**REPORT ON GRIME2 / Gaugecam**

Grime2 is the software that allows you to convert the photos from a water level gauge into exact water levels. Use following links to know better:

<https://gaugecam.org/>

https://github.com/gaugecam-dev/GRIME2

To measure the water levels, one camera is needed per catchment area (a wildlife camera is sufficient), a water level rod and an individual power supply.

(look at background\_installation.pdf)

I (Annika) had already email-contact with Ken Chapmen ([kchapman12@huskers.unl.edu](mailto:kchapman12@huskers.unl.edu)), he is PhD at the university of Nebraska-lincoln and responsible for the software. He and his team developed it. He is veeery friendly and willing to help, so if there are any questions – just write him.

Downwards I add some of the emails we wrote (the most important ones)

Hello everyone!

my name is Annika Ertel- at the moment I am working for the NGO *Plan Yaque* in the dominican republic. *Plan Yaque*, tries, beneath other things to monitor the waterquality in the biggest watershed of the country. The aim is to make funders and the population aware of the urgency of protective measures and possibly also to show the success of measures already taken.

As this is a tremendous work, we search for possibilities to measure parameters, such as the flow, constantly, without beeing present. By researching I came across gaugecam.org and we would love to try it in two selected small watersheds- one with and the other without reforestation measurements- to analyse and compare the respective responses to rainfall events in the watersheds.

As I have a geographer's background (B. Sc. at University of Leipzig, Germany) I am not a professional neither in computer sciences nor in fluvial systems, but I have a basic knowledge.

Before starting the project I would love to get to know the current state of the art within GRIME2.

1. It is ready to use, or are there some mayor limitations, I didn't find out so far?
2. Do you have some recomendationes regarding the quality of the camera?
3. Did you tried  (and therefore recomend) to use the software as well during night, with illumnination?

Of course I would freely share my data and my results with you- and would be happy about your advice and any kind of colobaration.

Annika Ertel

Volunteer at Plan Yaque

Jarabacoa / Dominician Republic

Hello Annika,

Would it be helpful to have a Google Meet, Zoom, or MS Teams meeting on this. We would love to be able to help you and we think GRIME2 is ready for "primetime". Also, I am fluent in Spanish (we speak it at home) and we have some special connections to Dominican Republic (my nephew spent time there in the Peace Corp).

Please let us know.

Thanks,

Ken

Sorry I did not answer the questions in the first email. Here they are:

1. It is ready to use, or are there some mayor limitations, I didn't find out so far?

Ready to use. Also, it is really straight forward for you to create graphs from the data we produce as well as animations. We can walk you through that, but we also have how-to videos available.

1. Do you have some recomendationes regarding the quality of the camera?

​It depends on how much the water moves up and down and how much resolution you need. This is part of the reason we wanted to discuss it with you. There are inexpensive options and we can even provide guidance on illumination and power. Some people just use a game camera of the type you can purchase easily on Amazon. Hunting & Trail Cameras. There are also connectivity issues. If you do not transmit the images, someone will need to go retrieve the images periodically.

1. Did you tried  (and therefore recomend) to use the software as well during night, with illumnination?

​The system worked quite will with a nighttime IR light source (it is easier to find the waterline with IR illumination)

We would be quite happy to walk you through all this. The software is designed for non-technical users and we like to make how-to videos when some aspect is not clear.

I hope that helps.

Ken