

TBTIMPACTS Kickoff meeting – Goa 27-29 September 2005

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**SIXTH FRAMEWORK PROGRAMME PRIORITY**

**SPECIFIC TARGETED RESEARCH PROJECT**

***Assessing impacts of TBT on multiple coastal  
uses TBTIMPACTS***

Contract no.: INCO-CT-2005-510658

**Partner 1 ENEA – Scientific tasks**

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**TBTIMPACTS**



# ENEA scientific tasks

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- **Financial Coordinator**
- **Co-Coordinator of WP2**
- **Co-Coordinator of WP5**

# WP2

Participants: Partners 1, 2, 3 and 6

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- **To study environmental impacts of TBT in Indian and European marine environments**
  - **To evaluate the effect of TBT on the biochemical composition of microorganisms**
  - **To examine the possibility of production of exopolymers by microorganisms to overcome TBT pollution**
  - **To analyse historic data on alien species (surface-attached) invasion in European waters with an aim to correlate with TBT ban**
  - **To analyse fishing practises in India that could potentially endanger public health by way of consumption of TBT through fish and fish products**
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# ENEA scientific tasks - WP2

Environmental impact in Europe

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# ENEA scientific tasks - WP2

Environmental impact in Europe

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## Study of the Environmental impact of TBT in Europe

Sources of information that will be explored are:

- 👉 Scientific literature (peer reviewed articles)
- 👉 European Commission funded projects
- 👉 Grey literature
- 👉 National Monitoring Programmes???

# ENEA scientific tasks - WP2

Environmental impact in Europe

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## Scientific literature (peer reviewed articles);

- ≡ Articles searching, relating with organotin monitoring data appeared in literature in the last 10 years, in different on-line catalogue such as:
    - ★ Web of Knowledge
    - ★ Swetswise
    - ★ Academic Press
    - ★ American Chemical Society (ACS)
    - ★ Blackwell-Sinergy
    - ★ Elsevier
    - ★ Kluwer
    - ★ .....
  
  - ≡ Only the articles where appropriate quality control tools have been used in collecting the data will be inserted in a database.
  
  - ≡ Preparation of an electronic format that authors of the selected articles will be asked to fill in.
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# ENEA scientific tasks - WP2

Environmental impact in Europe

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👉 Scientific literature (peer reviewed articles);

☰ Organotin environmental distribution database construction and implementation by ENEA/Subcontractor

(Country, sampling location, sampling date, compounds, matrix, concentration levels, type of QC tools applied, reference)

- ★ The DB on OTs environmental distribution will be available on the project website
- ★ easy search page with the possibility to sort the data by
  - analyte
  - country
  - year
  - .....

# ENEA scientific tasks - WP2

Environmental impact in Europe

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## European Commission funded Projects:

- ▢ **HIC-TBT**
- ▢ **OT-SAFE**
- ▢ **SCOOP**
- ▢ **Project searching with organotin monitoring data**
- ▢ **Necessity to have the permission from EU for inserting the data in the DB**

# ENEA scientific tasks - WP2

Environmental impact in Europe

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## Grey literature:

- ☐ Format preparation for the collection of grey literature in the DB
- ☐ List of European experts to be contacted for their OTs grey data and to suggest names/institutions in their Country where the same request can be made

# ENEA scientific tasks - WP2

Environmental impact in Europe

Institution	Scientist
University of Huelva (ES)	J.L. Gomez-Ariza
University of Oviedo (ES)	A. Sans Medel
CSIC (ES)	J. Bayona
University of Pau/CNRS (FR)	F. Pannier/ O.F.X. Donard
University of Luton/Plymouth (UK)	L. Ebdon/L. Pitts
University of Vienna (AT)	E. Rosenberg
Free University of Amsterdam (NL)	J.W. Wegener
University of Athens (GR)	N. Thomaidis
University of Umea (SE)	W. Frech

# ENEA scientific tasks - WP2

Environmental impact in Europe

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## National Monitoring Programmes?

- ⇒ A formal letter to be prepared by the project and sent to the Environment Ministries of EC Countries
- ⇒ Already existing contacts: UK, NL, IT

# WP5

Participants: Partners 1, 2, 3, 4, 5, 6 and 7

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- To generate decision tools for improved coastal health and restoration of degraded coastal ecosystem
    - ↪ Indicators of coastal health for assessing and monitoring of coastal waters in the context of organotin compounds
    - ↪ A quality control programme for validation of analytical data
    - ↪ Policy recommendation at national, regional and international level
  
  - To develop strategies for long term monitoring of marine environment
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# WP5

Participants: Partners 1, 2, 3, 4, 5, 6 and 7

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  - To develop strategies for long term monitoring of marine environment
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## ENEA scientific tasks – WP5

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- ☞ To support Indian laboratories in the implementation of analytical methods for organotin determination in water, sediment and biota
- ☞ To develop a suitable quality control programme

# ENEA scientific tasks – WP5

## Implementation of analytical methods

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↪ List of Indian laboratories potentially involved in organotin analysis

↪ Inquiry on their analytical potentiality

- ★ A questionnaire will be distributed to the laboratories to get information on the analytical methodologies in use and the existing laboratory facilities for organotin compounds analysis

↪ Training of 2 young researcher of partner 3 nearby the ENEA laboratories; basing on questionnaire results

- ★ Solid sample treatments (US, MW, ASE)
- ★ Analysis (GC/MS – GC/MS with and without isotope dilution)

↪ Video-communication systems (*ENEA campus e-learning project*);

↪ Scientific helpdesk

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# ENEA scientific tasks – WP5

## Quality Control Programme

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### ↪ Internal Quality Control (only for partners of TBTIMFACTS)

- ★ CRMs BCR 477, BCR 462 and/or BCR 646
- ★ Derivatized standards for calibration (IVM – NL)
- ★ QC samples for Quality Control Charts
- ★ Electronic forms and guidelines for building and maintaining CC
- ★ Eventual training on CC

### ↪ External Quality Control (for all Indian laboratories willing to participate)

- ★ 5 PTs starting from the second year of project

# ENEA scientific tasks – WP5

## Quality Control Programme

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### ↪ External Quality Control (for all Indian laboratories willing to participate)

≡ 5 PTs starting from the second year of project exploiting the BCR step by step approach

1. Organotins in unknown standard (blind) solutions (to check errors at instrumental analysis step (calibration and/or separation))
2. Organotins in spiked seawater samples (to check performances in relatively easy sample (type of matrix and concentration level))
3. Organotins in seawater samples (to be verified) (to check performances on real samples)
4. Organotins in sediment samples (to check performances at low concentration)
5. Organotins on mussel tissue (to check performances on complicate matrix)

# ENEA scientific tasks – WP5

## Quality Control Programme

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↪ External Quality Control (for all Indian laboratories willing to participate)

≡ **PTs Organization**

1. Invitation to all Indian laboratories involved in organotin analysis (results of questionnaire)
2. Sample purchasing (from RMs European producers) and dispatching
3. Providing electronic guidelines
4. Scientific helpdesk during the PTs
5. On line data submission
6. Data evaluation by Tool4PT (Mermayde) and Hostan (BCR) statistical tools
7. Reporting to labs
8. Web forum for the technical discussion of results
9. Final report

# ENEA scientific tasks – WP5

## Quality Control Programme

### ↙ PTs schedule

	Invitation	Sample Dispatching	Results Deadline	Reporting to labs	Final Report
1	March 2006	May 2006	July 2006	September 2006	November 2006
2	October 2006	December 2006	February 2007	April 2007	June 2007
3	May 2007	July 2007	September 2007	November 2007	January 2008
4	December 2007	February 2008	April 2008	June 2008	August 2008
5	May 2008	July 2008	September 2008	November 2008	January 2009

## Subcontract – WP2 and WP5

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- ↪ Both in WP2 and (mainly) in WP5 the project will be supported by a subcontractor identified in the technical annex as QualityConsult
  
- ↪ According to the technical annex QualityConsult will be involved in the following tasks:
  - ☞ To assist Participant 1, if required, in collecting information on environmental distribution of organotin compounds in European marine environments and on other antifouling compounds through literature review.
  - ☞ To organize and manage (data evaluating and reporting) intercomparison exercises among laboratories.
  - ☞ To provide Indian laboratory with suitable reference materials to be used in intercomparison exercises and in the establishment of quality control charts.

# QualityConsult

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↳ QualityConsult is an independent no-profit association active in the field of promotion and development of analytical quality

↳ Main activities of QualityConsult are:

- ↳ Participation in EC funded projects
- ↳ Providing of quality control tools to analytical laboratories at National and International level

# QualityConsult

EC funded on going projects

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## ↪ Project partner in

- ☞ VIRM - European Virtual Institute for Reference Materials (Secretariat/Scientific Helpdesk)
- ☞ SWIFT-WFD - Screening methods for Water data InFormaTion in support of the implementation of the Water Framework Directive (Organization, evaluation and management of PTs among European laboratories (over 80))
- ☞ QUA-NAS - Improving the infrastructure for metrology in chemistry in the candidate new member States

## ↪ Project Coordinator of

- ☞ TAQC-WFD – Training Courses in Analytical Quality Control in support to the Water Framework Directive

# QualityConsult

Quality Control tools provider

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## ↪ PTs provider

- ☞ A permanent Proficiency Testing scheme has been established at national level since 2004
- ☞ Around 50 – 60 laboratories/year
- ☞ 24 PTs conducted so far

## ↪ Control Charts

- ☞ Electronic tools and scientific assistance for building and maintaining of analytical control charts