As part of the official opening of EPA the Hague on 13 June, I have received a request for posters of student work. The assignment for this week and next week is perfectly suited for this.

The aim of the assignment is to design an adaptive plan for the Waas. On github, I have uploaded data about the performance of the system under uncertainty for a range of policy options. The performance is given over time and covers costs, and casualties and economic damages due to flooding. If desired, strategies composed of more than one individual option can be reevaluated by me.

The model that is used for the Waas has been made by Deltares and is not mine to freely share. In addition, the code for coupling this model to the workbench is quite a bit more complicated than what you have been encountering so far. Together, this is why you will have to contact me if you want to evaluate a specific new policy.

More information regarding the Waas can be found in Haasnoot et al. (2012) where the original version of the case is introduced. I have extended the case in my own work. The formulation including the sources of uncertainty that I am using was first reported in Kwakkel et al. (2015). Here, I use a many objective robust optimization approach to find the Pareto approximate set of candidate pathways. In a follow up paper, Kwakkel et al. (2016), I compare this optimization approach to a robust decision making approach. For the later paper, there is a github repo with my notebooks and other python code: https://github.com/quaquel/EMS_RDM-DAPP-comparison . Please use these sources as inspiration, but try to use your own creativity as well.

The assignment can be done in groups, so please self organize. The deliverable is a poster. I envision that you will work in groups of five or so students.

HAASNOOT, M., MIDDELKOOP, H., OFFERMANS, A., VAN BEEK, E. & VAN DEURSEN, W. P. A. 2012. Exploring pathways for sustainable water management in river deltas in a changing environment. *Climatic Change,* 115**,** 795-819.

KWAKKEL, J. H., HAASNOOT, M. & WALKER, W. E. 2015. Developing Dynamic Adaptive Policy Pathways: A computer-assisted approach for developing adaptive strategies for a deeply uncertain world. *Climatic Change,* 132**,** 373-386.

KWAKKEL, J. H., HAASNOOT, M. & WALKER, W. E. 2016. Comparing Robust Decision-Making and Dynamic Adaptive Policy Pathways for Model-Based Decision Support under Deep Uncertainty. *Environmental Modelling & Software,* 86**,** 168-183.