



**Minutes 4<sup>th</sup> Retreat CRC 990**  
**May 8 – 9, 2014**  
**Landhotel Am Rothenberg, Volpriehausen**

The documents are stored on the SharePoint in the folder *Retreat\_2014* (under Events - Retreats): [https://sharepoint.uni-goettingen.de/projects/sfbindo/\\_layouts/15/start.aspx#/Events/Forms/AllItems.aspx](https://sharepoint.uni-goettingen.de/projects/sfbindo/_layouts/15/start.aspx#/Events/Forms/AllItems.aspx)

**Thursday, May 8**

**1. Status of project progress**

- The summary PowerPoint report from the management / coordination is available in the subfolder *Project\_Progress\_Interdisciplinary\_Collaboration*.

**2. Status of research of project groups**

- The presentations of the project groups A, B, C, Z02 and INF are available on the SharePoint in the subfolder *Research\_Groups*.

**3. Status of research of the foci 1 to 4**

- The presentations of the foci speaker are available on the SharePoint in the subfolder *Foci*.

**4. Interdisciplinary collaboration – feedback by junior scientists**

- The strengths and weaknesses of the existing framework for collaborative project work has been presented by the junior scientists.
- The summary / concluding report is available in the subfolder *Project\_Progress\_Interdisciplinary\_Collaboration*.

**5. Internal evaluation of the CRC**

- The criteria for internal evaluation – as agreed by the PIs – are available on the SharePoint in the subfolder *External\_Internal\_Evaluation*.

**6. External evaluation of the CRC**

- The Executive Evaluation Report of Dr. Amini is available in the subfolder *External\_Internal\_Evaluation*.

**7. Status on collaboration –Indonesia**

- The summary PowerPoint report of the management of the Indonesian University Consortium is available in the subfolder *Project\_Progress\_Interdisciplinary\_Collaboration*.

**8. Publication policy**

- The final agreement – as agreed by the members and counterparts of the CRC – is available on the SharePoint in the folder *Legal Documents*:  
[https://sharepoint.uni-goettingen.de/projects/sfbindo/\\_layouts/15/start.aspx#/Knowledge\\_Base/Legal%20Documents/](https://sharepoint.uni-goettingen.de/projects/sfbindo/_layouts/15/start.aspx#/Knowledge_Base/Legal%20Documents/).



**Friday, May 9**

## **9. Thematic focus of the 2nd phase**

### **A. Draft research strategies**

- The presentation is available on the SharePoint in the subfolder *Thematic\_Focus\_Research\_Strategies*.
- As kick-off the draft research strategies for the second phase were presented as (thematic) topics for discussion in groups A, B and C.
- The overarching themes focus on “Variability of transformation systems and social structures and their impact on biodiversity and human welfare”. The core questions following from this overarching strategy are
  - a) Plantation management in oil palm and rubber
  - b) Plantation age / stage of development in oil palm and rubber
  - c) Ethnicity and livelihood strategies – variability across households

### **B. Integration of livestock in oil palm plantations**

- The presentation is available on the SharePoint in the subfolder *Thematic\_Focus\_Research\_Strategies*.

## **10. Group and plenary discussion**

**Feed-back of the groups to the plenum** (as given on PowerPoint slides by group representatives)

### **Group A - Environmental processes**

- The presentation is available on the SharePoint in the subfolder *Thematic\_Focus\_Research\_Strategies*.

### Joint interdisciplinary approaches and conceptual framework / analytical dimensions for the second phase:

- Hot spots- hot moments / shocks: include the inundated / peat sites within our study region that might be over proportional important (trace gases, corridors for fauna, ready for restoration), short-term changes after transformation, trees outside of forests
- Life cycle assessment: include a few different age classes: soil organic carbon, trace gases, water fluxes (exist already), improve nutrients management: opportunity for links with B and C
- Create hierarchy of sites: VIP, ...: no intensive measurements anymore on forest and Jungle Rubber



## **Group B – Biota and ecosystem services**

- The presentation is available on the SharePoint in the subfolder *Thematic\_Focus\_Research\_Strategies*.

### Joint interdisciplinary approaches and conceptual framework / analytical dimensions for the second phase:

- Temporal and spatial variability in the transformation systems
- Focus on management variability (link to socio-economic groups)

#### Temporal variability

- Interannual variability of the core plots
- Age of the system (young to old)
- Land-use history (time since forest conversion)

#### Spatial variability

- Management gradient from high to low intensity
- B11: enrichment experiment
- Cattle farming in oil palm plantations
- Landscape context (from near-natural surroundings to a monotonous matrix)
- Regional context: soil differences, microclimate

## **Group C – Human dimensions**

- The presentation is available on the SharePoint in the subfolder *Thematic\_Focus\_Research\_Strategies*.

### Joint interdisciplinary approaches and conceptual framework / analytical dimensions for the second phase:

- Variability plus processes / dynamics
- Contextualization of transformation
- Theoretical conceptualization / theory building (together with A and B)

#### Topics

- Interactions and flows between human and environment, i.e. migration, innovation, transformation, rural-urban systems, linkages
- Drivers of transformation from outside
- Factor markets, i.e. labor, land, water, inputs
- Environmental implications of production and consumption, i.e. impacts of household decisions and policies on ecosystem services
- Ecosystem services, i.e. governance of ecosystem services, assessment of ecosystem services, functional vs. local biodiversity
- Transformation systems, i.e. costs of replanting, productivity / sustainability
- Risk / vulnerability / polarization



#### Links to natural sciences

- Ecosystem services
- Yield dynamics / investment dynamics / income dynamics
- Management intensities
- Heterogeneity of productivity and the role of biodiversity
- Land / water governance and markets

#### Plenary discussion - Minutes

The plenary discussion centered on

1. Thematic focus
2. Site selection / plot selection
3. Further procedure

##### 1. Thematic focus

- Variability and life-cycle assessments (LCA). LCA covers a broad spectrum of scientific themes (e.g., analysis of ecosystem services, socioeconomic dimensions and human well-being). Based on LCA both ecological / natural systems and economic and social demands can be investigated:
  - o Discussion of innovative aspects of LCA as compared to “variability”.
  - o LCA can be linked to socio-economic perspectives and decision-making; for example, trees are getting older and the farmer has to adjust his management accordingly.

##### 2. Site selection / plot selection

- General point to consider: Bukit Duabelas region has 2 different soil types.
- Extension of study sites (e.g. to study variability) is not feasible for both regions. Focus on sites – both new ones and persistent ones - that help analyzing important topics / questions:
  - o age of oil palm – more useful to research in Harapan region
  - o role of riparian areas
  - o impact of oil palm on water quality and quantity (important aspect from Indonesian perspective)
  - o temporal variability and scaling up
- Variability at restricted sites – slopes, riparian systems, swamp areas
- Evaluation of biodiversity, ecosystem services and human well-being, and the linkage between groups A, B, C is only possible on a system level, i.e. beyond core plots.

##### 3. Further procedure

- Consensus to establish an interdisciplinary working group on
  - o Development of theoretical framework
  - o Formulation of overarching hypotheses
  - o Theory forming including policy perspectives
- The concept will be discussed with the Joint Management Board.