

Network of Excellence
Marine Biodiversity and Ecosystem Functioning
Responsive Mode Project 4.3

MarPACE
Marine Propagation Along the Coasts of Europe

Intercalibration workshop, 8-9 June 2006, Banyuls (France)

AIM OF THE RESEARCH

To identify phase-changes in recruitment along latitudinal gradients.

By taking samples of both pelagic propagules, primary and secondary settled organisms, we intend to examine if there is a gradual gradient in recruitment or sudden shifts in recruitment patterns (possibly indicating bio-geographical boundaries).

Sampling locations

Workpackages
February 2005



Participating institutes:

Abo Akademi University
Akvaplan-NIVA
Centro Interdisciplinar de Investigacao Marinha e Ambiental
Consorzio Nazionale Interuniversitario per le Scienze del Mare
Ecological Consultancy Services Limited
Finnish Institute of Marine Research
Laboratoire d'Océanographie Biologique de Banyuls
Netherlands Institute for Ecology
Museum National d'Histoire Naturelle
Polish Academy of Sciences
Roskilde University
Royal Netherlands Institute for Sea Research
Station Biologique de Roscoff
Stiftung A.Wegener Institut für Polar- und Meeresforschung
Universidade de Evora
Universitat de Illes Balears
University of the Azores
University of Wales at Swansea
Vlaams Instituut voor de Zee

Pan-European Gradients
in Propagation and Settlement Events

Protocols

Draft 8 November 2005
Katja Philippart & Judith van Bleijswijk
Royal Netherlands Institute for Sea Research

Protocols

Pelagic propagules
Primary & secondary
settlers

November 2005

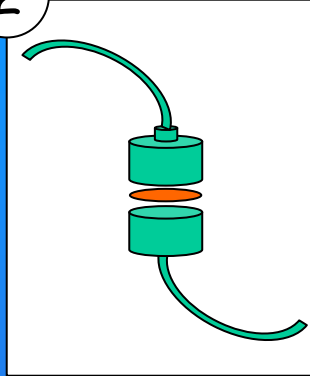
Protocols pelagic propagules (June 2006)

1



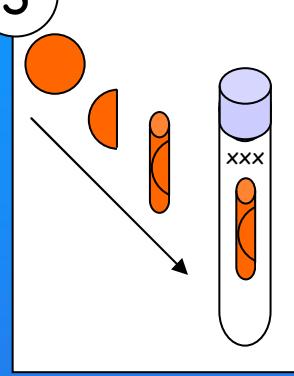
Sampling of water

2



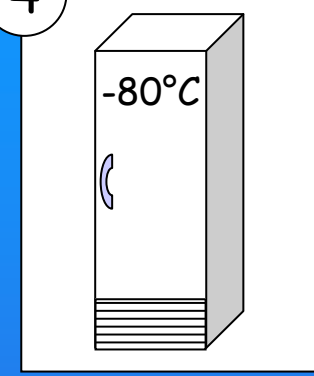
Filtration of water sample

3



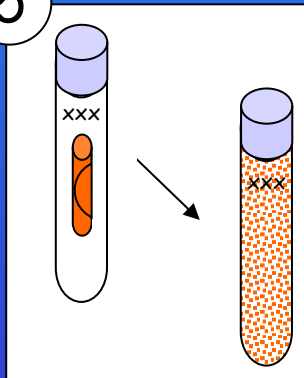
Folding of filter in tube

4



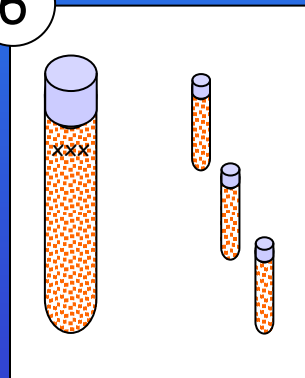
Storage of filter sample

5



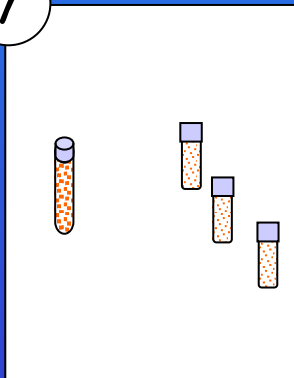
DNA extraction filter sample

6



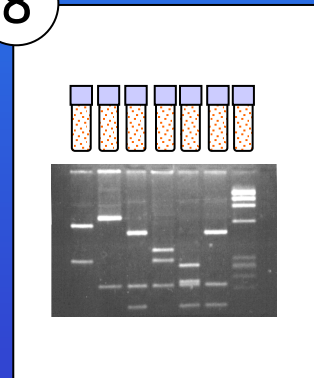
Subsampling DNA extract (groups)

7



Subsampling DNA extract (species)

8



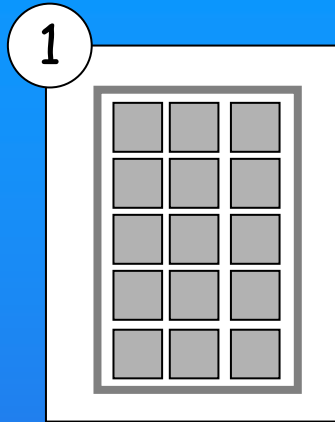
Diagnostic PCR

Protocols pelagic propagules (June 2006)

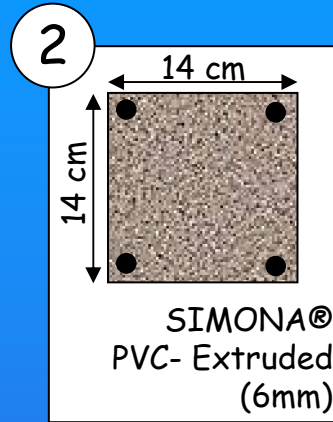


	Week 2	Week 4	Week 6
Species a	absent	present	present
Species b	absent	present	absent
Species c	absent	absent	present

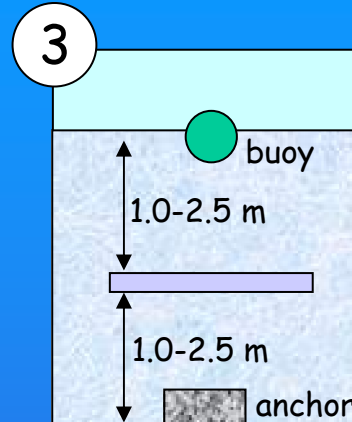
Protocols benthic settlers (June 2006)



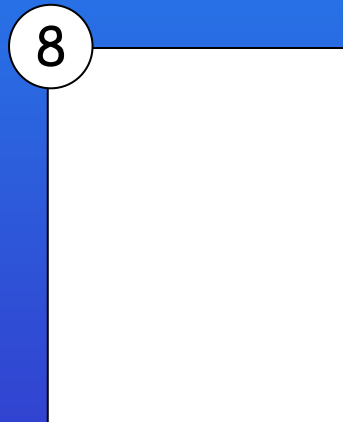
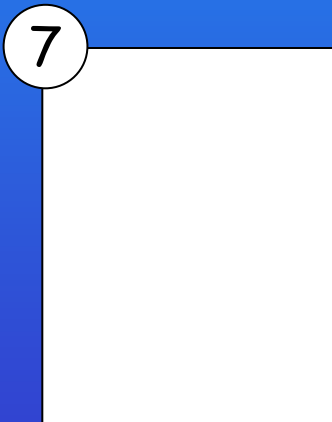
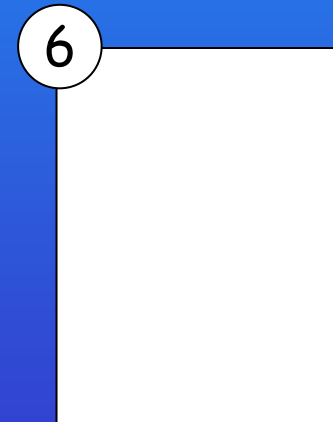
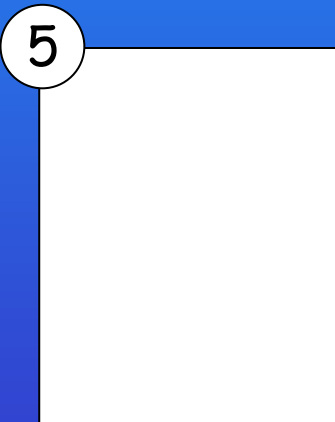
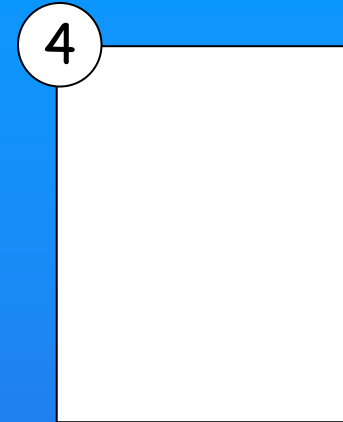
Building of frames



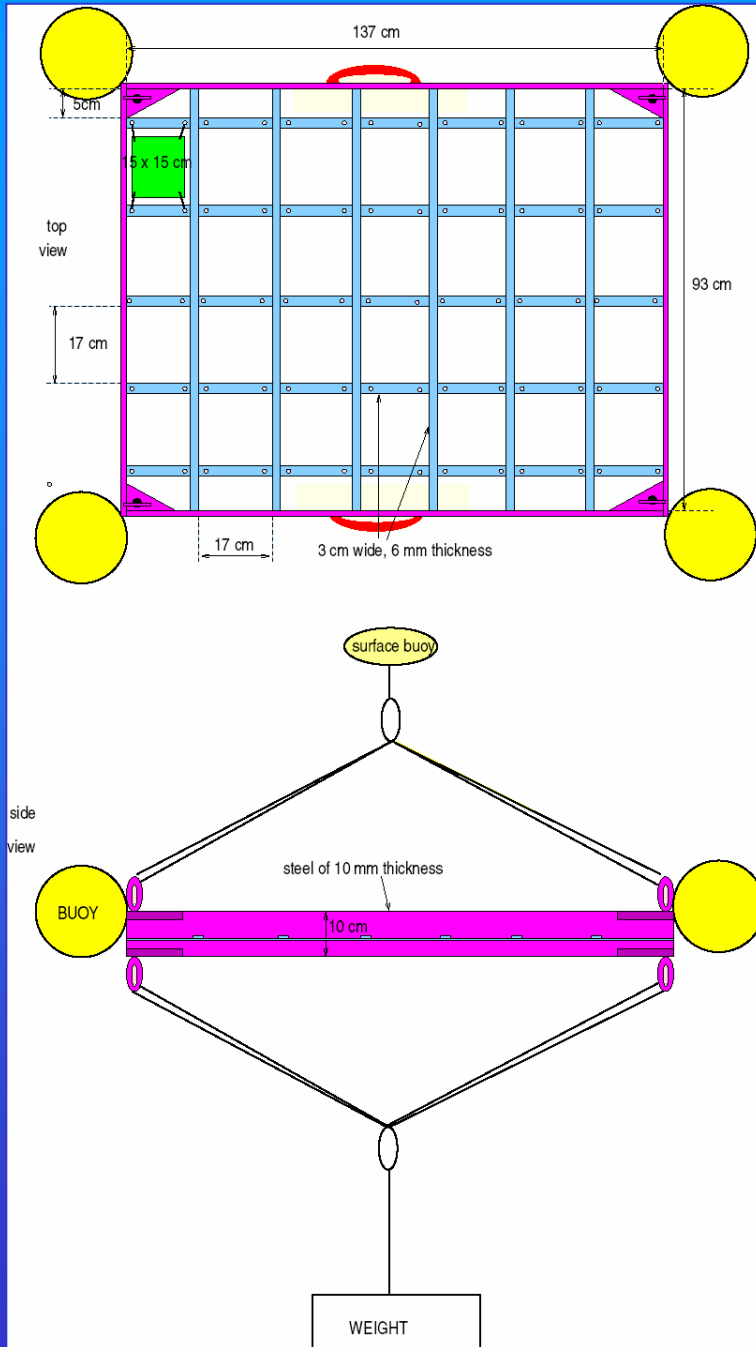
Preparation of panels



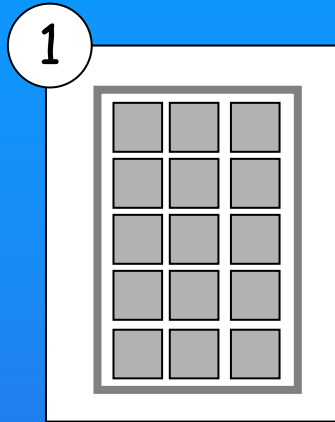
Positioning of frames



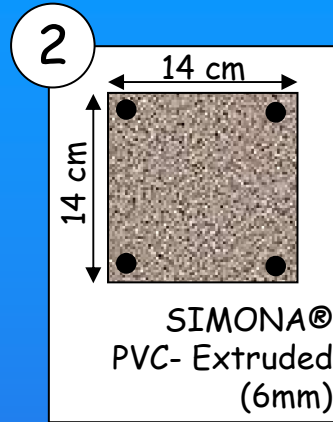
Recruitment frame Blue print (Katell)



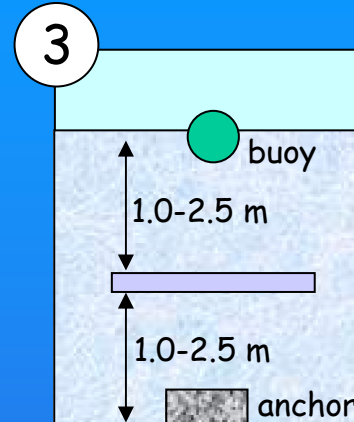
Protocols benthic settlers (June 2006)



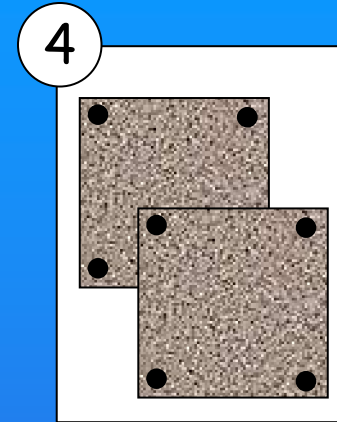
Building of frames



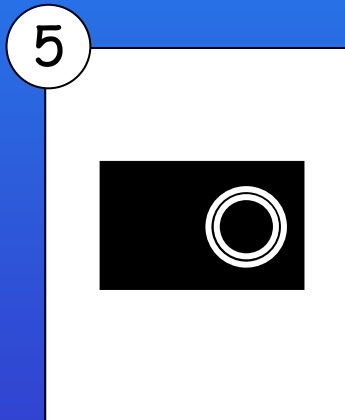
Preparation of panels



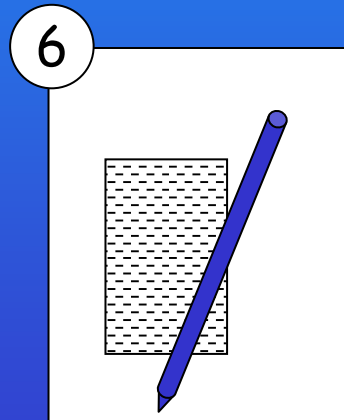
Positioning of frames



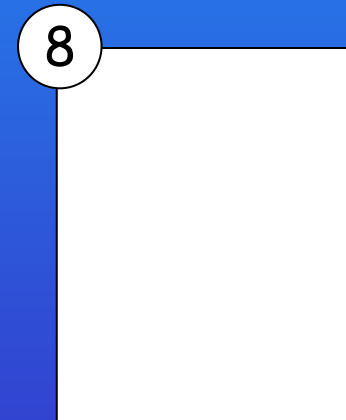
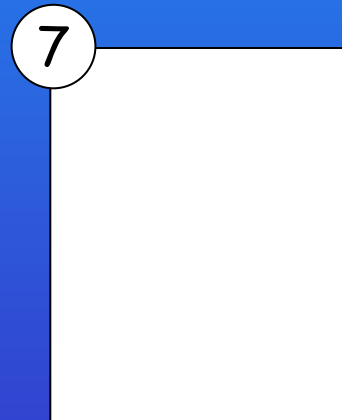
Sampling of plates



Photographing of plates



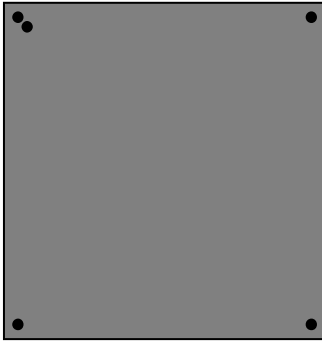
Description of plates



DESCRIPTION RECRUITMENT PANEL

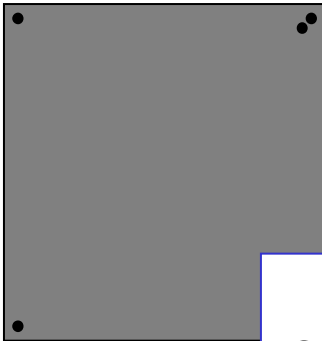
Sampling station:
 Nr. of recruitment frame: 1 / 2 / 3
 Nr. of recruitment panel:
 Starting date panel:
 Sampling date panel:
 Description performed by:
 Description date:

TOP: nr digital photo:

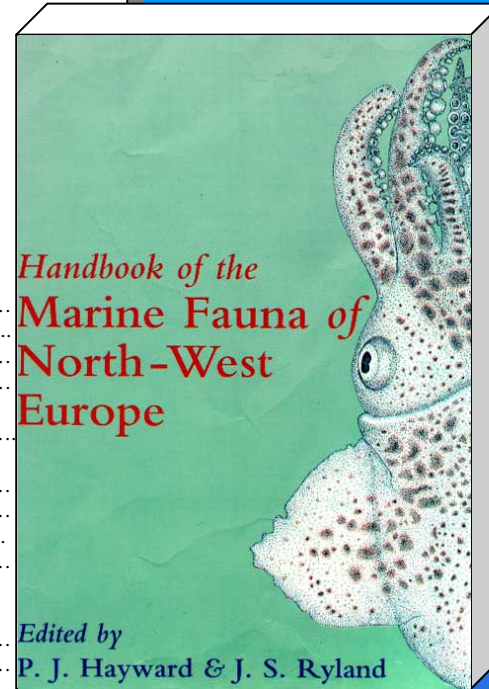


- Microalgae:
- Macroalgae:
- Sponges:
- Hydroids, etc.:
- Flatworms, etc.:
- Annelids:
- Echiurans, etc.:
- Crustaceans:
- Insects, etc.:
- Molluscs:
- Bryozoans:
- Sea urchins, etc.:
- Acorn worms, etc.:
- Fish:
- Other:

BOTTOM: nr digital photo:



- Microalgae:
- Macroalgae:
- Sponges:
- Hydroids, etc.:
- Flatworms, etc.:
- Annelids:
- Echiurans, etc.:
- Crustaceans:
- Insects, etc.:
- Molluscs:

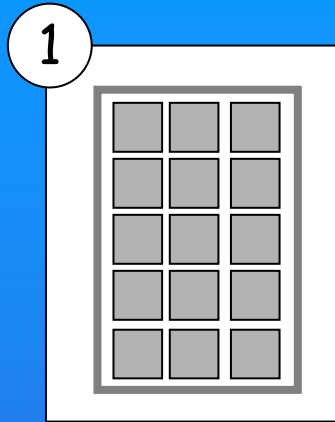


Protocols
 Primary settlers

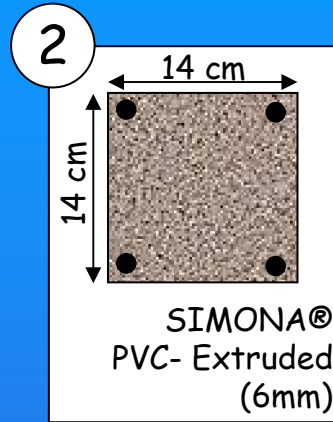
November 2005

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Species b	absent	absent	absent
Species c	absent	absent	present

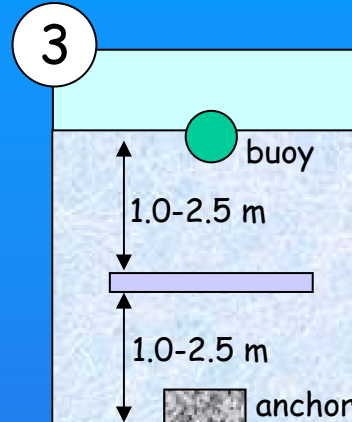
Protocols benthic settlers (June 2006)



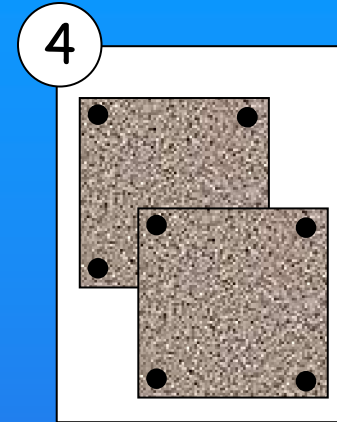
Building of frames



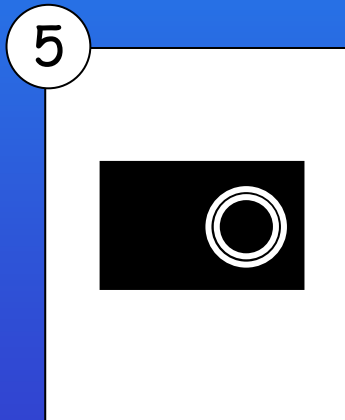
Preparation of panels



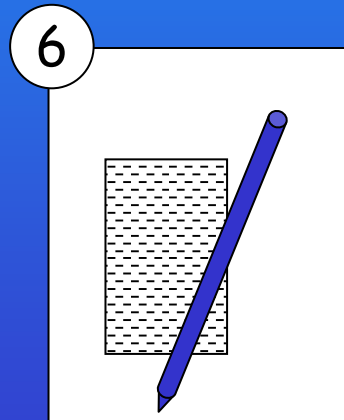
Positioning of frames



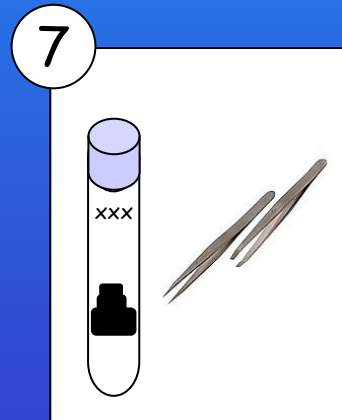
Sampling of plates



Photographing of plates



Description of plates



Subsampling (optional)



Expert judgment

Pelagic propagules

	Week 2	Week 4	Week 6
Species a	absent	present	present
Species b	absent	present	absent
Species c	absent	absent	present

Primary settlers

	Week 2	Week 4	Week 6
Species a	absent	absent	present
Species b	absent	absent	absent
Species c	absent	absent	present

Comparison of species

Timing reproduction	(date)
Development time	(# fortnights)
Settlement success	(yes/no)

Comparison of locations

Trigger for reproduction
Relationship with temperature
Relationship with latitude / characteristics

Start of
Measurements

15 September 2006





Presentation of First results

MarBEF
General Assembly
Spring 2007

REMAINING QUESTIONS

1. Recruitment frames versus panels (cf. SETL project)
2. Positioning recruitment panels (bottom/surface)
3. Instruments on recruitment panels (e.g. temp logger)?
4. All organisms present, or selected species only?
5. Molecular analyses (who does what?)
6. Secondary settlers too?
7. Latitudinal- & seasonal-dependent sampling frequency?
8. Gaps in latitudinal gradient (other partners)?
9. FP7 proposal?
10.