



EnviEFH 2nd Participant Working Meeting

Heraklion Crete, Greece, May 09 -11, 2007

Working Meeting Agenda

15-20' Coffee Discussions: 11:00 and 16:00 – Lunch Breaks: 13:00-15:00 – Dinners: 20:30

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#### **Wednesday May 09**

|                        |                    |                                                                                                                 |
|------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------|
| Statistical Consulting | 10:00..<br>..13:00 | Testing of existing methods in EFH mapping as well as presentation of recent new methods, analysis of real data |
|------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------|

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Thursday May 10

Project Progress	9:30.. ..13:00	Overall progress of the project, presentation of works for each site/species with reference on data and methods
Deliverables	15:00.. ..18:00	Deliverables presentations and current status of their development

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#### **Friday May 11**

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| Stakeholder Input<br>EFH Tools | 9:30..<br>..13:00  | Types of stakeholder input and presentation of EFH Tools                                                          |
| Dissemination                  | 15:00..<br>..18:00 | Discussion on planned publications per participant as well as organisation of joined publications, special issue. |

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Venue: Galaxy Hotel (<http://www.galaxy-hotel.com.gr/>)

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### Meeting Participant List Meeting Minutes

| No | NAME                   | EMAIL                     | ORGANIZATION                |
|----|------------------------|---------------------------|-----------------------------|
| 1  | Romain Crechriou       | crecrom@univ-perp.fr      | CNRS/EPHE, FR               |
| 2  | Paloma Martin          | paloma@cmima.csic.es      | CSIC/ICM, SP                |
| 3  | Pilar Sanchez          | pilar@icm.csic.es         | CSIC/ICM, SP                |
| 4  | Graham Pierce          | g.j.pierce@abdn.ac.uk     | UNIABDN, UK                 |
| 5  | Jianjun Wang           | nhi791@abdn.ac.uk         | UNIABDN, UK                 |
| 6  | Jennifer Smith         | jennifer.smith@abdn.ac.uk | PhD Candidate               |
| 7  | Chrissi-Yianna Politou | c-y@ath.hcmr.gr           | HCMR/IMBR, GR               |
| 8  | Eugenia Lefkaditou     | teuthis@ath.hcmr.gr       | HCMR/IMBR, GR               |
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| 14 | Marianna Giannoulaki   | marianna@her.hcmr.gr      | HCMR/IMBR, GR               |
| 15 | Andreas Palialexis     | andreaspal@pathfinder.gr  | PhD Candidate               |
| 16 | Alain Zuur             | highstat@highstat.com     | Highland Statistics Ltd, UK |
| 17 | Vasilis Valavanis      | vasilis@her.hcmr.gr       | HCMR/IMBR, GR               |



## Meeting Minutes

The EnviEFH 2<sup>nd</sup> plenary working meeting was a dynamic and productive meeting with all participants taking important part in the discussions, which clarified many different issues dealing with data analysis and final products. Input and noting from G. Pierce was very important to the general outcome of the meeting while all participants' input and suggestions were focused and greatly helped the joint effort of producing results with integration of data and knowledge from different areas of the Mediterranean.

During May 9<sup>th</sup>, a consulting meeting was organised with Highland Statistics where testing of existing GAM (Generalized Additive Models) development was performed and new, recent GAMM (Generalized Additive Mixed Models) development were presented by Alain Zuur and discussed with EnviEFH Consortium.

During May 10<sup>th</sup>, a presentation of the current status of the project was presented by V. Valavanis as well as a short briefing was carried out on the status of the project's 1<sup>st</sup>-year reporting to the Commission. An official announcement of the production of the Special Issue of *Hydrobiologia* was introduced to all participants. Presentations and related discussion were made by all project participants. Specifically, R. Crechriou presented EFH maps for the French study sites (data and species life-stages included) and announced the production of 2 papers as contribution to the planned special issue. Also, a stakeholder meeting is planned with French fishermen organizations in September 2007. Following, P. Martin and P. Sanchez presented works for the Spanish study area with produced species EFH maps and mention that work on time-lagged effects needs to be completed. Additionally, C-Y. Politou, A. Siapatis, E. Lefkaditou and A. Palialexis presented works from the Greek study sites with included data, species life stages and EFH maps. Following, A. Palialexis explained the methods of using biological and environmental data on various species to extract species-preferred environmental ranges. A general discussion on the existing and recent methods on EFH mapping was carried out including issues such as using presence and/or abundance data as well as analysing biological-environmental data on a 2-stage GAMs/GAMMs (presence modelling, then abundance given presence) for a more detailed EFH maps production.

During May 11<sup>th</sup>, the general methods discussion re-initiated with issues on using bio-environmental data from multiple years (multiple models, pooled years, introduce 'year' effect in analysis and time as explanatory variable). Following, the discussion was focused on the choice of explanatory variables for demersal fish species (depth slope-aspect, slope variability, distance from coast, substrate types, latitude and longitude and surface oceanographic patterns). Also, time-lagged or teleconnected environmental effects were discussed, introducing spatial and temporal autocorrelation in data analysis. Following, biological validation methods for the model outputs (choice of validation datasets, observed/predicted comparisons and visual and statistical tests) were discussed. A. Palialexis presented a live R session using a real dataset and showed step-by-step programming routines using BROD GAR for GAMs before using R for GAMMs. J. Wang and J. Dokos presented the current developments for the ArcView-based and

MapObject-based GIS EFH tools. A comprehensive discussion on the organisation of *Hydrobiologia* special issue was carried out and several joint publications were agreed among EnviEFH participants.

Concluding, the EnviEFH Consortium decided to enhance the existing GAM method with more recent data (2006 and 2007), test the recent-new GAMM method with latest data and organise a 3<sup>rd</sup> plenary meeting for the finalisation of the *Hydrobiologia* special issue. Thus, a 3-month extension to the project was decided and a related request was made to the Commission.

