Newsletter of the Erasmus International Off-Campus PhD programme on Cleaner Production, Cleaner Products, Industrial Ecology and Sustainable Development

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Collected by:
Frank Boons

Dear candidates, alumni, and staff of the PhD. Programme!!!

This newsletter marks a transitional period in the channels of communication within our community. Actually this will be the last newsletter that appears as the main source of information about the program.

At the intensive in Egypt, we discussed new ways of providing access to information and other resources that can help you to stay up-to-date about the development of the programme, what it can do for you, and what you can do to further its evolution. As an outcome of this discussion, a number of changes will be made in coming months.

The crucial ones are:

1. Making the updated website operational: We are now working on adding content to the website, so that it represents the vision, qualities, and results of our programme.
2. Opening a member area on the website that will become a significant channel of communication between and among members of the programme; this will include but not be limited to bilateral communication between supervisors and candidates. This week, you will receive further information about this from Hester Mourik, our new assistant to the programme.
3. The newsletter will continue as a backlog of news messages placed on the PhD Programmes' general website and on the main page of the member area pages.

We will keep you updated about these changes, but as always, do not hesitate to ask if you have any questions or suggestions!!

Please note that Ms. Hester Mourik will provide support for this transition. She may be contacted at the following email address: 331428hm@student.eur.nl. She will also contact you in the near future to help you in making the most of these new opportunities.

Other items in this newsletter:

- announcement about the 2010 INTENSIVE and associated conference
- impressions of the 2009 INTENSIVE in Cairo, Egypt
- specification of criteria for evaluating progress of Candidates

Details for the 2010 INTENSIVE

The 2010 INTENSIVE will take place in Rotterdam, The Netherlands, at the EUR campus, from October 23rd to November 3rd. The Intensive is connected to the joint ERSCP/EMSU conference that will be held in Delft.

The general structure of the INTENSIVE program will be:

October 23rd – 25th: training program for all new PhD candidates

October 26th – October 28th: participate in the formal program of the ERSCP/EMSU conference;

October 29th – November 3rd: training programme for new and advanced candidates

In the coming months, you will be informed about the content of the programme. We intend to engage you in preparatory activities during the months prior to the INTENSIVE, in order to make more effective use of our face-to-face time during our time together.

For further information on the conference, you can check out the official website at http://www.erscp-emsu2010.org/. The deadline for submitting abstracts is March 20st, 2010. We again urge you discuss with your supervisor so as plan for and to submit an abstract for a paper. In our experience, active participation in a conference like this one helps you to make big advances in your thesis research. Of course, as you all know, we encourage you to develop and publish papers in peer-reviewed journals. Such articles can then be integrated within your thesis.
At this joint conference, as after the last two INTENSIVES, A special issue of the Journal of Cleaner Production will be developed. One or two additional Special Issues will also be developed for publication in related journals.

Impressions and reflections about the 2009 INTENSIVE held at the New American University Campus in Cairo, Egypt

From October 23th to November 5th, 2009, we held our INTENSIVE at the American University in Cairo, Egypt (AUC). Our hosts, Dr. Salah El-Haggar, Ms. Dalia Sakr, and Ms.Lama El-Hatow, did a wonderful job in preparing for our stay, including excellent classroom facilities, great food, field visits and a conference in which many of us participated (on the picture you see part of our group walking on the campus' main street).

In addition to welcoming new Candidate Yasser Askar, we had a successful "Prospective Ph.D. candidate evening meeting" at which over 15 Egyptian students with interest in our programme, engaged in a discussion about our programme and explored the possibilities for joining. (Several applications are now in progress, due, in part, to that discussion session.)

In addition to classes and presentations, we had a number of field visits that stimulated discussion on the implementation of concepts such as 'cradle-to-cradle,' cleaner production, and

leaner products. In addition, the programme included a two day visit to the eco-town of Al-Gouna on the border of the red sea.

In addition to Yasser, two new Ph.D. Candidates joined our program, but due to illnesses were, unfortunately unable to join us in Cairo. They will join us in The Netherlands in Oct. 2010. They are:

- Garth Hickle from St. Paul, Minnesota;
- Juan Carlos Caycedo G., from Bogota, Colombia.

We welcome them to our program; all three are making good progress in getting on their Thesis Journey.

Criteria for the evaluation of thesis progress

At the Cairo INTENSIVE, we introduced a more explicit system of evaluating the thesis progress of our candidates. Here we want to share with you the full description of the criteria that will be used in the future to make sure that your thesis evolves, increasingly efficiently and effectively towards completion. We have defined four milestones, each of which is crucial to completion and defense of a good quality thesis.

There are four milestones (see Annex 1 for a full description):

1. Delivering a full research plan and literature review;
2. Delivering a specified operationalisation of the research plan;
3. Delivering three chapters/articles that will be part of your thesis;
4. Delivering and defending the completed thesis.

At our regular, SKYPE-based staff meetings, these milestones will be used to discuss progress of candidates. These milestones, also clarify, in more detail, what is expected of you when we talk about things such as ‘literature reviews’ or ‘research plans.’

With these criteria, it becomes possible for us to more effectively assess the quality and progress of your work. This means that you, as candidates, must formally present the materialization of your work for each milestone to our faculty, who will formally assess and approve it or ask for you to do some further work to fulfill the specific milestone.

Starting in 2010, these milestones will also be a more explicit part of our INTENSIVE courses.

ANNEX 1

Ia RESEARCH PLAN

The research plan consists of approximately ten pages or 4000 words. Although this research plan will be accepted as a certain time as a milestone, we wish to emphasise that this is a living document that will evolve, almost until the end of the thesis development process.

The research plan should consist of the following elements:

1. The background and focal area(s) of your research [0.5 page]

Describes the topic in which you are interested, and how it is problematised by firms, governmental agencies, NGO's, academia and/or the media.
In this section you should also describe YOUR specific connection(s) to the focus area.
This first section is to be based on grey literature, scientific literature, and your own experience(s).

2. Research questions [1 page]

The research questions should be detailed formulation of the questions that your thesis is designed to answer with scientific rigor. This section usually consists of one core question, and several sub-questions that amplify upon the core question.
The core question builds on a relationship between at least two variables, and some sort of enquiry into the relationship between these variables, that is, the way in which variation in one variable is associated (or causes) variations in another variable.

> *An example might be: Why are chemical firms in India more polluting than chemical firms in Germany?*
> *The variables in this question are: countries [Germany, India] and level of pollution [more, less].*
> *A constant in this question is the sector(s) of industry; it has the same value for all objects of study [which are individual firms].*
> *The sub-questions could then be:*
> *- What is the level of pollution of chemical firms in India?*
> *- What is the level of pollution of chemical firms in Germany?*
>
> *Obtaining answers to these sub-questions helps you as the researcher to determine if the assumption hidden in the question is actually true. They do not go into the area of the 'Why' with which the core question starts, however. For this, we need more information about the possible causes for the differences that were found. This cause-effect relationship can importantly be based upon utilisation of one or more relevant theories {unless you're Einstein and come up with your own unique theory}.*

This section is based on scientific and grey literature. The former helps you to pose questions that have not already been answered; the latter helps you to pose questions that are based on factually accurate information. In addition, formulating research questions is perhaps, the part where interactions with your supervisor(s) and others are most vital.

3. Theoretical framework [1 page]

Theories outline more general relationships between/among variables. As such, they help you to summarise the accumulated knowledge of scientific researchers over time. This does not mean that all theories make a coherent whole; as researchers adopt different perspectives, they often develop new insights that within their perspective constitute progress, while from another perspective they may be considered as an anomaly. For this reason, you need to be explicit about your choice of (parts of) theories that you intend to use. In this section, you are expected to provide an outline of what you intend to use. This is based on a thorough study of the relevant scientific literature, as well as based upon discussions with your supervisor and other scientific and professional colleagues.

This section should also include an explicit consideration of the interdisciplinary nature of your proposed sustainability research, and the consequences of this interdisciplinarity for your proposed research.

> *In our previous example, the theory comes in when the researcher is seeking an answer to the 'why' question. The difference between the performance of firms in India and Germany may stem from a variety of causes, some of which have been theorized to be due to:*
> *-Relative strictness of governmental rules (including efficiency of monitoring and sanctioning);*
> *- Knowledge base of local operators and managers;*
> *-German firms (often business units of larger firms) are closer to their headquarters, and hence are more under the influence of hierarchical control of top management; therefore, their environmental performance is better;*
> *-German firms are members of efficient trade associations, which have developed programs for preventative action that is implemented effectively;*
> *-Firms in India are (for various reasons) less visible to the media and NGO scrutiny, therefore, their performance is less environmentally sound.*
>
> *For each of these possible explanations, theories are available that suggest, to some extent, the conditions under which the proposed mechanism(s) could operate. Part of the contribution of your thesis is to make such statements more precise and to hopefully go beyond them into new dimensions.*

4. Your Research Strategy

This is a stepwise description of the way in which your data will be collected and analysed in such a way that your research questions can be answered within the theoretical framework, and with the scientific rigor required for a PhD thesis.
Here an explicit discussion of the reliability and validity of your research should be presented.

5. Conclusions and Design

Expected results and the way these are fed into the design of tools for practical use should be specified here. You can include ideas about recommendations and a dissemination strategy for your results.

Ib Literature review

The literature review consists of an annotated bibliography that documents the result(s) of your systematic review of the scientific and 'grey' literature relevant for your research area and for answering our core research question and sub-questions.

The review of 'grey' literature includes relevant documents from societal actors in which they report on their goals, evaluate their actions, or on developments in the field for which they are responsible. A systematic review starts with identifying:
- The relevant actors for your area of focus, and the way through which you can access their documents;
- Databases of relevant grey literature relevant for your area of focus.

Based on these searches through key words and 'snowballing' you collect the relevant studies for the time period you have decided on. Frank, please use a footnote to explain for some of our candidates what is meant by 'snowballing.' This may be especially important for our colleagues who are from the tropical jungles!!!!!

The review of scientific literature will focus upon relevant articles, chapters, and books that together present the body of existing knowledge regarding your area of focus. A systematic review starts with finding:
- Overview/review articles that give a summary of development of scientific knowledge over the past decade(s);
- Authors/scientists that have been active in research regarding the topic;
- Journals that publish articles that are relevant for your area of focus.

Based on these searches, through key words and 'snowballing' you will collect and review the relevant literature for the time period you have decided to address.

For each item you review, you collect full bibliographical details and the abstract. Moreover, you indicate in what way the contents of that document will serve in your research (building block for theory, source of data, etc.) (You may find that End-Notes is a useful software package that help you to organise your literature review information. We will provide you a free copy of the Endnotes software.)

II Operationalisation

The second milestone is a further clarification of the details of the research strategy. In approximately five pages (2000 words) you should make an exhaustive list of all theoretical variables you intend to investigate and how you intend to transform them into measurable indicators for our thesis research.

Theory consists of a specification of relationships between/among variables. The theoretical variables need to be transformed into measurable entities. Examples of theoretical (or at least conceptual) variables are: sustainability, size of organization, level of education, level of trust, environmental impact, quality of life, security, happiness and others.

> *In our example, the variables of country and level of ecological impact must be documented or operationalised in a systematic and consistent manner;*
> *The variable 'country' seems relatively straightforward, but still requires clarification, such as a geographically delimited area with a recognized central governmental authority recognized by the United Nations. The process of operationalisation points to possible confusion (some entities that consider themselves as countries are not recognized by the UN). Also, the operationalisation may lead to reflections on whether one really is looking at the right variable (country, as opposed to a certain culture, which may transcend formal, national boundaries.)*
>
> *The variable 'ecological impact' also requires elaboration, as to what impacts will be measured, in what units, and over what timeframe.*

Ia, Ib, and II together should provide *COMPLETE* directions for *ANOTHER* researcher to perform similar research; using the core question you posed in a way that will satisfy fellow scientists (including the members of your defence committee!).

Please note that every theoretical variable can be measured in different ways (for example, the size of an organization could be measured in the # employees, annual economic turnover, size of production, geographical span of markets, etc.). This means that a crucial element of the operationalisation consists of the arguments you provide for choosing one indicator/method of measurement over another.

III Three chapters/articles finished

The third milestone depends on the type of thesis you have chosen to write. The objective of this milestone is to capture the stage where you have finished a substantial part of your actual research (collected and analysed at least some of the data) in a way that meets the approval of your scientific peers

For candidates writing a monograph, the third milestone consists of having finished three chapters, including at least one chapter containing analyses of empirical data.

For candidates writing a thesis through articles, this milestone consists of having submitted/published at least three articles in international, peer reviewed journals, and received positive feedback (i.e. not a rejection) about the article.

IV Finished thesis

This is the moment when the thesis has been accepted by the 'small committee' for defence at EUR.
Please clarify this process in more sentences as well as clarify the next steps. Many do not know about the several steps involved.