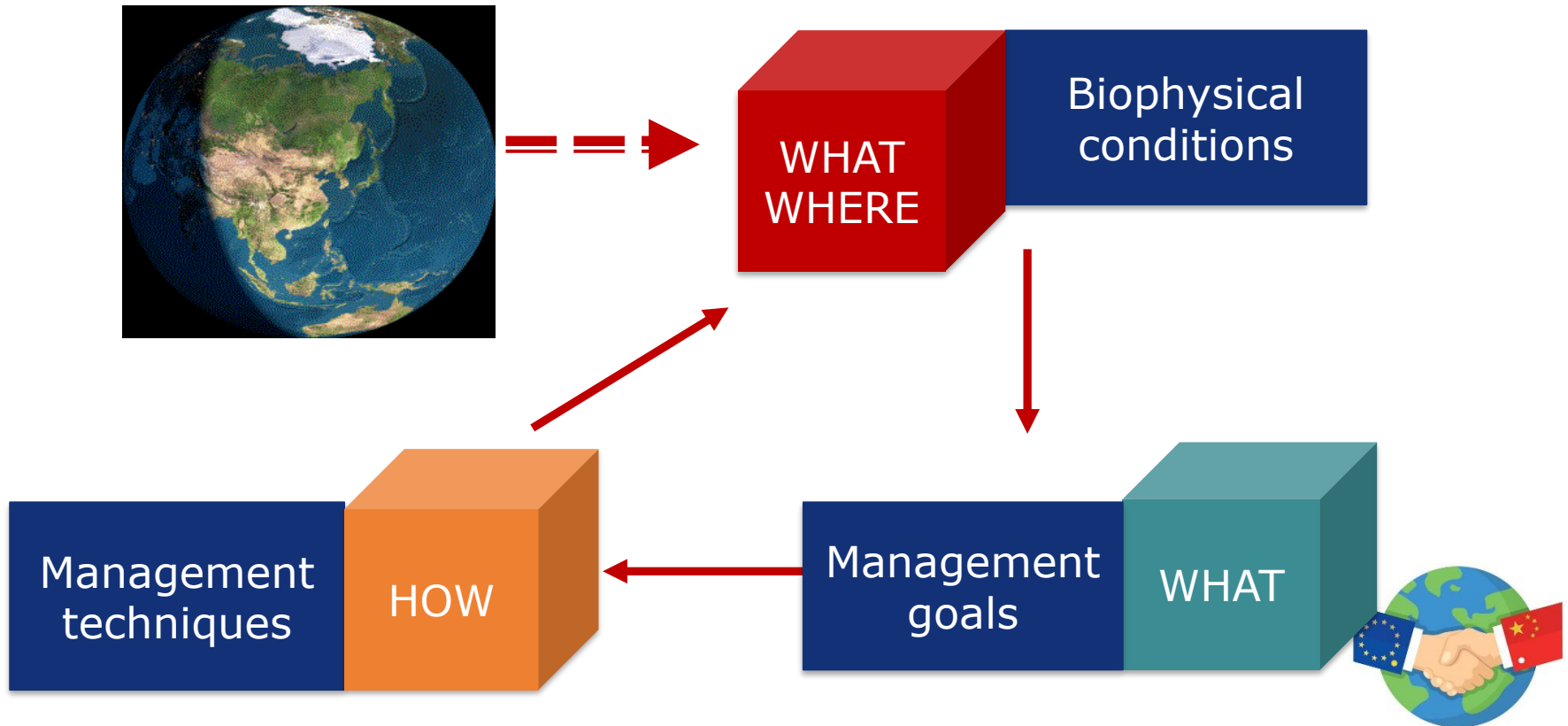
Forest covers about 1/3 of land area

Factors limiting/affecting forests

- *Climatic factors (precipitation, temperature, …)*
- *Site factors (topography, soil, …)*
- *Land use competition*
- ***Forest management***
- *…*

Cold 冷

Warm 热

Wet 湿

Dry 干

Overview of challenges from the EU and China

*All are changing (environment, forest, service supply and demand, **forest management**,…)*

Overview of challenges from the EU and China

- ***Biophysical conditions change***

- Quantification of uncertainty
- Future extreme events
- Impact on forests distribution
- Inadequate understanding of genetic basis for resistance
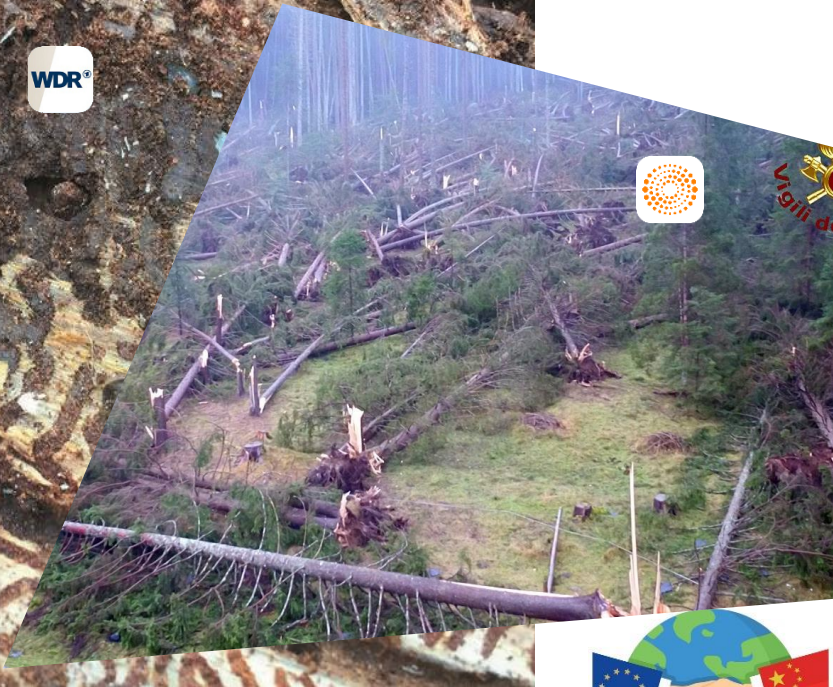
Biophysical conditions change

Europe in flames

How can we fight wildfires sweeping the continent - and is it too late to end the cycle?
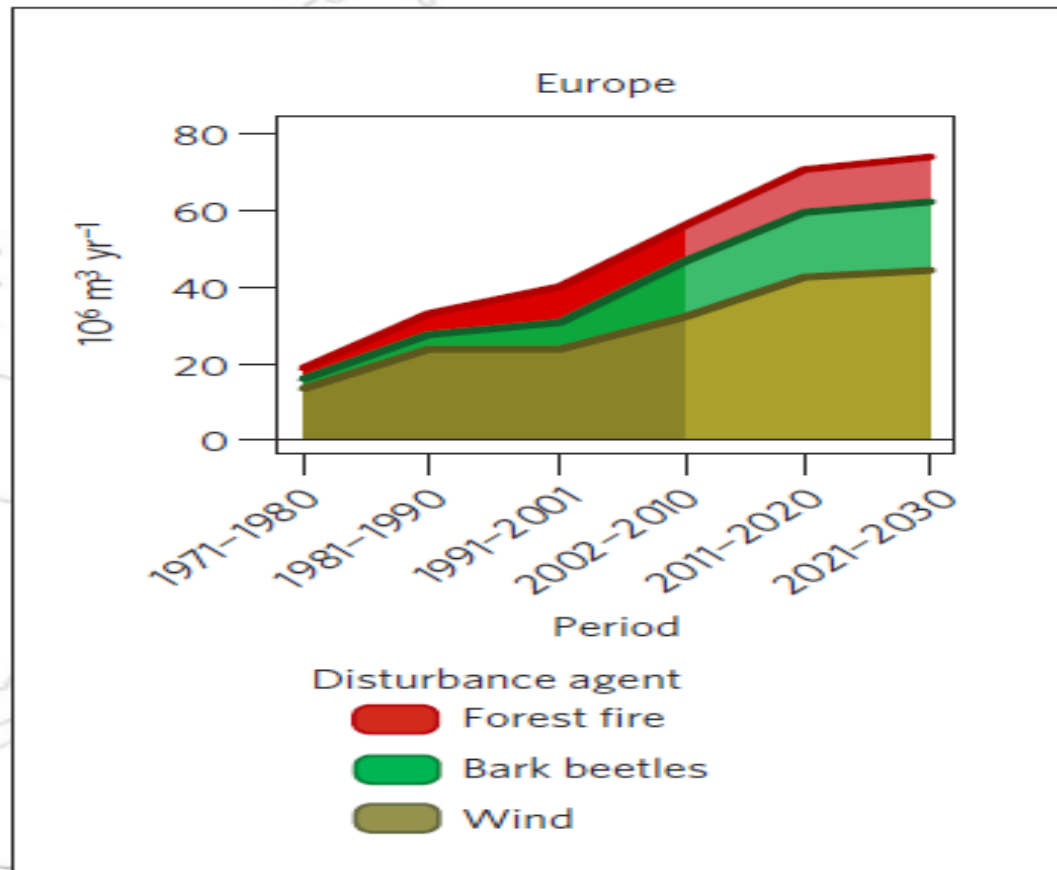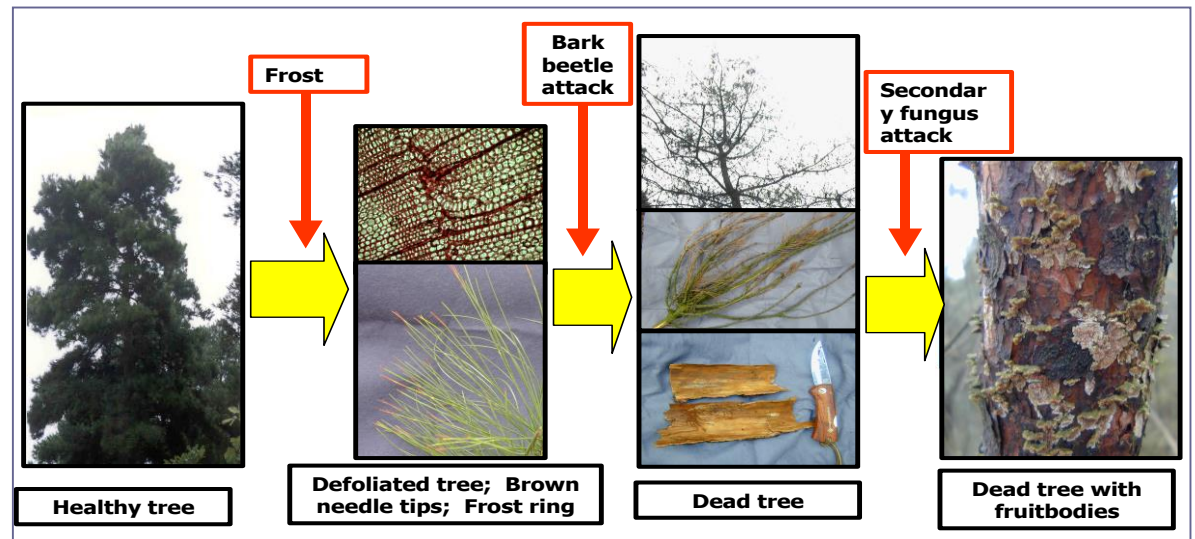
Bark beetles destroy two million spruces in

Italian storms claim 17th life, and 14 million trees

Disturbance risks triggered by extreme events

Biophysical conditions change

Insect attack on needles

Insect attack on stem bark

Healthy tree

Defoliated tree

Dead tree

Frost

Bark beetle attack

Secondary fungus attack

Healthy tree

Defoliated tree; Brown needle tips; Frost ring

Dead tree

Dead tree with fruitbodies
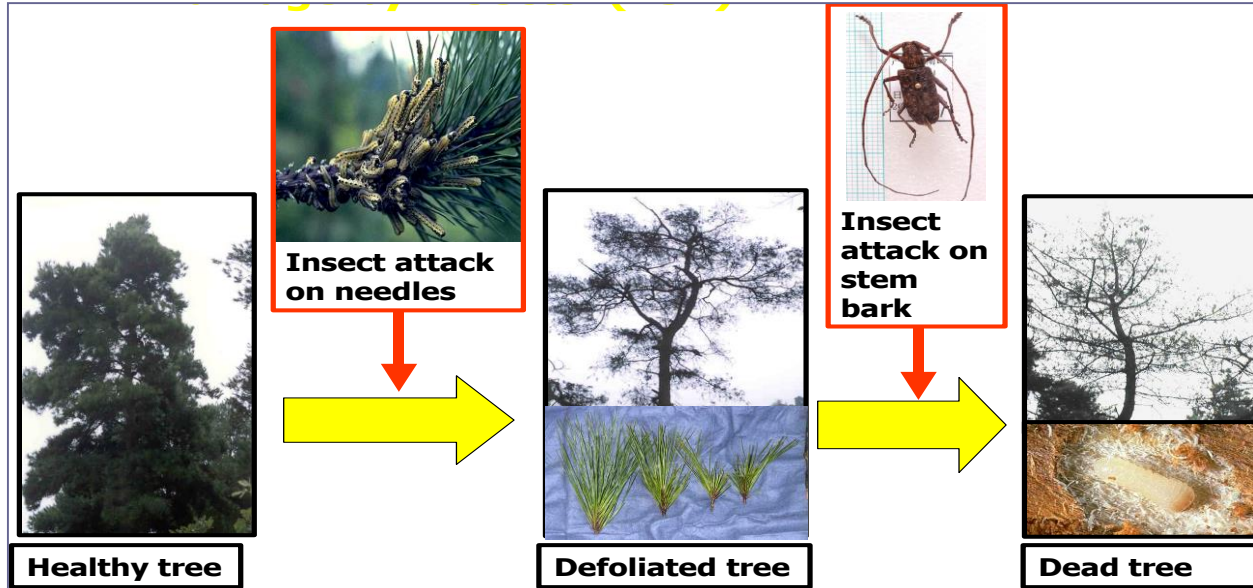
How R&I can address these challenges

Two types of needs:

- *Basic Knowledge*
- *Forest Management related issues*

The basic knowledge needs

We need to

- *Improve our understanding of **tree physiology and the response** to Climate Change & disturbances*
- *Boost our understanding of effects of **forest structure** on ecosystem services*
- *Enhance **adaptive capacity** of tree species and populations*

Forest management related issues

We need to

- *Develop **pro-active** forest risk management and approaches stressing **prevention and preparedness**.*
- *Establish forest management for **enhancing forest resilience***
- *Learn how to bring and use in **desirable genetic traits** Set up **multi-scale management** of ecosystem trade-offs in **multi-functional forests and landscapes**.*

Best way of jointly tacking these challenges

● Service response of function

Improved forest management
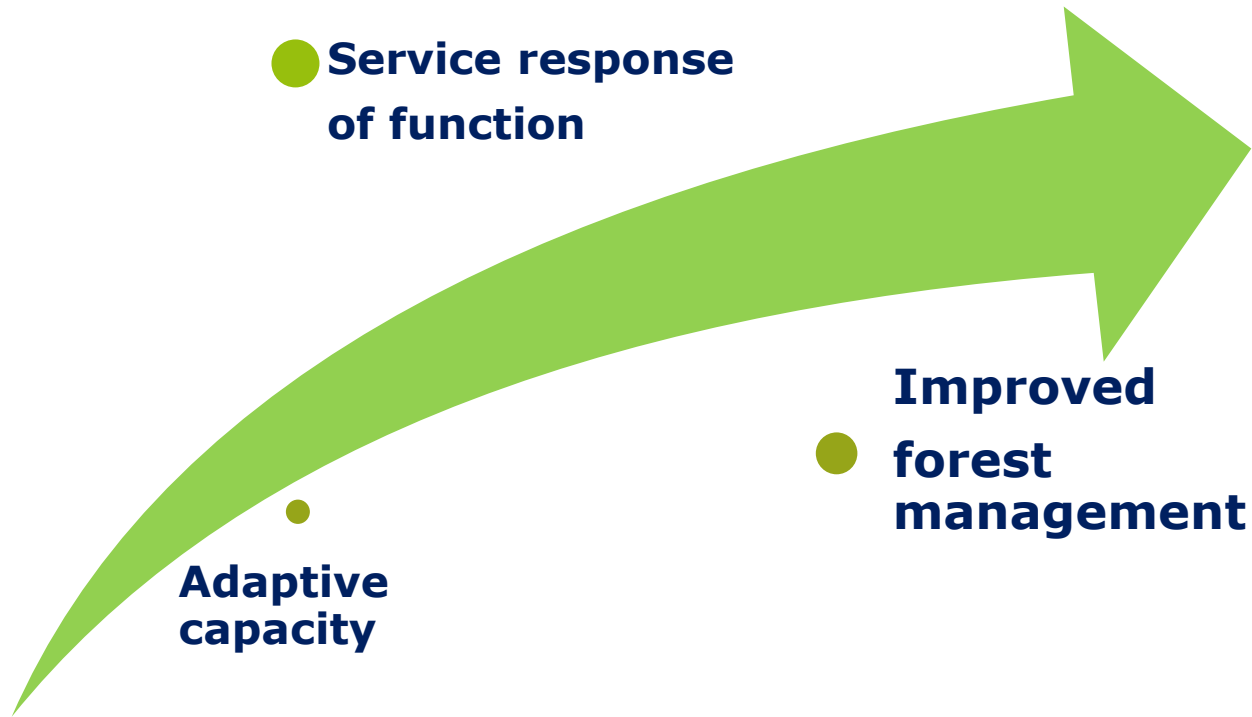
● Adaptive capacity

Best way of jointly tacking these challenges
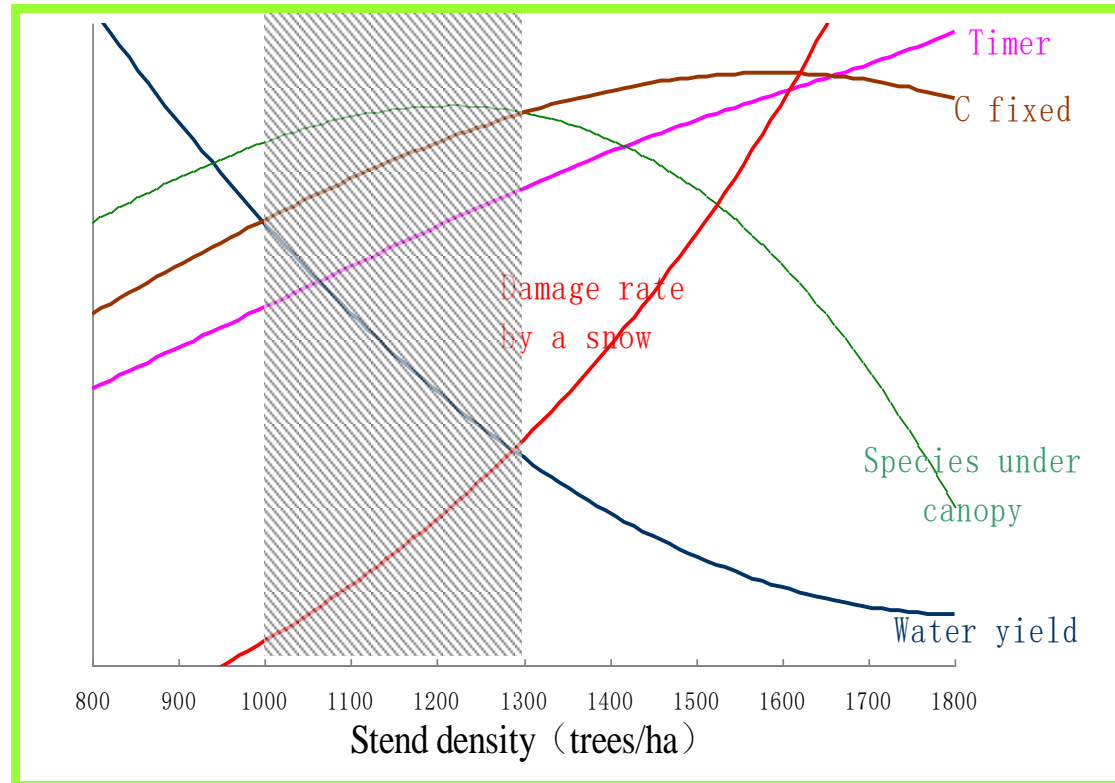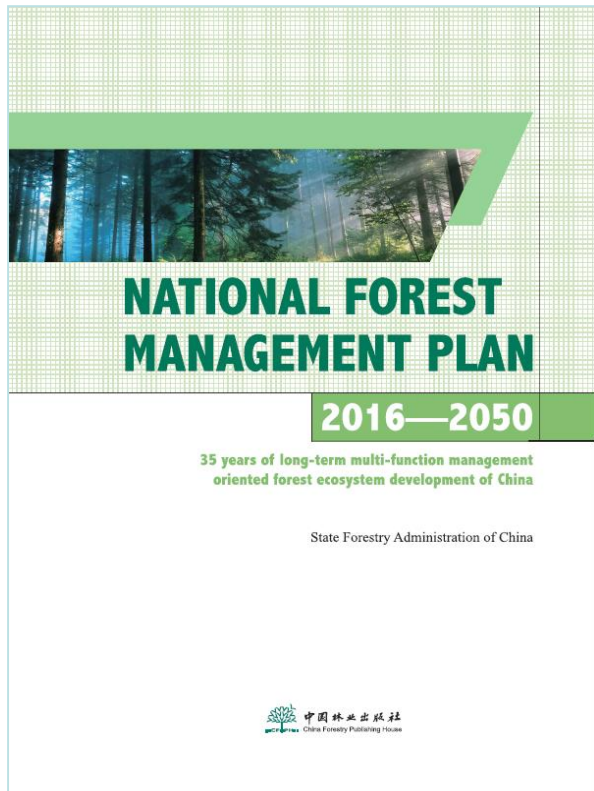
Best way of jointly tacking these challenges

Adaptive Capacity

Researches may cover:

- *Understanding & quantification*
- *Species adaptive capacity*
- *Physiological limits & resistant varieties*
- *Long-term monitoring on species by indicators*

Best way of jointly tacking these challenges

Service response of function

Researches may cover:

- *Balance provision of demands & services*
- *Adaptive multifunctional forest management*
- *Multiscale approach for ES (ecosystem services)*
- *Desirable genetic traits into natural population*

Best way of jointly tacking these challenges

Improved forest management

Researches may cover:

- *Decision support tools*
- *Pro-active risk management & Risk prevention & preparedness*
- *Management guidance for forest resilience*
- *Involve key actors in developing forest management*

Thanks!
谢谢 ！

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