



Self-imposed evaluation of the Helmholtz Research School MICMoR as a tool for quality assurance and advancement of a structured graduate programme

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MICMoR at a Glance



- a graduate programme for ~30 doctoral students
- research: climate change in mountain regions, research at Atmosphere – Biosphere – Pedo-/Hydrosphere interfaces

- funded by Helmholtz Association: 01/12-12/17

- based at the Institute of Meteorology & Climate Research (KIT/IMK-IFU), Garmisch-Partenkirchen



- 7 partner institutions in Bavaria



- 04/15: 26 doctoral students, ~ 60 scientists



Aims of Evaluation



= Quality Control

- have original aims been reached?
- are doctoral students & supervisors satisfied?
- needs for further programme development?
 - focus on recruitment, training, community & networking, supervision, management
 - carried out by external expert
Dr. B. Scholz



Mixed-methods approach

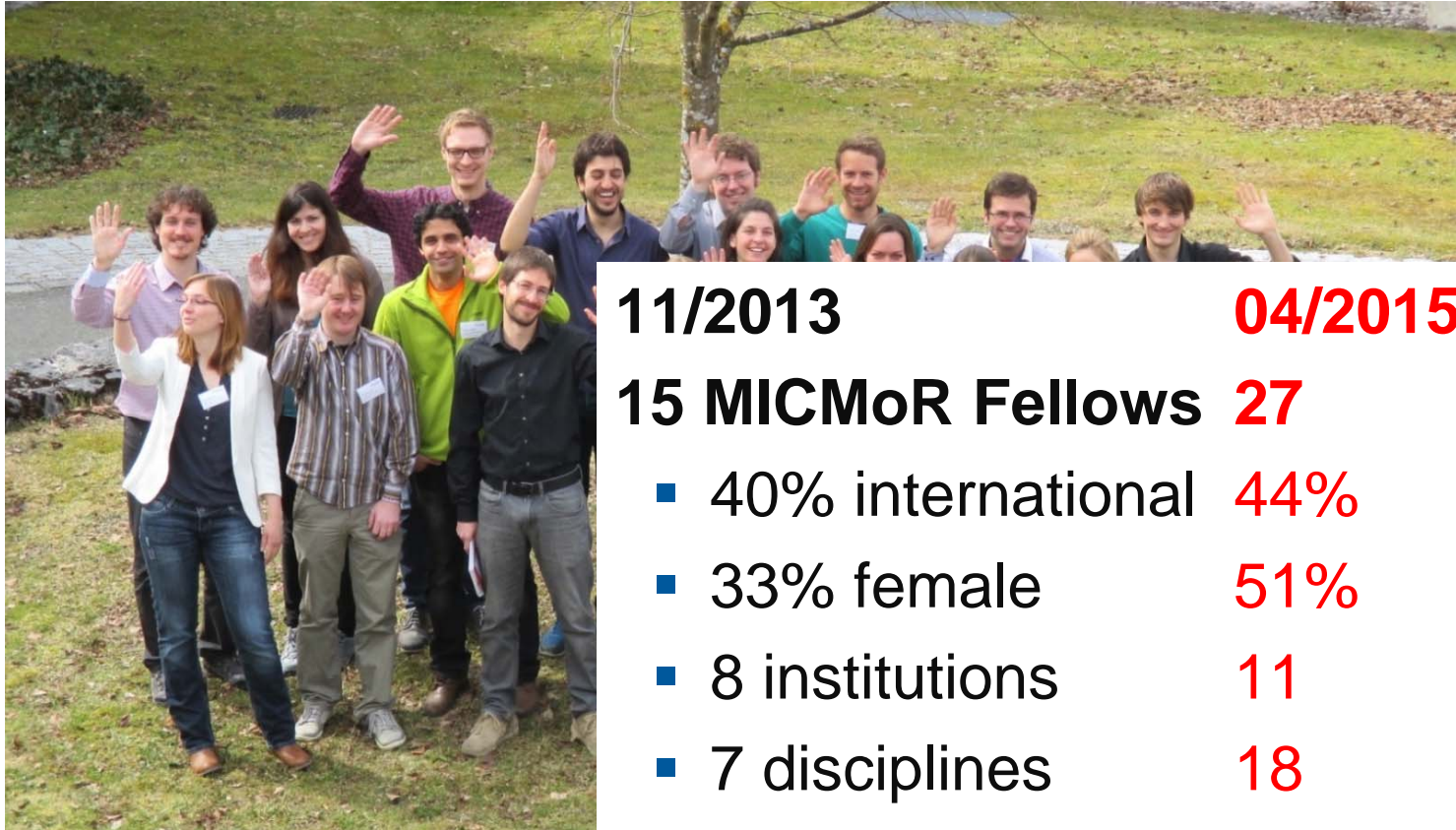


- questionnaires: 15 fellows & 38 supervisors / mentors (09/13)
- interviews: focus groups 1. fellows, 2. supervisors / mentors, 3. Steering Committee, 4. Coordination (12/13-02/14)
- benchmarking: compare with other programmes




final report presented at workshop with
MICMoR stakeholders (11/14)

Results: Recruitment & Fellows



11/2013	04/2015
15 MICMoR Fellows	27
■ 40% international	44%
■ 33% female	51%
■ 8 institutions	11
■ 7 disciplines	18



→ 2012 - 2015: 25 fellowships with supplemental funding

→ 2014 & 2015: 6 fellowships with full stipends

Results: Training



- Scientific Training

i.e. *Summer Schools & Technical Short Courses*

- high appreciation by fellows & advisors
- critical points: only details



Summer School 2014: *Examining mountain ecosystems in regional to global environments of carbon-cycling & climate*

- Professional Skills Training:

i.e. *Research Skills Development, Presentation & Communication, Career & Leadership, Research Funding*

- high appreciation by fellows



Fellows can shape the programme
→ graduate representative, needs analysis



Results: Community & Networking



5th Research Forum, Freising, 11/14



Fellows' Retreat 2014, Schneefernerhaus, Zugspitze

■ Research Forum (1-2 days):

→ *The MICMoR Community event, 2 / year, keynote talk & fellows' progress reports*



- high appreciation by fellows: present research & get feedback, stimulating atmosphere
- low attendance by scientists



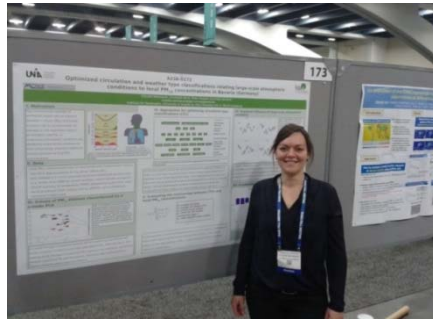
■ Fellows' Retreat (2-3 days):

→ *For fellows only, 1 / year, topics Mentoring, Visibility in Science, Ethics*



- exclusive fellow meeting appreciated
- important for team-building

Results: International Networking



AGU Fall meeting, C. Weitnauer, San Francisco, USA, 2013



Stay abroad, U. Mikolajczyk, Kings College, London, UK, 2014/2015

- Funds for conferences, workshops & research stay abroad
 - *with application & report*
 - popular among fellows & widely used



Results: Supervision I



Thesis Advisory Committee

1 supervisor, 2 mentors, different disciplines & institutions, meet 2/y

Supervision Agreement

with PhD outline, work plan, qualification plan

Does it work?



- in place for all fellows, seems to work reasonably well
- fellows: high relevance for qualification & project, appreciate that they are 'urged' to engage external mentors
- supervisors: helpful for doctoral process



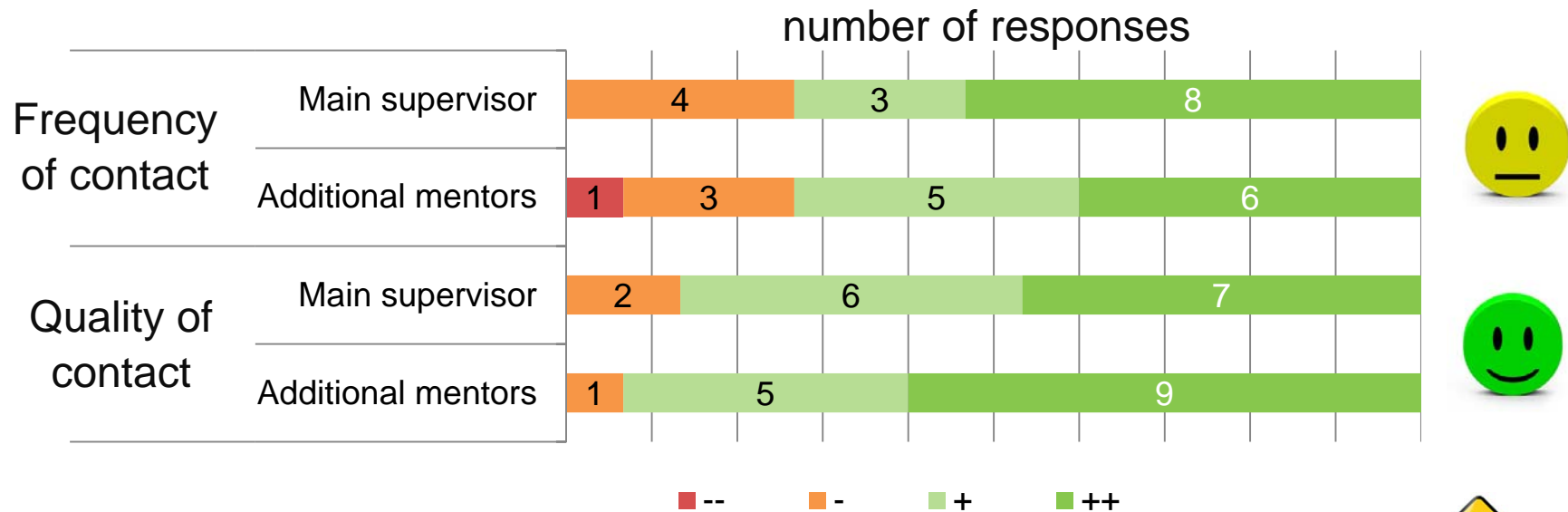
→ does not always work well, constant reminding needed

Results: Supervision II



The Supervision Process:

- fellows: high satisfaction with quality, less with frequency



- difficult to schedule meetings with 3 ,busy‘ scientists
- unofficial day-to-day advisor important, no official status



Results: Supervision III



Specific Elements:

- fellows encouraged by supervisors?

scientific & professional training: **93%**
conferences: **80%**
stay abroad: **60%**



- agreement with supervisors on achievements?

objectives & duration of doctorate: **93%**
work plan: **60%**
number publications: **53%**
number conference presentations: **20%**
stay abroad: **20%**



- fellows receive career advice? **46%**



Results: Supervision IV



Recommendations:

- draft guidelines for committee meetings, include agreements on qualification targets
- offer career coaching
- offer mentor coaching
 - supervisors originally reluctant, now: 15 of 34 support idea - „*useful for less experienced colleagues*“

Summary & Conclusions



Recruitment high internationality & interdisciplinarity,
balanced gender ratio



Training high quality training



Community & Networking fellows \uparrow , scientists \downarrow
 \rightarrow enhance motivation & cooperation
among scientist, set up alumni network



Supervision in place & \pm working
 \rightarrow include qualification targets, offer
career & mentor coaching



**Evaluation as valuable tool for
quality assurance & advancement**