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**Synopsis First Regional Workshop for the project
“Caspian Water Quality Monitoring and Action Plan for Areas of Pollution Concern”
Tacis/2005/109244**

Venue: Nissa Hotel, Ashgabat, Turkmenistan; February 4-6, 2008

I. OUTCOME OF PROCESS

This Workshop was organized by the DHV/COWI Consortium and managed to enable:

Clarifying aims of Workshop (Chair TL, 9.30-11.30, Monday February 4, 2008)

- Experts building on CEP SAPs intellectual heritage and data (TL)
- Deputy MNP TM expressing TM's commitment for hosting the project and focus it to the regional and national priorities
- PM Tacis briefing countries on ENPI (European Neighborhood Partnership Instrument) and other financial instruments of the EC for the region
- PM CEP PCU briefing countries on CEP/SAP, including progress with PIF and COP1/COP2 with ancillary LBS protocol;
- TL expressing the aims of the Workshop
- RC introducing the national and international experts contracted by the Project;
- LKE1-RU expressing their strong political commitment for environmental management and protection as presented in RU's recently agreed National Security Protocol.

Reporting Country situations (Chair RC, 11.30-16.00, Monday February 4, 2008)

- Technical coordinators / SAPICS of riparian countries presenting and sharing country situation on National Monitoring and Action Planning, presented in alphabetic order by
 - LKE1-AZ
 - SAPIC-IR
 - LKE1- KZ
 - LKE1- RU
 - LKE2-TM

Technical Guidance towards Action Planning for LBS (Chair KE3, 16.30-18.00, Monday February 4, 2008)

- KE4 presenting technical guidance on identifying and prioritizing actions towards LBS
- NKE1 presenting the use of satellite images towards identifying and positioning monitoring stations to measure impact of LBS

Technical Guidance towards Monitoring (Chair KE3, 9.00-13.00, Tuesday February 5, 2008)

- KE2 reporting vessel, sampling and laboratory status and needs for AZ, KZ and TM
- CEP-PCU Technical Advisor reporting CEP-II Contaminant Survey and Activities
- NKE3 reporting proficiency testing needs and plan of action for implementing it
- KE3 reporting on needs for exchange of information and sharing data
- PM AGMIN reporting delivery of monitoring equipment under parallel Tacis contract
- KE2 reporting steps for achieving a RWQMP

National Monitoring Plans (Chair NKE3/RC, 14.00-18.00 February 5, 2008)

- LKE2-RU reporting NWQMP-RU as example
- NKE3 reporting harmonization needs and critical requirements to agree upon
- Country delegations splitting-up for working it out, country by country, facilitated by experts
- Country delegations presenting findings in plenary
- PM CEP-PCU describing progress in PIF, COP and ancillary protocols, including LBS
- NKE3 consolidating findings in agreed harmonized RWQMP

Social Evening February 5, 2008

Harmonized Monitoring Plan (Chair NKE3, 9.00-10.30 Wednesday February 6, 2008)

- NKE3 presenting Harmonized Monitoring Plan
- LKE1-AZ confirmed commitment of AZ
- SAPIC-IR confirmed commitment of IR, suggesting participation of international co-financeers
- LKE1-KZ confirmed commitment of KZ
- LKE1-RU confirmed commitment of RU
- LKE2-TM confirmed commitment of TM
- TL thanked participants and closed Workshop

Second Tacis Coordination Meeting (Chair NKE3, 11.30-13.00, Wednesday February 6, 2008)

The Second Tacis Coordination meeting was organized by the DHV/COWI Consortium for reaching a formal agreement on RWQMP with SAPICs of riparian states, in presence of PM Tacis, PM CEP PCU and international experts.

TL presented project progress made so far and the results of agreed RWMP to be implemented and completed in 2008, including:

1. *Parameters*
2. *Proficiency testing*
3. *Station Locations*
4. *Timing*
5. *Laboratories*
6. *Sampling logistics (Vessel)*
7. *Equipment needs*
8. *Training needs*
9. *Reporting*
10. *Meetings*
11. *Action planning toward LBS*

Presentation of results to SCM CEP SAP in President Hotel, Ashgabat, February 7, 2008

On request of PM Tacis, TL presented project progress made so far and the results of agreed RWMP to be implemented and completed in 2008, including

1. *Parameters*
2. *Proficiency testing*
3. *Station Locations*
4. *Timing*
5. *Laboratories*
6. *Sampling logistics (Vessel)*

- 7. *Equipment needs*
- 8. *Training needs*
- 9. *Reporting*
- 10. *Meetings*
- 11. *Action planning toward LBS*

PM CEP-PCU reminded RWQMP developed two years ago was agreed upon. It agreed on parameters, guidelines, data to be collected, timing, and some equipment was provided; a couple of reports were received. The question how to proceed can be answered by building to the extent we can to the extent we can and bring forward the process and operations as agreed above.

II. DETAILED REPORTING

For the detailed reporting reference is made to the papers in RU and EN attached on this CD-ROM.

III. ADDITIONAL OBSERVATIONS

1. Institutional embedding of CASPIAN MAP

To avoid replication of information presented already in Inception Workshop and Inception Report, the institutional embedding of Caspian MAP was not rehearsed. Rather TL Caspian Map demanded RC to present the international and national expert's CV contracted in the Project, most of them were not consolidated or present at the Inception Workshop. Most national experts, contracted by approval of PM Tacis, were not attending the workshop in order to be cost efficient and effective. Only the approved TM Team plenary attended the First Regional Workshop. Therefore RC presented all selected expert's CV's articulating this project essentially is a people's business on request of TL Tacis.

PM CEP PCU reminded TL Tacis institutional embedding is vital. Therefore following figures rehears this, enabling all parties to recognize Caspian MAP's organization and institutional setting. The latter has consequences for the coordination of Caspian MAP with CEP-SAP which is due to finalize in 2008 and its envisaged successor COP, to be enabled operating under a third grant hopefully activated this year. This has consequence for the envisaged reporting mechanisms to the CEPSAP Steering Committee Meeting, SCM. Before the end of 2008, the Project will report to the COP.

CASPIAN MAP's Organization

The Local Experts LE1 (Technical Coordinator), LE2, LE3 and LE4 in AZ, KZ, RU and TM of CASPIAN MAP are homologues of the International Experts KE1 (TL), KE2, KE3, and KE4, **Figure 1.**

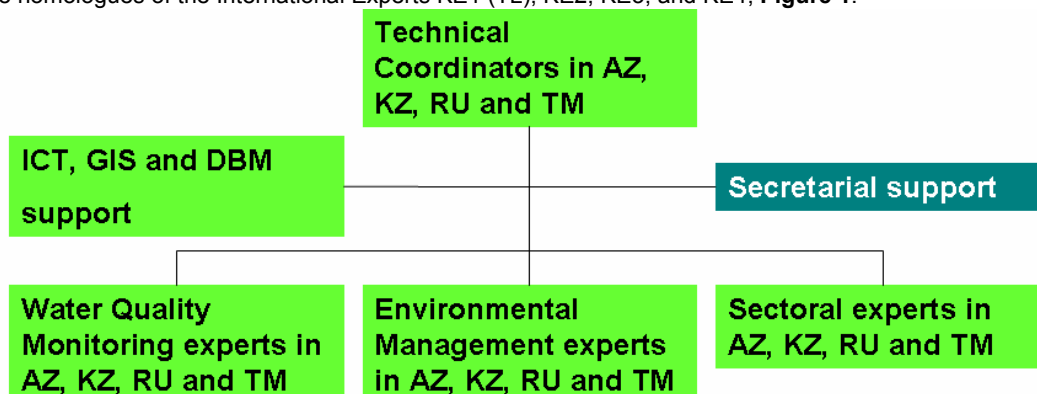


Figure 1. Organization of National Teams

Technically the international organization is simple, based on CASPIAN MAP's ToR, recognizing international Key (KE) and Non Key Experts (NKE):

- KE1=TL=International Team Leader, stationed in DHV BV, Amersfoort, The Netherlands
- KE2=International Water Quality Monitoring Expert, stationed in Kiev, Ukraine.
- KE3=International Environmental management Expert, stationed in COWI, Copenhagen, Denmark.
- KE4=Industrial Engineer, stationed in DHV China, Beijing, PRC
- NKE1=RS, GIS and DBM Expert, responsible for using satellite images, stationed in Turkey.
- NKE3=Proficiency Testing Expert, stationed in Kingston, Ontario, Canada.
- In duty station Ashgabat, the office operations are managed by an Associate Expert (AE) from DHV BV, Amersfoort, The Netherlands not financed by Tacis, but by the Netherlands Ministry of Foreign Affairs (DGIS, the General Directorate for International Cooperation). AE is stationed in Ashgabat,

Caspian MAP's Institutional Embedding

Institutionally the embedding of CASPIAN MAP is illustrated in Figure 2.

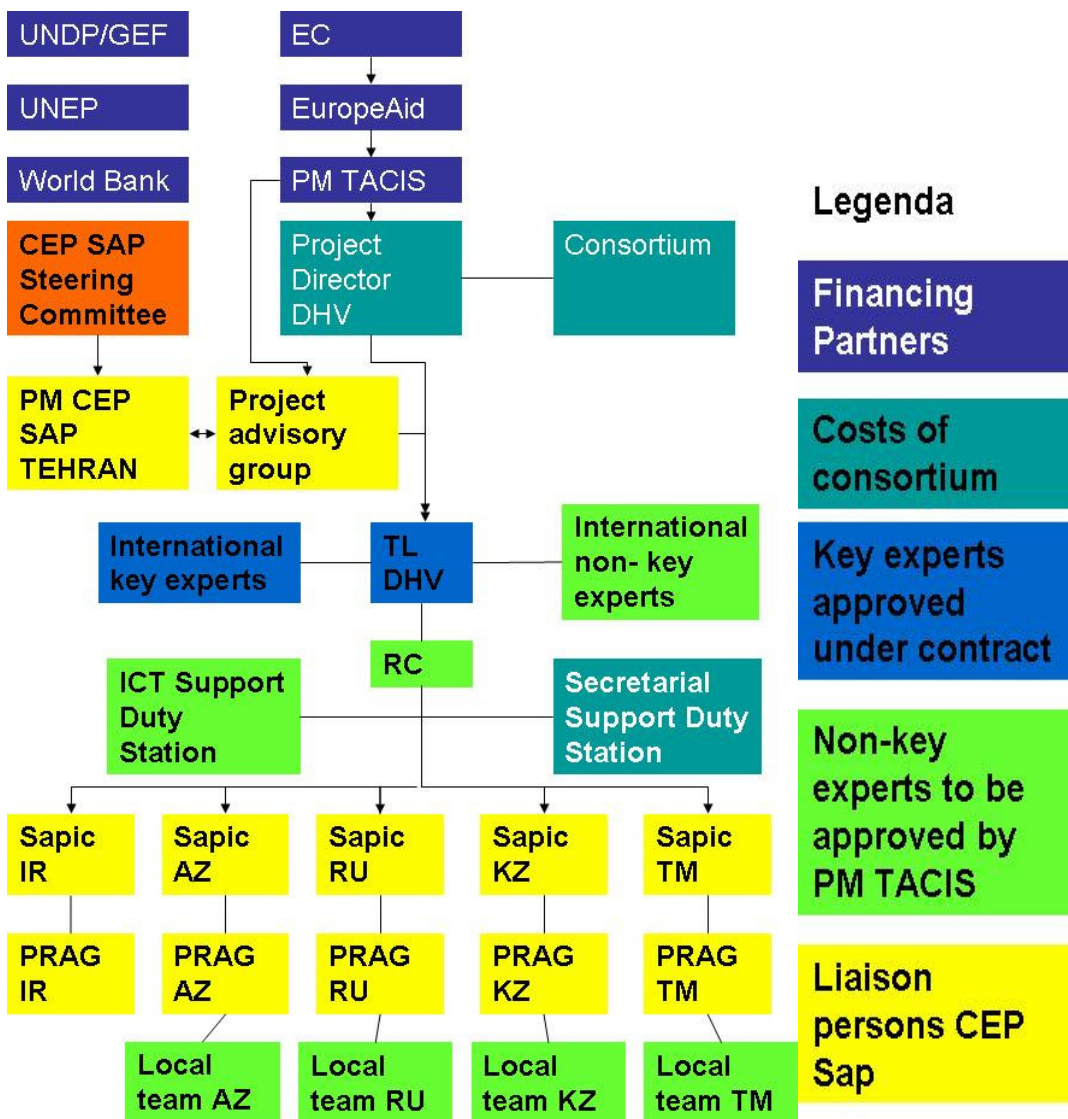


Figure 2. Institutional embedding of Project

In this framework, the Regional Coordinator is the principle interlocutor between TL and the Local teams.

Caspian MAP's Coordination Meetings with SAPICs (SCM's as called in Tacis ToR)

The Tacis ToR for CASPIAN MAP assumes good cooperation between the Ministries of Environment and other bodies involved in Caspian Sea water quality issues, the network of laboratories, the Caspian Environment Program, including the CEP Pollution Regional Advisory Group, including exchange of observers, especially at Steering Group meetings. It is expected that the five Caspian countries (AZ, IR, KZ, RU, TM) will continue to co-operate on water quality issues through the CEP Pollution Regional Advisory Group and other relevant bodies.

The Tacis ToR for CASPIAN MAP suggested a Project Steering Committee would be set up to guide project implementation. The Project Steering Committee would comprise a representative of the European Commission, the Contractor, a water quality representative from each Caspian littoral country within the Tacis program (AZ, KZ, RU and TM), the chair of the Pollution Regional Advisory Group, and the CEP Project Manager. Representatives from the World Bank, UNDP and UNEP would also be welcome. A representative from IR may also participate. The Project Steering Committee may be expanded to the other national representatives on the CEP Pollution Regional Advisory Group. Meetings of the Project Steering Committee would take place back to back with the bi-annual (or otherwise) meetings of the Pollution Regional Advisory Group, to economize on travel costs. The Contractor would ensure the proper functioning of the regional Project Steering Committee, including writing minutes, preparing agendas etc.

In reality, the above expectation as formulated in the early part of 2005 has been replaced by a more pragmatic mechanism:

Box 1. Suggested Coordination Meetings (Tacis SCMs in Tacis ToR)

TACIS Coordination Meetings for CASPIAN MAP with SAPICs are held in pace with the CEP-SAP SCM or arranged in pace with CASPIAN MAP's venues in the region by:

1. Presenting Tacis CASPIAN MAP to the CEP-SAP SCM in Moscow, December 2007.
2. Holding the First Tacis Coordination Meeting for CASPIAN MAP with SAPICs and PRAGs and PM CEP PCU in pace with the Inception Workshop, May 2007 in Ashgabat.
3. Holding the Second Tacis Coordination Meeting for CASPIAN MAP with SAPICs, PM Tacis and PM CEP PCU, while reporting its results to CEP-SAP's SCM in Ashgabat, February, 2008 in pace with the CASPIAN MAP First Regional Workshop held in Ashgabat, February, 2008.

Future TACIS Coordination Meetings for CASPIAN MAP with SAPICs will be synchronized as much with COP and/or CASPIAN MAP Activities in the Region. Preliminary following venues of the TACIS Coordination Meetings for CASPIAN MAP are foreseen by holding a:

4. Third Tacis Coordination Meeting with PRAGs in late June 2008 in Atyrau, KZ, in pace with a Technical Tacis CASPIAN MAP Meeting. At that technical meeting the Proficiency Test Report, the final planning of the sampling campaign and the training programs will be discussed. PM CEP/COP-PCU and EU representative in KZ will be invited to attend.
5. Fourth Tacis Coordination Meeting with SAPICs and/or PRAGs hold in December 2008 in Baku, AZ in pace with the CASPIAN MAP's Second Regional Workshop. At this Second Workshop, the results of monitoring program and the interim results of the LBS action planning will be discussed. PM CEP/COP-PCU and EU representative in AZ will be invited to attend.

6. Fifth and Final Tacis Coordination Meeting with SAPICS and/or PRAGs hold in May 2009 in Russia in pace with the Third and Final Regional Workshop for presenting final results of CASPIAN MAP and COP's SCM. presenting results to EC, IFIs and International Donors, including private sector and NGOs.

2. Data Availability and Data Dissemination

Data collected under CASPIAN MAP

As explicitly stated in CASPIAN MAP's ToR, it is assumed that scientific information gathered and/or processed using resources provided by this project will be shared freely. There were no arguments against this and countries promise to adhere to it.

Data collected under former donor driven projects

Most data collected in former donor driven projects under CEP are available in the CEP PCU in Tehran. In the Second Phase, the Caspian Regional Thematic Activity Centers for Pollution (CRTCs) were abandoned. In stead P-RAGs, Pollution Regional Action Groups were formed, to replace the CRCTs. The P-RAG is a consultative body on pollution control strategies, meeting twice a year. It is for the CoP1 to decide the P-RAGs can continue. P-RAG's institutional arrangements are in place:

1. A Regional Water Quality Monitoring Program, RWQMP was agreed upon, delineating how to sample, where to sample, etc
2. A work plan for pollution action planning was agreed, supported by protocol for land-based pollution sources (ancillary LBS protocol).

We must assure that what has been assured will not be lost and that the results obtained are transferred to the COP. However, there is one exemption as mentioned in following Box 2.

Box 2: Data missed from Baku based CRTC-Pollution

The consolidated pollution data collected in Baku's Caspian Regional Thematic Activity Centers (CRTCs) for Pollution have not been found yet. PM Tacis on behalf of EC made an urgent request to disclose these data in accordance with agreed protocol for financing CEP.

Data published in the public domain

"The Caspian Sea Environment", published by Springer Verlag Heidelberg 2005 in the series called "The handbook of Environmental Chemistry", Volume 5 Water Pollution, Part P. certainly amalgamates a wealth of data on the Caspian. However the suggestion that it will take decades to publish an equivalent of information on the Caspian is not true.

1. Firstly, because a lot of historical data collected by the FSU and Iran on the Caspian before 1991, were not disclosed. The next paragraph lingers on this issue.
2. Secondly, a number of recent geo-chemical studies on the Caspian were neither taken on board, especially those connected with research work done under auspices of the Monaco MEL IAEA and NATO's Science for Peace and Stability Program, Multidisciplinary Analysis of the Caspian Sea Ecosystem (MACE). These will be made available through our website, <http://caspiandata.com>.
3. Thirdly, and possibly more important, Russia now also becomes pro-active in putting data on the environment in the public domain. In the Inception Report, reference was made to ESIMO website <http://www.oceanography.ru/esimo>. Under Russia's newly agreed National Security Pact, the need for sharing data on the environment has been recognized to such an extent that institutes and agencies under different ministries and scientific organizations will start sharing information on a web-site. This information that now still is RU will be made available in EN language in due time. This new RU policy

of sharing information in the public domain can give an unprecedented impetus to our work and hopefully followed by AZ, KZ and TM. It hopefully prompts a similar IR initiative, where data are scattered over many agencies and institutions, only available in Persian language.

4. Fourthly, international and local oil companies are collecting a wealth of baseline data for the purpose of damage indemnification and fulfilling compliance control obligations. Part of these data arrives in the national data base of the national Hydromet or equivalent organizations.
5. National monitoring agencies in riparian states, scattered over different ministries and organizations, are involved in compliance, trend and scientific monitoring. Part of this is published in the public domain by monthly, quarterly and yearly bulletins or publications. The country status reports prepared for this Regional Workshop linger on this issue, as reported in following paragraph.
6. Last but not least let us bank on the work achieved and published at the CEP SAP CPU website: <http://www.caspianenvironment.org/newsite/index.htm>. *Experts involved in this project should be strongly familiar with work presented Mr. Reza Sheikholeslami, Pollution Expert, PCU, Tehran, presenting CEP-II Regional Pollution Related Activities in the Caspian Sea, both at this First Regional Workshop and at the Inception Workshop. It both is available in RU and EN and on our CD ROMs for present and past workshop. Rehearsal is the mother of all learning.*

3. Further clarification of monitoring terminology

Following Figure 3, reiterates the DPSIR approach introduced in Inception Workshop. In this diagram, distinction is made between:

- **Compliance (source) monitoring**, covering activities and emissions
- **Trend monitoring**, covering transmission and immission and
- **Scientific monitoring**, covering uptake, impact and effects

This terminology facilitated discussion on monitoring during workshop

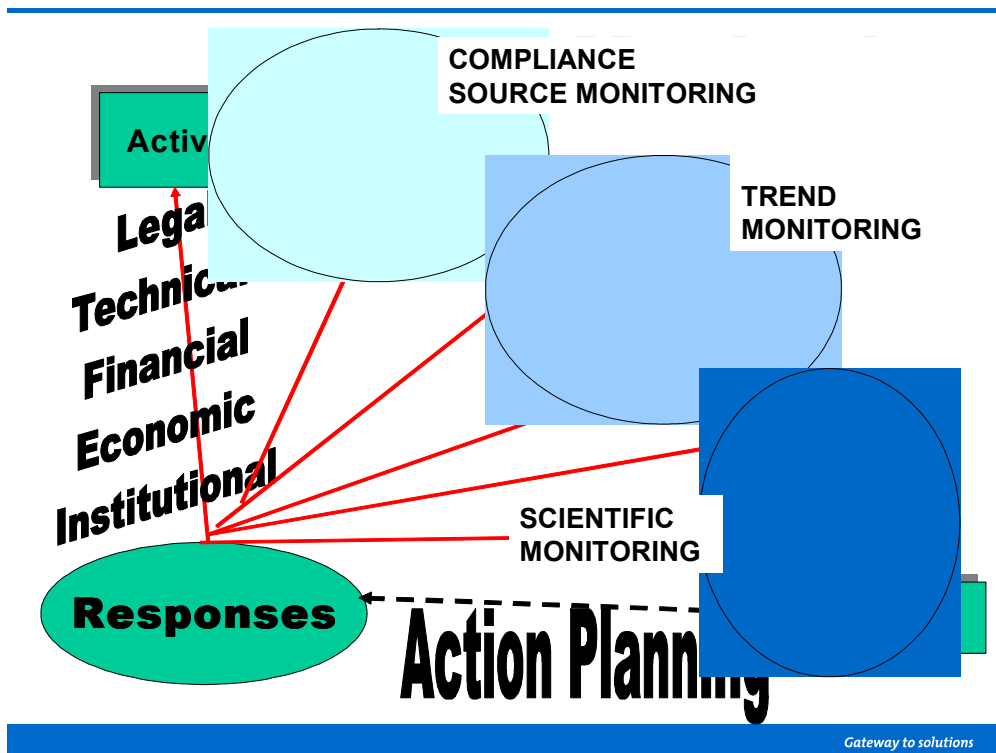


Figure 3. Monitoring in DPSIR approach

4. Getting access to non-disclosed country/ historical data

Making reference to *APPENDIX A: DATA REQUIREMENTS FOR POLLUTION ASSESSMENT of KE3's Mission 1 Report of December 2007*, data requirements have been spelled out quite well, enabling the set-up of a first crude mass-balance approach. The question is, can we get them?

In order facilitating a quick answer to this question following questions has been raised to riparian states in order to decide in which direction this project should go, see Box 3. As decided in wrap-up with experts, a written request for acquiring these data will be made and addressed to NFPs.

Box 3: Questions prepared for getting access to data for mass-balance modeling - Caspian Sea

General data for Caspian Sea:

Hypsography

- *Area [km²] and/or Volume [km³] = f(Water level [m]) in table and/or graphical form*

Water quality data

Monthly average concentrations [mg/l] in the water phase for the period 1979-2005 in the:

- *Northern basin (Russia and Kazakhstan cooperation)*
- *Middle basin (Russia, Kazakhstan, Azerbaijan and Turkmenistan cooperation)*
- *Southern basin (Azerbaijan and Turkmenistan cooperation + available data from Iran)*

For the following parameters:

- *Biological Oxygen Demand (BOD)*
- *Total Phosphorus (TP)*
- *Copper (Cu)*
- *Total Petroleum Hydro Carbons (TPH)*
- *Radon (Ra)*

Sediment data

Estimated annual average (spatial) active volume of the sediment pool for the period 1979-2005 in the:

- *Northern basin (Russia and Kazakhstan cooperation)*
- *Middle basin (Russia, Kazakhstan, Azerbaijan and Turkmenistan cooperation)*
- *Southern basin (Azerbaijan and Turkmenistan cooperation + available data from Iran)*

Estimated concentrations [mg/g] in the active sediment pool of the following parameters:

- *Organic material (dry matter)*
- *Total Phosphorus (TP)*
- *Copper (Cu)*
- *Total Petroleum Hydro Carbons (TPH)*
- *Radon (Ra)*

Caspian Basin Specific Q+Q Data pertaining to

- *Northern Basin*
- *Middle Basin and*
- *Southern Basin*

5. Confusion in semantics

Problems in semantics easily occur, not only in understanding the meaning of a word in the translation but also in understanding the meaning of a word in the context of the project. An example is the following:

- **Profiler:** geography vertical section of physical feature: a vertical section through a physical feature, e.g. through soil, showing its development from bedrock. (Encarta)

- **Understanding by team member:** A device to do echo soundings for measuring the hydraulic profile (bottom depth) of the system.
- **In specification of Celtic Explorer Research Vessel (Damen Shipyards):** an Acoustic Doppler Current Profiler (ADCP) for measuring flows!

Box 4: Precise definition of semantics is needed to avoid misunderstandings and irritation.

In this project a CTD profiler is meant: The Profiling System for measurement of conductivity, temperature, dissolved oxygen, pH, turbidity including closing water bottle system for sampling water (2.5l minimum) for nutrients, organics and trace metal analysis; Purpose: Profiler is designed to measure conductivity, temperature, dissolved oxygen, pH and turbidity in marine or fresh water environments to depths up to 200 meters, (AGMIN).