

Minutes of the General Assembly

20-22 November 2013 – Toulouse – France

Participants

Coordination: Guillaume Decocq (also WP1 & WP6 leader, SM N France), Kris Verheyen,

WP2: Steffen Ehrmann, Stefanie Gärnter

WP3: Marc Deconchat (leader, SM S France), Brice Giffard, Emilie Andrieu

WP5: Elsa Varela

WP6: Elena Górriz

Other site Managers (SMs): Jörg Brunet (S Sweden), Sara Cousins (C Sweden), Martin Hermy (Belgium), Martin Diekmann (NW Germany)

Others: Pieter De Frenne (Belgium), Jessica Lindgren (C Sweden), Pallieter De Smedt (Belgium), Alicia Valdes (N France), Marie Carles (local organisation, Toulouse).

Could not attend the meeting: Karin Hansen (leader WP4; proxy to Guillaume Decocq), Michael Scherer-Lorenzen (leader WP2). Monika Wulf (SM NE Germany), Jaan Liraa (SM Estonia)

All presentations are available on the website (intranet): <http://www.u-picardie.fr/smallforest/uk/>

Decisions are reported below in blue

20th November 2013

13.30 Welcome

The meeting is held at the INRA centre of Castanet-Tolosan and has been organized by Marc Deconchat and collaborators. **Special thanks to Marie Carles for the practical organisation.**

End of the second year of smallFOREST: time for an update about the field work done so far and how it will be valued in the forthcoming months.

13.45-15.50 WP1: the database and what we can publish on it

Presentation by Alicia; see ppt "WP1 (Alicia).pdf"

- The **second year of fieldwork** is over. Overall, the planned work has been completed. N=16 windows containing 708 geolocalized fragments with information (patch sketches for Toulouse are available but not yet sent to Amiens) and species composition.
- It is possible to incorporate all the information collected in each WP into the same geodatabase
- Second draft of the paper (provisional title: *Drivers of herbaceous species diversity in small forest fragments along a latitudinal gradient*) – see ppt.

→ the concept of highly vs lowly managed agriculture landscape must be clearly defined (e.g. by the total energy input through fertilizers, pesticides, fuel for tractors...; permeability with respect to species movements).

→ PCA on landscape variables: retain PCA axes themselves (but not necessarily meaningful) or the 4 most relevant variables along each axis? Is this really a problem to have an unbalanced number of variables in the GLM?

→ problem of the scale at which gamma is measured which is not a "broad" scale; gamma would rather be defined at the window scale and alpha at the patch scale (or plot scale when several plots within a patch)

→ concern about using tree diversity as a index of biotic heterogeneity

→ target journals: *Global Ecology and Biogeography* (first priority), *Journal of Biogeography*

- The way ahead - some information has not been valued yet: abundance data, patch sketches, analyses at the window scale, woody plant diversity (to be combined with WP2), forest integrity/ancient forest species, response of some target species (which ones?), etc.

- other ideas: how the strength of the relationship between diversity and independent variables change along the gradient (SEM?).

→ Alicia will prepare v.2 of the manuscript and distribute it to all partners*. SMs decide who has to appear in the author list; WPs who are not SMs can contribute if they want (based on a significant input in the writing and editing of the ms that justifies co-authorship).

*Two email lists will be created (e.g. smallforest@u-picardie.fr): 1) One general list including all people involved in smallFOREST and 2) one smaller list (e.g. smallforestpaper@u-picardie.fr) including only the SM and the scientists (not technicians, etc.) involved in the WPs. The latter list will be used to distribute paper proposals and drafts of ms.

16.10-17.00 WP2 & WP4

Presentation by Steffen; see WP2&WP4 (Steffen).sng

- Taxonomic & functional diversity

Data collection is completed. PCQ, structural group of 4, species ID of up to 12 trees per plot, dead trees, D130, tree height, stems per individual, BA

Results on C-storage and biodiversity will be available at the end of 2nd semester 2014.

→ functional traits to be analysed still have to be defined (for both overstory trees and understory herbs and shrubs) to get the final results.

Planned paper: patch and landscape drivers of C-storage and sequestration in biomass and soils (target: 2nd trimester 2014)

- Stemwood production & nutrient availability (see also WP4 (Karin).ppt)

Stemwood production: results available soon.

Nutrient analyses: in progress

Analysis of soil samples in progress (ca. 1499 soil + 1499 litter samples!) for pH, total C, total N, total and available P

Planned paper: relationship between biodiversity and N pools, pH and P availability

- Ticks

Tick collection is completed (plot level within VIPs). Prevalence of Lyme disease and encephalitis to be determined (2nd-3rd trimester 2014), but cost-limited.

Planned papers: (i) meta-analysis on forest fragmentation effects on Lyme disease, ticks and mammals (target: 1st trimester 2014); (ii) landscape drivers of tick abundance and tick-borne disease prevalence (target: 1st trimester 2015).

- Mushrooms (Olivier; presentation by Guillaume; see Mushrooms (Olivier).ppt)

Following the last GA a lighter sampling protocol has been proposed. So far, data received from N France, Belgium, S Sweden; to come from C-Sweden. Missing data: NW and NE Germany (2013 has been a bad year for mushrooms!). **No news from S France and Estonia.**

Forthcoming steps: species identification and incorporation into the database.

- A set of functional traits still has to be defined, depending on the needs of the other WPs, for computing functional biodiversity of both under- and overstories. Stefanie will do the work
- Edible plants: to be sorted for the species lists (Martin H & Alicia will take this in charge)
- Mushrooms: SMs are invited to communicate to Olivier whether (and when) they will send some data

17.00-18.00 WP3

- Update (Marc & Brice; see WP3 (Marc&Brice).pptx)

- Brice (Postdoc WP3 in Toulouse) focuses on “big” forest carabids that are all expected to be slug predators in adjacent croplands.

- Several parts of WP3 have been dropped because too time-consuming or technically difficult to achieve: (i) part of task 3.1: trapping in adjacent croplands; (ii) task 3.2: predation efficiency; (iii) Slug trapping: this has been done but almost no result (but slugs were trapped into carabid traps).

→ this will be counterbalanced by a deeper analysis of ground beetles thanks to Ludmilla (PhD student in Amiens → all carabids will be identified) and Pallieter (PhD student in Ghent → spiders, centipedes, millipedes, isopodes will be identified) = “arthropod task force”.

- Brice’s postdoc ends in 2013, before any data analysis and beetle sorting will be completed.

- More than 4000 traps collected (NB: ca. 4€ per trap), few have been destroyed. Sorting in progress → end expected between late February and March 2014.

- Problem with Estonia: only big carabids can be used? (beetles were kept frozen in plastic bags instead of being placed in alcohol, hence very bad conservation of material). Also there has been only 15 days between the two samplings (but should not be a major problem).

Planned: flux analyses (Brice), biodiversity analyses (Ludmilla)

→ The “arthropod task force” must do all its possible to sort all samples by the end of February 2014. Brice will then identify malacophagous big carabids. Ludmilla and Pallieter will progressively identify the rest of the samples.

- First results on arthropods (Pallieter; see Arthropods (Pallieter).pptx)

To be analyzed further: impact of target variables such as forest age, land use intensity, potential for pest control, microclimate, GDH. **Very interesting results for community ecology.**

- Papers to be derived

First papers are planned at autumn 2014.

21st November 2013

8.00-15.00 Field excursion in the two study windows of S France

- visit of the openfield landscape
- visit of the bocage landscape

15.20-17.00 WP5 (Elsa; see WP5 (Elsa).pptx)

- Total economic value (TEV) approach: estimation of annual flows (€/ha/year) including use value (direct & indirect; market value), option value, non-use value. Market price available for wood, hunting, carbon, recreation, tick-related disease. No market price available for biodiversity, recreational possibilities.

→ the information provided by SMs is very heterogeneous; **no information received from Estonia.**

- Valuation surveys: conducted in France (in progress) & Belgium (completed). Transferability to other regions? (e.g. difficult in Sweden where the amount of forest is not relevant but the broadleaf forest area is). Estimates from the choice cards/scenarios (Wald procedure): linear function incorporating landscape type, patch area, age, structure, bird/insect/plant diversity; significant differences between the two landscape types; € per additional unit/person*year. → preliminary results (see ppt).

→ data from Belgium under analysis; data from N France to come and be analysed; benefit transfer functions and integration in Summer/early Autumn 2014

- planned papers: estimates of market values? (difficult due to the limited quality and heterogeneity data gathered till now → SMs still can send data to Elsa to improve the first data set they sent); Belgian and French valuations (+++, alone or merged with cognitive mapping study and/or Elena's study); benefit transfer? (too early to state).

- cognitive mapping (**Frédéric; presentation by Guillaume; see Cognitive mapping (Frédéric).pptx**)

The methodology for data analyses has been developed, as well as the related GIS tools and software. Differences between the objective space and the cognitive space (as drawn on sketch maps) will be analysed at two levels: a geographic one, and a morphometric other, using 2-D spatial regression analysis.

Data received (or almost received) from all regions **except NW Germany and S France**. Till now, only N French data have been analysed to test the method and tools.

Immediate research questions: correspondence between the differences of attributes and differences in location? For who / where the strongest differences are observed?

→ Marc will try again to get more maps from S France; in progress in NW Germany

→ Guillaume will post papers about cognitive mapping on the intranet.

17.15-18.30 WP6 – Part I – update on policy instruments (Elena; see WP6-I (Elena).ppt)

- General presentation of methods and outcomes

DPSIR framework: **Driving forces** (causes) → **Pressures** (Process) → **State** (outcomes) → **Impacts** (problems? to whom?) → **Responses** (Policy instruments) → feedback on **D, P, S** and **I**.

Typology of policy instruments: sticks (command-and-control), carrots (economic incentives),

sermons (information). Instruments are to change someone's behaviour, embedded in an institutional context, have some costs & benefits. Ideally they should have some numerical targets; someone should control its enforcement; and there should be some monitoring.

Instrument description: title, objective, promotor, payment/no payment, start year/status, who can/has to participate, what has he to do, costs, control/monitoring, alternatives

Effectiveness assessment, Efficiency, Equity/fairness

Triangulation importance: quantitative data, qualitative assessment (experts), field observations

- How to conduct the study

Steps: 1) instrument selection (2 per region), 2) Excel file to be completed, 3) Missing data, 4) Stakeholders' identification & interview preparation, 5) sending all: excel + Interviews' notes + list of interviewed stakeholders

Aims of interviews : to decide on the instrument relevance ; to provide with non-published data ; to assess their effectiveness/efficiency/equity perceptions

Stakeholders report: interview guideline; table: type of stakeholders, type of meeting, number.

→ No information received yet from **Estonia and S France**

→ Next steps: data provision until February 2014; data analysis & report writing till April 2014; paper writing & communication to a Conference in June

- Potential paper

Policy instruments affecting small private forest patches: a cross-Europe travel over broadleaves remnants.

→ Marc will send the information for S France next week; when some data were missing in the previously sent Excel files, SMs are invited to complete them.

→ Elena will now work individually with SMs to prepare stakeholder interviews (e.g. individual Skype meetings)

22rd November 2013

9.00-10.30 WP6 – Part II

- The synthesis for the final product (Kris; see WP6-II-SmallFOREST synthesis.pptx)

Project papers to be derived: intra-WP (e.g. WP1), inter-WPs (e.g. WP2+WP4), all-WPs (e.g. a "all-in-one, big paper")

Uniqueness of smallFOREST: very large gradient; true ES approach; integration of socio-economics → maybe the largest data set available containing biodiversity metrics and ESs that have been quantified in natura. Enables us to go beyond multifunctionality towards services and their socio-economic aspects.

6 ES indicators (**proxies**) available at the patch level: mushroom/edible plant abundance, wood stock, C stock, N&P soil stocks, woodlice & millipede abundance, carabids, ticks.

→ potential vs actual ESs would be worth to analyse

→ scale: some ESs are rather at the LW than patch scale (e.g. roe deer density)

Way of proceeding: analyses of the "big matrix"; meta-analysis type (better able to cope with missing values); scenarios of change – impacts on biodiversity and ES – link with policies

→ dedicated small working group?

To be checked: data gaps (mainly Estonia & S France); common database; possibility for upscaling from the patch level to the landscape level using WP1 data
→ what is the more relevant ES classification: Costanza's one used in the project proposal or the TEEB one?

It is needed to incorporate all data gathered in the different WPs in the same geodatabase (e.g. Excel spreadsheets linked to the patch in the geodatabase for carabids). Metadata matters (name of investigator, dates, etc.).

→ All ideas for papers should be reported on the dedicated Excel file, which was prepared by Karin and posted on the intranet and should be circulated by the email list smallforestpaper@u-picardie.fr (see above)

→ a dedicated group of post-docs coordinated by Guillaume & Kris will start to work on the planned "all-WPs integrative paper"

- Dissemination and stakeholder interaction (Guillaume & Kris; see Dissemination & General discussion.pptx)

Regional Committees of end-users should be built as soon as possible (depending on the regions, one per LW or the same one for both LWs).

A meeting of a Supranational stakeholder advisory board should be organised at the end of the project for transferring the results; if possible, to be combined with FunDivEurope.

Dissemination targets (i) scientists → collectively done within the smallFOREST consortium; (ii) stakeholders → Regional Committees of end-users should be used for this purpose; technical bulletins of various stakeholders are usually open for dissemination of research results; (iii) general public → general public version of main results to be posted on the website (using national languages?); fact-sheet written in national languages should be disseminated in each region (English and French versions already available; contact Marina); toolkits for teaching; press release (not only the results but the study itself and its overall objectives and background).

→ Any action of dissemination (e.g. an article in a local newspaper or a technical bulletin) should be forwarded to Marina (to be mentioned on the website, but also for activity reports).

→ Towards the end of the project we should aim at publishing at least one paper in a local journal per region showing the main results of the project

10.30-12.20 General discussion

- Resources

smallFOREST was definitely too ambitious given the amount of money available: very few money is still available for 2014 (a couple of thousands € per region) and almost all partners had to use money from other projects and extra-resources. Two PhD students not planned initially (Ludmilla and Pallieter) are almost entirely devoted to smallFOREST. Human resource for 2014 is critically weak for some tasks.

- Time schedule and next steps

The 2nd year of smallFOREST is almost over; 2014 will be dedicated to the end of the fieldwork (WP5 & WP6), to data analyses and paper writing, to the synthesis and report writing.

Compared to the planned time schedule (in the application): WP1 is on time; WP2, WP4 and WP6 are almost on time; part of WP3 has been cancelled and the rest is delayed; part of WP5 (cognitive mapping) is delayed but the rest is almost on time.

- Next meetings

The 2014 General Assembly should be organised during the 3rd week of September 2014 (15 – 21/09), possibly in Freiburg (alternatives: Ghent, Amiens)

Meanwhile, some smaller working groups can meet: WP2+WP4 (Karin); individual Skype meeting between Elena and SMs for WP6.

- Miscellaneous ?

After-smallFOREST? → to be discussed at the next GA

12.20 Conclusion of the meeting

Agreement on the main decisions and actions (in blue above)

End of the meeting : 12.30