NATIONAL INSTITUTE OF BIOLOGY

Self-evaluation Reports for the period 2004-2007

SELF-EVALUATION REPORT FOR THE PERIOD OF 2004 -2007
OF THE NATIONAL INSTITUTE OF BIOLOGY (NIB)

Introduction

Scope and context of self-evaluation

This assessment covers the research of Programmes and one Infrastructural Programme and projects carried out at the NIB, as well as the NIB performance as a whole from 2004 to 2007. The self-evaluation is based on Act 42 of The Law of Research and Development (Ur.l. RS 96/2002 and 115/2005) and on the National Research and Development Programme (NRRP) recommendations (Ur.l. RS 3/2006).
The aims of the assessment are to stimulate and improve the quality and activities of research and infrastructural Programmes and Institutes and also, to improve the management and leadership efficacy and improve the accountability of NIB to the users of knowledge and to the society.

Procedure and methodology

The self-evaluation procedure and methodology was approved by Scientific Council (SC) of NIB on September, 13th 2007. The SC also nominated the self-evaluation committee and decided for external evaluation. Internal self-evaluation was the first phase of the procedure, based on the recommended (a) international standards of scientific quality (b) measures of quality of relevance to the social environment and (c) directives of NRRP. The elements are seven quantitative and nine quantitative elements (ARRS document 5319-7/2007-4):

I. Quantitative elements	**II. Qualitative elements**
- scientific publications and citation	- overall assessment of research quality
- patents	- achieved development in the research area (theory, methodology, recognition)
- contracts with users of knowledge	- wider social dimensions of research
- other type of research collaboration	- relation between basic and applied content
- education at university level	- direct research association with economic and social need
- research staff and qualifications	- international integration of research
- financial resources	- interdisciplinary and inter-institutional dimensions of research
	- research infrastructure, equipment and premises
	- managing and organisational research dimensions

External evaluation as the second phase of self-evaluation was carried out for each Programme and for NIB as a whole, by an Evaluation Committee, appointed by the SC in November 2007. Its members were highly recognised scientists from relevant research fields from various European institutions (App. 1). All members declared that their assessment had been free of bias and personal interest, reached without any influence from the institute and with no conflict of interest. The referees received the information on methodology for research evaluation for each Department, COBBIS and SICRIS information, citations and annual reports of NIB from 2004 -2006.
The third phase of self-evaluation was the preparation of the final self-evaluation reports of programmes by the principal investigators in cooperation with programme members as well as the final self-evaluation report of the NIB by self-evaluation committee.
The final self-evaluation report was approved by SC on January 25th 2008.

Mission and organisation in the period of 2004-2007

The National Institute of Biology is a public non-profit institute, whose mission is to create/extend basic knowledge and to perform top level curiosity-driven and society-inspired research in the field of biology. Biology and other related natural, life, earth and environmental sciences are integrated to carry out internationally recognised research. The ongoing and long term goal of NIB is also to transfer

this knowledge into practice in order to improve nature preservation, to find ecologically acceptable solutions in natural resources management and to improve the quality of life. By close collaboration with governmental and non-governmental bodies and companies, we aim to provide conditions and means for sustainable development locally and worldwide.
NIB was established in 1960 as a research institute within the Biotechnical Faculty of University of Ljubljana but was recognized in 1975 by the Government of Slovenia as a legal entity and in the 1994 established as a public research institution. NIB has a nine member Board of Governors, the majority being governmental representatives and with two internally elected representatives, the president being Prof. Dr. Tine Valentinčič. The Director, Prof. Dr. Tamara Lah Turnšek, by formal request being recognised scientist from the NIB research field, plays a dual role, as a managerial and scientific leader. All items regarding the research and research management are discussed by the Scientific Council (SC), comprising nine internally nominated and elected senior scientists. This body is also responsible for periodic research staff evaluation and advancement. SC is directed by Assoc. Prof. Dr. Anton Brancelj.
Top management includes, beside the director, two deputy directors, one for organisational and financial matters and one for science transfer management, and Board of Heads of the Departments and two heads of the Infrastructural Centres. The director is also advised by the Business Committee, Education Committee and Promotion Committee, comprised of nominated staff to coordinate their respective activities.
NIB is composed of five research units (Departments) and one administrative unit. NIB is located at Biological Centre in Ljubljana, with one research Department located on the Slovenian coast in Piran.

Research activity
The five Departments carried out four research Programmes and one Infrastructural Programme during this evaluation period: ***Coastal Marine Research (P1-0237***), conducted by Marine Biology Station Piran, ***Plant Physiology and Biotechnology (P4-0165),*** conducted by the Department of Biotechnology and System Biology; ***Communities, Relations and Communications in Ecosystems (P1-0255),*** jointly conducted by the Department of Freshwater and Terrestrial Ecosystem Research and the Department of Entomology; ***Ecotoxicology, Toxicological Genomics, Carcinogenesis and Ecoremediation (P1-0245),*** conducted by the Department of Genetic Toxicology and Cancer Biology. External partners include Institute of Physical Biology (P1-0237), the University of Nova Gorica (P1-0165) and the Natural History Museum of Slovenia (P1-0255). One NIB researcher is a member of the research programme at another institute (Josef Stefan Institute).
In addition, the scientific activity at NIB includes basic and applied projects, as well as targeted research projects financed by ARRS and international projects (**App. 10**).

Part I: Quantitative evaluation with comments.
Scientific publications and citation
Publications and citations are the most valuable indicator of scientific excellence. However, one should critically evaluate the scientific output with respect to the Programme financing. We strongly believe that this index is a more reliable indicator than taking into account the size of the programme group, allowing comparisons between the Programme groups in the same field of research. The summary for NIB is presented in **Table 1.**

Table 1: Summary of quantitative research achievements of NIB 2004-2007

<table>
<tr><td>Type of publications/citations</td><td>Number</td><td colspan="4">Number of articles per one FTE* (total 19.8 FTE)</td></tr>
<tr><td>Scientific articles</td><td>228</td><td colspan="4">2,88 Articles/ FTE /year</td></tr>
<tr><td rowspan="3">Scientific articles with Impact Factor</td><td rowspan="3">154
(67,54 % of all)</td><td colspan="4">1,94 Articles/ FTE /year</td></tr>
<tr><td colspan="4">Quartiles</td></tr>
<tr><td>1
55
(35,71%)</td><td>2
38
(24,68%)</td><td>3
41
(26,62%)</td><td>4
20
(12,99%)</td></tr>
<tr><td>First author (NIB)</td><td>67
(43,51% of articles with IF)</td><td colspan="4">0,85 Articles/ FTE /year</td></tr>
<tr><td>Review papers</td><td>7</td><td colspan="4"></td></tr>
<tr><td>Short communications</td><td>5</td><td colspan="4"></td></tr>
<tr><td>Invited lectures at meetings</td><td>6</td><td colspan="4"></td></tr>
</table>

Published confer. presentations	23	
Monographs and books	5	
Book Chapters	16	
Patent	1	
Scientific movie, audio or video recording	1	
TOTAL CITATIONS	418	5,28 citations /FTE/year
Citations without self-citations	309	3,90 citations /FTE/year
Standardized citations	187	2,36 citations /FTE/year
Total Bibliographic points for all four Programmes (ARRS classification)	6052,53	76,42 points /FTE /year

*FTE of all Programmes, carried out at NIB.

The quantitative research output of the NIB within self evaluation period is available at SICRIS. There are differences between the Programmes as extremely low financing of some Programmes forces the researchers to find additional financing by a greater number of small projects, drastically effecting the scientific quality and bibliographic output (see App. 10 and comments on page 7).

Patents

One patent application was granted (Patent no. 21937). The Intellectual Property Rights (IP) regulation act was approved in NIB by the Board of Governors in 2007 and internal seminars were organised at NIB to stimulate patent applications. Secondly, we successfully applied for an international grant in the field of Industrially Important Molecular Life Sciences - INREMOS - and established the Virtual Institute in the field of Systems Biology Tools Development for Drug Design and Cell Therapy, with the purpose of developmental research, leading to patenting and possibly a spin-off company.

Contracts with users of knowledge

These contracts can be divided in two categories:

1. Ministries and their bodies: (Ministry for Environment and Spatial Planning (MOP), Agency of Environment (ARSO), Ministry for Agriculture, Forestry and Food (MKGP), Phytosanitary Administration of the RS (FURS) and Ministry of Health (MZ) – for whom we carry out various public administrative services, such as monitoring of fresh waters (rivers and lakes) and the sea, diagnostic analysis of plant pathogens and genetically modified organisms. We are also counselling and providing scientific and technical support to authorities for the transfer of legislation from EU to Slovenia, as well as for Slovenian presidency.

Total income increased from 0.43 mio € in 2004 to 1.04 mio € in 2007, demonstrating the very successful involvement and importance of NIB in creating policy decisions in the areas of our expertise.

2. Industrial organisations**:** We are trying hard to keep and expand the existing collaborations with Luka Koper, d.d., Aquarius, d.o.o, Optotek, d.o.o., LIMNOS d.o.o., VIVA LA MUSICA, with the biotech, pharmaceutical and food industries, such as LEK-SANDOZ , BiaSeparation d.o.o., Educell d.o.o., Pivovarna Laško, d.d., and Radenska, d.d. Total income of 0.32 mio € in 2004 decreased to 0.22 mio € in 2007. In spite of great efforts, the actual contribution to products development in industry is lower compared with the partners mentioned above (ad 1). Customers' satisfaction was expressed by certificates in different fields, due to the high professional qualifications of NIB research staff (see below). To guarantee the highest quality of services for our customers, NIB maintains the quality system in compliance with standard ISO 9001:2000 as well as the accreditation of its laboratories in compliance with standard ISO 17025 on the field of detecting genetically modified organisms since 2003.

Education at university level

In addition to our mission in public services, we also participate in education, particularly at university level and in public opinion making. Twenty seven (27) senior researchers with habilitation are very much involved in the educational process of all four universities in Slovenia according to inter-institutional agreements or contracts. Moreover, they are actively involved in the preparation of new studies, such as the new "Environmental Protection and Ecotechnology" programme starting 2007 in the Higher School of Environmental Protection in Velenje in 2007. The most important achievement in

this respect is the development, together with University of Primorska and University of Trieste (Italy), of a new Joint Postgraduate Study "Marine Biology" that has started in year 2007/2008. Slovenian part of the programme was prepared by the researchers of NIB – Marine Biology Station Piran and its Head is the study coordinator. Also, one international summer school in the field of Systems Biology was organised in 2006 by the Department of Biotechnology and Systems Biology. In addition, we are involved in the educational processes by mentoring BSc, MSc and PhD students in the above mentioned institutions and these activities are increasing. For example, in 2007 there were 26 young researchers employed at NIB, 3 more than in 2004.

Research staff and qualifications

Human resource structure is shown in **App. 8**. In 2004 NIB comprised 98 employees, whereas this increased by the end of 2007 to 119. Out of these, 60 were permanently employed. Forty six (46) hold a PhD, 6 MSc and 47 BSc, and the rest had at least high school education. At present there are 88 (73.3 %) researchers among 119 employees, 16 (13.3 %) technical support and 16 (13.3 %) administrative staff. The number of researchers increased from 50 in 2004 to 62 in 2007 (24% increase). Also, there was a large increase in quality as 45 % senior researchers are holding the highest scientific titles (Scientific Counsellor and Higher Senior Researcher or equivalents) in 2007. Scientific quality is reflected in regular promotion to higher scientific titles, achieved by most researchers. In this period, most of 17 young researchers finished their studies (14 PhDs) in the due time.

In general, human resource development at NIB improved, not only quantitatively but also in quality, as a larger percentage of employees had higher education and position in 2007 than in 2004. Also, we are proud to be an organisation with a high proportion of women in highest positions in research and management and a well gender balanced SC and Board of Governors.

Financial resources

The structure and fluctuation of income in the evaluation period is shown in **App. 9**. In absolute terms, in 2004 the total NIB budget was 3.96 mio €, whereas in 2007 this increased up to nearly 6 millions € (5.84 mio €), the increase index being 1.48. This, nearly 40% real growth is a very good achievement. In each of these years, NIB had a positive balance, proving successful financial management, ranging from 0.087 mio € to about 0.1 mio € in 2007.

Of the resources, ARRS is the crucial one for the quality of scientific excellence. ARRS income in 2004 was 2.88 mio €, 73.2% of total NIB income. In 2007 this was 3.76 mio €, representing only 63.8%. At first it may appear as a positive trend - NIB showing a relative increase in services and marketing. However, as these were small projects, the consequences of altered balance of the income show that additional burden on researchers and administration increased enormously. This was also observed by our external reviewers, suggesting that an increase in stable financing of large projects and programmes vs. numerous small projects would benefit science in Slovenia in general. Although these small projects provide the basis for the growth of the Institute, they can cause the dispersal of the focus and can hinder the constant tendency for excellence in scientific output.

The most stable financing from ARRS is from programmes and overheads, but their real value decreased in this period. For example the increase of the total Programme income was 6.0% and of the Infrastructural Programme 4.7%, whereas the inflation rate was 8.6%. We are successful in applications for basic research projects (100% increase from 2004). Moreover, we were successful in increasing the Targeted Research Programmes (CRP) income during the evaluation period by 400%, representing at present more than 5% of the total income. Other external finance from the public sector increased from 11% in 2004 to 17.9% in 2007. Increase in international funds increased from 5.6% in 2004 to 9.6% in 2007. Other public funds (see below) account for a 17.87% share in cumulative funding in 2007. Foreign finances comprise 9.61% of NIB cumulative funding (**App. 9**).

Part II: Qualitative Self-evaluation

Achieved development in the research area (theory, methodology, recognition)

Five Departments participate in four Programmes and their activities are presented in self-evaluation report of each research programme. Two groups are large, above 30 members, whereas the other two have 21 and 13 members. This requires additional administrative and managerial skills and careful planning in using the infrastructural resources.

Marine Biology Station Piran (MBS). Marine research at this Department located on Slovenian coast is multidisciplinary and aims at integrating approaches of biological, chemical and physical oceanography of coastal sea into research of ecosystem biocomplexity including human dimension.

Anthropogenic pressures and climatic changes have caused dramatic changes in enclosed seas and coastal environments including the northern Adriatic. Marine environmental assessment and forecasting abilities are key elements enabling sustainable uses of marine ecosystems. The topics of basic and applied research at the department include important ecological and development issues extending form the need to set up observation systems on sea, the need for sustainable mariculture and the conservation of marine biodiversity. The main research themes were plankton ecology including HABs and microbial processes in the water column, phylogeography of bloom jellyfish species, habitat preferences of coastal ichthyofauna, numerical modelling of tidal and wind-driven circulation, biogeochemistry of mercury and benthic fluxes. Research themes within EU funded projects (12) encompassed marine biodiversity, sustainable mariculture, circulation forecasting and marine observation systems as well as marine data management and monitoring. MBS researchers are partners of EU network of Excellence MarBEF, and the group enjoys good international visibility also collaborating with non-EU countries within bilateral projects and projects funded by international organisations. In addition, MBS hosts one of 24 International Ocean Institute's worldwide operational centres. MBS researchers gave invited lectures at international conferences and universities (14), besides, renowned visiting scientists were lecturing at MBS (18 from 8 countries). MBS researchers are actively involved in the research, monitoring and development activities for different users in particular for public sector (ministries and agencies, municipalities) and act as consultants for international organisations.

The Department of Biotechnology and Systems Biology (FITO) has grown quickly from the plant biotechnology and physiology orientated group but at present the scope of its activities is much broader. In the frame of international projects (COEXTRA, TRANSVIR, INREMOS), and other forms of cooperation with related research institutions in Slovenia and abroad, its program Plant Physiology and Biotechnology (P4-0165) produces excellent results in understanding biological systems, with the emphasis on plant – pathogen interactions, research on genetically modified organisms and plant pathogens. The Department uses advanced technologies of quantitative molecular biology and the development of systems biology supported by bioinformatics and biostatistics. Their research is concentrated mainly on the investigation of interaction between agronomically important plants (potato, corn, vegetables, grape vine, and fruit trees) and pathogens like viruses, bacteria, phytoplasmas and pests. In order to find the genes involved in plant defence, they compare sensitive and resistant varieties, among them also transgenic lines. Using cDNA microarrays and Real-time PCR, several genes involved in responses of plants to infection were detected, like stress-related genes, genes involved in photosynthesis, and secondary metabolism. The involvement of different signal molecules, known to be involved in gene expression connected with plant defence, was revealed. With the use of complex analysis of Colorado potato beetle adaptation towards plant defence, several interesting genes and proteins were selected for functional analysis. Many methods of microarrays and real time PCR for molecular diagnosis and quantitative and qualitative analysis of gene expression in different systems (plants, microorganisms, vertebrates and invertebrates) were developed and improved. Research output and modern technologies and techniques have been implemented in applications in agriculture, pharmacy and recently in medicine. The Department closely cooperate with diverse companies and ministries as consultants in governmental, European and international bodies like EPPO, ENGL, CEN and projects like ERA NET and Technological platforms.

Department of Freshwater and Terrestrial Ecosystem Research (EKO) and the Department of Entomology (ENTOMO) together with the Natural History Museum of Slovenia conduct the Programme "*Communities, Relations and Communications in Ecosystems",* representing a good example of cooperation of scientist professionally skilled in different fields of biology. Members of EKO group are mainly oriented to ecological, eco-physiological and taxonomical/biodiversity basic research in ecosystems. Taxonomic research is focussed on "lower crabs": Copepoda, Cladocera and Ostracoda, where internationally recognised taxonomical publications (in total 15 in IF journals!, 4 in the last 4 years) were published. Researchers are specialised in groundwater dwelling fauna, important also for water quality and they have well established communication with relevant national and international community. Eco-physiological studies are mainly oriented to different aspects of stress in aquatic organisms (thermal, pollution) with oxygen consumption as the main indicator of it. The newest techniques (with optodes) were introduced enable us to study individual organisms. The main activities of the group are focussed on ecosystem level, where structure and function of communities are studied. In epigean ecosystems members study high-mountain and Alpine lakes (in connection with some applied activities). They also introduced intensive ecological studies in groundwater ecosystems, where they developed new sampling methods for groundwater in the rivers. In karstic system they established a cave laboratory with instrumental support (temperature, water

flow, humidity) to study population dynamic of Copepoda (Crustacea) and Coleoptera (Beetles) under climate change. Effects of human activities on some selected birds' species are studied on long-term base as a base for biodiversity conservation. Apart local end-users (Ministry of environment, local communities), members of the EKO group participated in several international projects like INTERREG (with specific orientation to local communities) and European Science Foundation. They run several bilateral projects of scientific and technological cooperation worldwide, of particular importance being with China, USA, and Russia. In the next period their main orientation will be oriented to groundwater ecosystems, important either as source of drinking water or "hot-spot" of biodiversity but threatened by climate change and human activities.

Department of entomology (ENTOMO) conducts long term programme of basic research of different aspects of neuronal basis of behaviour in insects. Investigations are focused on model species like fruitflies and stink bugs, on economically important species like honeybees and leaf- and planthoppers as well as on cave crickets as indicators of specific environments in Slovenian Karst. The most important results of basic research in the last period are descriptions of anatomy and function of neuronal networks processing information about mechanical signals, the analysis of mechanical properties of plants, important for transmission of communication signals and description of the latter in various species, new data in population genetics and enlargement of the research field on honeybees. Application is focused on transfer of laser technology in research in biology and for the use in studying resonant properties of wood. The most important partner within NIB is EKO, in Slovenia The Natural History Museum, Institute of Agronomy, Faculty for Mathematics and Physics and Biotechnical Faculty of the University of Ljubljana, and outside Slovenia the University of California Riverside (bilateral project), University of Sussex (Royal Society ESEP project), The University of Cardiff (Marie Curie Intra-European fellowship), Cambridge University (3-years postdoctoral grant), University of Madeira (Portugal, bilateral project), Chinese Academy of Science Beijing (China, bilateral project), EMBRAPA institutes and the University Parana Curitiba (Brazil) and Universities of Würzburg in Frankfurt (Germany). The research group is flexible and opened for cooperation. Its advantages are intensive international cooperation, optimal ratio between research and education, good ratio between basic and applied research and strong flow of PhD students who proceed their professional careers in science after successful studies.

The Department of Genetic Toxicology and Cancer Biology (GEN) carries out the Programme Ecotoxicology, Toxicological Genomics, Carcinogenesis and Ecoremediation, comprising research activity**,** where environment and human health are closely related. The unique interdisciplinary expertise of the researchers in this group enables novel approaches to study complex interactions between environmental and genetic factors in living organisms including humans. The studies are focused on exploring the mechanisms of genotoxicity and other cancer related processes of emerging environmental and dietary contaminants and mechanisms of cancer protection of natural agents. Using state of the art biological and molecular methodologies several genes that are specifically involved in responses of mammalian cells to genotoxic effects were identified. With the development of new in vitro methodology with precision cut organ slices the cancer protective potential of xanthohumol (flavonoid from hops) and its mechanisms of action have been revealed. In vitro and clinical studies of cancer progression related processes which are focused on the role of proteinases and their inhibitors in brain tumours revealed their usefulness as targets for development of new therapeutics. The research in ecotoxicology comprises studies of the consequences of general water eutrophication, with the emphasis on cyanobacterial proliferation effects on biodiversity and on the effects their toxins on human cells and tissues. Very high scientific output and in particular citation rate is reflected in international recognition, as two largest international projects (SYSTHER, CANCERDEGRADOME) are carried out by this group, and organising many international meetings and other exchange activities. This group is also involved in highly relevant applied research, its socio-economic impact being particularly related to management with water resources in Slovenia. In this period new potential application was developed (battery of toxicity assays) safety evaluation of drinking water, pharmaceuticals, food as well as for testing environmental sample. Cancer research has potential application in clinical diagnosis, prognosis and long term in cancer therapy.

Wider social dimensions of research

Areas of our expertise needed in creating legislation are recognized and already importantly supporting Slovenia government in the future decision about the EU Water Framework Directive at sea and for fresh waters, rivers and lakes. Our contribution, complementing numerous international studies, is highly relevant to management with water resources of general quality of water bodies in Slovenia and world, which is becoming more and more demanding and interrelated to climate changes. Highly important in this respect is EU project Alp-lakes. Also, this reflects in marine

environmental policy development (WFD, Marine Strategy and Ecosystem Approach, Coastal Zone Management), relevant for environmental impact assessment (Liquid gas terminal in the Gulf of Trieste), and to marine biodiversity studies for management purposes, etc. Marine Biology Station Piran is also responsible for the NODC (National Oceanographic Data Centre) and report as National reference marine centre to European Environmental Agency and UNEP/MAP/MED POL and founding member of MARS (European Marine Research Stations Network).
For various national organizations (MOP) several expert opinions related to biodiversity and Natura 2000 are performed each year by the group for ecosystems research, for example monitoring on a status of populations of cray-fish, beetles and birds, including white stork, which is a pan-European project in collaboration with the Natural History Museum. Close cooperation with policy makers, e.g. with Ministries, competent for agriculture, environment, defence and health, and with all corresponding inspection services is also in the field of plant health and food safety as well as fresh water biodiversity conservation. We are also involved in Slovenian presidency of EU in the year 2008. The importance of our researches and the use of our knowledge are noticeable especially in crisis situations such as affaires with genetically manipulated organisms or natural disasters such as an epidemics of fire blight. NIB is a member of European Network of GMO laboratories (ENGL) and has *representative* in European Plant Protection Organization (EPPO), nominated by state. Ministry of Agriculture, Forestry and Food and Ministry of Health nominated NIB as a National Reference Laboratory for GMO detection in feed and food. We are authorized by Ministry of Agriculture, Forestry and Food as a diagnostic laboratory for plant pathogenic microorganisms.

Relation between basic and applied research
NIB, being traditionally under-financed institution in the field of natural sciences in Slovenia, was very much involved in application of knowledge predominantly in the public sector. This is observed to various extents in all groups. As these mostly represent highly advanced consultant services and high tech analysis, we would like to increase our efforts in finding industrial partners for a long term active participation in their R & D activities, possibly resulting in joint venture spin-off companies in future. Industrial partners are mostly attracted by the Department of Biotechnology and Systems Biology.
One significant threat to the successful implementation of the research strategy is the short term nature and the insecurity of funding. We will soon reach the point, where the additional increase of applied, contract based small projects oppose to systemic financing would be contra-productive and harm scientific excellence, distort the mission of NIB from creating top quality basic knowledge. Without the latter, the transfer of knowledge activities will not reach top level and by a feedback loop we would also endanger the potential links with high-tech technologies.

Direct research association with economic and social need
Contract-bound cooperation is running with public sector, such as ministries and with all corresponding inspection services. Apart from consultant and diagnostic activities we represent them in European as scientific experts in European actions like ERA NET in the field of systems biology and plant health. Cooperation with the Chamber of Commerce and technological companies is of high importance, in the fields like pharmaceutical, food and environmental protection enterprises, etc. Moreover, the management should encourage development of expertise and knowledge in intellectual property rights, marketing and management, particularly among young researchers and postdocs, to meet the need of industrial partners and to protect industrial property rights of NIB. In addition, efforts towards spin-off are emerging at NIB management.
Our efforts are focused on increasing general public awareness in the field of NIB activities. For example, events on radio and TV, interviews for journals, production of DVD and other outreach material, including the web site. There are numerous workshops and meetings, organised by NIB for public and different stakeholders, including scientific community.
Education is also considered as socio-economic impact. In this respect, we have increased significantly our potential. The major success was in the establishing the new Joint degree Educational Programme “Marine Biology” and participating in other education programmes.

International integration of research
International collaboration during this period increased significantly, representing an important source of income, reaching nearly 10% of total income in 2007, and also reflecting high reputation of NIB scientists. Most important and prestigious are EU projects, comprising 51.7% of all international projects in 2007. Other type of contracts are European initiative for trans-European cooperation (Interreg IIIA and IIIB), on LIFE programme, and one TEMPUS project. There is also even higher increase in other projects, such as UNEP, FAO, ADRICOSM, COST, TWINING, ERA-NET and

various other platforms. On the other hand, due to low financial effects the interest for ARRS bilateral projects was decreasing simultaneously. However, there is an extensive informal international exchange and student mobility, visits of scientist, invited lectures, etc. In this respect, we specially welcome an increasing number of foreign undergraduate and graduate students and postdocs, (mostly from EU countries). Unfortunately, there is a lack of resources and lab space available, particularly at Biological Centre to allow for expanding the exchange to senior scientist, e.g. sabbatical leave of absence, what would undoubtedly increase the scientific output. During this period Joint Studies and International Summer Schools were initiated and will be expanded in the future, internationalising our activities.

Interdisciplinary and inter-institutional dimensions of research
Interdisciplinary research is inherent in all research Programmes at NIB. For example, Coastal Marine Research comprises biological, chemical and physical aspect as well as mathematical expertise in modelling of the coastal zone. Inter-institutional formal and informal collaboration in Slovenia is excellent within each Programme, the partners being most outstanding Slovene institutes and faculties, as well as industrial R&D laboratories and companies. There are relatively good interactions within the Biological Centre with the Department of Biology of Biotechnical Faculty, University of Ljubljana, where we are jointly planning to increase premises at present location. We are also partners in both multi-institutional Centres of Excellence in Environmental Technologies as well as in Centre of Excellence in the Fields of Pharmacy and Biotechnology. We need to enhance more profound inter-departmental collaboration and establish closer links among the Programme groups in future to reinforce internal synergy and use of infrastructure – a hidden resource.

Research infrastructure, equipment and premises
Research facilities and equipment and other working conditions, important elements for successful research, are good at NIB at both locations. In long-term perspective, we plan to invest approximately 10% of business revenues and surplus in research and other necessary equipment. We are also successful in building consortia of stakeholders in cases of very expensive equipment. The premises in Piran, where the process of re-construction took about six years, resulted in a new building that offers excellent working conditions, providing extensive cooperation with different partners in Slovenia and abroad. The premises in Ljubljana are already a problem, as due to relatively fast expansion of NIB, we are already faced with immediate need for additional space, however the most expensive and modern equipment is well maintained under ISO 17 025, in order to serve research at the institute and outside in the frame of the Infrastructural Programme NIB.

Managing and organisational research dimensions
NIB is caring for improvement of organisation and quality of work and education of co-workers not only in the scientific fields, but also in the quality assurance systems and in management (by organising internal workshops on team work, project management, intellectual property- IP, etc.) and other professional courses. There was no financial deficit during the evaluation period, indicating good financial management and administration. However, we feel the need to a more intensive dissemination of the results to public, which is so far sporadic and not well organised, mostly due to a lack of resources. During this period, however, new corporate image (logo) and an attractive web page was set up, giving good bases for more aggressive promotion activities. Since 2003, we are upgrading quality system in compliance with ISO standard 9001:2000, granted by the internationally accredited SIQ). This improved standards and regulations from top to bottom management proved to be beneficial not only to entire business performance, but also to all employees.

Analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT analysis)

1. Strength of NIB
- High quality of basic research resulting in expertise in various fields of biology–competent counselling.
- High interdisciplinary.
- High flexibility in meeting the needs of various partners (users of knowledge).
- Highly motivated staff.
- Good infrastructure - new premises at MBP in Piran and relatively good equipment (in Ljubljana).
- Increased visibility in recent years.
- Very good international collaboration – with great potential to increase.

- Good collaboration with research and all higher education institutions in Slovenia and abroad.
- Good gender balance – women in leading positions (management, councils and boards).

2. Weaknesses of NIB:

- Insufficient laboratory facilities-infrastructure in Ljubljana and modern equipment in Piran.
- Too many small size projects – scattered research activities and insecurity of governmental funding.
- Relatively weak intra-departmental collaboration, particularly between the two locations (Piran and Ljubljana).
- Insufficient funding for dissemination, promotional and public awareness activities.
- Insufficient knowledge of intellectual property rights and patenting.

3. Opportunities recognised by NIB

- NIB research directions are in line with worldwide recognized problems, and in line with 7FP EU Research themes such as:
    - ecology, biodiversity and nature conservation, climate changes, water resources, food quality
    - neurobiology and brain research, cancer research, systems biology and bioinformatics,
    - interdisciplinary and transdisciplinary projects with social sciences, particularly on environmental impact and sustainable development, etc.
- New possibilities for international collaboration in higher education schemes (summer schools, courses, joint study programmes)

4. Threats

- Decrease in stable ARRS financing is threatening scientific excellence.
- High administrative demands, particularly by international EU projects – coordinated by Slovene governmental administration.
- Employment restrictions (for public sector) limits the possibility of increasing very much needed marketing of NIB, project managements, dissemination and promotion, etc.
- Low level of public and political understanding of science importance for development of Slovenia.

Conclusions:

We believe that our strategic goals have been accomplished. These achievements have also been acknowledged by the external referees (App. 6, see also http://www.nib.si/si/institut/kijz/splosni_podatki_o_institutu/program_dela/default.html).

In future, the dedication of NIB to the self evaluation results and to the comments and recommendations of the referees will lead to further improvements of our strategic activities.

Appendices:

Appendix 1: List of external evaluators and their CV's
Appendix 2: Evaluation report of external referee for Programme *Coastal Marine Research (P1-0237*),
Appendix 3: Evaluation report of external referee for Programme *Plant Physiology and Biotechnology (P4-0165)*
Appendix 4: Evaluation report of external referee for *Communities, Relations and Communications in Ecosystems (P1- 0255)*
Appendix 5: Evaluation report of external referee for Programme *Ecotoxicology, toxicogenomics carcinogenesis and ecoremediation (P1-0245)*
Appendix 6: Evaluation report of external referee of NIB by external referees
Appendix 7: List of researchers holding university habilitation
Appendix 8: Human Resources for 2004 – 2007
Appendix 9: Financial structure of income for 2004 – 2008
Appendix 10: List of Projects 2004-2007
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Appendix 12: List of users of infrastructure at NIB for 2004-2007.

Self-evaluation report for the programme P1-0237 »Coastal Sea Research«
Principal Investigator: prof. dr. Alenka Malej

The main goal of our r**esearch** programme is to understand the complex ecological dynamics and pollution problems related to oceanographic and anthropogenic driving forces in the coastal seas. The backbone of this multidisciplinary research is field work at sea, combined with laboratory research and modelling. The research themes tackled by our group include tidal and wind-driven circulation and their impact on transport; interannual changes in thermohaline characteristics; and the dynamics of the planktonic food web focusing on the ecology of harmful algal blooms and mucilage phenomena, jellyfish outbreaks and links to the microbial loop. Biodiversity research focused on coastal ichthyofauna and microhabitat preferences. Within pollution studies most research efforts were directed at the assessment of the impact of mariculture, the application of new bioassay tests and advanced biomarkers. During 2004-2007 we published 37 original scientific articles, 29 with IF (47 and 36 with IF for the whole Marine Biology Station–MBS group), 29 scientific conference contributions, 51 abstracts (international conferences), 2 scientific monographs and 3 chapters in scientific books. Programme research group's publications were cited 289 times without auto citations (458 citations for the whole MBS group).

Research and development: The group's activities include innovative technology development and strong seagoing research. Numerous new field and laboratory techniques and methods have been developed and are expected to be implemented fully over the lifetime of the programme (2004-2008). As a result of the ongoing development of the Oceanographic Buoy (continuous *in situ* recording and transmission of selected oceanographic and biological data) the new system will represent a state-of-the-art field observing system. We developed original devices for on-line monitoring of phytoplankton composition, as well as new bioassays based on the measurement of photosynthetic parameters. A low cost *in situ* video recording system has been developed and was successfully used to assess gelatinous zooplankton. A special portable chamber for *in situ* redox potential measurements in the sediment was constructed and tested. The group's successful development activities also resulted in one patent. New non-destructive *in situ* sampling techniques, associated with SCUBA diving to study marine biodiversity *in vivo*, were developed. These methods enabled the mapping of endangered species and very important habitats. New premises, completed in spring 2006, also made possible the setting up of specialised laboratories for molecular biology, radio-isotope analysis and fluid dynamics. Numerous methods and techniques such as modern molecular identification techniques, advanced biomarkers, and radioactive (33-P) assay of microbial plankton were introduced.

Applied research and the wider dimensions of program research. The research group is actively involved in research, monitoring and development activities for different users like long-term marine monitoring according to national, EU and international legislation. Issues covered are relevant to marine environmental policy development (WFD, Marine Strategy and Ecosystem Approach, ICZM), environmental impact assessment (Liquid gas terminal in the Gulf of Trieste), and marine biodiversity studies for management purposes. Researchers are responsible for the NODC (National Oceanographic Data Centre), and report as National Reference Marine Centre to European Environmental Agency and Regional UNEP/MAP Unit (Athens). Much effort was put into the establishment and maintenance of the field observation system with data transmission at MBS which are made available to public at our webpage. Outreach and public dissemination activities are also important. Besides popular science articles other outreach activities include: events on radio and TV, interviews for journals, production of CDs and other outreach material incl. website (**www.mbss.org**, over 200.000 visitors). The »Prometheus of Science« award from the Slovene Science Foundation for excellent communication in Science testifies to the high quality of these activities. An important segment of our current activities is education: 12 members of the programme group are involved in undergraduate and graduate teaching at all four Slovenian universities. 1 PhD, 4 M.Sc. and 29 B.Sc. theses were completed under the supervision of our researchers during 2004-2007. Programme group members developed, together with the Universities of Primorska (Slovenia) and Trieste (Italy), a new Joint Postgraduate Study "Marine Biology" that began in 2007/2008. The programme leader is also coordinator of this joint study for the Slovenian side.

International integration. External collaborations are numerous and document productive interaction with outstanding groups in EU and non European countries. Among the international projects (17) with a joint inflow of over 667,000 € during 2004-2007, 12 were co-financed by the EU (5^{th} and 6^{th} FP, LIFE, INTERREG, TEMPUS). Within the framework of bilateral agreements of the Republic of Slovenia 17 cooperative projects were carried out with 18 partners from 11 EU and 6 non-European countries. During 2004-2007 we organised 9 scientific and professional meetings including a successful electronic conference with over 1200 participants from 46 countries.

Research staff are members of: Bureau Central CIESM, national coordinator of MED POL, GEF (UNEP/MAP), member of IOC IP on Harmful Algal Blooms, national CDB WG for Coastal and Marine Environment and GBIF, member Med GIG, EU WFD, EC member of Slovenian Geodesy and Geophysics Association) and also members of editorial boards (5) or editors (2) of scientific journals.

Finances. ARRS sources (incl. IC and young researchers) represented 58-69% of annual income and decreased in last two years. Foreign funds increased from 9% in 2004 to 17% in 2007; other sources represented 17-25 % of cumulative MBS income during 2004-2007. The requirement for staff members to acquire a large proportion of external funds for basic functioning (incl. indirect costs) should be taken into account when valuing productivity in terms of scientific publications.

Infrastructure and equipment. New MBS premises in Piran were finished in spring 2006 after 5 years of construction. During these 5 years we literally worked in the middle of the building ground and had to relocate all equipment and offices twice which seriously impacted the research productivity of the group. Working conditions are very good now and basic equipment is at hand but due our location in Piran we have fewer opportunities to share the large facilities and instrumentation in Ljubljana.

Self-evaluation report for the program P4-0165-0105: "Plant Physiology and Biotechnology"
Principal investigator: Prof. Dr. Maja Ravnikar

Research activity: The main goal of research is to understand interactions among hosts and microorganisms with emphasize on the genetically modified organisms (GMO), microorganisms and pests. We are using complex research approaches using tools of well established molecular methods, electron microscopy, biochemistry and biocultures as well as new methods, such as tools of systems biology, e. g. genomics, proteomics, bioinformatics. By using cDNA microarrays and Real-time PCR several genes involved in defence responses of plants (e.g. stress-related genes, genes involved in photosynthesis, carbon and secondary metabolism) have been detected. Additionally different signal molecules, known to be involved in gene expression associated with plant infection and pathogen resistance has been revealed. Many new methods for the molecular diagnosis of genetically modified organisms and patogens as well as quantitative and qualitative analysis of the gene expression in different systems (plants, microorganisms, vertebrates and avertebrates) have been developed and improved. Scientific output of Department of Biotechnology and Systems Biology (FITO) for the first four years of duration was 77 scientific articles, 61 articles in the journals cited in SCI; 24 articles in journals of the first quartile of the specific science field, scientific monography, professional monography, 4 chapters in scientific books of foreign publishers and 7 chapters in the expert books.
Research for development and socio-economic: The applicative research and diagnostic services for the needs of ministries competent for agriculture, environment, defense and health are upgrading in consultancy in governmental, European and international bodies like EPPO (European Plant Protection Organization), ENGL (we are a member of European Network of GMO laboratories), CEN and projects like ERA NET (EUPHRESCO and ERASysBio) and Technological platforms (Plants for the future and Food for Health). Among others we are involved in Slovenian presidency of EU in 2008. Cooperation with highly technological companies is of great importance. Our most important partners are Lek Sandoz d.d., Bia Separtions d.o.o., Optotek and many others. Seven employees of FITO are affiliated with the University of Ljubljana, Nova Gorica and Maribor. Lately we have been mentors to 11 PhD theses, 1 master degree thesis and 23 undergraduate theses.
International cooperation: The research quality and relevance are reflected in invitations to join the international projects (4 EU FWP, 16 bilateral, 4 COST) and different associations; we are founding members of the International Associations of Plant Bacteriology, as advisors we cooperated on EU missions in China, in Italy (EC Joint Research Center) and Jordan.
Research staff: There are currently 34 employees, 15 members of FITO are partially involved in research program (4,1 FTE), additional 19 people are employed on other projects. The increasing number of employees from 2004 when 24 people were employed may attribute to the growing applied work for the companies and international projects. Beside the full-time employed foreign researchers from Spain and France we were also host researchers from Great Britain, Check Republic, Macedonia, Bosnia, Italy, France and Croatia. **Finances:** Apart from the program, we also conducted 70 different projects. Income from ARRS for program and research projects represented 57% in 2004 and only 43% in 2007, foreign finances 10% and companies 10%, the rest are other public finances. **The ratio between basic and applied i**s 60 / 40%. **The research infrastructure** is up to date, **equipment** is on the high level; the most expensive equipment is kept in the instrumental Centre PLANTA by the ISO 17025 system which together with the highly trained specialists ensures top results. We are also a partner in Centre for Functional Genomics and Microchips and a member of Centre of Excellence of Biotechnology and Pharmacy.

SWOT analysis:
1. Advantages: Research at FITO is distinguished by the extreme interdisciplinary and strong connections with knowledge centers in Slovenia and abroad as well as with EU and international parties, Slovene ministries and companies.
2. Weakness: lack of the working space.
3. Possibilities: establishing of a Spin-off Company with the strategic partners from the industry.
4. Danger: Non stable financing and very low program founding in relation to many small projects (1-3 years) results in difficulties to maintain the focus.

Self-evaluation Report for the Programme P1-0255: "Communities, Relations and Communications in Ecosystems"
Principal Investigator: prof. dr. Anton Brancelj

The Program includes basic, applied and developmental investigations of (a) basic mechanisms of communication, (b) neurobiology, (c) relations between environment and organism, (d) inter-specific relations, (e) biodiversity and (f) integrated research of ecosystems. It runs according to the Program with no need for change. The results are recorded n the Annual Reports. The programme, financed by 6 FTE is conducted by scientists of the National Institute of Biology (Dept. of Freshwater and Terrestrial Ecosystems and Dept. of Entomology) and the Natural History Museum of Slovenia. It includes 14 scientists with PhD, 3 professional co-workers, 1 technician and 7 PhD students. The period between 2004 and 2007 was characterised by the fast growth of the program team; 9 researchers with PhD in 2004 and 14 in 2007. Most of them were young researchers (PhD students) who completed their studies in the frame of the »Young Researchers Program of the Republic of Slovenia«. Some of them continued their career abroad (The University of Cambridge) or were employed in industry. At the moment 10 PhD students are trained within the team.

Basic science is the main activity of the programme team. In addition to the basic research in the period 2004-07 there were also 12 basic and 3 postdoctoral projects. The results are evident from the bibliography (SICRIS). Of a total of 96 scientific articles, 51 (53.5 %) were published in journals with IF 19 (in the top quarter) and achieved 52 normalised citations. In 31 articles with IF (out of 51), members of the team were the leading (i.e. first) author. One book and 6 book chapters were published in the same period.

The program team focused its attention on increasing international scientific cooperation by joint research with institutions from USA (4 projects), Canada (2 projects), China (2 projects), United Kingdom (2 projects) and Russia (1 project). International scientific cooperation was performed also in the frame of the projects of the 4^{th} and 6^{th} EU Framework, INTERREG (3 projects), Marie Curie, NATO, Royal Society and Ad Futura grants, etc. Within Slovenia the program group collaborates mainly with GeozRS, IJS and The Institute for Agriculture of RS and internationally with Universities of: Cardiff (UK-Wales), California Riverside (USA), Wűrzburg, Gőttingen and Frankfurt (Germany), Karl-Franzens Graz (Austria), Ghent (Belgium) and University College London (UK). In the future international co-operation will remain a high-priority activity of the programme team.

The team broadened the research range to new topics like investigations of the immune system and behaviour in bees, implementation of laser technology, new techniques in measurements of oxygen consumption and concentration of fatty acids in aquatic organisms, and intensified transfer of theoretical knowledge to final users (esp. in the field of research of ecosystems).

Applied research, transfer and development of knowledge and technology, together with education at the different levels of the university studies,are the most important tasks by which the team brings added value to socio-economic development of society.

Management with water resources in Slovenia is one of the focal points within Alp-lakes INTERREG projects, conducted in close relation with the Program. For national organizations like ARRS and MOP the team conducted several expert reports related to biodiversity and Natura 2000, monitoring the status of populations of crayfish, beetles and birds, including white stork as part of a pan-European project. Laser technology has been successfully transferred into research on biological systems. Six members of the program team are involved in undergraduate and graduate level programs at the Universities of Ljubljana, Maribor and Nova Gorica. Members of the program group also contributed to renewal of education programs according to the Bologna declaration in different topics concerning statistics, computer science, entomology, ecology, animal physiology, eco-physiology and communication at the Universities of Ljubljana, Maribor and Nova Gorica.

The **Strengths** of the programme are inter-department and inter-institutional joint research, orientation to basic research, international recognition and co-operation, high expertise in zoology, taxonomy, ecology, physiology and entomology, and good infrastructure. **Weaknesses** of the programme are development in surroundings with less attention to basic research, relative youth of the researchers, rather long response time in some fields of research – field ecology. Some new techniques (genetics) are just about to be included into research. More attention should be put on public-relations and self-advertising. **Opportunities** of the program group are use of their good technical equipment, development of new methods and an interdisciplinary approach for solving research challenges on micro (organism) and macro (ecosystem)-level as well as from local to international approach. This will increase transfer of knowledge to the end-users (esp. local communities & small enterprises) and promote new research. The main **threat** to the program is reduction of funding as a potential re-orientation of general research politics on the micro (institute) and macro (state)-scales.

Self evaluation Report for the Programme P1-0245: Ecotoxicology, Toxicological Genomics, Carcinogenesis and Ecoremediation
Principal Investigator: prof. dr. Tamara Lah Turnšek

Scientific activity is focused on cancer initiation and development as a consequence of the disturbed equilibrium of environmental carcinogens and anticarcinogens, and is studied from the aspects of genetic toxicology, cancer biology and ecotoxicology. As environment and human health are closely related, the unique interdisciplinarity of expertise in this group enables novel approaches to the study complex interactions between environmental and genetic factors in various organisms, including humans. The number of high-ranked publications has increased during the evaluation period (total of 40, see COBBISS/SICRIS). Scientific achievements are (a) New role of lysosomal enzymes in apoptosis of glioblastoma, leading to the possibility of enhanced therapeutic protocols, (b) Newly established and significant prognostic impact of the stem cell marker nestin for patients' survival, now suggested for use in clinical practice, (c) a set of publications, revealing novel cancer preventive mechanisms of xanthohumol from hops, (d) the immediate high citation rate of the paper on the genotoxic effect of microcystin and (e) immediate scientific attention to the new theory of cyanobacterial bloom decay. The increased number of invited book chapters and talks at meetings (6) as well as a 45% increase in citations indicates enhanced recognition within recent years (2004-2007).

Research and Development comprise a relatively large and highly relevant part of our work. New toxicity/genotoxicity test systems (novel human cell lines, and zebrafish embryo test) were developed, influenced by the adoption of new legislation in the field of chemical safety in the EU. On the other hand, understanding the phenomena of cyanobacterial blooms degradation can improve ecoremediation of polluted fresh water resources. Finally, research in the frame of the SYSTHER project, aimed at commercialization, will reveal the possible use of stem cells in cancer therapy.

The ratio between basic and applied projects is already reversed (4.9 vs 5.7 FTE App. 9 in NIB Report**),** which is already a threat to the basic research output! (*not clear whether the threat comes from the ratio being larger or smaller!*)

The applied research of the Program is focused on providing an expert contribution to the management of water resources in Slovenia and to EU legislation transfer to Slovenia, thus having high socio-economic impact on sustainable development. Applied projects on the biological properties of surface waters recognise the general quality conditions of water and identify sources of water pollution. **Wider dimensions of** the Programme therefore relate to general management of water resources in Slovenia and worldwide, both of which are related to climate changes, and constitute emerging new dimensions and opportunities for our research.

Direct association with socio-economic needs is less than in the previous period, as we have finished research on hops. Present contracts with industrial partners are limited to toxicity and genotoxicity testing for evaluation of drinking water quality and pharmaceuticals (**App.10**, NIB Report). An important aspect of socio-economic impact is education, as three senior scientists are teaching at all Bologna levels at universities and one was a member of the coordination study group , establishing the new program "Environmental Protection and Ecotechnology", starting 2007 in Velenje.

The **dissemination of our results** is at an appropriate, but not excellent level and could be improved.

International cooperation is lively. Although only a few bilateral cooperations remain from past periods, we use new resources, such as Ad Futura fellowships for young researchers for participation in international PhD education. EU Projects: 1 COST, "HEPDNA" (7 partners) and one of the 36 partners (8 from industry) in the integrated project "CANCERDEGRADOME". Recently, together with Dept. FITO-NIB, the 5-year funding for a Virtual Institute project "SYSTHER" allows us to expand the stem cell research and initiate a novel, bioinformatics strategy in our research. Three international Conferences, with cca 150 participants were organised; The Genetic Society International Meeting and two Conferences on Experimental and Translational Oncology, demonstrating not only high international activity and recognition, but also the managerial skills of the senior research staff of the Programme group.

Inter-institutional collaboration in Slovenia is rather good, the partners being IJS, UNG, UKC, FFA and many other institutions, both formally and informally. We are a partner in the Centre of Excellence: Environmental Technologies, but new networks in other areas should be encouraged.

Inter-departmental collaboration is good but could be increased, to achieve the internal synergy with Dept. EKO and MBP, which may be a hidden resource at NIB.

Research staff is increasing gradually in scientific and professional quality. Weekly intradepartmental presentations of activities and discussion are stimulating for scientific training and communication. The latter should contribute to clear vision and planning of research direction. In the past three years, 6 new PhD theses were initiated. Of the 5 PhD students that finished their thesis in our department during this period, two remained in the group as postdocs, others being employed at equivalent institutions in the fields of their expertise).

Finances (App. 9). The ARRS funding represents about 60% of our income and the main problem is that the costs of the research (materials & supplies) are much higher than are provided by ARRS funding models. As the Programme funding is only 2FTE/16 researchers, we have to apply for scattered research projects, outside the focus of our main research lines, already jeopardising scientific excellence.

Equipment and infrastructure: well equipped modern laboratories, but absolutely insufficient laboratory space, hinders good organisation and coordination of research work. With respect to the **management**, we work on the principle of project based organization and ISO-9000 standards, which are the basis for further development for GLP acquisition, needed particularly in the field of standardized genotoxicity testing.

Self-evaluation report for the Infrastructural program of the National Institute of Biology (IP NIB)
Principal Investigator: Dr. Maruša Pompe-Novak

The infrastructural program of the National Institute of Biology (IP NIB) consists of two program and organization integrated infrastructural centres: the Infrastructural Centre Planta (IC Planta), that functions in the frame of the Department of Biotechnology and Systems Biology at the National Institute of Biology, and the Infrastructural Centre MBP (IC MBP), that functions in the frame of the Marine Biology Station at the National Institute of Biology.

The large infrastructural equipment of IC MBP consists of two complexes of large equipment: a) the research vessel PI-800 »Sagita«, equipped with sophisticated navigation and research equipment, various water samplers, an ADCP current meter and CTD probe, and b) an oceanographic buoy equipped with a meteorological instrument, CTD probes and AWAC current meter. The large infrastructural equipment of IC Planta consists of three complexes of large equipment: a) a transmission electron microscope with CCD camera and ultracuts with all appertaining equipment, b) a real-time PCR machine with all appertaining equipment including robot for pipetting, and c) facilities for plant and tissue culture breeding (plant growth chambers and a quarantine greenhouse with all appertaining equipment) (Appendix 11; www.nib.si).

At IP NIB, large infrastructural equipment has been purchased by merging funds form different sources and institutions, of which the Department of Biology of the Biotechnical Faculty, University of Ljubljana, is our most important partner. Large equipment is also used by small research programs, research projects and other users that cannot purchase and run such expensive equipment themselves. Such a broad spectrum of use assures maximal exploitation of the equipment.

IP NIB is constantly completing and modernizing its large infrastructural equipment. In the period 2004 – 2007, we upgraded all five complexes of large equipment. Among others this included the purchase of a cryo-ultracut, a new real-time PCR machine, a portable real-time PCR machine, a robot for pipetting and a new quarantine greenhouse, together with radical modernization of the research vessel and oceanographic buoy. With our own investments, we have increased the value of the equipment from 1,497,211.01 EUR to 2,009,442.42 EUR, a 34% increase in the last four years. On 1st January 2008, additional equipment worth 100.00,00 EUR was activated – a total increase of the value of the equipment from 2004 of 40% (Appendix 11; www.nib.si).

In the period 2004 – 2007, the share of the use of large infrastructural equipment on the projects financed by the Slovenian Research Agency (ARRS) and the competent ministry was between 62% and 68%, while the share of the use on projects from the market was between 32% and 38%.

The number of users per year of IP NIB's infrastructural equipment has been increasing constantly at an average annual rate of 5%. The increase from 2004 to 2007 was 16%. In total, 176 different users have used IP NIB's large infrastructural equipment in this period, 66% of these from our own research organization (RO) and 34% from other ROs (Appendix 12; www.nib.si). IP NIB's infrastructural equipment was used for the research activity of more than 20 different research groups from 8 different ROs with extremely diverse subjects of research and analysis. IP NIB's equipment supports research activities, bodies of ministries, enterprises and educational activities. In the period between 2004 and 2007, it was used in the execution of 18 research programs and 19 research projects financed by ARRS, for the training of 32 young researchers, and for carrying out 42 international research projects, among them 12 EU 5th and 6th framework projects. It was used for 10 applied projects which were ordered by economical enterprises, 10 applied projects which were requested by different ministries and agencies and 12 projects that have served to support bodies of ministries and the performance of public services. Further, it was used to support 19 subjects of 8 academic programs at 3 universities.

IP NIB ensures collaboration between researchers of different research programs, projects and institutions. It facilitates the connection of researchers with the users of their research – other budget users and various industries, as well as with educational programs. IP NIB is a foundation for collaboration in European and other international projects. With this modern and well maintained research equipment (in accordance with the ISO 17025) ever more projects are acquired, which are requested by enterprises that expect certificates of quality control of service performance. IP NIB's equipment also supports the development of new technologies and the performance of highly specialized analyses. At the same time, IP NIB ensures the functioning link between NIB and relevant Slovene and European networks. Developmental work is also carried on which has resulted in a patent and the assembly of a model using a cluster of parallel numerical computers.

Research and analytical work that has used IP NIB's infrastructural equipment in 2004 – 2007, has contributed significantly to increase in the quality of life, to awareness of various environmental issues and, because of the wide response, also to the creation of public opinion. Such an example is oceanographic buoy web page (buoy.mbss.org), whose visitors increased from ~9.000 in 2004 to ~25.000 in 2007.

NATIONAL INSTITUTE OF BIOLOGY

Appendix 1:

List of Evaluators and their CV's

Marine Biology Station

Vodja / Head: prof. dr. Alenka Malej

Evaluator:

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Vodja / Head: prof. dr. Maja Ravnikar

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Evaluator: Prof. dr. Serena FONDA UMANI

Prof. Serena FONDA graduated in Biological Science in 1973 at the University of Trieste, Italy. After completing her studies, she received a research fellowship in Ecology from the same University, where she became first Lecturer of Ecology (1981), then Associate Professor (1991) and then full Professor of Marine Biology (2005). From 1992 to 2005, she was the Director of the Laboratory of Marine Biology, located in Trieste and employing about 40 people, a non-profit Research Institute. She has been a Visiting Professor at Scripps Institution of Oceanography (University of California), Horn Point Environmental Laboratory (University of Maryland), Marine Laboratory of Villefranche-sur-Mer (University Paris VI), Marine Laboratory of Aragò (University of Perpignan), College of Fishery (University of Tromso), University of Athens. Her professional interest concerns mainly the ecology of marine plankton, and more in general marine bio-geo-chemical fluxes, with special reference to the Adriatic Sea. She has taken active part in a significant amount of field research, participating in several oceanographic cruises in the Mediterranean Sea, in the Strait of Magellan (Chile), in the Chesapeake Bay (USA) and in the Antarctica (Ross Sea). She has been acting as team leader for about 20 regional, national and international research projects. She has published more than 250 scientific works (more than 80 in peer-reviewed journals) in her field of interest, and has advised about 85 graduate and 20 PhD students at her home University and elsewhere.

Relevant references:

- Benovic A, **Fonda Umani S**, Malej A, Specchi M (1984) Net zooplankton biomass of Adriatic Sea. Mar Biol, 79: 209-218
- Serrazanetti GP, Conte LS, Carpené E, Bergami C, **Fonda Umani S** (1991) Distribution of aliphatic hydrocarbons in plankton of Adriatic Sea open waters. Chemosphere, 23(7): 925-938
- Milani L, **Fonda Umani S** (1992) Mucilaginous agglomerations in the Gulf of Trieste (Northern Adriatic Sea): analysis of the micro-zooplankton populations in the period June-August 1989. Sci Tot Environ(suppl): 569 - 580
- Cabrini M, **Fonda Umani S**, Honsell G (1992) Mucilaginous aggregates in the Gulf of Trieste (Northern Adriatic Sea): analysis of phytoplankton communities in the period June-August 1989. Sci Tot Environ(suppl): 557 – 568
- Serrazanetti GP, Pagnucco C, Conte LS, Artusi R, **Fonda Umani S**, Bergami C (1994) Sterols and fatty acids in zooplankton of the Gulf of Trieste. Comp Biochem Phys 107 B 3: 443 - 446
- Cataletto B, **Fonda Umani S** (1994) Seasonal variations in carbon and nitrogen content of *Acartia clausi* (Copepoda, Calanoida) in the Gulf of Trieste (Northern Adriatic Sea). In: Ecology and Morphology of Copepods. (FD Ferrari, BP Bradley eds). Hydrobiologia 292/293: 283 - 288
- Monti M, Welker C, Della Valle G, Casaretto L, **Fonda Umani S** (1995) Mucous aggregates under natural and laboratory conditions. Sci Tot Environ 165: 145 – 154
- Degobbis D, **Fonda Umani S**, Franco P, Malej A, Precali R, Smodlaka N (1995) Changes in the northern Adriatic ecosystem and hypertrophic appearance of gelatinous aggregates. Sci Tot Environ 165: 43 - 58
- Monti M, **Fonda Umani S** (1995) Tintinnids in Terranova Bay - Ross Sea During Two Austral Summers (1987/88 and 1989/90). Acta Protozool 34: 193-201.
- Cataletto B, Feoli E, **Fonda Umani S**, Sun Chen Yong (1995) Eleven years netzooplankton community in the Gulf of Trieste: time series analysis. ICES J mar Sci 52: 669 – 678
- Cataletto B, Feoli E, **Fonda Umani S**, Monti M, Pecchiar I (1996) Analyses of relationships between mucous aggregates and phytoplankton communities in the Gulf of Trieste (North Adriatic Sea) by multivariate tecniques. PSZN Mar Ecol 17: 291 – 308
- **Fonda Umani S** (1996) Pelagic biomass and production in the Adriatic Sea. In: The European Anchovy and its Environment (J Palomera, P Rubies eds) Sci Mar 60 (suppl): 65 – 77
- Monti M, Welker C, **Fonda Umani S** (1996) Effects of synthetic zeolite "A" and polycarboxylates on quality and quantity of diatom mucous exudates. Chemosphere 32(9): 1741 – 1754
- Ban S, Burn C, Castel J, Chaudron V, Christou E, Escribano R, **Umani SF**, Gasparini S, Ruiz FG, Hoffmeyer M, Ianora A, Kang HK, Laabir M, Lacoste A, Miralto A, Ning X, Poulet S, Rodriguez V, Runge J, Shi J, Starr M, Uye S, Wang Y (1997) The paradox of the diatom - copepod interaction. Mar Ecol Progr Series 157: 287 - 293
- Mozetic P, **Fonda Umani S**, Cataletto B, Malej A (1998) Seasonal and inter-annual plankton variability in th Gulf of Trieste (northern Adriatic). ICES J mar Sci 55: 711 –7
- **Fonda Umani S**, Monti M, Nuccio C (1998) Microzooplankton biomass distribution in photic and aphotic layers in the Ross Sea. J Mar Syst 17(1-4): 287 - 302.

- Culverhouse PF, Herry V, Reguera B, Gonzales-Gil S, Williams R, **Fonda Umani S**, Cabrini M, Parisini T, Ellis R (2002) Dinoflagellate categorisation by artificial neural Network (DICANN). Sea Technol 43(12): 39-46
- **Fonda Umani S**, Accornero A, Budillon G, Cappello M, Tucci S, Cabrini M, Del Negro P, Monti M, De Vittor C (2002). Particulate matter and plankton dynamics in the Ross Sea polynya of Terra Nova Bay during the austral summer 1997/98. J Mar Syst 36(1-2): 29 – 49.
- Cabrini M, Andri M, Cok S, Pecchiar I, **Fonda Umani S** (2002) Carbon partitioning among the first trophic levels in the North Western Adriatic basin. Chem Ecol 18: 95 – 105
- Vichi M, Oddo P, Zavatarelli M, Colucelli A, Coppini G, Celio M, **Fonda Umani S**, Pinardi N (2003) Calibration and validation of a one-dimensional complex marine biogeochemical fluxes model in different areas of the northern Adriatic shelf. Ann. Geophys 21: 413-436
- **Fonda Umani S,** Beran A (2003) Seasonal variations in the dynamics of microbial plankton communities: first estimates from experiments in the Gulf of Trieste, Northern Adriatic Sea. Mar Ecol Progr Series 247: 1 - 16
- Vadrucci MR,Vignes F, Fiocca A, Basset A, Sanparpia I, Carrada G, Cabrini M, **Fonda Umani S** (2003) Space-time patterns of co-variation of biodiversity and primary production in phytoplankton guilds of coastal marine environment. Aquat Conserv Mar Fresw Ecosyst 13: 489 – 506
- Corinaldesi C, Crevatin E, Del Negro P, Marini M, Russo A, **Fonda-Umani S**, Danovaro R (2003) Large scale spatial distribution of virioplankton in the Adriatic Sea. Appl Environ Microb 69(5): 2664-2673
- Bergamasco A, Defendi V, Del Negro P, **Fonda Umani S** (2003) Bacterial activity and physical structure during an ISW overflow event at the Ross Sea continental shelf-break. Antarct Sci 15(3): 405-411
- Cantoni C, Cozzi S, Pecchiar I, Cabrini M, Mozetic P, Catalano G, **Fonda Umani S** (2003) Primary production and inorganic Nitrogen uptake in a shallow coastal Sea (Gulf of Trieste, Northern Adriatic Sea). Oceanol Acta 26(5/6): 565 –575
- Solis-Weiss V, Aleffi F, Rossin P, Bettoso N, Orel G, **Fonda Umani S**. (2004) Effects of industrial and urban pollution on the benthic macrofauna in the Bay of Muggia (industrial port of Trieste, Italy). Sci Tot Environ 328(1-3): 247-263
- **Fonda Umani S,** Beran A, Parlato S, Zollet T, de Olazabal A, Virgilio D, Lazzarini B, Cabrini M (2004) *Noctiluca scintillans* MACARTNEY in the Northern Adriatic Sea: long term dynamic, relationships with temperature and eutrophication, and role in plankton food webs. J Plankton Res 26(5): 545 - 561
- **Fonda Umani S**, Monti M, Bergamasco A, Cabrini M, De Vittor C, Del Negro P (2005) Plankton community structure and dynamics versus physical structure from Terra Nova Bay to Ross Ice Shelf (Antarctica). J Mar Syst, 55(1-2): 31- 46
- Bonnet D, Richardson A, Harris R, Hirst A, Beaugrand G, Edwards M, Ceballos S, Diekman R, Lopez-Urrutia A, Valdes L, Carlotti F, Molinero JC, Weikert H, Greve W, Lucic D, Albaina A, Yahia Daly N, **Fonda Umani S**, Miranda A, dos Santos A, Cook K, Robinson S, Fernandez de Puelles ML (2005) An overview of *Calanus helgolandicus* ecology in European waters. Progr Oceanogr 65(1): 1 –53
- Blasutto O, Cibic T, De Vittor C, **Fonda Umani S** (2005) Microphytobenthic Primary Production and Carbohydrates Estimation under Different Salinity Regimes in the Northern Adriatic Lagoonal System of Grado and Marano. Hydrobiologia, 550(1): 47 – 55.
- **Fonda Umani S.** Tirelli V. Beran A, Guardiani B (2005) Relationships between microzooplankton and mesozooplankton: competition vs predation on natural assemblages in the Gulf of Trieste (northern Adriatic Sea). J Plankton Res, 27(10): 973 – 986.
- **Fonda Umani S**, Milani L, Borme D, de Olazabal A, Parlato S, Precali R, Kraus R, Lucic D, Njire J, Totti C, Romagnoli T, Pompei M, Cangini M (2005) Inter-annual variations of planktonic food webs in the northern Adriatic Sea. Sci Tot Environ 353(1-3): 218-231
- Del Negro P, Crevatin E, Larato C, Ferrari C, Totti C, Pompei M, Giani M, Berto D, **Fonda Umani S** (2005) Mucilage microcosms. Sci Tot Environ 353(1-3): 258 – 269.
- Pugnetti A, Armeni M, Camatti E, Crevatin E, dell'Anno A, Del Negro P, Milandri A, Socal G, **Fonda Umani S**, Danovaro R (2005) Imbalance between phytoplankton production and bacterial C demand in relation to mucilage formation in the Northern Adriatic Sea. Sci Tot Environ, 353(1-3): 162-177
- Paoli A, Karuza A, De Vittor C, Del Negro P, **Fonda Umani S** (2006) Daily variations of highly active bacteria in the Northern Adriatic Sea. J Plankton Res 28(3): 325 – 335.
- Tirelli V, Borme, D, Tulli, F, Cigar M, **Fonda Umani S**, Brandt SB (2006) First estimating of energy density of *Engraulis encrasicolus* (Linneus, 1758) in the Adriatic Sea (northeastern Mediterranean). J Fish Biol 68: 982 – 989.
- Kamburska L, **Fonda Umani S** (2006) Long-Term Copepod Dynamic in the Gulf of Trieste (Northern Adriatic Sea). Recent Changes and Trends. Clim Res 31: 195-203

- Barbini R, Cabrini M, Colao F, Fantoni R, Fiorani L, **Umani SF**, Kolodikova NV, Lazzara L, Palucci A, Parmiggiani F (2006) Biogeochemical properties of the Ross Sea retrieved from in situ and remote optoelectronics devices during the Austral summer 1997-98. J Optoelect Adv Mat 8(4): 1565-1573
- Piontkovski SA, O'Brien Td, **Fonda Umani S**, Krupa EG, Stuge TS, Balymbetov KS, Grishaeva OV, Kasymov AG (2006) Zooplankton and the North Atlantic Oscillation: a basin-scale analysis. J Plankton Res 28(10) :1039 - 1046
- Culverhouse PF, Williams R, Simpson B, Galliene C, Reguera B, Cabrini M, Parisini T, Pazos Y, Wang H, Escalera L, Morono A, Hensey M, Silke J, Pellegrini A, Thomas D, James D, Longa MA, Kennedy S, **Fonda Umani S**, Pellegrino FA, del Punta G (2006) HAB Buoy: a new instrument for in situ monitoring and early warning of harmful algal bloom events. African J Mar Science 28(2): 245-250
- Paoli A, Del Negro P, Fonda Umani S (2006) Temporal variability in bacterioplanktonic abundance in coastal waters of the Northern Adriatic Sea. Chem Ecol 22(1): 93 – 103
- **Fonda Umani S**, Del Negro P, Larato C, De Vittor C, Cabrini M, Celio M, Falconi C, Tamberlich F, Azam F (2007) Major inter-annual variations in microbial dynamics in the Gulf of Trieste (Northern Adriatic Sea) and their ecosystem implications.Aquat Microbial Ecol 46:163-175
- Mazzocchi MG, Christou ED, Di Capua I, Luz Fernández de Puelles Mª, **Fonda Umani S**, Molinero JC, Siokou-Frangou I (2007) Temporal variability of *Centropages typicus* in the Mediterranean Sea: From the seasonal to decadal scale. Progress in Oceanogr 72: 214 - 232
- Cibic T, Blasutto O, **Fonda Umani S** (2007) Biodiversity of Settled Material in a Sediment Trap in the Gulf of Trieste (Northern Adriatic Sea). Hydrobiologia 580:57-75
- Cibic T, Blasutto O, Falconi C, **Fonda Umani S** (2007) Microphytobenthic biomass, species composition and nutrient availability in sublittoral sediments of the Gulf of Trieste (northern Adriatic Sea). Estuar Coast Shelf S,75:50-62
- Paoli A, Celussi M, Valeri A, Larato C, Bussani A, **Fonda Umani S**, Vadrucci M R, Mazziotti C, Del Negro P (2007) Picocyanobacterial distribution in Adriatic transitional environments**.** Estuar Coast Shelf S,75: 13-20
- Solidoro C, Bandelj V, Barbieri P, Cossarini G, **Fonda Umani S** (2007) Understanding dynamics of biogeochemical properties in the northern Adriatic Sea by using Self-Organizing Maps. In press J Geophys Res C: Oceans, 112 (7) art. no 7590

Evaluator: dr. Guy VAN DEN EEDE

By formation, Van den Eede is an engineer in Chemical and Agronomical Sciences (division Industrial Biochemistry and Microbiology) from the Catholic University Leuven, Belgium (1982) with PhD specialisation in molecular biology at the State University Ghent (Belgium) (1982 – 1990).

In 1982 Van den Eede has started his career at the laboratory of Genetics, State University Ghent, in the group of Professor Marc Van Montagu, a new project dealing with the molecular study of the symbiotic interaction between a soil bacterium and a tropical leguminous plant. The research was carried out in collaboration with the ORSTOM laboratory in Dakar, Senegal. In Senegal, he was co-ordinator of an agricultural project which aims at using green manure in rice cropping. In that period he has had teaching tasks, was organiser of a scientific meeting in Dakar and was active as consultant for various national and international organisations.

Since 1.12.1990 he has been appointed at the Joint Research Centre of the European Commission in Ispra, Italy. Since 1.4.2003 he is Head of he Unit Biotechnology and GMOs and his Unit has received the mandate to operate the Community Reference Laboratory for GM Food and Feed. Tasks include the validation of detection methods for GM labeling and traceability compliance, distribution of control samples and provision of expert advise in cases of litigation. He is the chairman of the European Network of GMO Laboratories and member of different advisory boards. Currently the Unit has forty members of staff working on projects of molecular biology, bioinformatics and molecular databases, method validation, biometrics and statistics.

In support to the implementation of the EU policies on GMOs, Guy Van den Eede has been involved for many years in risk assessment related to the widespread use and/or consumption of GMOs. He was the chairman of WG3 of ENTRANSFOOD, which is a European network on the safety assessment of genetically modified food crops.

Currently, he is Member of the Management Board and of the Executive Committee of Co-extra. His Unit chairs WP4 “Development of Testing and Sampling Approaches”. This work package aims to develop efficient sampling and testing approaches to uniformly cover the whole supply chain, to validate methods where these are lacking in order to be able to implement the smart sampling and testing approaches, and to develop and implement an improved validation process in order to be able to deliver validated methods for the GM analysis.

Guy Van den Eede is also involved in the implementation of the Cartagena Protocol on Biosafety and is member of the management board of the Black Sea Biotechnology Association (BSBA).

Info on the Community Reference Laboratory: http://gmo-crl.jrc.it
Info on the B&GMO Unit: http://biotech.jrc.it/
Info on the ENGL Network: http://engl.jrc.it/
Info on training: http://gmotraining.jrc.it
Info on deliberate field trials in the EU: http://gmoinfo.jrc.it/
Info on the Institute for Health and Consumer Protection: http://ihcp.jrc.cec.eu.int/

Evaluator: prof. dr. Henri J. DUMONT

Education

Ghent University	Biology	Ms Sci	1964
Ghent University	Zoology	Ph D	1968
Ghent University	Limnology	D Sci	1979

Appointments

1964-1668	Research fellow with the National Science Fund, Belgium
1969-1986	Assistant and associate Professor of Zoology, Ghent University
1986-	Professor of Animal Ecology, Ghent University

Research fields

Zooplankton ecology and biodiversity
Ancient lakes ecology
Invasive species
Aquatic Biology (including dragonflies) in deserts and semideserts

Editorships

Editor in chief of Hydrobiologia (1980-2003)
Honorary editor-in-chief of Hydrobiologia 2003-…
Member of the editorial board of about twelve international journals, including Invasive species, and the Journal of Paleolimnology

Other activities

Belgian national representative to the commission on sustainable development of the UN, 1993-1995
Director, Biodiversity training program of United Nations University, 1999-2005

Honours

Great Cross of the order of scientific merit, Brasil (2002)
Foreign member of the Russian Academy of Natural Sciences (2003)
Honorary Ph D of University of Aguascalientes, Mexico (2003)
Member of Honour of the Russian Hydrobiological Society (2003)
Emil Racovitza prize of the Romanian Academy of Sciences (2004)

Consulting

Consultant for GEF and The World Bank on Biodiversity and Transboundary Waters (e.g. the Danube program, the Black Sea Program and the Caspian Sea program)..

Publications

About 400 scientific papers and books. ISI citations: ca. 3000. Most cited paper: 450 ISI citations.

Some recent Publications

S. Negrea, N. Botnariuc and HJ Dumont, 1999. Phylogeny, evolution and classification of the Branchiopoda (Crustacea). Hydrobiologia 412: 191-212.
L.-o Sanoamuang, G. Murugan, P. H Weekers and HJ Dumont, 2000. *Streptocephalus sirindhornae*, a new species of freshwater fairy shrimp (Anostraca) from Thailand. Journal of Crustacean Biology 20:561-567.
Weekers, P. H., G. Murugan, J. R. Vanfleteren, D. Belk, and H. J. Dumont, 2002b. Phylogenetic analysis of Anostracans (Branchiopoda: Anostraca) inferred from nuclear 18S ribosomal DNA sequences. Molecular Phylogeny and Evolution 25: 535-544.
H. J. Dumont and S. Negrea, 2002c. Introduction to the Class Branchiopoda. Backhuys Publishers, 398 pp.

Other representative publications

Dumont, H. J., 1995. Ecocide in the Caspian. Nature (London) 377: 673-674.
Dumont, H. J., 1998. The Caspian Lake: history, biota, structure and function. Limnology and Oceanography 43: 44-52.
Dumont, H.J. and M. Silva-Briano, 1998b. A reclassification of the anomopod families Macrothricidae and Chydoridae, with the creation of a new suborder, the Radopoda. Hydrobiologia 384: 1-31.
Dumont, H. J., 2000. Endemism in the Ponto-Caspian fauna, with special emphasis on the Onychopoda (Crustacea). Advances in Ecological research 31: 181-196.

H.J. Dumont, A. I el Moghraby & L. A. Desougi, 1984. Limnology and Marine Biology in the Sudan. Developments in Hydrobiology 21: 363 pp (reprinted from Hydrobiologia vol. 110).
H.J. Dumont, 1986. The Nile River system. In B. R. Davies & F.F. Walker (eds), The ecology of River systems. Junk, The Hague, 61-74.
H.J. Dumont, 1986. Zooplankton of the Nile system. In B.R. Davies & K.F. Walker (eds), Theecology of River systems. Junk, The Hague, 75-88.

Evaluator: dr. Michel RENOU

Education:
- 1972: High-school leaving exam (*Baccalauréat*) in Science.
- 1976: Undergraduate (bachelor's degree) in Science (University Pierre and Marie Curie, Paris).
- 1977: Master Degree in Neurophysiology (University Pierre and Marie Curie, Paris).
- 1979: PhD (University Pierre and Marie Curie, Paris).

Scientific activity :

1977-1979: INRA Department of Médiateurs Chimiques, Brouëssy. « Investigation of pheromone communication in three moth species: the leek moth (*Acrolepiopsis assectella*), the sugar beet moth (*Scrobipalpa ocellatella*), and the olive tree moth (*Prays oleae*)". **PhD thesis** under the supervision of Dr Ch. Descoins. Isolation of the active substances. Behahavioral characterization. Electroantennography.

1980 - 1981: Max Planck Institut für Verhaltensphysiologie, Seewiesen, "Sensory bases of the choice of the host plant by an oligophagous Lepidoptera, *Heliconius charitonius*" **Post doctoral position** as fellow of Humboldt foundation in Pr. D. Schneider 's Department. Electrophysiological and morphological studies of receptors of tarsi and antennae involved in the detection of host plant volatile and sapid compounds and analysis of the factors of specificity of egg-laying behaviour.

1981 - 1990: **Research Scientist**, INRA, Department of Médiateurs Chimiques, Brouëssy. Chemical communication in insects : detection and coding of pheromone component by the olfactory receptor neurones. Functional organisation in Hadenine moths.

1990 - **2004**: **Senior Scientist**, INRA. Department of Médiateurs Chimiques, Brouëssy. Sexual communication and sensory ecology of phytophagous Coleoptera, Lepidoptera and Heteroptera. Activity of synthetic pheromone analogues. Physiology of olfactory receptor neurones. Interactions between acoustic and olfactory communication for specific mate recognition system.

2005 - now: **Deputy director** of the department UMR1272-PISC Insect Physiology : Signaling and Communication. Leader of the group « Interactions and complex communication » (3 full-position scientists). Investigations of the mechanisms of interactions between pheromone compounds and plant volatiles.

Main research administration activities

1992 - 2000: UR258 Department of «Phytopharmacy ans Semiochemicals», INRA Versailles. **Leader** of the **«Sensory Physiology»** group (3 full-position scientists).

2000 - 2004: **Deputy director** of the Department **"UR 258 Phytopharmacy and Semiochemicals"**, **Leader** of the group « Chemical Communication » (7 full-position scientists).

2005 - now: **Deputy director** of the Department **"UMR1272-PISC Insect Physiology: Signaling and Communication"**. **Leader** of the group « Interactions and complex communication » (3 full-position scientists).
Member of the Scientific board of the INRA Versailles Research Centre.
Member of the Local INRA Committee for Continuous Education.

Teaching activities

Lectures and curses
AgroParistech: lectures on *Chemical ecology* level: 3^{e} cycle
University of Paris VI (Pierre and Marie Curie) and Paris XI: level Master 2nd year Lectures in Sensory Physiology and Sensory Ecology. .
University Paris XIII DESS *Xenobiotics and cellular methods.* Seminar on Insect olfaction

Supervision of PhD theses

Patrick Brezot (1987) UPMC - Philippe Lucas (1990) UPMC - Xavier Grosmaitre (2001) (co-direction F. Marion Poll) Paris VI University. Nadège Miklas, (2002) Paris XIII University - Adeline Pézier (2006 – co-direction : P. Lucas) Paris VI University - Silvia Crudu (2005 - Marie Curie fellow).

Main international activities:
Working missions abroad: Japan (1), Spain (5), Slovenia (6).
Coordinator Marie Curie Training Site 2002-2006 « Insect Chemical Communication »
Animator, bilateral Program France-Slovenia PROTEUS (1998-2000).
Animator of bilateral programs, PICASSO 1998, 2000 - Program PECO (2001), Program PECO-GRESO. (2002).

Expert in the Scientific Committee for the bilateral cooperation INRA – Slovenian Research Ministry. (2004-2007)

Member of the "International Society for Chemical Ecology".

Expertise of projects for the NSF (USA) and the Slovenian Ministry of Research.

Regular revision of scientific papers for the Acta Zoologica Sinica, Annals of the Entomological Society of America, Annals of Forest Science, Annales de la Société Entomologique de France Bulletin of Entomological Research, Biocontrol, Biomed Central, Ecology Chemical Senses, Journal of Chemical Ecology, Journal of Insect Behaviour, Journal of Insect Physiology, Medicinal Chemistry

Publications in peer-reviewed journals 2001-2007

Miklas N., Stritih N., Čokl A., Virant-Doberlet M., & Renou M. 2001. The influence of substrate on male responsiveness to the female calling song in *Nezara viridula*. J. Insect Behav.14: 313-332.

Grosmaitre X., Marion Poll F., & Renou M. 2001. Biogenic amines modulate olfactory receptor neuron firing activity in *Mamestra brassicae*. Chem. Senses 26: 653-661.

Renou M., Berthier A., & Guerrero A., 2002. Disruption of responses to pheromone by (Z)-11-hexadecenyl trifluoromethyl ketone, an analogue of the pheromone, in the cabbage armyworm *Mamestra brassicae.* Pest management Science, 58: 839-844.

Miklas N., Cokl A., Renou M., & Virant Doberlet M., 2003. Variability of vibratory signals and mate choice selectivity in the southern green stink bug. Behavioural Processes, 1213: 1-12.

Miklas N., Lasnier T, & Renou M.,. 2003. Male bugs modulate pheromone emission in response to vibratory signals from conspecifics. Journal of Chemical Ecology, 29: 561-574.

Said I., Tauban D., Renou M., Mori K & Rochat D. 2003 Structure and function of the antennal sensilla of the palm weevil *Rhynchophorus palmarum* (Coleoptera, Curculionidae). Journal of Insect Physiology 49: 857-872.

Quero C, Bau J, Guerrero A. Renou M. 2004. Responses of the olfactory receptor neurons of the corn stalk borer *Sesamia nonagrioides* to components of the pheromone blend and their inhibition by a tifluoromethyl ketone analogue. Pest Management Science 60:719-726.

Rochat D., Mohammadpoor K., Malosse C., Avand-Faghih A., Lettere M., Beauhaire J., Morin J.-P., Pezier A., Renou M., & Abdollahi G. A. 2004. Male aggregation pheromone of date palm fruit stalk borer *Oryctes elegans*. Journal of Chemical Ecology, 30:387-407.

Hayase, S, Renou M, & Itoh T 2005 Possible origin of modified EAG activity by point-fluorination of the insect pheromone eldanolide. Eur. J. Org. Chem. 2777-2781

Said, I., Renou, M., Morin, J.-P., Ferreira, J. M. S., & Rochat, D. 2005 Interactions between acetoin, a plant volatile and pheromone in *Rhynchophorus palmarum* olfactory neurons and behavioral responses. J Chemical Ecology, 31, 1789-1805.

Saïd, I, Gaertner C., Renou M., & Rivault C. 2005 Perception of cuticular hydrocarbons by the olfactory organs in *Periplaneta americana* (L.) (Insecta: Dictyoptera). Journal of Insect Physiology 51: 1384-1389.

Sureda T., Quero C. Bosch P., Aviles R., Coll F., Renou M., & Guerrero A. 2006 Electrophysiological and behavioural responses of a Cuban population of the sweet potato weevil to its sex pheromone. Journal of Chemical Ecology 32 (10): 2177-2190

Sauphanor B., Franck P., Lasnier T., Toubon J.-F, Beslay D., Boivin T., Bouvier J.-C, & Renou M. 2007. Insecticide resistance may enhance the response to a host-plant volatile kairomone for the codling moth, *Cydia pomonella*. Naturwissenschaften 94:449-458.

Pezier A., Acquistapace A., Renou M., Rospars J.-P., & Lucas P., 2007 Ca2+ Stabilizes the Membrane Potential of Moth Olfactory Receptor Neurons at Rest and Is Essential for Their Fast Repolarization. Chemical Senses 32:305-317

Evaluator: prof. dr. Elke ANKLAM

Elke Anklam studied food chemistry to obtain a state examination degree (Münster - D) and has received her PhD in organic chemistry in 1984 (Hamburg – D). She worked as grant-holder in a post-doctoral position in 1985 (University of Strasbourg – F; Alexander von Humboldt Foundation), in a scientific position from 1986-1989 (Hahn-Meitner Institute Berlin - D; Arbeitsgemeinschaft Grossforschung and Deutsche Forschungsgemeinschaft). She was professor for food chemistry and chemistry at a University for Applied Sciences from 1990 – 1991 (Fulda – D). Since 1991 she is working at the Joint Research Centre of the European Commission where she was Head of the at that time Food Products and Consumer Goods Unit (Institute for Health and Consumer Protection) in Ispra from 1998 – 2002. In 2002, she transferred activities on food and feed analysis from Ispra to Geel (Belgium; Institute for Reference Materials and Measurements), where she was Head of the Food Safety and Quality Unit and the Institute's Deputy Director. Since July 2006 she is the Director of the Institute for Health and Consumer Protection in Ispra, Italy.

She has published more than 200 papers in scientific journals, more than 70 reports and has given more than 250 presentations in international workshops and conferences. She is member of several scientific and advisory boards of international research organisations and European projects, of editorial boards of scientific journals and co-editor of a scientific food journal.

NATIONAL INSTITUTE OF BIOLOGY

Appendix 2 - 6:

External Evaluators' Reports

Department Marine Biology Station

1. The work program of the Marine Biology Station (MBS) is a good example of multidisciplinary integrated program that uses biological, chemical and physical oceanography's approaches to study marine coastal ecosystem and its biocomplexity, including human dimension. The staff of the MBS includes experts in environmental chemistry, physical oceanography, geology, marine ecology, biology, molecular biology and microbiology that efficiently work together as it is needed to understand marine ecosystem complexities and dynamics. The staff is scientifically highly qualified and enthusiastic, and as average the members, who usually spent long periods abroad in very qualified scientific institutions, have a good international reputation. Even before the institution of the joint master degree (Slovenia – Italy) in Marine Biology (October 2007), the teaching activities of the staff at different Universities (Ljubljana, Maribor, Nova Gorica, Primorska) resulted in a high level of attraction for young students who are carrying on their PhD thesis at MBS. More students are expected to be involved in the future because of the just started joint master degree.

2. The field scientific work relies on the most relevant infrastructure of MBS: the research vessel PI 800 Sagitta, which allows the researchers to collect biological samples for their studies, as well as to carry on the monitoring programs that are granted by the Ministry of the Environment. These programs request a continuous effort in term of ship and men hours at the sea, in analyzing biological samples in the due time and in final reports, and can be seen as a distraction from higher basic science. On the other hand this sort of long term researches are at the base of any serious investigation on climate changes effect on marine environment and in this contest must be considered as highly valuable. Data obtained by monitoring programs not only respond to any request posed by the Ministry itself but also by other stakeholders on the marine environment quality, and are necessary in supporting Slovenia government in the future decision about the EU Water Framework Directive. The maintaining of the research vessel represents a relevant cost, but is essential for the field research of any marine biological station, and when funds have to be allocated this has to be kept in mind.

3. A similar comment is related to COSP (Coastal Oceanographic buoy), which continuously monitors oceanographic and meteorological parameters. Elaborated data are made available to public at the web page; in addition all data are regularly transmitted to Slovenian Environmental Agency, as well as to ARPA FVG and OSMER in Italy. Future development of COSP will include environmental parameters (chlorophyll, DO, CO_2).

4. The new building of MBS was finished in spring 2006, before researchers were forced to work in not appropriate conditions and this is reflected in both number of scientific publication and PhD students, which steadily increased in the last year and passed from 9 in 2004 to 20 in 2006 and from 3 to 7 respectively. In the last year proportion between FTE and IF papers is far above the mean annual european range and it is expected to still increase due to the high level instrumentation and adequate lab space acquired in the last year. Productivity is not perfectly shared by all members and one point of weakness is the poor PhD students' production, which has to be implemented. The other point that has to be raised is the intrinsic modesty of the researches that do not try to publish in the top-level journals, although the high quality of their scientific production. Over all production can be scored very good.

5. Beside ARRS funding, MBS staff was very efficient in raising funds from other sources, mainly from Slovenian Ministry and from European Community (5^{th} and 6^{th} Framework Programs, LIFE, TEMPUS and INTERREG Programs). Numerous bilateral and international programs testify the high international visibility and reputation of the staff. Other grants increased over the evaluation period and accounted as average for more than 40% of total revenues.

6. International relationships are very active and allow the PhD students to enter in contact with high standing scientists, not only attending at the numerous seminars, but also as active part during the common experimental work.

7. Public awareness is a very important part of MBS activities and the Prometheus of Science award testifies their high quality. Much energy is devoted by all staff in public dissemination, which are not se easy to evaluate but that are recognized as fundamental in improving visibility by one hand and continuous education by the other.

8. Proportion between basic and applied science appears pretty good and MBS was able to develop other the period several new field and laboratory techniques and methods (e.g. system for in situ recording of oceanographic buoy data, device for on-line monitoring of phytoplankton composition, in situ video recording for gelatinous zooplankton, portable chamber for in situ redox potential measurements, etc.), and one of this was patented, first example at the NIB which has to be followed by others.

9. The most important problem that MBS has to face is to be so far from the central institution: they do not have the same opportunities to share large facilities and instrumentations with the other departments, every or almost every thing has to be bought by themselves at the home laboratory; they cannot use so easily the common library neither share facilities with any neighbor university department. Distance of MBS premises, located more than 120 km from NIB make communication with administration, Director and other research departments harder and this can determine scarce interactions and reciprocal beneficial exchanges about new methods or tools that can be common with the other departments, particularly for molecular approaches.

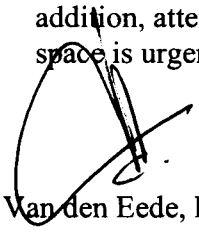
EXTERNAL EVALUATION – NATIONAL INSTITUTE OF BIOLOGY

DEPARTMENT OF BIOTECHNOLOGY AND SYSTEMS BIOLOGY – FITO

1. The work programme of FITO is structured along three topics: microbiology, omics and activities related to genetically modified organisms (GMOs). The staff of the department (mostly being female) is highly motivated, very enthusiastic and with a very high-scientific and technical profile. The fact that the management has teaching responsibilities at universities allows attracting the best young scientists, who in turn are motivated because they are aware of the quality of the work of FITO.
2. The work is organised in a matrix structure in the sense that there is a strong interaction and synergy between the three topics and projects are defined and carried across the three topics. An example for instance is that the microbial pathogens and plant cultivars studied in the microbiology project are analysed in the omics project to understand plant-bacterium interactions and are eventually studied in the GMO project in order to design modes for combating the diseases. This matrix structure works very well, but it is at the same time vulnerable because it highly depends upon the qualities of individual leaders and their excellent collaboration.
3. The projects carried out are well focused and reflect the current state of the art. The fact for instance that recently more emphasis has been put on bioinformatics and biostatistics demonstrates that the department is well aware of the broader scientific context. It is recognised that the department is profiling itself very well and is developing a clear vision.
4. The department has rightly put a lot of emphasis on the implementation of a quality policy and for instance has implemented ISO 17025. In addition, the work on international harmonisation of quality systems has been noted and the fact that the department takes international initiatives for agreed quality standards in the area of microbial diagnostics is extremely relevant.
5. It is recognised that there is a general need to seek for external funding in addition to ARSS financing and the department has been very good in raising external funds. However it is of concern that circa 40 contracts per year are needed to cover the external funding. This is too scattered, may create too much diversity in the activities and certainly creates too much administrative burden. In addition many contracts are very short-time and do not allow for mid-term planning, which in this area of research is essential. It is advised that certain contracts with third parties are no longer accepted because the added value for the department is too low, the financial input is too modest and the administrative burden for the department and for the central administration is too big. Where possible, the directorate should negotiate with government bodies and others the merging of several small requests into one or a few bigger contracts. It must be added however that the management despite the numerous contracts has succeeded in maintaining the work focussed to the three major research areas.

6. Apart from striving for a balance between ARSS and external funding, also a balance between basic and applied research must be achieved. Currently there is a good balance of 60% basic and 40% applied research. It is observed that some of the applied research may be covered by patent protection and it is suggested that a more active policy towards patenting should be applied. Also it is strongly suggested to create a spin-off in particularly for the marketing of diagnostic tools in the areas of microbiology, of micro-arrays and GMOs. The department has indeed completed or is in the course of developing diagnostics that are very much needed for instance for control purposes. Such a spin-off may further allow the generation of revenues to continue the development of such diagnostics.
7. Over the years the department has been mandated more and more to carry out high-level scientific and technical support to the policy environment. This is an illustration of recognised capability. An example is the nomination of the Department as National Reference Laboratory for GMOs. Other examples are the activities in relation to the upcoming EU presidency. In this context the suggestion of an additional NRL for microbial diagnostics is highly supported. It must be pointed out though that a lot of resources are devoted to policy support and that these activities are not generally assessed in the evaluation of the work programme. It is suggested that in future work programmes these activities are clearly indicated and that they form an integral part of the periodical evaluation process.
8. It is observed that an active collaboration is going on with other departments (e.g. the extremely relevant and important Systher project) and the collaboration with the Jožef Stefan Institute for instance is considered as very important. In addition, it is observed that all activities are quite well integrated in the EU scientific shere and even in a global context (e.g. collaboration with China). Also the fact that for instance that the department has participated to FVO missions is considered as very positive.
9. Scientists are provided with good opportunities for training on the job (e.g. to operate well in the quality system) and the organisation of periodical seminars contributes well to the further provision of scientific information.
10. More attention should be paid to the dissemination of the results. For instance it is noted that the quality of the annual reports is not very high and that progress is not clearly indicated. An active communication strategy should be employed. All staff should recognise that is not sufficient to work hard inside the laboratory but that the future of the department also depends in the dissemination of data.
11. The number of scientific publications has well increased over the years. The management should remain vigilant that publication in peer –reviewed papers of the highest standard possible is essential for scientific work and it should continue to develop an active policy with the aim of stimulating researchers for communication of their scientific achievements.

12. The management must be aware that staff is working at its maximum capacity. Although difficult to achieve, initiatives that reward staff or that improve the balance between work - job satisfaction - private life should be stimulated. In addition, attention should be spend to infrastructural facilities and more laboratory space is urgently needed.



Guy Van den Eede, December 1st 2007.

Department of Freshwater and Terrestrial Ecosystems Research

The department has a medium-sized staff, of comparatively young people, and attracts a sizeable number of Ph. D. students. It is networking rather well with similar institutions and research groups outside. It has a number of interesting research subjects going, and endeavours to engage in long-term studies, with am aim at identifying trends related to environmental changes on a longer time scale. Its members publish in reputable journals. There is a close association with the department of entomology.

Strong points

-The department strives to lift the caliber of its scientific output to international levels. This is reflected in the progress of the number of citations received by its members. In all cases, there is a sudden increase around 2001, and the yearly number of hits by each member is now between 20 and 40 (often coming from nil or a few per annum in earlier years). With the conventional threshold for international excellence being situated at 100 hits per annum, there is still some way to be covered, but, extrapolating, it should take less than five years for most members to get there. The reasons for this progress must be looked for in the stimulus provided by the creation of the institute of Biology on the one hand, and a progressive integration of Slovenian science into mainstream European programs on the other hand.

-Mobility of the members of the department is good to excellent, insuring exposure to novel ideas in different scientific environments.

-The research infrastructure of the group is excellent

-The group stands out by giving due attention, under the umbrella of biodiversity, to taxonomy. In this, it sets an example for many other institutions that fail to invest in taxonomic know-how, and thus produce papers that may instrumentally be advanced, but use completely wrong names for plants and animals, and are thereby rendered completely useless.

Points deserving attention

-Although there are many A1 publications that seem to attract the attention of colleagues abroad, the group should be more ambitious, and aim for the top journals in its field, and also for interdisciplinary journals that cover the sciences more broadly and reach much wider audiences. This is not to say that all papers should be aimed at top journals, but the best work coming out of the group certainly should. Probably, some exaggerated modesty is involved, but the caliber of some of the work certainly qualifies for aiming at top journals. At the same time, the group should try to increase its scientific output, currently (roughly) situated at one A1 paper per scientist per annum. The world average is significantly higher!

-The close association with the Department of Entomology is not (yet) revealed in joint papers. The two groups have remained largely individual in their scientific output. No added value is apparent yet, although the potential is clearly present. Innovative science is to be expected first and foremost where different disciplines and methodologies join forces. Thus, such a synergy should be actively promoted. It is announced in the newest program proposed, but without much explicitation, so there is room for improvement here.

-Interaction with other departments of the Institute of Biology should also be stimulated. There are cases in which other departments are tackling subjects that clearly touch upon the field of freshwater sciences. The research on microcystins is a possible example. Here, much added value could come from adding a population genetic aspect to the ecotoxicological research presently being carried out by the department of genetic toxicology. This sort of transversality, or bridge-building in research, could lead to refreshing and innovative results.

-One field is, at present, totally lacking: Molecular Ecology. This is felt to be a rather serious shortcoming, because DNA-based methods in ecology have taken off, have deeply revolutionized the discipline, and will surely continue to do this in the future. To miss this development may cause the group to be rapidly left behind.

(HJD)

Self evaluation of the National Institute of Biology
Report on the visit of the Department of Entomology

General evaluation of the Department

This is a mid sized, but very active, Research Group, with positive and enthusiast people and several interesting projects going on. The infrastructure of the Department is very good, with modern equipment, well organized laboratories and office space, and it is well equipped for sensory physiology. It provides a very good human and material environment for training of PhD students and it constitutes an attractive place for scientists from abroad.

The Department has a good opening on the international scientific community as testified by (i) the number of its collaborations with other research Institutes around the world, (ii) the mobility of young scientists to laboratory abroad.

The number of scientific publications in journals with good impact factor is good for the evaluation period, but it could have been higher. An effort should be made to incite PhD students and young scientists to publish during their thesis, or immediately after. The amount and quality of experimental work they performed, as I could realize after individual interviews, allow them to have more ambition in terms of scientific publications. I note that the number of citations of the scientific publications of the staff members is regularly increasing over the years.

The scientific field covered by the Department of Entomology, and the research axes they chosen, are scientifically relevant. Neurobiology of communication is a key point in invertebrate biology as it meets several points of major concern: preservation of biodiversity, tracing of invasive species, integrated pest management. The association of the analysis of molecular markers and of communication signals in the evaluation of intraspecific variability and characterization of population diversity is rarely achieved by a single group and it is a plus.

Besides their expertise in electrophysiology, neuroanatomy and behaviour, the Department has been able to successfully develop new technologies, like the laser analysis of vibrations.

Thus, the group can do coordinate work on signal production, signal transmission, and signal reception. This makes it a reference group for study on insect acoustic communication.

Their expertise and equipment has been also valorised by an applied project on mechanical properties of wood for music instrument. For the preparation of the next four-year program, I would recommend to the Department to define its long-term and core fields of expertise in basic biology and to hierarchise its axes of research and models. It will contribute to avoid any risk of dispersion and to build its strategy to acquire the approaches they should develop in priority.

The program P10255-105 «Communities, relations and communications in the ecosystems»

Heads of Department of Entomology and of Ecology express common interest and willingness to cooperate. This can result in a positive synergy for addressing complex environmental problems. However, the draft report I had in hands, in its present state, does not clearly show the added value of the association between the two Departments of NBI and their common objectives. Besides specific research activities specific of each Department, general objectives of the program and one or two common projects should be clearly identified.

More communication between staffs of the two Departments, by workshops, regular joint seminaries, and internal reporting of the progress of their programs is necessary. At this point I can only make some suggestions for potential points of interactions. Molecular biology has been used in The Department of Entomology to trace the populations of bugs and leafhoppers trough collaborations. It is also a key approach in ecology. Both groups would benefit to join their efforts to start developing their own forces. I see also some potential for convergence and transversality between the two Departments in ecotoxicology, with respect to the analysis of the impacts of xenobiotics (pesticides and other pollutants) on invertebrate behaviour and sensory physiology.

Ljubljana, December 1st
Michel Renou

External Evaluation – National Institute for Biology (NIB)

Department for Genetic Toxicology and Cancer Biology

Complete remarks on the NIB

I agree with the comments made by the other reviewers on the occasion of their visit at the end of November. I would like to stress that the evaluation exercise was very well prepared.

The NIB is a very dynamic Institute with mostly enthusiastic scientists, and a very ambitious and competent management team.

I agree with my fellow reviewers that more internal collaboration can be achieved and should be encouraged. More integration of scientific activities should be envisaged, probably by providing a modified structure allowing for more communication and collaboration (e.g. thematic programmes, tailored matrix-like structure).

I understand that a bottleneck for common events is the lack of appropriate meeting facilities, which are shared with the University.

Some activities are carried out in limited laboratory space, being the case particularly for those of the Department for Genetic Toxicology and Cancer Biology.

The NIB also needs to ensure a stable budget for the activities on GMOs, as it is the Slovenian reference laboratory. Other potential stable activities could derive from regular monitoring studies (e.g. environmental effects, human exposure data). Another potential activity could be in the field of methods that are alternative to animal tests, as the EC is currently inviting Member States to express their interest.

Evaluation of the Department for Genetic Toxicology and Cancer Biology (GEN)

Staff:
Excellent and very competent senior staff members, and enthusiastic young researchers, although the area of cancer biology seems to be understaffed, despite collaboration with the clinical researchers from the University. Many staff members and, positively surprising, also many management staff members are female. The research group comprises 18 Staff Members. The GEN department is structured into three groups headed by scientific councillors.

Work Programme:
The department carries out a large variety of research projects; these should be streamlined in order to reach a critical mass of expertise. I understand that the diversity derives from the need to earn money, however competitive projects (e.g. EU projects) should be aligned with more institutionalised ones (e.g. work for Ministries). The programme should also reflect more in-house collaboration (see my remarks above).
The department strives to be an excellent partner in projects with other organisations, and the highly profiled SYSTHER project is an outstanding example of high reputation and acceptance.
The department as well as the Department of Biotechnology and System Biology are partners in Centres of Excellence.

The research programme comprising three aspects of carcinogenesis is very interesting and at the forefront of research (despite the relatively small research groups). The work on new toxins in blooms, on genotoxicity of food and environmental carcinogens and especially the recent work on cancer stem cells have a great potential to make a major contribution to human health.
The department needs to balance carefully its activities on research on the one hand, and services on the other.

Scientific output
The results of the scientific work can be measured by assessing the number of competitive projects, number of PhD thesis and scientific publications.
As already mentioned the department is carrying out activities in many diverse projects. However, striving for participation in projects of higher dimension could increase the amount of income. SYSTHER is already an excellent example. The department should be encouraged to seek more high level collaboration in European projects.
The number of PhD theses is high and the PhD subjects are relevant to the NIB's work and of high quality.
The number of scientific papers in peer reviewed journals including review articles was about 40 in three years for a group of 18 researchers. Some fluctuation regarding young scientists who may contribute less to the publications pool can be assumed. It must also be stressed that preparation of competitive projects is time consuming. Despite the fact that some senior researchers are very active in publishing, there is room for improvement. In particular, the papers on cancer biology receive very high citations. It may be interesting to assess the HIRSCH Index for the senior scientists.

Laboratory Space/Equipment/Accreditation:
The laboratory space is not sufficient, especially for the activities on genetic toxicology.
Much state-of-the-art laboratory equipment is available. Some investment in the 'omics' area would be necessary in order to be competitive with other Institutions.
As the department is increasingly carrying out contract research and services, accreditation for selected activities should be envisaged, e.g. the work on fish embryo toxicity testing. This would make the selling profile more attractive.

EXTERNAL ASSESSMENT OF THE NATIONAL INSTITUTE OF BIOLOGY

1. The reviewers generally are very positively impressed by the NIB, its management and all its departments. They observe that the management and all staff is very motivated and enthusiastic and that they have high scientific profiles. In addition the laboratories are well equipped for high-level quality research. This is a very active Research group, with positive and enthusiast people. It thus provides a very good human and material environment to work and constitute an attractive place for scientists from Slovenia and abroad.

2. Although work is carried out in quite distinct areas and although there are certain difficulties associated with the remote distance between the Marine Biology Station Piran and the other departments, it is generally agreed that the projects are well focussed and put the right priorities. The need to have a significant amount of external funding may pose a threat to the development of coherent research programmes and the reviewers suggest keeping the focus on priorities. In that respect, the participation of external experts to a special annual session of the Scientific Council could help to define research strategy.

3. The reviewers acknowledge the strong emphasis NIB and its departments put on the implementation of quality schemes, for its management as well as for the scientific programmes.

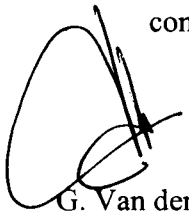
4. The institute is very good at attracting students, and a remarkably high number of PhD's are produced. Yet, due to the fact that PhD students spend a lot of their time in theoretical courses, they publish too little. This is considered as an underexploited opportunity.

5. Whereas inter-departmental research and cooperation is noted in certain areas, this may further be improved. Tools for this are for instance the issuing of an institute newsletter or the organisation of regular institute seminars focussing on possible cross-cutting activities.

6. The reviewers recognise that the scientists are very often implied in regulatory support, which is considered as an illustration of competence. It suggests that this aspect of the activities is included specifically in future work programmes and that this is the subject of the institute's evaluation.

7. The reviewers noted a certain lack of ambition in the appropriate communication of the scientific results and their impact on all different stakeholders and the valorisation of the excellent scientific research. This has been noted at various levels. Firstly, although the number of scientific publications has increased over the years, a more active policy on publishing in high-profile journals should be implemented. Deliverables of projects with a high application relevance should be patented. In addition, where possible, spin-offs may be created to market products that have a wider applicability. Finally, greater care should be spend on general dissemination of information (i.e. improve quality and readability of annual reports, preparation of leaflets, increase visibility, ...).

8. Many of these concerns could be addressed by creating the function of a communications manager, whose job would mainly consist of improving all communications of the institute, as well internally as with the outside world. Such a manager (perhaps a senior scientist no longer interested in doing research himself, but with a broad view of the biological sciences) could also be in charge with identifying instances where departments have common interests and could best join force. In addition the communication manager could clarify and promote the role of NIB at national and international level, with policy makers, private companies, and in general to stakeholders at large.



G. Van den Eede, December 1st 2007

On behalf of:
Dr. Serena Fonda Umani,
Prof. Dr. Henri L. Dumont,
Dr. Michel Renou,

NATIONAL INSTITUTE OF BIOLOGY

Appendix 7:

List of Habilitations

	Priimek	Ime	Naziv	Področje habilitacije	Univerza, kjer predava	Predmet / Subject
01	BAJT	OLIVER	DOCENT	Kemija okolja	Fakulteta za pomorstvo in promet	Varstvo okolja in poznavanje blaga, Goriva, maziva in voda
01	BLEJEC	ANDREJ	DOCENT	Statistika in računalništvo	Univerza v Ljubljani - Biotehniška fakulteta	Statistika in računalništvo, Biostatistika, Računalniške aplikacije v biologiji, Informacijska tehnologija v analizi podatkov
01	BOGUNOVIĆ	BRANKO	ASISTENT	Oceanografija	Univerza v Novi Gorici	Oceanografija
01	BRANCELJ	ANTON	IZREDNI PROFESOR	Ekologija	Univerza v Novi Gorici	Limnologija, Osnove ekologije, Ekologija krasa
01	ČERMELJ	BRANKO	DOCENT	Geologija	Univerza v Novi Gorici	Geologija
01	ČOKL	ANDREJ	REDNI PROFESOR	Fiziologija živali	Univerza v Ljubljani, Univerza v Novi Gorici, Univerza v Mariboru	Komunikacija živali, Življenski procesi, Primerjalna fiziologija živali, Komunikacija živali
01	DERMASTIA	MARINA	REDNI PROFESOR	Botanika	Univerza v Ljubljani - Biotehniška fakulteta	Mikrob in patogeneza, Biologija celice
01	FAGANELI	JADRAN	REDNI PROFESOR	Kemija okolja	Fakulteta za pomorstvo in promet; Univerza v Ljubljani - Biotehniška fakulteta	Varstvo okolja; Geomikrobiologija
01	FILIPIČ	METKA	DOCENT	Biotehnološki procesi v farmaciji	Univerza v Ljubljani - Fakulteta za farmacijo	Biotehnološki procesi v farmaciji
01	FORTE	JANEZ	ASISTENT	Ekologija morja	Univerza v Novi Gorici	Ekologija morja
01	GRUDEN	KRISTINA	DOCENT	Molekulska biologija	Univerza v Ljubljani - Biotehniška fakulteta; Univerza v Novi Gorici	Rastlinska biokemija; Rastlinska fiziologija in biotehnologija, Biotehnologija
01	KNEŽEVIĆ	MIOMIR	DOCENT	Celična tehnologija		
01	KOVAČ	MAJA	IZREDNI PROFESOR	Rastlinska biokemija in fiziologija rastlin	Univerza v Ljubljani - Biotehniška fakulteta	Rastlinska biokemija, Regulacija morfogenez, Interakcije organizmov z mikrobi
02	KOVAČ	NIVES	DOCENT	Kemija okolja	Fakulteta za pomorstvo in promet	
02	LAH TURNŠEK	TAMARA	REDNI PROFESOR	Molekularna biologija in biokemija	Univerza v Ljubljani- Biotehniška fakulteta; Medicinska fakulteta; Ekonomska fakulteta	Biokemija raka; Molekularni mehanizmi nastanka in razvoja raka; Genetska toksikologija in kancerogeneza; Trajnostni razvoj - biodiverziteta
02	LIPEJ	LOVRENC	IZREDNI PROFESOR	Ekologija	Univerza v Novi Gorici; Univerza na Primorskem	Biodiverziteta in varstvo narave v Sredozemlju, Zoologija, Biodiverziteta
02	MALAČIČ	VLADO	IZREDNI PROFESOR	Fizika	Fakulteta za pomorstvo in promet	Mehanika in hidrodinamika
02	MALEJ	ALENKA	REDNI PROFESOR	Ekologija	Univerza na Primorskem - Fakulteta za matematiko, naravoslovje in informacijsko tehnologijo; Univerza v Novi Gorici - Fakulteta za znanosti o okolju	Morski viri in upravljanje obalne cone; Morska ekologija
02	MOZETIČ	PATRICIJA	DOCENT	Biologija		
03	ORLANDO BONACA	MARTINA	ASISTENT		Univerza na Primorskem	Morska biodiverziteta in globalne spremembe
03	POMPE NOVAK	MARUŠA	ASISTENT	Biotehnologija	Univerza v Ljubljani - Biotehniška fakulteta; Univerza v Novi Gorici	Osnove rastlinske in živalske biotehnologije, Virologija, Izbrana poglavja rastlinske fiziologije in biotehnologije, Rastlinska fiziologija in biotehnologija, Patologija rastlin
04	RAMŠAK	ANDREJA	DOCENT	Molekulska biologija	Univerza v Novi Gorici	Biologija okolja
04	RAVNIKAR	MAJA	IZREDNI PROFESOR	Biotehnologija	Univerza v Ljubljani; Univerza v Novi Gorici	Osnove rastlinske in živalske biotehnologije, Virologija, Rastlinsko mikrobne interakcije, Rastlinska fiziologija in biotehnologija, Patologija rastlin, Mikrobiologija in parazitologija
10	SEDMAK	BOJAN	DOCENT	Ekotoksikologija		
10	TOME	DAVORIN	DOCENT	Ekologija živali	Univerza v Ljubljani - Biotehniška fakulteta; Univerza v Mariboru	Uvod v ekologijo, Pestrost in ogroženost živalstva, Varstvena ekologija populacij, Komunikacija živali
10	TURK	VALENTINA	DOCENT	Mikrobiologija in mikrobna ekologija	Univerza v Novi Gorici	Splošna mikrobiologija
10	ŽEL	JANA	IZREDNI PROFESOR	Rastlinska biotehnologija	Univerza v Ljubljani - Biotehniška fakulteta; Univerza v Novi Gorici	Osnove rastlinske in živalske biotehnologije, Rastlinska fiziologija in biotehnologija, Izbrana poglavja rastlinske fiziologije in biotehnologije, Rastlinska biotehnologija

NATIONAL INSTITUTE OF BIOLOGY

Appendix 8:

NIB Human Resources Structure for the period 2004 - 2007

ŠTEVILO ZAPOSLENIH
NUMBER OF STAFF

	01.01.	31.12.
2004	93	98
2005	98	109
2006	107	115
2007	113	119

legenda / legend
MR - PhD
Student
FTE - full time equivalent

IZOBRAZBENA STRUKTURA
STAFF QUALIFICATIONS

	V. in nižje	VI.	VII.	VIII.	IX.	skupaj / total
2004	19	0	30	10	39	98
2005	16	2	38	8	45	109
2006	19	3	40	4	49	115
2007	17	3	47	6	46	119

ŠT. ZAPOSLENIH PO OE
NUMBER OF STAFF BY UNITS

	MBP	FITO	EKO	ENTOMO	GEN	UPRAVA	skupaj / total
2004	25	25	12	11	14	11	98
2005	27	33	14	11	14	10	109
2006	30	31	15	11	16	12	115
2007	30	34	14	11	16	14	119

ŠT. ZAPOSLENIH PO OE PRIKAZANO V FTEjih
NUMBER OF STAFF BY WORKING FIELDS PRESENTED IN FTE

	MBP	FITO	EKO	ENTOMO	GEN	UPRAVA	skupaj / total
2004	20,12	22,05	11,57	9,44	10,88	13,00	87,06
2005	23,41	24,12	12,82	9,32	13,11	12,30	95,08
2006	26,93	27,21	12,66	10,34	13,91	10,24	101,29
2007	28,80	28,16	14,64	7,97	15,44	12,04	107,05

STRUKTURA PO KATEGORIJAH DEL. MEST
STRUCTURE OF STAFF BY WORKING FIELDS

	RESEARCHERS	TEHNICAL STAFI	ADMINISTRATI	skupaj / total
2004	73	13	12	98
2005	85	13	11	109
2006	86	15	14	115
2007	87	16	16	119

ŠT. MR
No. of PhD STUDENTS

	31.12.
2004	23
2005	29
2006	28
2007	26

ŠT. MR PO OE
No. of PhD STUDENTS BY UNITS

31.12.	MBP	FITO	EKO	ENTOMO	GEN	skupaj / total
2004	3	6	4	5	5	23
2005	5	8	5	5	6	29
2006	6	6	6	4	6	28
2007	7	7	4	3	5	26

	ŠT. ZAKLJ. DOKTORATOV - MRji NO. OF COMPLETED DOCTOR'S DEGREES	ŠT. ZAKLJ. MAGISTERIJEV - MRji NO. OF COMPELETED MASTER'S DEGREES	ŠT. ZAKLJ. DOKTORATOV NO. OF COMPLETED DOCTOR'S DEGREES	ŠT. ZAKLJ. MAGISTERIJEV NO. OF COMPELETED MASTER'S DEGREES
2004	6	2		
2005	2	1		
2006	7	0		1
2007	2	0	1	

MRji, ki se po zaključenem doktoratu niso zaposlili na NIB
PhD STUDENTS - not employed at NIB after finishing their Doctor's degrees

Simon Caserman - Kemijski inštitut / National Institute of Chemistry
Maja Zorovič - University of Cambridge, post-doc
Jernej Brzin - ni podatka
Miha Trinkaus - Inštitut za patološko fiziologijo
Hana Krečič Stres - Educell
Tanja Fatur - Inštitut za varovanje zdravja
Katarina Cankar - University and Research Center, Wageningen, NL, post-doc
Peter Kozmus - Kmetijski inštitut / Agricultural institute of Slovenia

ZAPOSLENI PO NAZIVIH

STRUCTURE OF STAFF BY SCIENTIFIC TITLES

	A	AM in AS	VRRA in AD	ZSO in RRSO	VZSO in VRRSO	ZSV in RRSV	skupaj / total
2004	22	11	14	7	11	8	73
2005	21	16	15	9	12	12	85
2006	27	11	17	7	11	13	86
2007	32	9	14	9	8	15	87

legenda/legend

znanstveni svetnik - ZSV
raziskovalno razvojni svetnik - RRSV
research adviser

višji znanstveni sodelavec - VZSO
senior research fellow

višji raziskovalno razvojni sodelavec - VRRSO
senior development and research fellow

znanstveni sodelavec - ZSO
research fellow

raziskovalno razvojni sodelavec - RRSO
research and development fellow

višji raziskovalno razvojni asistent - VRRA
senior development and research assistant

asistent z doktoratom - AD
postdoctoral assistant

asistent z magisterijem - AM
asistent specialist - AS
doctoral assistant

asistent - A
assistant

NATIONAL INSTITUTE OF BIOLOGY

Appendix 9:

Financial Structure of NIB Revenues for the period 2004 - 2007

	year						
Structure of NIB Revenues	**2004**	**2005**	**2006**	**2007**	**coefficient of increase 07/04**	**share in total revenues in 04**	**share in total revenues in 07**
ARRS	2.882.762,53	3.243.901,86	3.453.375,39	3.726.283,02	1,2926	73,23%	63,80%
Research programmes	1.184.008,67	1.214.251,19	1.237.393,69	1.255.614,95	1,0605	30,08%	21,50%
Infrastructure Programme	292.794,35	263.404,00	272.595,76	306.548,22	1,0470	7,44%	5,25%
Basic research projects	168.241,64	282.080,03	383.349,15	335.107,67	1,9918	4,27%	5,74%
Aplied research projects	49.670,51	121.506,88	102.981,38	71.167,10	1,4328	1,26%	1,22%
Post doc research projects	60.224,58	15.505,86	47.336,88	176.019,81	2,9227	1,53%	3,01%
PhD Students	522.762,94	659.005,17	667.062,63	786.730,66	1,5049	13,28%	13,47%
Bilateral projects	15.482,27	25.274,68	32.761,26	46.592,37	3,0094	0,39%	0,80%
Other ARRS projects	7.668,80	2.712,40	13.916,71	3.591,00	0,4683	0,19%	0,06%
Founders` participation to Infrastructure Costs	581.908,77	660.161,65	695.977,93	744.911,24	1,2801	14,78%	12,75%
Targeted research projects	75.070,94	61.810,93	237.300,08	293.014,37	3,9032	1,91%	5,02%
Other public financers	432.963,58	720.182,14	873.207,68	1.043.885,65	2,4110	11,00%	17,87%
Financers - Companies	326.988,21	215.182,08	170.979,61	216.480,96	0,6620	8,31%	3,71%
Foreign Financers	219.042,76	293.874,67	478.940,27	561.014,10	2,5612	5,56%	9,61%
4th Framework Programme	16.158,05	0,00	0,00	0,00	0,0000	0,41%	0,00%
5th Framework Programme	83.146,91	75.406,11	62.280,85	6.259,22	0,0753	2,11%	0,11%
6th Framework Programme	18.312,18	138.502,97	159.650,97	242.703,32	13,2537	0,47%	4,16%
Centres of Excelence	12.787,42	16.162,07	47.471,14	19.299,84	1,5093	0,32%	0,33%
INTERREG	0,00	0,00	77.539,07	200.434,38		0,00%	3,43%
COST projects	10.432,53	6.259,39	6.017,91	4.520,66	0,4333	0,26%	0,08%
LIFE programme	0,00	8.661,95	15.150,47	26.000,00		0,00%	0,45%
International Organizations	22.727,82	10.021,40	45.698,80	12.129,69	0,5337	0,58%	0,21%
Other Foreign Financers	55.477,85	38.860,78	65.131,06	49.666,99	0,8953	1,41%	0,85%
Cumulative revenues	3.936.828,02	4.534.951,68	5.213.803,03	5.840.678,10	1,4836		

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Appendix 10:

List of NIB Projects for the period 2004 - 2007

Projekti ARRS / Projects of Slovenian Research Agency

	Angleški naslov projekta / English Title of the Project	Slovenski naslov projekta / Slovenian Title of the Project	Vodja / Principal Investigator	Financer / Financer
Raziskovalni programi / Research programmes				
01	Cycling of substances in the environment, mass balances, modelling of environmental processes and risk assessment	Kroženje snovi v okolju, snovna bilanca in modeliranje okoljskih procesov ter ocena tveganja	Milena Horvat	SRA
01	Coastal marine research	Raziskave obalnega morja	Alenka Malej	SRA
02	Plant physiology and biotechnology	Rastlinska fiziologija in biotehnologija	Maja Ravnikar	SRA
03	Communities, relations and communications in ecosystems	Združbe, odnosi in komunikacije v ekosistemih	Anton Brancelj	SRA
10	Ecotoxicology, toxicologic genomic and carcinogeneis	Ekotoksikologija,toksikološka genomika, karcinogeneza in ekoremediacija	Tamara Lah Turnšek	SRA
Infrastrukturni program / Infrastructure Programme				
01	Infrastructural Centre MBP	Infrastrukturni center MBP (del Infrastrukturne skupine NIB)	Branko Čermelj	SRA
02	Infrastructural Centre Planta	Infrastrukturni Center Planta (del Infrastrukturne skupine NIB)	Maruša Pompe Novak	ARRS
Temeljni projekti / Basic projects				
01	Sources and cycling of organic matter in coastal waters (Gulf of Trieste)	Izvori in kroženje snovi v obalnem morju (Tržaški zaliv)	Jadran Faganeli	SRA
01		Vpliv mikrobnih procesov na biomagnifikacijo Hg v prehranjevalnih verigah Tržaškega zaliva	Jadran Faganeli	SRA
02	Biological diversity among two grapevine viruses and their role in plant	Biološka raznovrstnost dveh virusov vinske trte in njun pomen za rastlino	Maja Ravnikar	ARRS
02	The biological control of the tomato fruit abscission for a higher crop yield	Biotehnološki nadzor odpadanja plodov paradižnika za dosego večjega pridelka	Marina Dermastia	ARRS
02	Proteomics as a tool for following biosynthetic processes	Proteomika kot orodje za spremljanje biosinteznih procesov	Kristina Gruden	ARRS
02	Analysis of grapewine yellows and induced resistance to the disease using DNA microarrays	Proučevanje trsne rumenice in inducirane rezistence na to bolezen z genskimi mikročipi	Kristina Gruden	ARRS
02	Stress response across levels of organization in terrestrial isopod Porcellio scraber and a duckweed Lemna minor: a mechanicistic approach	Stres in odgovor na stres pri kopenskem izopodu Procellio scaber in vodni leči Lemna minor: mehanicističen pristop	Maja Kovač	ARRS
02	Application of high throughput techniques for analysis of gene expression in plant-pathogen and plant-herbivore interactions	Uporaba visoko zmogljivih tehnologij za analizo genskega izražanja v interkcijah rastlina-patogen in rastlina-herbivor	Kristina Gruden	ARRS
02	The effect of various techniques of planting material production and cultivation practices on the pathogenesis of apple proliferation phytoplasma in infected apple trees (Malus domestica Borkh.)	Učinek različnih tehnologij pridelovanja sadik jablane (Mallus domestica Borkh.) in vzgoje dreves na potek patogeneze po okužbi s fitoplazmo povzročiteljic metličavosti jablan (Apple proliferation)	Nataša Petrovič	ARRS
02	Bacteria from tomato rhizosphere (Lycopersicon esculentum Mill)	Bakterije v rizosferi paradižnika (Lycopersicon esculentum Mill)	Maja Ravnikar	ARRS
03		Odvisnost med biodiverziteto in hidrogeoloških pogoji v coni napajanja medzrninskega vodonsonika iz reke	Anton Brancelj	SRA
03	Biogeochemical cycling of carbon and nitrogen in eutrophic lakes	Biogeokemijsko kroženje ogljika in dušika v evtrofnih jezerih	Anton Brancelj	SRA
03	Physiological indicators of stress in cultivated plants	Fiziološki pokazatelji stresa pri kmetijskih rastlinah	Mateja Germ	SRA
03	Functional food based on interaction of polyphenol antioxidants, plant proteins and trace elements	Funkcionalna hrana s polifenolnimi antioksidanti, rastlinskimi beljakovinami in elementi v sledovih	Mateja Germ	SRA
03	Pathways of carbon, nutrients and pollutants through food-webs in Slovenian mountain lakes	Poti ogljika, nutrientov in polutantov skozi prehranjevalne mreže v slovenskih visokogorskih jezerih	Anton Brancelj	SRA
03	UNEP projekt Preparation of the National action plan for Slovenia	Priprava Nacionalnega akcijskega programa za Slovenijo	Gregor Muri	SRA
03	Effects of environmental changes on organisms and processes in Lake Bohinj	Vpliv okoljskih sprememb na organizme in procese v Bohinjskem jezeru	Tatjana Simčič	SRA
03	Impact of selenium on the yield of vegetables and crop plants	Vpliv selena na pridelek gojenih rastlin	Mateja Germ	SRA
03	The influence of UV-B radiation to antioxidant content and distribution in cultivated plants	Vpliv UV - B sevanja na vsebnost in porazdelitev antioksidantov v gojenih rastlinah	Mateja Germ	SRA
04	Ontogenetic development of symmetrical posture and a role of sensory neurons	Ontogenetski razvoj drže pri gibanju in vloga senzoričnih celic	Andrej Čokl	SRA
10	How cyclic cyanobacterial peptides affect biodiversity?	Kako ciklični peptidi iz cianobakterij vplivajo na biodiverziteto	Bojan Sedmak	SRA
10	Mechanisms of genotoxic activity of chemicals and cellular response to DNA damage	Mehanizmi delovanja genotoksičnih kemikalij in odgovor celic na poškodbe DNK	Metka Filipič	SRA
10	The role of proteolytic enzymes and proteinase inhibitors – cathepsins and cystatins in benign and malignant brain tumours	Vloga proteoliznih encimov v benignih in malignih možganskih tumorjih	Tamara Lah Turnšek	SRA
10	The role of proteolysis systems in malignacy of brain tumor steam cells	Vloga proteoliznih sistemov v malignosti možganskih tumorskih izvornih celic	Irena Zajc	SRA
10	The Influence of ecotoxins on pathophysiology of reproduction	Vpliv ekotoksinov na patofiziologijo reprodukcije	Bojan Sedmak	SRA
Aplikativni projekti / Applied projects				
01	Modelling of tidal dynamics and circulation in the Gulf of Trieste	Modeliranje plimovanja in cirkulacije v Tržaškem zalivu	Vlado Malačič	SRA
01		Študij transportnih procesov in mehanizmov ogljika v gozdnih ekosistemih	Jadran Faganeli	SRA
02	Development of quantitative real-time PCR for virus determination after purification procedure using monolithic cromatographic supports (CIM)	Razvoj PCR v realnem času za kvantitativno določanje virusov pri postopku čiščenja z monolitnimi kromatografskimi nosilci (CIM)	Maja Ravnikar	ARRS
02	Concentration and purification of plant viruses on monolithic supports	Koncentriranje in čiščenje rastinskih virusov na monolitnih kromatografskih nosilcih (CIM)	Nataša Petrovič	ARRS
03	Alpine space as potential source for regional water suply of Slovenia	Alpski svet kot potencialni vir za regionalno vodooskrbo Slovenije	Anton Brancelj	SRA
03	The determination of heavy metal pollution in the lake ecosystems by using bioindicators on the case of the Šalek lakes	Določitev obremenjenosti jezerskih ekosistemov z uporabo bioindikatorskih organizmov na primeru Šaleških jezer	Mateja Germ	SRA
04	The Use of Laser Technology for Registration of Mechanical Vibrations in Biological Materials	Uporaba laserske tehnologije za registracijo mehanskih vibracij v bioloških materialih	Meta Virant-Doberlet	SRA
04	Detecting neuron's activity changes	Zaznavanje sprememb aktivnosti živčnih celic	Andrej Blejec	SRA
10	Investigation of biological mechanisms of human glioma invasion in experimental model in rats	Proučevanje bioloških mehanizmov invazivnosti človeškega glioma na eksperimentalnem modelu v podganah	Tamara Lah Turnšek	SRA
10	Development of TNF-alpha analogues for cancer therapy	Razvoj analogovTNF-alfa za terapijo raka	Tamara Lah Turnšek	SRA
10	Development of a technological procedure for preparation of biologicaly active hop extract enriched with xanthohumol	Razvoj tehnološkega postopka za pripravo biološko aktivnega s ksantohumolom obogatenega esktrakta hmelja	Tamara Lah Turnšek	SRA
10	The effect of natural mineral waters on genomic stability	Vpliv naravnih mineralnih vod na stavilnost genoma	Irena Zajc	SRA
Podoktorski projekti / Post doc				
01	Application of biomarkers to study of pollution impacts on coastal marine ecosystems	Uporaba biomarkerjev pri preučevanju vplivov onesnaževanja v ekosistemih obalnega morja	Alenka Malej	SRA
01	Modelling of transport and transformation of mercury in the gulf of Triest	Modeliranje transporta in transformacij živega srebra v tržaškem zalivu	Jože Kotnik	SRA
02	Visualisation and interpretation of gene expression data in potato-virus ineraction	Vizualizacija in interpretacija podatkov o izražanju genov v interakciji krompir-virus	Špela Baebler	ARRS
03	Influence of UV-B radiation and temperature on organisms (SLO-ALPE2)	Alpska jezera: vpliv UV-B sevanja in temperature na organizme (SLO-ALPE2)	Tatjana Simčič	SRA
03	Vpliv večvrstnih odnosov na strukturo združb v ekosistemih	Vpliv večvrstnih odnosov na strukturo združb v ekosistemih	Al Vrezec	SRA
04	Influence of diseases on behaviour and immune response of forager bees Apis mellifera	Vpliv bolezni na vedenje in imunski odziv pašnih čebel Apis mellifera	Andrej Čokl	SRA
10	Cytotoxic and genotoxic effects of cynobacterial toxins; in vitro studies of the effects of the environmentaly relevant concentrations.	Citotoksično in genotoksično delovanje cianobakterijskih toksinov; in vitro raziskave učinkov za onesnaženo okolje značilnih koncentracij	Bojana Žegura	SRA
Ciljno raziskovalni projekti / Targeted research projects				
02	Diagnostics of the grapevine diseases	Diagnostika povzročiteljev bolezni vinske trte	Maja Ravnikar	ARRS
02	Harmonization of technologies for tracebility of GMOs in agricultural and food production and their co-existence with convencional and organic farming	Harmonizacija tehnologij za celovito sledljivost gensko spremenjenih organizmov v produkciji kmetijskih pridelkov in živil ter njihov soobstoj s konvencialno in ekološko pridelavo	Jana Žel	ARRS
02	New diseases on grapevine	Povzročitelji novih in manj znanih bolezni vinske trte	Maja Ravnikar	ARRS
02	Development of new systems for cultivation of mother-plants of stone fruit tree species - production of grafts in nethouse, yes or no?	Razvoj izboljšanega sistema za gojenje matičnih rastlin koščičastih sadnih vrst-pridelava cepičev v mrežniku, da ali ne?	Maja Ravnikar	ARRS
02	Development of methods for identification and monitoring of genetically modified organisms in feed and food	Razvoj metod za določanje in spremljanje gensko spremenjenih organizmov (GSO) v krmi in nekaterih potvorb v kmetijskih pridelkih oz. živilih	Jana Žel	ARRS
02	Development of methods for the detection of virus in potable drinking waters in case of terrorist attack and natural disaster	Razvoj metod za določanje virusov v pitnih vodah v primeru terorističnega napada in naravnih nesrečah	Kristina Gruden	ARRS
02	Development of testing methods for official control of genetically modified organisms	Razvoj preskusnih metod za izvajanje uradne kontrole prisotnosti gensko spremenjenih organizmov	Jana Žel	ARRS
02	The strategy for coexistance of genetically modified, conventional crops and organic farming and basis for establishment of register of gene sources	Strategija soobstoja gensko spremenjenih poljščin s konvencionalnim in ekološkim kmetovanjem in podlage za vzpostavitev registra genskih virov	Jana Žel	ARRS
02	Introducing more rapid methods for virus detection in grapevine certification	Uvajanje hitrejših metod za odkrivanje virusov v certifikaciji vinske trte	Nataša Petrovič	ARRS
02	Protection from unintentional release of GMOs and other biotic agenses (plant patogenic microorganisms) in the environement	Varstvo pred nenadzorovanim sproščanjem gensko spremenjenih organizmov in drugih biotskih agensov (fitopatogenih mikroorganizmov) v okolje	Jana Žel	ARRS
03	Determination of an effect of army training ground Krivolka as a case study of remediation	Določitev vpliva vojaškega poligona Krivolak na okolje z namenom njegove ekološke sanacije	Anton Brancelj	SRA
03	Evaluation of the nature on selected army training grounds in Slovenia from natural protection aspect: Comparison with reference areas	Naravovarstveno ovrednotenje izbranih vojaških območij v Sloveniji: Primerjalna študija z referenčnimi območji	Davorin Tome	SRA

04	Monitoring and detection of some pests and studies of geographically isolated populations	Postopki nadziranja in diagnosticiranja nekaterih nevarnih škodljivih organizmov ter študij populacij na različnih geografskih območjih	Meta Virant-Doberlet	SRA
10	Molecular detection of consequences of the use of biological weapon and activity of biological toxins and other long-term toxic effects on humans	Molekularna detekcija posledic uporabe biološkega orožja ter delovanja bioloških toksinov in drugih strupenih učinkov z dolgodobnim delovanjem na človeka	Tamara Lah Turnšek	SRA
10	Detection of the effects and consequences of the use of biological weapon, biological toxins and other agents with longterm effects	Molekularna detekcija posledic uporabe in delovanja biološkega orožja in toksinov z dolgodobnim delovanjem	Metka Filipič	SRA
10	The effctes of warfare posions on humans and environmen and environmeral measures	Učinki bojnih strupov na ljudi in okolje ter medicinski in okoljski ukrepi	Metka Filipič	SRA
10	The effects of war poisons on humans and environment and medical and environmental protective measures	Vpliv bojnih strupov na ljudi in okolje ter medicinski in okoljevarstveni ukrepi	Metka Filipič	SRA
10	Effects of extreme efforts on immune conditions and infectious diseases	Vpliv ekstremnih naporov in poškodb na imunsko stanje in obolevnost za okužbami	Metka Filipič	SRA
10	Nerv war toxins and natural toxins	Živčni bojni strupi in naravni toksini	Metka Filipič	SRA

Drugi tuji financerji / Other public financers

	Angleški naslov projekta / English Title of the Project	Slovenski naslov projekta / Slovenian Title of the Project	Vodja / Principal Investigator	Financer / Financer
01	Analysis of transboundary impacts of the LNG terminal in the Gulf of Trieste	Analiza čezmejnega vpliva projektov plinskega terminala v Tržaškem zalivu in plinskega terminala v Žavljah	Vlado Malačič	Ministry
01	Definition of the type specific reference conditions for coastal and transitional waters	Določitev referenčnih razmer za tipe obalnega morja in somornice	Patricija Mozetič	Institute
01	Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention), 2004	Izvajanje monitoringa kakovosti morja in kontrola onesnaženja s kopnega v skladu z Barcelonsko konvencijo v letu 2004	Valentina Turk	Ministry
01	Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention), 2006	Izvajanje monitoringa kakovosti morja in kontrola onesnaženja s kopnega v skladu z Barcelonsko konvencijo v letu 2006	Valentina Turk	Ministry
01	Monitoring of the quality of seawater and of water for living and growing marine molluscs in the year 2006	Izvajanje monitoringa kakovosti morja in voda za življenje in rast morskih školjk in morskih polžev v letu 2006	Patricija Mozetič	Ministry
01	Monitoring of the quality of seawater, transitional waters and of water for living and growing marine molluscs in the year 2004	Izvajanje monitoringa kakovosti morja, brakičnih voda in voda za življenje in rast morskih školjk in morskih polžev v letu 2004	Patricija Mozetič	Ministry
01	Monitoring of the quality of seawater, transitional waters and of water for living and growing marine molluscs in the year 2005	Izvajanje monitoringa kakovosti morja, brakičnih voda in voda za življenje in rast morskih školjk in morskih polžev v letu 2005	Patricija Mozetič	Ministry
01	Monitoring of toxic phytoplankton species in the shellfish-growing (Mytilus galloprovincialis) areas in Bays of Seča, Strunjan and Debeli rtič in the year 2006	Izvajanje monitoringa toksičnih vrst fitoplanktona na območjih gojišč užitne klapavice v Strunjanskem zalivu, Seči in na Debelem rtiču v letu 2006	Patricija Mozetič	Ministry
01	Monitoring of toxic phytoplankton in the shellfish-growing (Mytilus galloprovincialis) areas in Strunjan and Seča Bays in the year 2005	Izvajanje monitoringa toksičnih vrst fitoplanktona na območjih gojišč užitne klapavice v Strunjanskem zalivu in v Seči v letu 2005	Patricija Mozetič	Ministry
01	Monitoring of toxic phytoplankton in the year 2007	Monitoring toksičnega fitoplanktona v letu 2007	Patricija Mozetič	Ministry
01	National Monitoring programme of R Slovenia	National Monitoring Programme Slovenia	Valentina Turk	Ministry
01	Ocean Sciences	Oceanske znanosti	Alenka Malej	Ministry
01	Observing systems and ocean services	Opazovalni sistemi in servisne dejavnosti	Alenka Malej	Ministry
01	Biodiversity research in the Strunjan Lagoon	Program spremljanja kakovosti morja in vnosov onesnaženja s kopnega v skladu z Barcelonsko konvencijo	Valentina Turk	Ministry
01	Biodiversity research in the Strunjan Lagoon	Raziskave biodiverzitete na območju Strunjanske lagune	Lovrenc Lipej	Institute
01	Ecological parameters in Posidonia community	Raziskave izbranih ekoloških dejavnikov, merjenih v združbi pozejdonke (Posidonia oceanica L.)	Janez Forte	Ministry
01	Observatory of the northern Adriatic: regional collaboration for the protection of the sea and information of public	Regionalno sodelovanje na področju varovanja morja in obveščanja javnosti v okviru Observatorija za severni Jadran	Patricija Mozetič	Community
01	Monitoring of the ecological and chemical status of the sea in the year 2007	Spremljanje ekološkega in kemijskega stanja morja v letu 2007	Patricija Mozetič	Ministry
01	Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention)	Spremljanje kakovosti morja in vnosov onesnaženja v skladu z Barcelonsko konvencijo	Valentina Turk	
01	Monitoring of toxic phytoplankton in the shellfish-growing areas	Monitoring toksičnih vrst fitoplanktona na območju gojišč školjk	Patricija Mozetič	Ministry
01	Habitat types at LN Piran	Strokovne podlage za določitev habitatnih tipov na območju LN Piranska vrata	Lovrenc Lipej	Community
01	Environmental Impact Assessment - LNG terminals in the Gulf of Trieste and Zavlje	Študija presoje vplivov na okolje v Republiki Sloveniji za projekt plinskega terminala v Tržaškem zalivu in plinskega terminala v Žavljah v segmentu Morsko okolje	Vlado Malačič	Ministry
01	Monitoring of the ecological status of the Slovenian sea according to the European Water Framework Directive	Uskladitev monitoringa ekološkega stanja morja z zahtevami Vodne direktive	Lovrenc Lipej	Ministry
01	Oceanographic Buoy	Vzdrževanje oceanografske boje	Branko Čermelj	Ministry
01	Adriatic Sea integrated coastal areas and river basin management system pilot project		Vlado Malačič	Ministry
01	National Marine Data Reference Centre	Delovanje nacionalnega referenčnega centra za morje	Alenka Malej	Ministry
01	Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention)	Izvajanje monitoringa kakovosti morja in kontrola onesnaženja s kopnega v skladu z Barcelonsko konvencijo	Valentina Turk	Ministry
01	Evaluation of the Ecological Status of Coastal Waters in accordance with the European Water Framework Directive and collaboration in the preparation of expert basis for the Marine Strategy Directive in the years 2007-2008.	Program opredelitve ekološkega stanja morja v skladu z vodno direktivo in sodelovanje pri pripravi strokovnih podlag za direktivo o strategiji morij v letih 2007-2008	Martian Orlando Bonaca	Ministry
01	Monitoring of toxic phytoplankton in the shellfish-growing areas	Monitoring toksičnih vrst fitoplanktona na območju gojišč školjk	Patricija Mozetič	Ministry
02	GSO feed - analysis of GMOs in feed for certification organ	GSO Krma - o izvajanju analize gensko spremenjenih organizmov v krmi za potrebe certifikacijskega organa	Jana Žel	MKGP
02	Capacity Building for Effective Participation in the Biosafety Clearing House	Izvajanje projekta UNEP-GEF	Mojca Milavec	MOP
02	Testing of GMOs in food (Ministry of Agruculture, Forestry and Food)	MKGP GSO HRANA	Jana Žel	MKGP IRSKGH
02	Testing of GMOs in feed (Ministry of Agruculture, Forestry and Food)	MKGP GSO KRMA	Jana Žel	MKGP IRSKGH
02	Monitoring of GMOs (monitoring in feed) (Ministry of Agruculture, Forestry and Food)	MKGP GSO Monitoring	Jana Žel	MKGP
02	Acreditation of methods for detction of GMOs	MKGP Metode	Jana Žel	MKGP
02	Contract in Plant Health, MKGP – Plant Health Administration and Phytosanitary inspectorate	Pogodba o poslovnem sodelovanju med NIB in Inšpektoratom za kmetijstvo, gozdarstvo in prehrano	Maja Ravnikar	Inšpektorat za kmetijstvo
02	Expert projects in plant health protection	Program strokovnih nalog na področju zdravstvenega varstva rastlin	Maja Ravnikar	MKGP
02	Center of excellence of Biotechnology with pharmacy	Razvoj raziskovalne infrastrukture centra odličnosti 'Biotehnologija s farmacijo'	Maja Ravnikar	MVZT
02	ofinancing of preparations regarding the organizational schemes, equipment, and personnel (ali pa human resources) at the National Institute of Biology for the purposes of advising and action in case of an attack by weapons of mass destruction and by classical means.	Sofinanciranje organizacijskih, materialnih in kadrovskih priprav v Nacionalnem inštitutu za biologijo, za strokovno svetovanje in ukrepanje v primeru napada z orožji ali sredstvi za množično uničevanje ter s klasičnimi sredstvi	Jana Boben	MORS
02	Systems Biology Tools Development for Cell Therapy and Drug Development	Orodja sistemske biologije pri raziskavah celične terapije in zdravil	Maja Ravnikar	MVZT
02	European networking summer school "Genomics and Bioinformatics:Exploiting Microarrays in Plant Physiology"	Evropska poletna šola "Genomika in bioinformatika: Uporaba mikročipov v rastlinski fiziologiji"	Gruden-Pompe Novak-Ravnikar	MVZT
02	Reference Laboratory (Ministry of Environment and Spatial Planning)	Pogodba MOP Referenčni laboratorij	Jana Žel	MOP
02	Reference Laboratory (Ministry of Helath)	Pogodba MZ Referenčni laboratorij	Jana Žel	MZ
02	Expert counsulting - negotiations for "Kartagen protocol"	Strokovno svetovanje v postopku pogajanj v okviru Kartagenskega protokola	Jana Žel	MOP
02	Co-financing scientifically cooperation in the Republic of Slovenia (Ion Gutierrez)	Sofinanciranje znanstvenega sodelovanja v RS (Ion Gutierrez)	Maja Ravnikar	Ad Futura
03		Analiza 50 vzorcev vode - določitev koncentracij izbranih fizikalno-kemijskih parametrov	Anton Brancelj	Institute
03	Inventory of habitat types and species for a project Water supply for Slovene Istra and Karstic hinterland	Kartiranje habitatnih tipov in vrst na področju predvidenih ureditev za potrebe projekta Ureditev oskrbe prebivalstva s pitno vodo Slovenske Istre in zalednega kraškega območja	Olga Urbanc Berčič	Ministry
03	Methodology of sampling aquatic macrophytes for determinationof water quality in Slovenia	Metodologija vzorčenja vodnih makrofitov za določanje ekološkega stanja tekočih voda v Sloveniji	Olga Urbanc Berčič	Institute
03	Monitoring of standing water	Monitoring kakovosti jezer (biološki parametri)	Olga Urbanc Berčič	Ministry
03	Monitoringof selected beetle species populations	Monitoring populacij izbranih ciljnih vrst hroščev	Al Vrezec	Ministry
03	An assessment of ecological status of the Ljubljanica River: macrophytes and fish	Ocena ekološkega stanja reke Ljubljanice: makrofiti in ribe	Mateja Germ	Community
03	Network of special areas of conservation (SAC)	Opredelitev območja evropsko pomembnih negozdnih habitatnih tipov s pomočjo razširjenosti značilnih rastlinskih vrst	Olga Urbanc Berčič	Ministry
03	Adaptation of trophic index to requirements of WFD for evaluation of ecological status of the rivers in Slovenia based on macrophytes	Prilagoditev trofičnega indeksa zahtevam vodne direktive za vrednotenje ekološkega stanja rek v Sloveniji na podlagi makrofitov	Mateja Germ	Institute
03	An inventory of habitat types and selected groups of organisms was made with an impact assesment of the high way on these elements and the mitigation measures was proposed.	PVO AC Beltinci Lendava: V poročilu o vplivih na okolje obravnavamo obstoječe stanje nekaterih elementov narave, vpliv izgradnje AC na te elemente in predlagamo omilitvene ukrepe.	Olga Urbanc Berčič	DARS
03	Specialist opinion about reducing Raven's (Corvus corax) population	Strokovno mnenje glede odvzema iz narave za vrsto krokar (Corvus corax)	Al Vrezec	Institute
03	Execution of Agenda 21 in the river basin of Ljubljanica implemented through common touristic services and infrastructure	Uresničevanje načel Agende 21 na porečju Ljubljanice preko razvoja skupnih turističnih storitev in infrastrukture	Anton Brancelj	Community

03	Sampling and analysis of 20 samples of phytobenthos for evaluation of ecological status of the rivers in Slovenia	Vzorčenje in obdelava 20 vzorcev fitobentosa za določanje ekološkega stanja vodotokov v Sloveniji	Gorazd Kosi	Institute
03	Eurowaternet for the sea in Slovenia	Vzpostavitev Eurowaterneta za morje v Sloveniji	Gregor Muri	Ministry
10	Analysis of periphyton in the frame of international monitoring of surface waters.	Analize perifitona v okviru meddržavnega monitoringa kakovosti površinskih voda	Gorazd Kosi	Ministry
10	Biological methods for treatment of wastewaters	Biološke metode čiščenja odpadne vode	Metka Filipič	Ministry
10	Analysis of periphyton and macrozoobenthosin the frame of international monitoring of surface waters -Danube convention 2005	Izvajanje analiz perifitona (obrasta) in makrozoobentosa v okviru meddržavnega monitoringa kakovosti površinskih vodotokov in Donavske konvencije za leto 2005	Gorazd Kosi	Ministry
10	Analysis of ecological status of surfave waters	Izvajanje analiz za določanje ekološkega statusa površinskih vodotokov	Gorazd Kosi	Ministry
10	Quality of lake waters of Bled, Bohinj, Cerkinca, Slivnica, Pernica and Ledava lakes	Kvaliteta vode v Blejskem, Bohinjskem, Cerkniškem, Šmartinskem, Slivniškem, Perinškem in Lendavskem jezeru ter akumulacijah Klivnik in Mol(j)a	Mihael Bricelj	Ministry
10	Monitoring of standing water	Monitoring kakovosti jezer v letu 2004: biološki parametri	Mihael Bricelj	Ministry
10	Monitoring of standing water	Monitoring kakovosti jezer v letu 2006	Mihael Bricelj	Ministry
10	Set up of the methodology for sampling and laboratory processing of phytobentos samples for determination of ecological status of Slovenian surface waters	Priprava metodologije vzorčenja ter laboratorijske obdelave vzorcev alg (fitobentosa) za določanje ekološkega stanja vodotokov v Sloveniji in obdelava 45 vzorcev alg	Gorazd Kosi	Institute
10	Recycling and use of wates	Recikliranje in raba odpadkov	Metka Filipič	Ministry
10	Tracing experiment for determination of the sources of fecak ciontamination in Lokva in St. Peter at Dragonja	Sledilni poskusi za ugotovitev virov fekalnega onesnaženja izvora Lokva v Sv. Petru nad Dragonjo : 2. faza	Mihael Bricelj	Community
10	Evaluation of ecological and chemical status of lakes in 2007	Spremljanje ekološkega in kemijskega stanja jezer v letu 2007	Mihael Bricelj	Ministry
10	Evaluation of ecological and chemical status of rivers in 2007	Spremljanje ekološkega in kemijskega stanja vodotokov v letu 2007	Gorazd Kosi	Ministry
10	Samplings and processing of the firobentos samples for determinantion of the ecological status of surfacewaters in Slovenia	Vzorčenje in obdelava 10 vzorcev fitobentosa za določanje ekološkega stanja vodotokov v Sloveniji ter sočasne meritve izbranih osnovnih fizikalno-kemijskih parametrov	Gorazd Kosi	Institute
10	Systems Biology Tools Development for Cell Therapy and Drug Development		Tamara Lah Turnšek	Ministry
10	Infulence of fishery plant on river ecosystem	Vpliv ribogojnic na rečni ekosistem	Gorazd Kosi	Institute
10	Saprobiological analysis of surface waters in 2004	Saprobiološke analize v okviru monitoringa kakovosti površinskih vodotokov v letu 2004	Gorazd Kosi	Ministry

Družbe / Financers - Companies

	Angleški naslov projekta / English Title of the Project	Slovenski naslov projekta / Slovenian Title of the Project	Vodja / Principal Investigator	Financer / Financer
01	Environmental Report: Luka Koper	Izdelava dveh segmentov Okoljskega porčila za celovito prostorsko ureditev pristanišča za mednarodni promet v Kopru, analiza obstoječega stanja in popis omilitvenih ukrepov in sicer: kakovost površinskih voda in obalnega morja ter cirkulacije vode in tran	Vlado Malačič	Aquarius d.o.o.
01	Mapping of two habitat types in the area between Koper and Izola	Popis habitatnih tipov med Izolo in Koprom	Lovrenc Lipej	Studio Mediterranea
01	Pollution reduction in the Bay of Koper	Zmanjševanje onesnaženja Koprskega zaliva	Oliver Bajt	Limnos d.o.o.
02	Detection of genetically modified organisms	Določanje GSO za različne naročnike	Jana Žel	various
02	Improvement of production strains with gene microarray technology	Izboljšava proizvodnih sevov s tehnologijo genskih mikromrež	Kristina Gruden	LEK
02	Colaboration in the area of Molecular biology LEK - Micro arrays	LEK ČIPI-Pogodba s področja molekularne biologije	Kristina Gruden	LEK
02	Introduction of DNA microarrays in Escherichia coli transcriptome studies	LEK-Uvedba uporabe DNA čipov pri preučevanju transkriptoma bakterije Escherichia coli	Kristina Gruden	LEK
02	Microreconnoitring system MISIS	Mikroizvidniški sistem MISIS	Maja Ravnikar	Fotona (Optotek)
02	Detection of GMO for Agricultural Ministry	MKGP GSO Analize (več pogodb)	Jana Žel	various
02	Contract for cooperaton with Bia Separations	Pogodba o sodelovanju z BIA Separations	Maja Ravnikar	BIA d.o.o.
02	Testing of caranten bacteria and viruses for diferent potato importers	Testiranje karantenskih bakterij in virusov za različne uvoznike krompirja	Maja Ravnikar	various (companies)
02	Research on Pharmaceuticals, Contract LEK	Pogodba s področja raziskav učinkovin Lek	Kristina Gruden	LEK
02	Contract for cooperaton with Bia Separations	Pogodba z BIA Separations	Maruša Pompe Novak	Bia Separations d.o.o.
02	Detection of microorganisms	Fitodiagnostična dejavnost	Maja Ravnikar	various
03	The construction of hydroelectric power plants on the low Sava River area: project: mapping of habitat types: conservation study	Izgradnja elektrarn na spodnji Savi HE Krško: projektna naloga: kartiranje habitatnih tipov: naravovarstvena študija	Olga Urbanc Berčič	HSE INVEST d.o.o.
03	An inventory of habitat types and selected groups of organisms on the area between HE Blanca and Krško	Kartiranje habitatnih tipov in inventarizacija rastlin in živali na območju med HE Blanca in in Krško	Olga Urbanc Berčič	HSE INVEST d.o.o.
03	An inventory of habitat types and selected groups of organisms on the area between Sevnica and HE Blanca, naravovarstvena študija	Kartiranje habitatnih tipov in inventarizacija rastlin in živali na območju med Sevnico in HE Blanca	Olga Urbanc Berčič	HSE INVEST d.o.o.
03	Maping of migratory routes on the Volovja Reber area, designated for a wind-farm	Kartiranje preletov ptic na območju Valovje rebri, predvidenim za izgradnjo veternih elektraren	Davorin Tome	ELEKTRO Primorska
03	Influences of windfarm and belonging power line in the area of Volovja reber on the environment, according to regulations in a protected areas - a report for birds	Okoljsko poročilo za vetrno elektrarno in povezovalni 110 kV daljnovod na območju Volovje rebri nad Ilirsko Bistrico v skladu s Pravilnikom o presoji sprejemljivosti planov in posegov v naravo na varovana območja - segment ptice	Davorin Tome	Aquarius d.o.o.
03	Birds on the area of the Rebernice slope over Vipavska dolina	Ptice na območju Rebrnic nad Vipavsko dolino	Davorin Tome	Aquarius d.o.o.
03	Inventory of bird populations on the Soča river gravel bars connected with erecting and dismounting of temporary film scene	Raziskava ptic na prodiščih reke Soče, v povezavi z aktivnostmi ob postavljanju in podiranju začasne filmske kulise	Davorin Tome	Propeler d.o.o.
10	Determinantion of acceptable flow rate of Josipdol stream in the area of Hydrolectrical power plant Josipdol	Določitev ekološko sprejemljivega pretoka za Josipdolski potok na področju odvzema vode za MHE Jospidol	Gorazd Kosi	Limnos d.o.o.
10	Evaluation of the current status and recomendations for the management of water streams in Goričko park	Ocena stanja in smernice za upravljanje z jezeri in vodotoki na območju parka Goričko	Gorazd Kosi	Limnos d.o.o.
10	Determination of curent status of fauna and flora at Hydroelectrical power plant Klavžarica	Opis obstoječega stanja flore in favne na področju MHE Klavžarica	Gorazd Kosi	Limnos d.o.o.
10	Antimutagenic properties of beer	Raziskave antimutagenih lastnosti piva	Metka Filipič	Pivovarna Laško
10	Cytotoxicity testing of concentrated water samples with MTT assay with human hepatoma HepG2 cells	Testiranje citotoksičnosti koncentratov vod z MTT testom na celicah humanega hepatoma HepG2	Metka Filipič	Radenska d.d.
10	Salmonella/microsomal (Ames test) genotoxicity testing of botteled water sample	Testiranje genotoksičnosti stekleničene pitne vode ZALA s Salmonella/mikrosomalnim testom (Ames test) in s testom komet s celicami humanega hepatoma HepG2	Metka Filipič	Pivovarna Union d.d.
10	Salmonella/microsomal (Ames test) genotoxicity testing of concentrated drinking water sample	Testiranje mutagenosti koncentriranih vzorcev pitnih vod s Salmonella/mikrosomalnim testom (Ames test)	Metka Filipič	Radenska d.d.
10	Pollution monitoring of surface waters under influence of of Cinkarna Celje	Monitoring onesnaženosti celinskih površinskih vod, vpliv Cinkarne Celje na vodno okolje Hudinje	Gorazd Kosi	Cinkarna Celje
10	Ichtiologic studies of Sava from HE Vrhovo to NE Krško	Ihtiološke raziskave Save od HE Vrhovo do JE Krško	Gorazd Kosi	HSE INVEST d.o.o.
10	Monitoring during the construction and operation of HE Plave II and HE Doblar II.	Izvajanje monitoringa pri izgradnji in začetku obratovanja HE Plave II in HE Doblar II: stanje v letu 2004 – vodno okolje	Gorazd Kosi	Limnos d.o.o.

Tuji financerji / Foreign Financers

	Angleški naslov projekta / English Title of the Project	Slovenski naslov projekta / Slovenian Title of the Project	Vodja / Principal Investigator	Financer / Financer
Bilaterale / Bilaterals				
01	Chemical characterization of aggregates and macroaggregates in the northern Adriatic Sea	Kemična karakterizacija agregatov in makroagregatov v Severnem Jadranu	Jadran Faganeli	ITALY
01	Quantitative determination of p53mRNA in different tissues in blue mussel Mytilus galloprovincialis	Kvantitativno določanje p53mRNA v različnih tkivih klapavice Mytillus galloprovincialis	Andreja Ramšak	CROATIA
01	Organic geochemistry and microbial ecology of stratified eutrophic alpine lakes	Organska geokemija in mikrobna ekologija stratificiranih evtrofnih alpskih jezer	Jadran Faganeli	USA
01	Harmful marine microalgae (HAB) in the Adriatic Sea: methodology, monitoring and mitigation of harmful blooms	Škodljive morske mikroalge (HAB) v Jadranskem morju: metode določevanja, monitoring in blaženje posledic škodljivih cvetenj	Patricija Mozetič	CROATIA
01	Harmful impacts of gelatinous plankton outbreaks on zoo-ichthyoplankton and phytoplankton in the Adratic and Black Seas	Škodljivi vplivi želatinoznih organizmov na zooihtioplankton in fitoplankton v Jadranskem in Črnem morju	Alenka Malej	RUSSIA
01	Evaluating Pollution Impact on Marine Fish Using Microarray-spotted Gene Product Biomarkes	Ugotavljanje vpliva onesnaženja na morske ribe z analizo izražanja biom. Genov z DN mikromrežami	Andreja Ramšak	ISRAEL
01	An evaluation of acoustic and video methods to estimate abundance of gelatinous plankton	Uporaba akustičnih in video tehnik za oceno abundance želatinoznega planktona	Alenka Malej	ARGENTINA
01	Impact of algae excudats on transport and speciation of metal pollutants in aquatic systems	Vpliv eksudatov alg na transport in speciacijo kovinskih onesnaževalcev v vodnih ekosistemih	Nives Kovač	FRANCE
01	Gelatinous zooplankton in the Adriatic Sea	Želatinozni plankton Jadranskega morja	Alenka Malej	CROATIA
01	An evaluation of acoustic and video methods to estimate abundance of gelatinous plankton		Alenka Malej	ARGENTINA
01	Comparative analysis of gelatinous zooplankton blooms in the Adriatic and Black Seas		Alenka Malej	RUSSIA
01	Harmful impacts of gelatinous plankton outbreaks on zoo-ichtyoplankton and phytoplankton in the Adriatic and Black Seas		Alenka Malej	RUSSIA
01	Mercury biogeochemistry in the Idrija river system: processes controlling methylation and demethylation		Jadran Faganeli	USA
01	Role of bacteria in production and decomposition of colloidal organic matter in the northern Adriatic		Valentina Turk	USA

01	Laboratory setup of a simulator for the coastal circulation of the Adriatic Sea		Vlado Malačič	RUSSIA
01	Solar water purification using semi-conductor catalysts (slovensko-češko sodelovanje) nosilec doc. dr. Oliver Bajt		Oliver Bajt	CZECH
02	Biological diversity of GFLV virus	Biološka raznovrstnost naravnih populacij virusa pahljačavosti listov vinske trte GFLV	Nataša Petrovič	USA
02	Identification of Genes Involved in Potato Defense against Viruses	Detekcija genov vpletenih v obrambni odziv krompirja na virusno okužbo	Maja Kovač	UK
02	Detection of genetically modified organisms	Detekcija gensko modificiranih rastlin	Jana Žel	PORTUGAL
02	Economic importance and control of virus diseases in blueberry and cranberry	Gospodarski pomen in obvladovanje virusnih bolezni borovnic in brusnic	Nataša Petrovič	USA
02	Biotic stress caused by potato virus Y (PVY) in transgenic and nontransgenic plants	Okužba s krompirjevim virusom Y (PVY) biotski stres v transgenih netransgenih rastlinah	Maja Kovač	CZECH
02	Plant hormones in development and biotic stres using biochemical and molecular approach	Rastlinski hormoni v razvoju rastlin in odzivu na biotski stres: biokemijski in molekularni pristop	Maja Kovač	CROATIA
02	Development of methods for detection of unauthorised genetically modified organisms (GMO) by quantitative PCR	Razvoj metode detekcije neavtoriziranih gensko spremenjenih organizmov (GSO) s kvantitativnim PCR	Jana Žel	FRANCE
02	Introduction of molecular techniques for routine determination of plant viruses	Uporaba molekularnih tehnik za rutinsko določanje diagnoze virusa rastlin	Nataša Petrovič	PORTUGAL
02	Detection of genetically modified organisms	Določanje gensko spremenjenih organizmov	Kristina Gruden	SPAIN
02	Molecular Basis of symptoms expression in potato after virus Infection	Molekularne osnove izražanja bolezenskih znamenj na krompirju po okužbi z virusom krompirja	Maja Ravnikar	UK
02	Development of real-time PCR technique for detection of different Potato virus Y strains	Razvoj polimerazne verižne reakcije v realnem času za določanje različkov krompirjevega virusa Y	Maja Ravnikar	UK
02	Sequencing and comparison of different PVY viruses in order to design virus resistance transgenes	Sekveniranje in primerjava različnih PVY virusov, z namenom načrtovanja rastlin odpornih na viruse s pomočjo transformacije	Jana Žel	UK
02	Evaluating Pollution Impact on Marine Fish Using Microarray-spotted Gene Product Biomarkes	Ugotavljanje vpliva onesnaženja na morske ribe z analizo izražanja biomarkerskih genov z DNA mikromrežami	Kristina Gruden	Israel
03	Water regime in wetlands – a driving force of the processes in the rhizosphere	Bilateralno sodelovanje med Slovenijo in Madžarsko z naslovom Vodni režim v mokriščih – gonilna sila procesov v rizosferi	Mateja Germ	
03	Biogeochemical cycling of carbon and assesment of shifts in Lakes Pamvotis (Greece) and Bohinj (Slovenija)	Biogeokemijsko kroženje ogljika ter ugotavljanje sprememb v sedimentih iz jezera Pamvotis (Grčija) in Bohinjskega jezera (Slovenija)	Gregor Muri	GREECE
03	Ecology of populations in karstic caves	Ekologija populacij v kraških jamah	Anton Brancelj	USA
03	Physiological adaptations of lower crabs to extreme conditions in some habitats	Fizioloških prilagoditve nižjih rakov na ekstremne razmere v nekaterih habitatih	Anton Brancelj	RUSSIA
03	Water regime in wetlands – a driving force of the processes in the rhizosphere	Vodni režim v mokriščih – gonilna sila procesov v rizosferi	Olga Urbanc Berčič	HUNGARY
03	Human Impacts on Alpine Lake	Vpliv človeka na alpska jezera	Anton Brancelj	
03	A study of environmental and climate change from the sedimentary records of remote lakes - II	Zapis sprememb v okolju in klimi v sedimentih visokogorskih jezer - II	Anton Brancelj	CHINA
04	The study of communication in hemipterous insects as a tool to develop new biological control tehniques	Študij komunikacije pri Heteropterih kot orodje za razvoj novih tehnik biološke kontrole	Andrej Čokl	CHINA
04	New perspectives in biological controle complementary roles of olphactory and substrate-borne vibrational signals in multimodal communication in insect pests		Andrej Čokl	USA
10	Isolation and characterisation of tumour stem cells from human glioblastoma	Izolacija in karakterizacija rakavih izvornih celic iz humanih glioblastomov	Tamara Lah Turnšek	UK
10	Characterisation of brain tumour stem cell	Karakterizacija izvornih možganskih tumorskih celic	Tamara Lah Turnšek	NORWAY
10	DNA damaging effect and cytogenetic changes in HepG2 cells and human lymphocytes upon simultaneous exposure to mikrocystin, oestrogen and tireoid hormones	Poškodbe DNA in citogenetske spremembe v HepG2 celicah in ˇcloveških limfocitih po hkratni izpostavljenosti mikrocistinu, estrogenu in tireoidnimu hormoni	Metka Filipič	SERBIA

5. okvirni program / 5th Framework Programme

01	Biofiltration and Aquaculture: an Evaluation of Hard Substrate Deployment Performance within Mariculture Development		Alenka Malej	EU
01	European Platform for Biodiversity Research Strategy		Lovrenc Lipej	EU
01	Mediterranean network to assess and upgrade Monitoring and forecasting Activity in the region		Vlado Malačič	EU
01	Creating a long-term infrastructure for MARine Biodiversity research in the European economic area and the Newly Associated states		Alenka Malej	EU
01	Mediterranean Forecastings System Towards Environmental Prediction		Vlado Malačič	EU
02	Environmental impact assesment of transgenic grapevines and plums on the diversity and dynamics of virus populations, TRANSVIR	Ocena okoljskega vpliva transgene vinske trte in sliv na raznolikost in dinamiko populacij virusov	Nataša Petrovič	EU
03	PASCALIS: Protocols for the Assessment and Conservation of Aquatic Life In the Subsurface	Protokoli za ocenitev in ohranitev vodnega življenja v podzemlju	Anton Brancelj	EU
10	HEPDNA: Development of assays for the detection and prediction of co- and anti-mutagenic constituents in food with cells of human origin.(QLK1-CT-1999-00810; annex QLRT-2001-2863).	HEPDNA: Razvoj testov za detekcijo in predikcijo ko-in anti-mutagenimi konstituentami v hrani		

6. okvirni program / 6th Framework Programme

01	A Pan-European infrastructure for ocean and marine data management (SEADATANET)		Vlado Malačič	EU
01	Ecosystem Approach for Sustainable Aquaculture		Alenka Malej	EU
01	Marine Biodiversity and Ecosystem Functioning		Alenka Malej	EU
01	Southern European Seas: Assessing and Modelling Ecosystem Changes		Alenka Malej	EU
02	GM and non-GM supply chains: their CO-EXistence and Traceability	Co-extra, Pridelovalne verige po vstopu GS rastlin na tržišče – soobstoj in sledljivost	Kristina Gruden	EU
02	Development of generic on site moleculr diagnostics for EU quarantine pests and pathogens, Portcheck	Razvoj molekularnih metod detekcije za karantenske povzročiteljev bolezni na terenu	Maja Ravnikar	EU
02	Pepino Mosaic virus: epidemiology, economic impact and pest risk analysis	Pepino Mosaic Virus: epidemiologija, ekonomski vpliv in ocena tveganja nevarnosti škodljivih organizmov	Maja Ravnikar	EU
10	CANCERDEGRADOME: Extracellular Proteases and the Cancer Degradome: Innovative Diagnostic Markers, Therapeutic Targets and Tumour Imgaing Agents		Tamara Lah Turnšek	EU

Centri odličnosti / Centres of Excelence

02	Planning, production and caracterization of biopharmaceutics	Načrtovanje, pridobivanje in karakterizacija biofarmacevtikov	Maja Ravnikar	EFRD
10	Center of excellence environmental technologies: New biological methods for detection of genotoxic wastewarter effluents	Center odličnosti okoljske tehnologije: Nove biološke metode za detekcijo genotoksičnih efluentov čistilnih naprav	Metka Filipič	EFRD

INTERREG

01	Information System about the Marine Environment in the Gulf of Trieste	Informacijski sistem o stanju morskega okolja v Tržaškem zalivu (ISMO)	Vlado Malačič	EU
03	Large Alpine Lakes	Velika alpska jezera	Anton Brancelj	EFRD
03	ALPLAKES - Alpine Lakes Network		Anton Brancelj	EFRD

LIFE

01	Enviromental Management through Monitoring and Modelling of Anoxia (EMMA)		Oliver Bajt	EU

Mednarodne organizacije / International Organizations

01	Education activities and coordination of IOC HAB program	Izobraževanja in koordinacija IOC HAB programa	Patricija Mozetič	NO IOC
01	Determination of priority actions for the further elaboration and implementation of the Strategic Action Programme for the Mediterranean Sea		Janez Forte	
01	International Ocean Institute, Operational Centre Slovenia		Alenka Malej	
01	Enzyme activities and imposex level in Hexaplex trunculus as biomarkers of TBT in Mediterranean sea		Alenka Malej	
01	Programme for the Assessment and Control of Pollution in the Mediterranean Region		Valentina Turk	
01	Marine Biodiversity Research and Education	Raziskave in izobraževanje o biodiverziteti v morju	Lovrenc Lipej	NO IOC
01	Harmful algal blooms - HAB	Škodljiva cvetenja- HAB	Patricija Mozetič	NO IOC
02	Building Capacity for Effective Participation in the Biosafety Clearing House (BCH)	Biološka varnost, Izdelava navodil za različne uporabnike informacijskega sistema biološke varnosti (ISBV) pri prijavah zaprtih sistemov gensko spremenjenih organizmov kot dela slovenske posredovalnice informacij (BCH)	Mojca Milavec	United Nations Environment Programme

Drugi tuji financerji / Other Foreign Fnancers

01	Collaborative international research on gelatinous zooplankton in the Adriatic Sea		Alenka Malej	CREICO, NSF, ZDA
01	Inquinamento da TBT lungo la costa dell'Istria: analisi dell'imposex e dei processi di biomineralizzazione in Hexaplex trunculus (Gasteropoda, Muricidae) come strumento di monitoraggio		Alenka Malej	NATO-CNR Advance Fellowship programme

01	ADRICOSM-EXT Adriatic Sea integrated coastal area and river basin management – extension		Vlado Malačič	UNESCO-IOC (Pariz)
01	Identification of population units in Adriatic shared stocks by genetic structure analysis		Andreja Ramšak	
02	Copy Number Real-Time, IRMM Real time Polymerase chain reaction, Certification studies applying rel-time polymerase chain reaction	Študija "Število kopij DNA v certificiranem referenčnem materialu (IRMM)	Jana Žel	IRMM
02	Grapevine yellows: a limiting factor for grape vine production	Trsna rumenica: omejujoč dejavnik za pridelavo grozdja	Kristina Gruden	University of Udine
02	Contribution in international ring-trials	Sodelovanje v medlaboratorijskih validacijah	Jana Žel	JRC, Institute for Health and Consumer Protection (IHCP
03	MIDCC - Multifunctional Integrated Study Danube Corridor and Catchment		Mateja Germ	
03	Fauna Europea (FaEu)		Davorin Tome	
04	Taxonomic status of Cyphopterum populations in Madeira: a bioacoustic approach		Meta Virant-Doberlet	Fellowship
04	Evolutionary differentiation in a widely distributed species		Meta Virant-Doberlet	The Royal Society ESEP project
04	Breaking the Code		Meta Virant-Doberlet	Fellowship

COST Actions

02	Bacterial diseases of stone fruits and nuts	Bakterijske bolezni koščičarjev in lupinarjev	Tanja Dreo	ARRS + Foreign Founds
02	Agricultural Bio-Markers for Array Technology	Biološki markerji za tehnologijo mikromrež v kmetijstvu	Maruša Pompe Novak	ARRS + Foreign Founds
02	Viticulture: Biotic and abiotic stress – Grapevine defence mechanism and grape development	Vitikultura: biotski in abiotski stres – obrambni mehanizmi in razvoj vinske trte	Kristina Gruden	ARRS + Foreign Founds
02	Combining traditional and advanced strategies for plant protection in pome fruit growing	Zdravje pečkarjev: kombiniranje tradicionalnih in naprednih postopkov zdravstvenega varstva pri gojenju pečkarjev	Tanja Dreo	ARRS + Foreign Founds
02	European Network for Environmental and Food Virology (ENVIRONET)	Evropska mreža na področju virologije hrane in okoljevarstva	Ion Gutierrez	ARRS + Foreign Founds
10	WG3: New Targets for Metal Based Drugs: Beyond DNA	WG3- Nove tarče za zdravila na osnovi kovin - nad DNA		

Twinning projekti / Twinning project

02	Effective phytosanitary control system	Učinkoviti fitosanitarni kontrolni sistemi	Maja Ravnikar	EU
02	Increasing networking and upgrading administrative capacity in the management of food and feed safety	Povecevanje povezovanja in nadgradnja administrativnega vodenja in upravljanja z varnostjo živil in krme	Jana Žel	EU

ERA Net Projects and Technology Platforms

02	ERA-NET EUPHRESCO	ERA-NET EUPRHESCO	Maja Ravnikar	EU
02	ERA-NET ERASysBio	ERA-NET ERASysBio	Maja Ravnikar	EU
02	EUROPEAN TECHNOLOGY PLATFORM "Plants for the Future"	EVROPSKA TEHNOLOŠKA PLATFORMA "Rastline za prihodnost"	Maja Ravnikar	EU
02	EUROPEAN TECHNOLOGY PLATFORM "Food for health"	EVROPSKA TEHNOLOŠKA PLATFORMA "Food for Health"	Maja Ravnikar	EU

TEMPUS

01	Underwater science and technologies (TEMPUS)		Alenka Malej	EU

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Appendix 11:

Composition of complexes of IP NIB's large infrastructural equipment

Appendix 11: Composition of complexes of IP NIB's large infrastructural equipment

Composition of complexes of IC Planta's large infrastructural equipment in the year 2007

Inventory number		Title of infrastructural research equipment	Purchase value (EUR)
2381		**Transmission electron microscope with appertaining equipment**	**296.694,69**
	2381	Transmission electron microscope	203.379,68
	4707	Crio-ultracut	93.315,01
2683		**Real-time PCR machine with appertaining equipment**	**305.669,03**
	2683	Real-time PCR machine	115.434,01
	4712	Real-time PCR machine (Fast)	73.759,16
	4715	Portable real-time PCR machine (Smart Cycler)	36.213,82
	2224	PCR system 9700	10.047,00
	4713	PCR system 9700	7.573,61
	4545	Robot for pipeting	62.641,43
5064		**Facilities for plant and tissue culture breeding**	**392.052,39**
	5064	Plant growth chamber no.1 (RK-3)	40.837,49
	5065	Plant growth chamber no.2 (RK-2)	40.837,49
	2815	Plant growth chamber no.3 (RK-1H)	62.226,20
	2382	Old quarantine greenhouse	28.247,37
	3549	New quarantine greenhouse	137.436,49
	2226	Shaker	13.127,62
	4653	Autoclave	21.328,28
	2256	Washing machine	9.596,37
	2035	Laminar flow	6.006,13
	1677	Microscope	32.408,95
TOTAL			**994.416,11**

Composition of complexes of IC Planta's large infrastructural equipment in the year 2004

Inventory number		Title of infrastructural research equipment	Purchase value (EUR)
2381		**Transmission electron microscope with appertaining equipment**	**203.379,68**
	2381	Transmission electron microscope	203.379,68
2683		**Real-time PCR machine with appertaining equipment**	**125.481,01**
	2683	Real-time PCR machine	115.434,01
	2224	PCR system 9700	10.047,00
5064		**Facilities for plant and tissue culture breeding**	**254.615,90**
	5064	Plant growth chamber no.1 (RK-3)	40.837,49
	5065	Plant growth chamber no.2 (RK-2)	40.837,49
	2815	Plant growth chamber no.3 (RK-1H)	62.226,20
	2382	Old quarantine greenhouse	28.247,37
	2226	Shaker	13.127,62
	4653	Autoclave	21.328,28
	2256	Washing machine	9.596,37
	2035	Laminar flow	6.006,13
	1677	Microscope	32.408,95
TOTAL			**583.476,59**

IC MBP's large infrastructural equipment in the year 2007

Inventory number	Title of infrastructural research equipment	Purchase value (EUR)
2413	**Research vessel with navigation and research equipment, CTD probe, ADCP current meter and information technology**	**921.245,97**
2413	Research vessel with navigation and research equipment, CTD probe, ADCP current meter and information technology	921.245,97
2460	**Oceanographic buoy with oceanographical and meteorological equipment and information infrastructure**	**93.780,34**
2460	Oceanographic buoy with oceanographical and meteorological equipment and information infrastructure	93780,34[1]
SKUPAJ		**1.015.026,31**

IC MBP's large infrastructural equipment in the year 2004

Inventory number	Title of infrastructural research equipment	Purchase value (EUR)
2413	**Research vessel with navigation and research equipment, CTD probe, ADCP current meter and information technology**	**739.241,019**
2413	Research vessel with navigation and research equipment, CTD probe, ADCP current meter and information technology	739.241,019
2460	**Oceanographic buoy with oceanographical and meteorological equipment and information infrastructure**	**174.493,40**
2460	Oceanographic buoy with oceanographical and meteorological equipment and information infrastructure	174.493,40
SKUPAJ		**913.734,42**

[1] In the framework of the INTERREG 'ISMO' project we raised this value for the additional 100.000,00 EUR used for the equipment that is going to be activated on 1st January 2008.

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Appendix 12:

List of users of IP NIB's large infrastructural equipment in the years 2004 – 2007

Appendix 12: List of users of IP NIB's large infrastructural equipment in the years 2004 – 2007

Users of IC Planta's large infrastructural equipment in the years 2004 – 2007

Research Programs Financed by Slovenian Reserch Agency that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. Program P4-0165, Plant physiology and biotechnology, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
2. Program P1-0245, Ecotoxicology, toxicological genomics and carcinogenesis, National Institute of Biology , Department of Genetic Toxicology and Cancer Biology, Tamara Lah Turnšek
3. Program P1-0255, Communities, relations and communications in the ecosystems, National Institute of Biology, Department of Freshwater and Terrestrial Ecosystems Research, Anton Brancelj

Other institutions

4. Program P1-0184, Investigations in zoology and speleobiology, University of Ljubljana, Biotechnical Faculty, Department of Biology, Boris Sket
5. Program P1-0212, Plant biology, University of Ljubljana, Biotechnical Faculty, Department of Biology, Marina Dermastia
6. Program P1-0198, Molecular biology of microorganisms, University of Ljubljana, Biotechnical Faculty, Department of Biology, Miklavž Grabnar
7. Program P4-0116, Microbiology and biotechnology of food and environment, University of Ljubljana, Biotechnical Faculty, Department of Food Science and Technology, Peter Raspor
8. Program P4-0097, Nutrition and ecology of gastrointestinal tract, University of Ljubljana, Biotechnical Faculty, Zootechnical Department, Irena Rogelj
9. Program P4-0015, Wood science and technology, University of Ljubljana, Biotechnical Faculty, Department of Wood Science and Technology, Marko Petrič
10. Program P1-0189, Pharmaceutical technology: design, preparation and evaluation of drug delivery systems, University of Ljubljana, Faculty of Pharmacy, Aleš Mrhar
11. Program P4-0053, Endocrine, immune, nervous and enzyme responses in healty and sick animals, University of Ljubljana, Veterinary Faculty, Vojteh Cestnik
12. Program P4-0127, Pharmaceutical biotechnology: man and environment , University of Ljubljana, Faculty of Pharmacy, Borut Štrukelj
13. Program P1-0140, Proteolysis and its regulation, Jožef Stefan Institute, Department of Biochemistry and Molecular Biology, Vito Turk
14. Program P1-0048, Structural biology, Jožef Stefan Institute, Department of Biochemistry, Molecular and Structural Biology, Dušan Turk
15. Program P1-0207, Toxins and biomembranes, Jožef Stefan Institute, Department of Biochemistry, Molecular and Structural Biology, Igor Križaj
16. Program P2-0145, Specialty polymers, National Institute of Chemistry, Majda Žigon

Research Projects Financed by Slovenian Reserch Agency that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. Basic research project J1-6040, Biological diversity among two grapevine viruses and their role in plant, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
2. Basic research project J4-6459, Analysis of grapevine yellows and induced resistance to the disease using DNA microarrays, National Institute of Biology, Department of Plant Physiology and Biotechnology, Kristina Gruden
3. Basic research project Z4-3339, Application of high throughput techniques for analysis of gene expression in plant-pathogen and plant-herbivore interactions, National Institute of Biology, Department of Plant Physiology and Biotechnology, Kristina Gruden
4. Basic research project J1-6605, The Role of proteolytic enzymes in benign and malignant brain tumours, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Tamara Lah Turnšek
5. Basic research project J1-7363, Role of the proteolytic systems in the malignancy of brain

tumour stem cells, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Irena Zajc

6. Applied research project L4-6050, Development of quantitative real-time PCR for virus determination after purification procedure using monolithic cromatographic supports (CIM®), BIA Separations d.o.o., Separations technology company, Aleš Štrancar
7. Applied research project L4-3209, Concentration and purification of plant viruses on monolithic supports (CIM®), BIA Separations d.o.o., Separations technology company, Aleš Štrancar

Other institutions

8. Basic research project J1-6473, Stress response across levels of organization in the terrestrial isopod Porcellio scaber and the duckweed Lemna minor: a mechanicistic approach, University of Ljubljana, Biotechnical Faculty, Department of Biology, Damjana Drobne
9. Basic research project J4-9738, Biotechnological control of tomato fruit drop to reach higher yield, University of Ljubljana, Biotechnical Faculty, Department of Biology, Marina Dermastia
10. Basic research project L4-6222, Biological tests for toxicity and genotoxicity determination in water, soil and food, University of Ljubljana, Biotechnical Faculty, Zootechnical Department, Romana Marinšek Logar
11. Basic research project J7-7604, Bioactive compounds from alternative sources, University of Ljubljana, Biotechnical Faculty, Department of Food Science and Technology, Helena Abramovič
12. Basic research project J4-7062, Proteomics as a tool for monitoring biosynthesis processes, University of Ljubljana, Faculty of Pharmacy, Janko Kos
13. Basic research project J1-6715, Extremophilic fungi: the effect of high salinity and low temperature on membranes, University of Ljubljana, Faculty of Medicine, Ana Plemenitaš
14. Basic research project Z4-3290, The effect of various techniques of planting material production and cultivation practices on the pathogenesis of apple proliferation phytoplasma in infected apple trees (Malus domestica Borkh.), University of Maribor, Faculty of Agriculture, Mario Lešnik
15. Basic research project J1-6488, Role of cysteine proteases in inflammation, Jožef Stefan Institute, Department of Biochemistry, Molecular and Structural Biology, Boris Turk

Young researchers education programs that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. Young Researcher Špela Baebler, National Institute of Biology, Department of Plant Physiology and Biotechnology, Jana Žel
2. Young Researcher Hana Krečič Stres, National Institute of Biology, Department of Plant Physiology and Biotechnology, Maja Kovač
3. Young Researcher Katarina Cankar, National Institute of Biology, Department of Plant Physiology and Biotechnology
4. Young Researcher Jana Boben, National Institute of Biology, Department of Plant Physiology and Biotechnology , Maja Ravnikar
5. Young Researcher Matjaž Hren, National Institute of Biology, Department of Plant Physiology and Biotechnology, Maja Ravnikar
6. Young Researcher Manca Pirc, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
7. Young Researcher Polona Kogovšek, National Institute of Biology, Department of Biotechnology and Systems Biology, Maruša Pompe Novak
8. Young Researcher Meti Buh Gašparič, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
9. Young Researcher Urška Čepin, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
10. Young Researcher Miha Trinkaus, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology
11. Young Researcher Bojana Žegura, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology
12. Young Researcher Boris Gole, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Tamara Lah Turnšek

13. Young Researcher Irena Hreljac, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Metka Filipič
14. Young Researcher Saša Kenig, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Irena Zajc
15. Young Researcher Anja Pucer, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Tamara Lah Turnšek

Other institutions

16. Young Researcher Maja Prelovšek, University of Ljubljana, Biotechnical Faculty, Department of Biology, Boris Bulog
17. Young Researcher Marjetka Kralj, University of Ljubljana, Biotechnical Faculty, Department of Biology, Damjana Drobne
18. Young Researcher Anja Klančnik, University of Ljubljana, Biotechnical Faculty, Department of Biology
19. Young Researcher Nina Slapar, Jožef Stefan Institute, Department of Biochemistry and Molecular Biology
20. Young Researcher Nataša Toplak, National Institute of Biology, Omega d.o.o.

Research Projects for Ministries that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. CRP V1-0879, Development of methods for identification and monitoring of genetically modified organisms in feed and food, National Institute of Biology, Department of Plant Physiology and Biotechnology, Jana Žel
2. CRP V4-0994, The strategy for coexistance of genetically modified, conventional crops and organic farming and basis for establishment of register of gene sources, National Institute of Biology, Department of Plant Physiology and Biotechnology Jana Žel
3. CRP M1-0145, Development of methods for virus detection in drinking waters in the case of terrorist attack and natural disaster, National Institute of Biology, Department of Biotechnology and Systems Biology, Kristina Gruden
4. CRP M1-0152, Protection from unintentional release of GMOs and other biotic agenses (plant patogenic microorganisms) in the environement, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
5. CRP M1-0151, Molecular detection of consequences of the use of biological weapon and activity of biological toxins and other long-term toxic effects, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Metka Filipič
6. CRP M1-0031, Molecular detection of consequences of the use of biological weapon and activity of biological toxins and other long-term toxic effects, National Institute of Biology, Department of Genetic Toxicology and Cancer Biology, Tamara Lah Turnšek
7. TP MIR 06/RR/02, Microreconnoitring system MISIS, FOTONA (Optotek), Marko Marinček and Griša Močnik

Other institutions

8. CRP V4-0458, Introducing more rapid methods for virus detection in grapevine certification, University of Ljubljana, Biotechnical Faculty, Department of Agronomy, Zora Korošec Koruza
9. CRP V4-0872, New and less known grape vine diseases, Agricultural Institute of Slovenia, Gregor Urek
10. CRP V4-0343, Development of new systems for cultivation of mother-plants of stone fruit tree species - production of grafts in nethouse, yes or no?, KGZ Nova gorica, Nikita Fajt

Projects for Ministries that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. Expert projects in plant health protection field, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
2. Contract 2311-06-000116 with MKGP, Monitoring of GMOs, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
3. Contract 2314-06-000013 with MKGP, Testing of GMOs in food, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
4. Contract 2314-06-000007 with MKGP, Testing of GMOs in feed, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel

5. Contract 2311-06-000119 with MKGP, Acreditation of methods for detection of GMOs, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
6. Contract 2511-06-200510 with MOP, Reference laboratorij, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
7. Barcelona convention, MOPE ARSO, National Institute of Biology, Marine Biology Station, Valentina Turk

International Research Projects that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. EU project QLK3-CT-2002-02140 Environmental impact assesment of transgenic grapevines and plums on the diversity and dynamics of virus populations, TRANSVIR, INRA, Marc Fuchs, National Institute of Biology, Department of Plant Physiology and Biotechnology, Nataša Petrovič
2. EU project 441891, Pepino mosaic virus: epidemiology, economic impact and pest risk analysis, PEPEIRA, Plant Research International, Rene van der Vlugt
3. EU project 7158, GM and non-GM supply chains: their CO-Existence and Traceability, CO-EXTRA, INRA, Yves Bertheau, National Institute of Biology, Department of Biotechnology and Systems Biology, Kristina Gruden
4. EU project SSPE-CT-2004-502348, Development of generic on site moleculr diagnostics for EU quarantine pests and pathogens, PORTCHECK, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
5. EU project COST 858, Viticulture: biotic and abiotic stress – grapevine defence mechanism and grape development, National Institute of Biology, Department of Plant Physiology and Biotechnology, Kristina Gruden
6. Bilateral project between Slovenia – Great Britain PSP 15/2006, Development of real-time PCR technique for detection of different Potato virus Y strains, National Institute of Biology, Department of Plant Physiology and Biotechnology, Maja Ravnikar
7. Bilateral project between Slovenia – Czech Republic BI-CZ/06-07-012, Biotic stress caused by Potato virus Y (PVY) in transgenic and nontransgenic plants, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Kovač
8. Bilateral project between Slovenia – Italy 485-III/13.20 and 723-III/13.6, Grapevine yellows: a limiting factor for grape vine production, National Institute of Biology, Department of Plant Physiology and Biotechnology, Ruggero Osler
9. Bilateral project between Slovenia - Spain BI-ES/04-05-011, Detection of GMO, National Institute of Biology, Department of Plant Physiology and Biotechnology, Kristina Gruden
10. Bilateral project between Slovenia - USA BI-US/03-04/26, Economic importance and control of virus diseases in blueberry and cranberry, National Institute of Biology, Department of Plant Physiology and Biotechnology, Nataša Petrovič
11. Bilateral project between Slovenia - USA BI-US/05-06/24 Biological diversity of GFLV virus, National Institute of Biology, Department of Plant Physiology and Biotechnology, Nataša Petrovič
12. EU project Marine biodiversity and ecosystem functioning, National Institute of Biology, Marine Biology Station, Alenka Malej

Projects for economy enterprises that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

NIB

1. Detection of microorganisms, National Institute of Biology, Department of Biotechnology and Systems Biology, Maja Ravnikar
2. Detection of genetically modified organisms, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
3. Contract 1-6/5-2007 with Institute for control and certification in agriculture and forestry, Defining genetically modified organisms, National Institute of Biology, Department of Biotechnology and Systems Biology,Jana Žel
4. Contract 824/2005 with Institute for control and certification in agriculture and forestry, Defining genetically modified organisms, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel
5. Contracts P046903 and BO47385, GM Copy Number Study, National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel

6. Contract 5-057/2003 with Lek Sandoz, National Institute of Biology, Department of Biotechnology and Systems Biology, Kristina Gruden
7. Contracts RU-116/2006 and RU-125/2006 with Lek Sandoz, National Institute of Biology, Department of Biotechnology and Systems Biology, Kristina Gruden
8. Contract with Krka, National Institute of Biology, Department of Biotechnology and Systems Biology, Kristina Gruden
9. Contract with BIA Separations d.o.o., National Institute of Biology, Department of Biotechnology and Systems Biology, Maruša Pompe Novak
10. Contract with Omega d.o.o., National Institute of Biology, Department of Biotechnology and Systems Biology, Jana Žel

Pedagogic work that were using IC Planta's large infrastructural equipment in the years 2004 – 2007

Other institutions

1. Practical course of Cell biology, University of Ljubljana, Biotechnical faculty, Postgraduate study program of biological and biotechnical sciences
2. Practical course of Functional morphology, University of Ljubljana, Biotechnical faculty, Postgraduate study program of biological and biotechnical sciences
3. Practical course of Basic zoology, University of Ljubljana, Biotechnical Faculty, Department of Biology, Undergraduate Biology Study Program
4. Practical course of Principles of plant and animal biotechnology, University of Ljubljana, Biotechnical Faculty, Department of Biology, Undergraduate Biology Study Program
5. Practical course of Virology, University of Ljubljana, Biotechnical Faculty, Undergraduate Microbiology Study Program
6. Practical course of Selected topics of plant physiology and biotechnology, Univeristy of Nova Gorica, School of Environmental Sciences, Undergraduate study programme Environment
7. Practical course of Selected topics of plant physiology and biotechnology, Univeristy of Nova Gorica, School for Viticulture and Enology, Bachelor's programme in Viticulture and Enology
8. Practical course of Plant pathology, Univeristy of Nova Gorica, School for Viticulture and Enology, Bachelor's programme in Viticulture and Enology

Users of IC MBP's large infrastructural equipment in the years 2004 – 2007

Research Programs Financed by Slovenian Reserch Agency that were using IC MBP's large infrastructural equipment in the years 2004 – 2007

1. Coastal marine research, P1-0237, prof. dr. Alenka Malej
2. Cycling of substances in the environment, mass balances, modelling of environmental processes and risks assessment, P1-0143 , dr. Milena Horvat

Research Projects Financed by Slovenian Reserch Agency that were using IC MBP's large infrastructural equipment in the years 2004 – 2007

1. Sources and cycling of organic matter in coastal waters (Gulf of Trieste,), J1-5314, prof. dr. Jadran Faganeli
2. Modelling of tidal dynamics and circulation in the Gulf of Trieste, L1-5289, ass. prof. dr. Vlado Malačič
3. Application of biomarkers to study of pollution impacts on coastal marine ecosystems, Z1-4215, prof. dr. Alenka Malej
4. Modelling of transport and transformations of mercury in the Gulf of Trieste, Z2-3502, dr. Jože Kotnik, Jožef Stefan Institute
5. The impact of microbal processes on Hg biomagnification in food webs of the Gulf of Trieste (northern Adriatic sea) (basic research project), 0127369, prof. dr. Jadran Faganeli
6. Carbon transport processes and mechanisms in forest ecosystems (basic research project), 0127397, dr. Nives Ogrin
7. Pathways of carbon, nutrients and pollutants through food-webs in Slovenian mountain lakes (basic research project), JI-6717, ass. prof. dr. Anton Brancelj

International Research Projects that were using IC MBP's large infrastructural equipment in the years 2004 – 2007

1. Creating a long-term infrastructure for MARine Biodiversity research in the European economic area and the Newly Associated states (MARBENA, EVK1-CT-2002-40029), EU, prof. dr. Alenka Malej
2. Biofiltration and Aquaculture: an Evaluation of Hard Substrate Deployment Performance within Mariculture Development (BIOFAQs, Q5RS-2000-30305), EU, prof. dr. Alenka Malej
3. Mediterranean network to assess and upgrade Monitoring and forecasting Activity in the region (MAMA, EVR1-2001-00006), EU, ass. prof. dr. Vlado Malačič
4. Mediterranean Forecastings System Towards Environmental Prediction (MFSTEP, EVK3-CT-2002-00075), EU, ass. prof. dr. Vlado Malačič
5. European Platform for Biodiversity Research Strategy (BioPlatform, EVK2-CT-2001-20009), EU, ass. prof. dr. Lovrenc Lipej
6. Marine Biodiversity and Ecosystem Functioning (MarBEF, GOCECT - 2003 -505446), EU, prof. dr. Alenka Malej
7. Ecosystem Approach for Sustainable Aquaculture (ECASA, 006540), EU, prof. dr. Alenka Malej
8. Environmental Management through the Monitoring and Modelling of A (EMMA,ENV/IT/00479), ass. prof. dr. Oliver Bajt
9. Programme for the Assessment and Control of Pollution in the Mediterranean Region (UNEP/MAP ME/6030-00-04), dr. Valentina Turk
10. Determination of priority actions for the further elaboration and implementation of the Strategic Action Programme for the Mediterranean Sea (GEF/UNEP, GFL 2328-4291-2731), Janez Forte, biologist
11. Identification of population units in Adriatic shared stocks by genetic structure analysis (FAO GCP/REP/010/ITA), dr. Andreja Ramšak
12. International Ocean Institute, Operational Centre Slovenia (IOI OCS 2484933), prof. dr. Alenka Malej
13. Adriatic Sea integrated coastal areas and river basin management system pilot project (Ministry of the Environment and Spatial Planning, Italy), ass. prof. dr. Vlado Malačič
14. Collaborative international research on gelatinous zooplankton in the Adriatic Sea (CREICO, NSF, ZDA), prof. dr. Alenka Malej
15. Mercury biogeochemistry in the Idrija river system: processes controlling methylation and demethylation (Slovenian-American collaboration), prof. dr. Jadran Faganeli

16. Role of bacteria in production and decomposition of colloidal organic matter in the northern Adriatic (Slovenian-American collaboration), dr. Valentina Turk
17. Comparative analysis of gelatinous zooplankton blooms in the Adriatic and Black Seas (Slovenian-Russian collaboration), prof. dr. Alenka Malej
18. Laboratory setup of a simulator for the coastal circulation of the Adriatic Sea (Slovenian-Russian collaboration), ass. prof. dr. Vlado Malačič
19. Quantitative assesment of p53mRNA in different tissues of blue mussells *Mytillus galloprovincialis* (Slovenian-Croatian collaboration), dr. Andreja Ramšak
20. Gelatinous zooplankton in the Adriatic Sea (Slovenian-Croatian collaboration), prof. dr. Alenka Malej
21. Inquinamento da TBT lungo la costa dell'Istria: analisi dell'imposex e dei processi di biomineralizzazione in *Hexaplex trunculus* (Gasteropoda, Muricidae) come strumento di monitoraggio (NATO-CNR Advance Fellowship programme), dr. Francesca Garaventa / prof. dr. Alenka Malej
22. ADRICOSM-EXT Adriatic Sea integrated coastal area and river basin management – extension (UNESCO-IOC, Pariz), ass. prof. dr. Vlado Malačič
23. Solar water purification using semi-conductor catalysts (Slovenian-Checz collaboration), ass. prof. dr. Oliver Bajt
24. Chemical characterization of aggregates and macroaggregates in the northern Adriatic Sea (Slovenian-Italian collaboration), prof. dr. Jadran Faganeli
25. A Pan-European infrastructure for ocean and marine data management - SEADATANET, EU, assoc. prof. dr. Vlado Malačič
26. Enzyme activities and imposex level in *Hexaplex trunculus* as biomarkers of TBT in Mediterranean sea (NATO/CNR), prof. dr. Alenka Malej/dr. Francesca Garaventa
27. Information System about the Marine Environment in the Gulf of Trieste (ISMO) , INTERREG IIIA, SLO - IT 2000 - 2006, assoc. prof. dr. Vlado Malačič
28. Harmful impacts of gelatinous plankton outbreaks on zoo-ichtyoplankton and phytoplankton in the Adriatic and Black Seas (Slovenian-Russian collaboration), prof. dr. Alenka Malej
29. An evaluation of acoustic and video methods to estimate abundance of gelatinous plankton (Slovenian-Argentinian collaboration), prof. dr. Alenka Malej
30. Impact of algae excudats on transport and speciation of metal pollutants in aquatic systems (Slovenian-French collaboration), ass. prof. dr. Nives Kovač
31. Harmful algal blooms in the Adriatic: methods for identification, monitoring and measure to reduce harmful effects, (Slovenian-Croatian collaboration), ass. prof. dr. Patricija Mozetič
32. Underwater science and technologies (TEMPUS), (JEP_41082_2006), prof. dr. Alenka Malej

Development Projects that were using IC MBP's large infrastructural equipment in the years 2004 – 2007

1. Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention), (Ministry of the Environment and Spatial Planning, Environmental agency of the Republic of Slovenia), dr. Valentina Turk
2. Pollution abatment in the bay of Koper (Limnos d.o.o.), ass. prof. dr. Oliver Bajt
3. Biodiversity research in the Strunjan Lagoon (Institute of the Republic of Slovenia for Nature Conservation), ass. prof. dr. Lovrenc Lipej
4. Mapping of habitat types in an area between Izola and Koper, Studio Mediterranea, ass. prof. dr. Lovrenc Lipej
5. Definition of the type specific reference conditions for coastal and transitional waters (Institute for Water of the Republic of Slovenia), dr. Patricija Mozetič
6. Monitoring of toxic phytoplankton species in the year 2005, dr. Patricija Mozetič
7. Observatory of the northern Adriatic: regional collaboration for the protection of the sea and information of public (MO Koper, Občina Piran), dr. Patricija Mozetič
8. Monitoring of the quality of seawater, transitional waters and shellfish waters in the year 2005 (Ministry of the Environment and Spatial Planning, Environmental agency of the Republic of Slovenia), dr. Patricija Mozetič
9. Monitoring of the ecological status of the Slovenian sea according to the European Water Framework Directive (Ministry of the Environment and Spatial Planning), assoc. prof. dr. Lovrenc Lipej
10. Monitoring of toxicphytoplankton species in the shellfish-growing (Mytilus galloprovincialis) areas in Strunjan and Seča Bays in the year 2005 (Ministry of Agriculture, Forestry and Food, Veterinary administration of the Republic of Slovenia), dr. Patricija Mozetič

11. Monitoring of the quality of seawater and of water for living and growing marine molluscs in the year 2006 (Ministry of the Environment and Spatial Planning, Environmental agency of the Republic of Slovenia), ass. prof. dr. Patricija Mozetič
12. Monitoring for the Assessment and Control of Pollution from Land Base Sources (Barcelona convention), 2006 (Ministry of the Environment and Spatial Planning, Environmental agency of the Republic of Slovenia), ass. prof. dr. Valentina Turk
13. Monitoring of toxic phytoplankton species in the shellfish-growing (Mytilus galloprovincialis) areas in Bays of Seča, Strunjan and Debeli rtič in the year 2006 (Ministry of Agriculture, Forestry and Food, Veterinary administration of the Republic of Slovenia), ass. prof. dr. Patricija Mozetič
14. Slovenian Waterborne Technologic Platform, Alenka Malej
15. Study of cross-border impact of the off-shore gass-terminal in the Gulf of Trieste and the on-shore terminal in Žavlje near Trieste. Environmental impact assessment of the off-shore gass terminal in the Gulf of Trieste and the on-shore terminal in Žavlje near Trieste, assoc. prof. dr. Vlado Malačič
16. Evaluation of the Ecological Status of Coastal Waters in accordance with the European Water Framework Directive and collaboration in the preparation of expert basis for the Marine Strategy Directive in the years 2007-2008. (2511-07- 200199) (Ministry of the Environment and Spatial Planning), Martina Orlando.
17. Environmental report for the space-planning of the international maritime traffic in the Port of Koper, the analysis of the present situation and mitigation activities from the point of water quality, coastal circulation and sediment transport, (1002/07), Aquarius d.o.o., ass. prof. dr.Vlado Malačič

Other Research Projects that were using IC MBP's large infrastructural equipment in the years 2004 – 2007

1. Marine Biodiversity Research and Education (NO IOC), ass. prof. dr. Lovrenc Lipej
2. Harmful algal blooms – HAB (NO IOC), dr. Patricija Mozetič
3. Research of selected ecological factors measured in the community of Posidonia oceanica L., (Institute of the Republic of Slovenia for Nature Conservation, Ministry of the Environment and Spatial Planning), Janez Forte, biologist
4. *Education activities and coordination of IOC HAB program* (NO IOC), dr. Patricija Mozetič
5. National reference maine centre to EEA, (Ministry of the Environment and Spatial Planning), prof. dr. Alenka Malej