

Easier and faster evaluation of complex Earth system models, Improved quality standard for model evaluation, easily expandable, coupling to Earth System Grid Federation (ESGF)

Eyring et al., GMD, 2020
Large-scale diagnostics

- **Large scale:** atmosphere, ocean, cryosphere, land processes, biogeochemical processes
- **Integrative measures of model performance**, e.g. performance metrics for essential climate variables

Lauer et al., GMD, 2020
Diagnostics for emergent constraints and future projections

- **Effective climate sensitivity (ECS) and transient climate response**
- **Emergent constraints**, e.g. carbon cycle, hydrological cycle, ECS
- **Climate model projections**, e.g. sea ice

Weigel et al., GMD (accepted)
Diagnostics for extreme events, regional and impact evaluation

- **Hydrological cycle**
- **Extreme events**
- **Evaluation for impact assessments**, e.g. heat and cold wave duration, combined climate index
- **Regional features**

