Minutes of the user committee meeting – Bblooms project – Namur, 20 april 2007

FUNDP : JP. Descy, G. Verniers, B. Leporcq
UGent : J. Van Wichelen, K. Van Der Gucht, I. Van Gremberghe
VUB : A.Peretyatko
ULg : A. Wilmotte, P. Simon
U. Dundee : G. Codd

Belspo : D. Harmegnies

Exc.: W. Vijverman

For the user committee :

Nadine Burlion - Issep
Luc Samsoen Provinciaal - Centrum voor Milieuonderzoek
Olivier Thunus in place of Evelyne Flore - Eaux de surface – DGRNE

Exc. Renaud Bocquet – BIM

D. Harmegnies introduce the Belspo research project and the user committee role (see PPT annex 1).

G. Verniers presents the Bblooms projects to the members of the user committee (see PPT annex 2):

- ✓ Mains objectives
- ✓ Differents kinds of analyses
- ✓ Bblooms 1 results
- ✓ New project Bblooms 2
- ✓ Bloomnet
- ✓ Website

For Bloomnet, we need the participation of the authorities and the managers to be informed when there is a bloom. All the information to detect a bloom will be on the website.
We (FUNDP, UGent, VUB) will do the sampling and the different measures from the environmental parameters.

In Wallonia, N. Burlion, from Issep, will follow all the swimming zones during 20 weeks (from May to September). She will inform FUNDP when there are blooms.

In Flanders, there is no specific organization. Jeroen Van Wichelen follows some lakes and ponds. Luc Samsoen proposes to do the same as in Wallonia for the swimming zones (VMM).

In Brussels, VUB follows the different ponds. We don't know IBGE-BIM role.

An interesting reference :

Maria Leitao, Alain Couté – 2005 – Guide des Cyanobactéries planctoniques du Grand Ouest de la France. Manuel pour les prélèvements et la reconnaissance à l'usage des gestionnaires des eaux de surface : caractéristiques, échantillonnage, identification. Agence de l'Eau Seine Normandie. 63P.
Pour l'obtenir s'adresser à Jean Duchemin : duchemin.jean@aesn.fr

G. Codd, subcontractor, specialist in toxin analyses present his contribution to the project (see PPT annex 3).

A. Peretyatko introduces the situation in Brussels and a summary of the studies of the VUB lab on the Voluwe ponds.

Next meeting of the committee: beginning of December

Minutes of the user committee meeting – Bblooms project – Namur, 12 december 2007

FUNDP : JP. Descy, G. Verniers, B. Leporcq
UGent : I. Van Gremberghe
VUB : A.Peretyatko, L. Triest
ULg : Y. Lara

Belspo : D. Harmegnies

For the user committee :

Nadine Burlion - ISSEP
Luc Samsoen - Provinciaal Centrum voor Milieuonderzoek
Olivier Thunus - Eaux de surface – DGRNE
Renaud Bocquet – BIM
Eric Chauveheid – VIVAQUA

Exc. :
Gaby Verhaegen
Benoît Tricot

Jean-Pierre Descy remind the different objectives of the research project and introduce the order of the day :

- progress in the field studies
  UGent, VUB, FUNDP, ULg
- perspectives for 2008
- approval to the activity report 2007.

You can find the PPT from the different universities on the website.

UGent

2 reference lakes : Donkmeer, Vijver Westveld
sampling :
start in May to November
integrate sample of 3 localities in each lake
2 sample / week

40 samples from Donkmeer, 46 from Westveld
blooms still present
in Donkmeer : spring-early summer *: Anabaena subcylindrica or A. flos-aquae* or *Aphanizomenon flos-aquae* – in july start *Planktothrix* bloom
in Westveld : mid may : *Microcystis*

other sites :
Gavers Harrelbeke : *Aphanizomenon flos-aquae* - carp mortality – closed for public
Park Kraaienem : *Aphanizomenon flos-aquae*
Visvijver Ballooi : *Tetraselmis* sp
Schulensmeer : *Microcystis flos-aquae*
Meerhout Gewad : *Microcystis wesenberghii*
Spaarbekken AWW : *Microcystis flos-aquae*

Isolation of strains :
- colonies of *Microcystis* were picked out from Leeuwenhofvijver (34), Tiens Broek (34) and Westveldparkvijver (54).
- filaments of *Planktothrix* were picked out from Driekoningenvijver (52) and Donkmeer (29).
- for 25 strains from Lake Leeuwenhof, 14 strains from Tiens Broek and 52 *Planktothrix* strains from Driekoningen the 16S-23S rDNA ITS sequence was amplified and sequenced.
- fragments of the *mcy* A and *mcy* E toxin genes were amplified for a subset of these strains

Determination of the genetic diversity and toxigenicity of toxic cyanobacteria in BLOOMNET samples :
- DGGE of rDNA-ITS was performed on 62 bloomnet samples containing *Microcystis* or *Planktothrix*, showing a high ITS diversity for *Microcystis* and a very low diversity in *Planktothrix* blooms.
- clone libraries were made of samples from four of the *Microcystis* blooms. A preliminary alignment of the clones congrued well with the DGGE data as it showed a very high within-lake diversity.

FUNDP

1 reference lake : Falemprise (Eau d'Heure)
sampling :
start in May to October
1 sample / week
principal sp *Aphanizomenon flos-aquae* (+ *Anabaena* sp + *Microcystis aeruginosa)*
in august : *Planktothrix agardhii*

other sites :
Carrière d'Ecaussines – propriété Vivaqua – *Planktothrix rubescens*
Lac de Chérapont à Gouvy – swimming zone – *Microcystis* sp

VUB

2 reference ponds : Ixelles pond near Flagey Place (IxP1, IxP2)
sampling :
start in March to September
monthly from march to may – weekly june to august – twice monthly in september
integrate sample of 10 locations in each pond

other sites :
TrBr, RKI2, RKI3 monthly from March to September

Temporal dynamics of phytoplankton/cyanobacteria can be very different even in very similar and connected ponds - dominant species are :

in IxP1 : *Planktothrix* first , after *Gomphosphaeria*
in IxP2 : *Planktothrix – Gomphosphaeria - Woronichinia*

ULg

- Isolation and culture of strains : 20 fresh samples from IxP1, IxP2, Fal, MIKI, NRPD1, NRPD4
- Detection of *mcy* genes
- Single colony approach

The discussion has concerned :

- the experimental protocol about the different depths sampling
- the difference between Flanders and Wallonia about the species

All the teams must begin the field sampling in March.

We need an approval from the user committee about the report 2007.

Nb : avec chaque PV de réunion les participants recevaient une copie des PPT présentés.