# Data analysis and/or modelling of some hydrologic phenomenon

## My Name

MSc thesis proposal

Hydrology and Quantitative Water Management Group, Wageningen University

## 1  Problem description

Remove text from this template and write your own (of course). Feel free to change headers, but make sure the topics are covered. There is a lot of valuable information available on the internet on how to write thesis proposals and the thesis reports themselves.

In this Section, you should:

- Motivate and justify the research. Put your research in global context (who cares about your research?)

- State what has been done already. Summarize relevant literature (Brauer et al., 2011).

- State what has NOT been done yet. Where is the gap in knowledge? This should lead directly to the research objectives in the next Section.

## 2  Research objectives

State objectives clearly. What is the point of this research? The aim should follow directly from the problem description.

## 3  Research questions

Which questions do you want to answer in order to reach the objectives? Divide into sub-questions for clarity.

## 4  Field site and data

Are you going to use other people's data or collect data yourself? What are the considered locations, instruments, resolutions? You can also include the data in the methods.

## 5  Methods

How are you going to find the answer to your questions? What do you need for this? Describe the core measurement equipment or models briefly. It often helps to link the steps in the methodology to the research questions.

## 6  Timetable

Adapt the Table below to make it specific for your project (or make your own). Set deadlines for the products. Be as specific as possible: mention when you will collect which data /do which model runs / write which parts of the report. It often helps to link activities and products to your sub-questions. A specific planning can help later on to see if you are on schedule or that you should e.g. shorten a certain data-processing step or stop calibrating your model, so you have enough time to do the analyses and answer your research questions. It often helps to link the tasks to the methodology (and therefore to research questions). Specify special conditions: are you planning to take courses, vacation, etc.

## References

Brauer, C. C., Teuling, A. J., Overeem, A., Van der Velde, Y., Hazenberg, P., Warmerdam, P. M. M., Uijlenhoet, R., 2011. Anatomy of extraordinary rainfall and flash flood in a Dutch lowland catchment. Hydrol. Earth Syst. Sci. 15, 1991–2005.

Table 1: Schedule of the project.

| Wk | Date | Task | h | Product | Deadline | Feedback on |
|----|------|------|---|---------|----------|-------------|
| 1 | 1 Jan | Read literature | | Thesis agreement | 2 Jan | |
| 2 | 8 Jan | | | | | |
| 3 | 15 Jan | | | Draft research proposal | 19 Jan | Draft research proposal |
| 4 | 23 Jan | | | Final research proposal | | |
| | | | | Proposal presentation | | |
| | | Collect discharge data | | | | |
| | | Collect discharge data | | Introduction | | |
| | | Collect discharge data | | | | |
| | | Collect discharge data | | Field site and data | | Discharge data |
| | | | | | | |
| | | Analyse rainfall input | | Methods - part x | | Rainfall data |
| | | Process discharge data | | | | |
| | | | | Methods - part x | | |
| | | Calibrate model | | | | |
| | | Calibrate model | | | | Calibrated model |
| | | | | | | |
| | | Analyse low flows | | Results - part x | | Low flow analyses |
| | | | | | | |
| | | | | Results - part x | | |
| | | | | | | |
| | | | | Discussion | | |
| | | | | Conclusion | | |
| | | | | Abstract | | |
| | | | | Full draft report | | Draft report |
| | | | | Colloquium presentation | | |
| | | | | | | All |
| Total (1008) | | | 0 | | | |

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