



## IMPRS for Global Biogeochemical Cycles Agreement

*This agreement concerns the PhD studies of FristName LastName (born on DD.MM.YYYY) on the PhD project "The TITLE OF THE PHD PROJECT" at the IMPRS for Global Biogeochemical Cycles.*

>> Funding status: IMPRS-gBGC funded / MPI-BGC funded / FSU funded / DAAD funded / associated

>> Entry date: 01.XX.202X

### Preface

In cooperation with the Friedrich Schiller University Jena (FSU Jena), the Max Planck Institute for Biogeochemistry houses a unique and flexible research program that grants German and foreign students a broad selection of learning opportunities while still maintaining a research focus. Its aim is to provide first class training and education for outstanding PhD researchers from all over the world in a stimulating research environment. This competitive PhD program will provide PhD researchers with an excellent starting platform for a successful career in a field related to global biogeochemical cycles.

### General structure of the PhD program

Usually, PhD researchers are enrolled at the FSU Jena. It is also the FSU Jena who awards the doctorate (the German Dr. rer. nat., which corresponds to the American PhD or occasionally the Dr. Ing). Participation in the IMPRS-gBGC will be documented on the official PhD certificate. The graduation criteria of the FSU Jena, as laid down in the regulation of the faculties of Chemistry and Earth Sciences, Biology and Pharmacy and Mathematics and Computer Sciences, are therefore applied to their full extent. However, should no suitable supervisor be available at the FSU Jena, the PhD advisory committee (PAC) of the respective PhD researcher can agree to a graduation from another university. In general, the PhD work should be completed within three years. All scientific work in the program is based on the Max Planck Society's Rules of Good Scientific Practice.

The three-year IMPRS-gBGC program consists of original and independent research leading to a PhD thesis and an additional PhD curriculum. The thesis will be conducted under the guidance of the direct supervisor and a PAC.

### Some definitions

- **PhD thesis:** Independently compiled scientific output of the PhD work. It has to be written in English and should be composed of several single scientific manuscripts with a detailed summary in English and German.
- **PhD researcher:** Person who has been admitted to the program by the IMPRS-gBGC steering committee. Researchers can be funded by the IMPRS-gBGC (paid by the Max Planck Society, the MPI-BGC or the FSU Jena) or — for **associated PhD researchers** — externally.
- **Direct supervisor:** Senior scientist and IMPRS-gBGC faculty member in whose group the PhD researcher is performing her/his PhD work.
- **PhD advisory committee (PAC):** Committee of at least three senior scientists (including the direct supervisor, another IMPRS-faculty member from the partnering institution, and ideally a scientist related to the foreign research visit) who guide the PhD researcher in all aspects of her/his PhD work.

## PhD thesis and supervision

A PAC is composed of the direct supervisor, another IMPRS-gBGC faculty member (from FSU Jena if the direct advisor is from MPI-BGC and vice versa) and at least one other senior scientist. The third scientist could be related to the three month foreign research visit. The members of the PAC are jointly elected by the PhD researcher and her/his direct supervisor. This committee should be formed within the first 3 months and meets regularly. The purpose is to monitor the work progress and to advise the PhD researcher regarding the development of the project. In addition, career planning and networking are discussed with the PAC.

Within 5 months of admission, the PhD researcher should have completed a written thesis proposal. This PhD proposal should clearly develop the research questions out of a detailed overview of the recent research in this specific area. Furthermore, a method section on how to answer the research questions, possible results and their implications for recent research in this area, and a timeline with defined milestones are mandatory. A preliminary program for the additional curriculum, tailored to fit this research program, should also be presented in the proposal. This proposal will be sent to all PAC members, and a PAC meeting will be held during the first 5 months. At this meeting, all committee members will have read the proposal in detail and will discuss the proposed thesis work in great detail, the main aim being to provide critical and constructive feedback to the PhD researcher before the main practical work is done.

The second PAC meeting has to be organized by the PhD researcher at the latest after 12 months of PhD work. The PhD researcher will present her/his research progress. Thereafter, PAC meetings should be called by the PhD researcher every 6 to 12 months. Before each meeting the PhD researcher will send a brief progress report to each committee member, and give a short presentation at the meeting itself. The research and additional curriculum schedule for the next period should also be planned/adjusted during these meetings. The PhD researcher and the PAC members are obliged to document their meetings briefly to the program coordinator using standard forms.

PAC members are asked to actively collaborate with the PhD researcher, e.g., to read and comment on drafts of manuscripts.

*All PAC meetings are initiated and organized by the PhD researcher.*

## Scientific results and publication

By law, all scientific results (e.g., original lab-books) have to be stored for ten years in the labs and are lab-property. Only copies for private documentation may leave the labs. All results should be published following the Max Planck Society's Rules of Good Scientific Practice. Preferably, all manuscripts should be submitted (ideally also accepted) before the deadline for finishing the PhD and leaving the host lab. If results are not fully published by this time and the PhD researcher does not have the time to finish the publication work in her/his new affiliation, the direct supervisor may ask someone else to finish the work. This third person might gain the right of first authorship depending on how much work still needs to be done. All documents that shall leave the lab such as grant proposals, manuscripts (and also revisions of manuscripts), and abstracts for conferences have to be approved by the direct supervisor prior to leaving the lab.

## Additional curriculum

Besides their own scientific research culminating in the PhD thesis, the PhD researchers are obliged to complete an additional training program.

### The additional curriculum contains:

- An **overview course** on global biogeochemical cycles and related earth system sciences.
- **Core courses** that introduce the PhD researchers to scientific fields relevant to global biogeochemical cycles in which they have no deep knowledge yet. The purpose of those courses is to facilitate interdisciplinary communication and collaboration.
- Specific **skill and elective courses** on techniques that are relevant for research in global biogeochemical cycles.

Table 1: Overview of minimum points per curricular activity

Curricular element	credit points (CP)	Minimum CP
<b>Courses related to global biogeochemical cycles</b>		
Biogeochemical Cycles in the Earth System - an Overview*	1.2	1
Core courses <sup>(1)</sup>	1 per 5-day course <sup>(2)</sup>	2
<ul style="list-style-type: none"> <li>• e.g.:</li> <li>▸ Atmosphere, Ocean and Land</li> <li>▸ Terrestrial Biosphere</li> <li>▸ Soils, Soil Biology and Soil Hydrology</li> </ul>		
Skill and elective courses	1 per 5-day course	3
<ul style="list-style-type: none"> <li>• e.g.:</li> <li>▸ Statistics</li> <li>▸ Programming Skills</li> <li>▸ Analytical Techniques</li> <li>▸ Earth Observation Techniques</li> <li>▸ Modelling and Numerical Techniques</li> </ul>		
<b>Transferable skills</b>		
<ul style="list-style-type: none"> <li>• e.g.</li> <li>▸ Good Scientific Practice*</li> <li>▸ Scientific Writing</li> <li>▸ Career Planning</li> <li>▸ Data Visualization</li> </ul>	0.2 per day	1
<b>Outreach activities</b>		
Presentations at international conferences	1 CP/ talk; ½ CP/ poster	1
first author publications in international peer-reviewed journal	1 CP/ submitted 2 CP/ accepted	1
Non-first-author publication in international peer-reviewed journal	1 CP/ publication	0
Public outreach (e.g. radio contribution, newspaper article, public talk, Long Night of Science, blog...)	1 CP/ outreach	1
<b>Other scientific activities</b>		
Research visit at foreign research group	1 CP/ month	3
Active participation in PhDnet or scientific societies, organization of scientific events, teaching, ...	depending on effort	0
Reviewing of a publication, prize, grant, award, ...	1 CP/ prize or review	0
<b>∑ CPs from curricular elements specified above</b>		<b>13</b>
<b>Total number of CPs necessary to obtain IMPRS-gBGC certificate</b>		<b>20<sup>(2)</sup></b>

\* mandatory course for PhD researchers

(1) offered by IMPRS-gBGC

(2) The PhD researcher is free to choose together with PAC how to collect the credit points

- Training in collaborative research through short-term *research visits at foreign top research groups*. These exchange visits give the opportunity to specialize and further qualify in a field of interest. This will give unique contacts to top experts in the field and increase visibility of the research projects. The foreign research visit can be done in one or

several parts and must last 3 month in total. Summer schools and conference participations do not count as research visits.

- *Transferable skills*. Workshops on any personal skills which will improve the PhD researcher's employment opportunities and future career performance in academia and elsewhere.

- **Outreach.** Presentations of results at international conferences, publications in international journals, and explanation of one's own scientific work to the general public (either in Germany or in the researcher's home country). Participation in the IMPRS for Global Biogeochemical Cycles should be acknowledged in all outreach activities.
- **Other scientific activities.** All other activities that are relevant for a scientific career (e.g. organization of scientific events) can also be credited.

Besides these highly-individual aspects of their curriculum, all PhD researchers are obliged to participate actively in all **scientific events of their advisor's department** (journal club, lab seminars, ...) and to fulfill possible further requirements specific to the department. Furthermore, active participation at **IMPRS events** (symposia and retreats) is mandatory. Although these additional curricular events are rated as very important for the PhD researcher's scientific training, the PhD researcher's own scientific work will have priority where time constraints are an issue (e.g. field work). Non-attendance has to be agreed on by the supervisor prior to the IMPRS event.

These activities are meant to improve the PhD researcher's personal skills, foster research collaborations and the exchange of experiences among PhD researchers, and broaden their horizon within the field of global biogeochemical cycles.

In the course of the three-year PhD program, a minimum of 20 credit points (CP) has to be achieved (Table 1).

Courses and workshops will be offered by the IMPRS-gBGC. Nevertheless, PhD researchers are encouraged to participate in activities offered by other scientific institutes and universities after prior consent of the PAC and the program coordinator.

The CP system is closely related to the European Credit Transfer System (ECTS) and courses attended elsewhere are therefore easily creditable (1 ECTS = 25-30 hours of work ≈ 5-day block course).

The IMPRS-gBGC course leaders (specified on the school's web site) define the criteria for successful completion of their course. Each PhD researcher's PAC and the program coordinator jointly determine the amount of CPs for other curricular activities of the PhD researcher according to Table 1 and the ECTS.

It is the PhD researcher's responsibility to verify and document their achieved CP and to report them to the program coordinator.

The participation in the IMPRS-gBGC and the detailed additional curriculum will be certified individually by the IMPRS.

## Non-compliance

Non-compliance with the IMPRS-gBGC regulations might result in the cancellation of the funding and the exclusion of the PhD researcher for the IMPRS-gBGC. E.g. the cancellation of the stipend shall become effective if the PhD researcher did not organize the first PAC meeting within the first 12 months of his or her funding. Then the steering committee can decide to cancel the funding and exclude a PhD researcher from the IMPRS-gBGC.

## Funding

PhD researchers will receive either a grant (I) or a contract (II) which covers the first 36 months. The direct supervisor is responsible for providing funding for any time not covered by the initial funding period. The kind of funding depends on the funding sources.

### (I) grant

#### ... by the DAAD

PhD researchers who have been awarded the scholarship by the DAAD receive the stipend which is specified in their stipend letter (currently 1200 €/month including health insurance). The funding can be given for up to four years. In individual cases it is possible to conclude a minor employment contract with the MPG-BGC.

### (II) contract

#### ... by the FSU Jena

PhD researchers who have been selected for a contract funded by the FSU Jena receive a contract.

#### ... by the IMPRS or MPI-BGC

PhD researchers who have been selected for a contract funded by the IMPRS receive a special kind of support contract *sui generis* (*Fördervertrag*) with a basic duration of 3 years.

*Associated members are funded by other means.*

## Equipment and travel funds

The direct supervisor is responsible for providing office space and the equipment necessary to conduct the thesis work.

IMPRS-funded PhD researchers are entitled to 4,500 € of IMPRS support for participation in conferences and/or workshops (transport, accommodation, fees) or consumables and analysis related to the PhD project. These expenditures are subject to prior approval by the direct supervisor and the program coordinator.

*Associated members receive travel funds from their main advisor.*

## Research visit

There is extra funding available to help with expenses related to the 3-month research visit (transport, accommodation). Travel arrangements are subject to prior approval by the direct supervisor and the coordinator.

*Funding for associated members will be provided by the main advisor.*

## Additional Remarks

PhD researchers as well as advisors are encouraged to discuss emerging problems early on. In case the direct communication between them does not lead to a solution a multitude of contact persons are available to discuss problems and to give advice:

- PAC members
- IMPRS coordinator
- PhD representatives of the IMPRS-gBGC
- ombudspersons at MPI-BGC and FSU Jena
- psychological counsellor
- Graduate Academy of the FSU Jena
- external and anonymous consulting service via phone (Fürstenberg institute)

In case of conflict the primary goal is to maintain a good working basis for a successful completion of the PhD project. In serious cases it should be explored whether a change of the first advisor would be helpful and possible.

The MPI-BGC and FSU Jena are committed to assist PhD researchers in reconciling scientific work with family life issues. Additional information on programs for PhD researchers with families can be obtained from the coordination office.

FristName LastName has been admitted to the IMPRS-gBGC by the PhD program's steering committee.

Steffi Rothhardt

.....  
name of coordinator

.....  
date

.....  
signature

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MAX PLANCK INSTITUTE  
FOR BIOGEOCHEMISTRY



FRIEDRICH-SCHILLER-  
UNIVERSITÄT  
JENA

## Acknowledgment and consent of PhD researcher

I, the undersigned, hereby:

- i. Confirm that I have received a copy of the IMPRS for Global Biogeochemical Cycles Agreement;
- ii. acknowledge and understand the requirements for my PhD studies as set out in the IMPRS for Global Biogeochemical Cycles Agreement and the applicable rules, regulations and policies of the IMPRS-gBGC; and
- iii. consent to the processing of my personal information for all purposes by the IMPRS-gBGC in conjunction with my PhD studies and this PhD agreement.

I understand that if I have any questions about the agreement or my record, I may contact the IMPRS-gBGC office.

Name of PhD researcher: FristName LastName

Date:

Signature



## Acknowledgment and Consent of PhD advisory committee member of FristName LastName

I, the undersigned, hereby:

- i. Confirm that I have received a copy of the IMPRS for Global Biogeochemical Cycles Agreement;
- ii. acknowledge and understand the requirements for the PhD studies of FristName LastName as set out in the IMPRS for Global Biogeochemical Cycles Agreement and the applicable rules, regulations and policies of the IMPRS-gBGC; and
- iii. consent to be a member of the PhD advisory committee (PAC) of FristName LastName.

I understand that if I have any questions about the agreement, I may contact the IMPRS-gBGC office.

Name of PAC member:

Institution of PAC member:

.....  
MPI-BGC / FSU Jena

.....  
MPI-BGC / FSU Jena

Role of PAC member:

.....  
first advisor

.....  
second advisor

Date:

Signature:

Comments: