Vocational Education and Sectoral Training network on GIS & GI Application domains

LLP - Leonardo da Vinci Network No. 2007-1989

URL: www.vesta-gis.eu

# VESTA-GIS NEWSLETTER no. 1 (1/2008)

## VESTA-GIS at a glance

The overall aim of VESTA-GIS is to pool knowledge in the GIS domain (technology, applications), to share experience and foster innovation (new approaches) in vocational training by bringing together experts, organisations and users of GI and its application domains, as well as to identify the trends and skills requirements in this area and to improve the anticipated benefit of vocational training initiatives.
The following main activities are foreseen:

- Network Building and sharing knowledge;
- Analysis of training course offer and demand;
- Implementation of the Network training framework and of an e-learning platform hosting the partners' contributions;
- Training course catalogue building. This action will include the definition of pre-requisites of courses, such as a modular structure and selected quality criteria;
- Promotion of people mobility (students, new graduates and working people);
- Exploitation and dissemination action, including workshop organisation and support to competence validation and certification;

The network is developed with particular emphasis to the involvement of the GI users; in this perspective the network is addressed, other than on the GI technologies, including the cutting edge ones (interoperability, web-gis, standards, etc.) to the application domains, starting initially with:

- Water Resource Management
- Natural Environment Protection
- Coastal Management and Landscape

The network is developed in the favourable framework of the new European Directives for environment and territory, which are dealing with problems that have reached a new European dimension (such as the INSPIRE Directive recently approved by the European Parliament).

The Newsletter 1 aims to give a general overview about the context of VESTA-GIS project and network. In particular, they are outlined the objectives, the innovative aspects, the activities and the outcomes. A session is also dedicated to the VESTA-GIS core partners and associated partners, where all interested organisations are invited to join the network.

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## Rationale and Background

In the last years, the need for rational and functional management of geo-information within the European Community, as well as the need for a EU dimension to education and training, have been more than once stressed by the European policies.

On the one hand, the main EU directive concerning spatial information is the INSPIRE Directive. The purpose of this directive is to lay down general rules aimed at the establishment of the Infrastructure for Spatial Information in the European Community, for the purposes of the Community environmental policies and policies or activities which may have an impact on the environment. INSPIRE measures will ensure that the infrastructures for spatial information created by the Member States are compatible and usable within the whole Community and in transboundary contexts. Shifting to more sectoral issues, Member States are asked for example by the Water Framework Directive 2000/60/EC and the Habitat Directive 92/43/EEC to provide the Commission with information on the state of the waters and of the sites of Community importance in a GIS-compatible format and submit maps in GIS format.

As stated in several studies, to cope with the new European challenges there is a strong need to build the technological, political and human capacity at all levels necessary for the effective and widespread use of geo-information (e.g. see the European GI strategy of the GINIE project). This is particularly important in the implementation of INSPIRE that implies high profile skills on metadata, interoperability of spatial datasets and services, network services, geo-data sharing

On the other hand, the Copenhagen declaration, starting from the Lisbon strategy pillars that recognise the important role of education as an integral part of economic and social EU policies, aims to enhance the cooperation in vocational education and training (VET) in Europe.

Hence the need for vocational training in the field of geographic information and management of environmental spatial data. Different training material is available for technicians and officers to improve their knowledge in the field, both “traditional” and on-line material. Nonetheless different approaches and focuses are found, issues can overlap, courses can suffer from scarce visibility and can be difficult to be retrieved.

A comprehensive tool able to host, organise and make deliverable vocational lessons on GIS technology and their relevant sectoral applications is therefore needed. Such a tool would allow a potential trainee to check his/her knowledge and find the training path most suitable to the needs. E-learning training technologies, already operational but not widely diffused in the field, have a pivotal role in education and training actions, being open to a broad spectrum of trainees and location-independent. E-Learning facilities give the trainees the possibility to take the courses in their own pace and interact with the teacher at suitable time. Forefront training technologies provide a laboratory environment for trainees, where to store and execute software. The trainee can access them from any computer by using only a web browser, strongly reducing licensing problems for spatial data and GIS software.

Community policies stress also the importance for a training action at European level able to assure the fulfilment of the European initiatives and to face trans-boundary issues. Therefore, a European-wide network could cooperate for the collection and production of training material according to the needs required by the EU directives. The network should include partners with both GIS-technical and training skill.

An assessment survey was undertaken in 2005/2006 to identify the training needs of European GI users (GI-INDEED project - Geo-Information in the Implementation of Net-based Distance Education for Environmental Decision-making). The results showed the administrative level and role of the possible users of the project tools, indicated their GIS skills, the importance and characteristics of GIS use in their daily work and finally provided input for the course content. The used methods and the results can be taken into consideration as the starting point for the analysis of the training offer and demand.

## Aims and Objectives

The main aim of VESTA-GIS is to create a network operating on a comprehensive framework "a clearing house" devoted to combine access to training courses (mostly throughout distant learning facilities and organisation) and mobility opportunities.

The project is then developed according to two parallel objective streams. The first one, the "Training Framework", aims to collect, organise and deliver vocational training content on the GIS technology and tools as well as on their sectoral applications. The trainee should access such tool to check his/her knowledge and to find the most suitable training path to follow according the individuated needs.

This first objective is achieved, among others, also setting-up a Training Catalogue and an e-Learning distributed Platform, where the relevant courses and other training content available by the network partners are accessible by a course builder, able to guide a motivated choice of the best learning path a trainee should undertake.

To ensure quality and consistence, the courses to be published on the VESTA Platform is selected according to

the outcomes of the analysis of the training course offer and demand and adjusted to conform with course metadata.

The second objective stream, the "Mobility Framework" aims to create procedures and a context for promoting people mobility both placements into a working GI environment of new graduates and short visits to increase the sharing of knowledge and the exchange of experiences.

Throughout the on-line course builder of the Training Framework, the network involves procedures for identifying non-formal and informal learning, one of the main objectives of the Copenhagen Declaration and conclusion of the EU council number 9175/04EDUC101 SOC 220.

The target of VESTA-GIS is also an operational training network between experts of Geo-information and GI users in the Application domains with the aim of favouring/stimulating the involvement of sectoral stakeholders both as course-providers and ways to get a qualified and larger audience. VESTA-GIS is then structured in thematic sub-streams inside the above Training and Mobility Frameworks.

The objective of efficacy of the network and positive impact towards learners is pursued as follows. The trainee is tutored by a training guide in deploying the VESTA-GIS Platform and is able to study at his own speed and in the moment preferred/possible. The training content is made up by different supports (lectures, exercises, text books, diagnostic tests, etc) as uploaded in the platform but the project ensures the compatibility of such content as well as the viability of the decided learning path.

On the side opposite to users, the network pursues for its partners, by offering an e-Learning platform to collect and organise their courses, a better exploitation of their training material and the accumulated teaching experiences.

Being VESTA-GIS an open network the training is addressed both to external trainees and to “internal” trainees from organisations included within the network, so that also the partners can take advantage from the experience of the other ones, compare their knowledge and improve their education in GIS application domains.

## Project Description

*The VESTA acronym is intended to evoke the ancient Roman goddess of household abundance and well-being. In a similar way to the goddess positive action for food and health on Roman homes, the VESTA-GIS framework would hopefully energise the “home of GIS” with a welcoming energy for abundant (large chest of contents), bountiful (easily accessible) and healthy (certified quality) GIS training.*

*Needs and constraints addressed by VESTA-GIS*

The VESTA-GIS Network intends to set up a favourable context for enhancing professional skills at European level in the changing labour market consequent to the always increasing importance of GI in the new European dimension, that substancially changes the way of working of the GI experts, GI operators, end-users, educators, developers etc.
VESTA-GIS is committed both to improve the skills existing on the market (offering a comprehensive tool for training people in GIS technology, related sciences, application fields) and to promote mobility of people. As a matter of fact, the technical tools to do that already exist, but they need to be properly offered to a vocational training context, where technological innovation is welcome provided that it really facilitates the work and does not impose to privilege the tools upon the pursued solutions.

*Target groups*

The VESTA-GIS target groups are mainly the GI potential and actual users in the different EU Countries, as well as the providers of GIS training (both professional operators and GI experts and Academy). They are both practitioners and (even more) people potentially interested to GIS training but impeded by the fragmentation of offer, that is to be re-conducted to consistent and customisable training paths.
We refer then to officers of Administrations (main users of geo-information), to environmental operators, to companies providing GI services that need qualified skill. They are all working with GIS (or in case more simply only with geo-information to be browsed) but often are coming from different technical and scientific disciplines and frequently not committed to the management of GI from an Information Technology point of view. Those persons need to be able to maintain their sectoral application-oriented perspective (hence the decision of starting since beginning with some sectoral fields where the project partnership has a consolidated experience of networking for users' involvement) but as well to efficiently manage geo-information, with the additional new requirement, of complying with the provisions of the EU Directives, especially INSPIRE for the management of environmental geo-information. In a few words the attempt is to train people in a transparent and more friendly daily use of the geo-information tools in their specific field of work.
VESTA-GIS targets also fresh graduates approaching the labour market. They are pooled and endorsed by their University, the interest of which is demonstrated by a qualified membership in VESTA-GIS

*Long-term beneficiaries and VESTA-GIS impact on them.*

The long term beneficiaries are the administration officers and in general the GI users who benefit not only by a better knowledge (short term advantage) of GI tools in their daily work but also by the knowledge of the new and binding European provisions on the use of information. The long term beneficiaries are as well their organisation. There is in fact in complex organisations a different pace between the possible technical development and the effective capacity of introducing it in the office routine. You find not only economic, organisational and also simply precautionary reasons but sometimes also a scarce acceptation by the resources to be involved into the innovation process. A better acquaintance with the available tools, gained with a friendly way (as offered by the VESTA-GIS framework) to access to good quality GI training that combines technology and

application in the sector of interest is an important chance for motivating better involvement of human resources and consequently real innovation in organisations.

*Duration of the network*

The proper duration is at the upper value (36 months) because, even not considering the time to set up the network and to make it in action as training broker/provider, the most valuable added value of a network is to acquire an external visibility and the recognition of a "brand" label that makes the network itself to be something more than a simply addition of partners. A sufficient time to start the process and let it run successfully with the designed working tools (catalogue, platform, mobility, … ) is then needed.

## Project Innovation

The added value of the new network comparing former activity is the establishment of a comprehensive framework intended to act as a "clearing house" among offer and demand of training in Geo-Information that is able to efficiently address a series of opportunities for training courses/modules and mobility at a European level, including as well a path for accreditation of the acquired competence.
Other than the VESTA-GIS Training Framework, intended as the working tool to support GIS training and transfer of knowledge within the network and towards the external audience of GI and User Communities, the main innovations introduced by VESTA-GIS to enhance the development of skills in Geo-information, as well as the sharing of information about and the access to learning opportunities, are:

- *Interdisciplinary approach for training in GIS technologies and towards GI thematic areas*

The VESTA training framework offers new and more structured occasions to organise learning opportunities focused on specific thematic applications of GI. The project activity is developed considering both GIS technology *per se* and the GI thematic application domains, starting from three leading themes: Water Management, Natural environment Protection and Coastal Management and Landscape.

- *Meta Data for Training Courses*

Metadata are being used for facilitating the access to archived knowledge in many fields. VESTA-GIS organises a catalogue of courses structured upon a standard training metadata profile and filled in by the information provided by the Members of the network with the description of the training material to make possible an easy access to the course information by training tutors or by the trainees, directly.

- *A flexible organisation of the training material*

The training material inside the VESTA Training Framework is organised according to the following classification, to make easier assembly of components in the diverse occasions:

  - learning component: it is a training unit
  - module: a set of components fitting together
  - course: a set of modules and/or components provided by a training provider to the trainees or to an organisation

- *A Course Builder*

It is based on the above organisation of training material in order to allow to customise learning path according to specific training needs, offering for example to an organisation a flexible and customisable opportunity to give in-house training to its employees.
Finally it is needed to remind that the whole network and this proposal are running in a perspective of competence accreditation, as devised by the ECVET (European Credit Vocational Education and Training) system. To comply with this perspective the VESTA-GIS training framework is planned to lead to *"VESTA-GIS Curricula"* with a VESTA-GIS "Certification" compliant with ECVET. There is confidence that such approach will contribute to enhance competence accreditation in Geo-information, a process that is being started with the proposal for the GIS certification - endorsed by ECDL Foundation, the European Computer Driving Licence for GIS to which VESTA-GIS refers to for the basic GIS courses.

## The VESTA-GIS Training Framework

The VESTA-GIS Training Framework is intended to support GIS training and transfer of knowledge within the network and towards the GI and Users Communities.
The "VESTA-GIS Training Framework" is characterised by the following elements (see also Fig. 1):

- VESTA Training Guide, describing the platform architecture, the rules for accessing and use it, both for the organisation providing courses/training material and for the trainees.
- Course Builder, that allows to build-up customised learning paths, with the possibility of tailoring courses on the requirements of a specific person or organisation, according to the training material organisation as described below.
- Skill competence test, to verify the prerequisites of simulated learning paths throughout the Course Builder, before starting them.
- Training Modules Catalogue, to describe through metadata the training modules available and the way and condition to access to. It is organised in a main section regarding GIS technology and related sciences and in the different thematic application domains in which the network is developed.
- The basic GIS module makes also reference to the GIS certification - endorsed by ECDL Foundation (http://www.ecdlgis.com), the European Computer Driving Licence for GIS.
- Training Modules: according to the partners' indications, some of the training modules will be hosted

by the VESTA training platform itself for allowing e-learning delivery; other courses/training modules will be addressed through the catalogue, in case also with a direct links whenever the courses are already organised in other partner platforms.

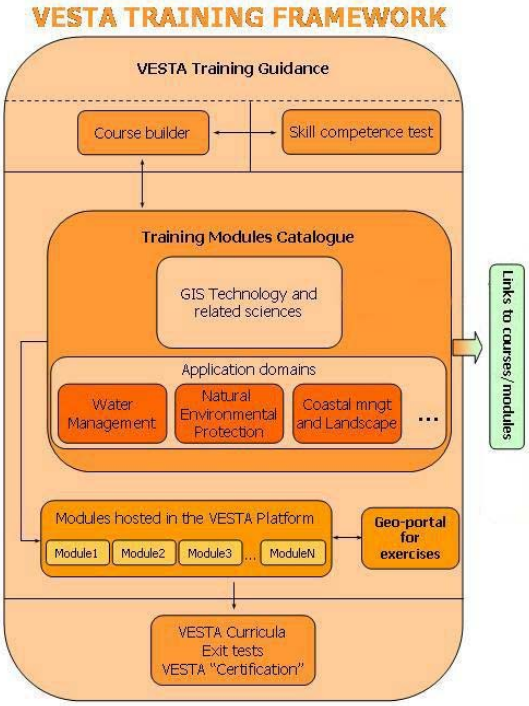


Figure 1: The VESTA-GIS Training Framework

- The e-Learning platform will be based on a Dokeos Corporation Open Source application that besides storing and delivering documents (including literature, presentations, tests, etc.) allows their organisation in three structured "learning paths" and the continuous contact between trainee and teacher through an agenda, messaging and document sharing facilities. Two different interfaces, for trainees and teachers, ensure a higher usability of the platform by both categories. Moreover SCORM (Shareable Content Object Reference Model; http://www.adlnet.gov/scorm/index.cfm) and IMS (IMS Global Learning Consortium, Inc.; http://www.imsglobal.org) compliant learning packages can be directly uploaded and displayed in the platform, improving the interoperability and the content access and sharing.
- The modules hosted within the platform could also deploy a GeoPortal for practical exercises with actual geo-data and the development of test-cases (in case, also with own data of the organisations the trainees belong to).
- The VESTA-GIS training framework leads to "VESTA-GIS Curricula" with a VESTA-GIS "Certification" according to to ECVET (European Credit Vocational Education and Training) system.

The training material related to the VESTA-GIS Training Framework will be organised according to the following classification:

- learning component: a training unit
- module: a set of components fitting together
- course: a set of modules and/or components provided by a training provider to the trainees or to an organisation

The learning path structure offers also to an organisation a flexible opportunity to give in-house training to its employees.

## Partnership

The Network has been set up according to three levels of partnership to meet the need for a large participation, guaranteeing an effective management of the project and of resource allocation at the same time:

1) the Coordinator, GISIG, is in itself a ne-work and, as such, taking the responsibility of most of the "networking" work packages;

2) the Core partners, identified to satisfy specific requirements of the project, that are responsible of specific tasks according to their main expertise;

3) the other Members of the Network, the Associated partners that contributes to the networking training activity towards transfer of skills, methodology and tools in a wider transnational context, according to their specific interest. More in detail:

1. GISIG (www.gisig.it) (Project Co-ordinator), a Sectoral European Association, constituted in 1992 as a COMETT UETP (University-Enterprise Training Partnership). GISIG has a long experience in promoting and managing large trasnational partnerships, devoted to networking, innovation and technology transfer in the GI field, including training and mobility initiatives within Leonardo and, previously, within COMETT. Among its Members, some major GI technology vendors guarantee a close follow-up of technology development, also through the possibility to access their catalogues of courses; some others are also committed to ensure a better impact of the initiatives promoted by the Association on a regional/national level. Moreover, the Association promotes thematic networks to pull expertise in GI applications domains (e.g NATURE-GIS (www.gisig.it/nature-gis).

On this base, the VESTA-GIS project has been set-up to deal with pan-European training needs and it is expected that the VESTA-GIS results will be disseminated across Europe and to various types of stakeholders.

The Core partners, that are represented (in addition to GISIG) within the project Steering Committee:

2. HiG, the GIS Institute at the University of Gävle is a multi-disciplinary research and innovation centre, recognised as a national focal point of GIS-related research and development in Sweden. It has a long lasting experience in managing on-

line courses and takes care of the implementation of the VESTA Training Framework and the related tools.

3. Z_GIS, the "Centre for GeoInformatics" at Salzburg University is a centre of competence active in research, continuing education and industry cooperation. The experience of the Centre is precious to coordinate the need analysis and to give fundamental inputs to the definition and evaluation of the courses metadata

4. LabSITA (http://www.labsita.org), at the University of Rome La Sapienza that performs research studies, applications and education on advanced applied techniques of Geographical and has developed jointly with AICA (Associazione Italiana per l'Informatica ed il Calcolo Automatico – http://www.aicanet.it) the programme and the syllabus of GIS certification - endorsed by ECDL Foundation core level (http://www.ecdlgis.com), in order to offer a programme for professional skills recognition in GI.

5. SADL, the Spatial Applications Division Leuven (http://www.sadl.kuleuven.be), R&D division of the Katholieke Universiteit Leuven (K.U.Leuven) that guarantees the link with the INSPIRE implementation and training needs evaluation, in particular concerning the suitability of the training material with regard to the INSPIRE provisions and the cross check of the INSPIRE thematic data (Annexes) towards the evaluation of the training modules for the Thematic application domains.

6. IRIDE (www.iride-acquagas.it) the Water management Utility branch of the IRIDE Group and 7. ICCOPS (www.iccops.it) Landscape, Natural and Cultural Heritage Observatory, a Non-Governmental Organisation of the UNEP Mediterranean Action Plan will lead the activities of two of the thematic sub-network considered in VESTA-GIS, for the Water Resource Management and Coastal Management and Landscape application domain, respectively. The third one, Natural Environment Protection, is leaded by GISIG, former co-ordinatior of the IST project "Nature-GIS" and promoter of the homonymous SDIC Spatial Data Interest Community, within INSPIRE.

The Associated partners (see below the table with the list and related sector of interest) in making own training courses accessible by the network, in mobility initiatives (either as hosting or sending organisation) as beneficiaries of the VESTA-GIS Training Framework for training, as well as for networking, dissemination/exploitation actions.

Most of the involved partners have a long record of experience in GI projects and within EU-funded programmes, inter alia in the Training and Education field, and are consequently familiar with the valorisation requirements to be applied towards the VESTA-GIS target groups. The partnership has a sound scientific and technical knowledge that, through co-operation among the various stakeholders involved in the project, will be shaped into the collection, selection and availability of training material, with the related added value, in order to suit the training needs assessed in the first phase of the project. Moreover, the European coverage of the project allows to cross-relating different situations in the different Countries. In this way the project outcomes can work in different contexts and are as well able to support the process of training standardisation and certified comparison in this field that is one challenge of training at the European level.

As overall the project, by enhancing training of end-users, should also contribute to the definition of sectoral standards for competence certification according to the principles stated by the Copenhagen Declaration and to the on-going consultation of ECVET.

| N. | Partner | Sector of interest |
|---|---|---|
| 8 | Aalborg University | GIS technology<br>GI applications for Coastal management and landscape, land management and urban planning |
| 9 | AGISEE – Association for Geospatial Information in South-East Europe | GIS technology |
| 10 | Aristotle University Thessaloniki | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape, Solid Waste Management |
| 11 | Autorità di Bacino del Fiume Po | GIS technology<br>GI applications for Water resources, soil defence |
| 12 | Budapest University of Technology and Economics | GI applications for Water resources, Nature conservation |
| 13 | CEMAGREF | GI applications for Nature conservation, Landscape ecology |
| 14 | Central European University | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 15 | Consiglio Nazionale delle Ricerche | GIS technology |
| 16 | CSI Piemonte | GIS technology |
| 17 | Ege (Aegean) University | GI applications for Nature conservation, Coastal management and landscape |
| 18 | ENEA | GIS technology<br>GI applications for Nature conservation |
| 19 | Epsilon International SA | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape, civil protection, natural disasters |
| 20 | Fondazione ENI Enrico Mattei (FEEM) | GI applications for Coastal management and landscape |
| 21 | Fraunhofer Institute for Computer Graphics Research | GIS technology<br>GI applications for Nature conservation |
| 22 | German Aerospace Center (DLR) | GIS technology |

| N. | Partner | Sector of interest |
|---|---|---|
| | | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 23 | Grad Rijeka | GIS technology |
| 24 | Hellenic Centre for Marine Research | GIS technology<br>GI applications for Water resources, Nature conservation |
| 25 | IGN France International | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape, Cartography, Geoportals |
| 26 | IH Cantabria | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 27 | INI-GraphicsNet Stiftung | GIS technology |
| 28 | Instituto Geografico Portugues | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape, Environmental Impact Assessment, Strategic Environmental Assessment, Remote Sensing applications |
| 29 | IRENAV – Institut de Recherche de l'Ecole navale | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape, Maritime GIS, Web and Wireless GIS |
| 30 | ISEGI – Universidad Nova de Lisboa | GI applications for Nature conservation |
| 31 | Macedonian Ecological Society | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape |
| 32 | Masaryk University | GIS technology<br>GI applications for Nature conservation, emergency management |
| 33 | National Technical University of Athens | GI applications for Water resources, Nature conservation |
| 34 | Pamukkale University | GIS technology<br>GI applications for Water resources, Nature conservation, Natural hazards, hazard assessment for urban areas |
| 35 | PAP/RAC – UNEP-MAP Priority Action Programme / Regional Activity Centre | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 36 | Politechnika Opolska (Opole University of Technology) | GIS technology |
| 37 | Provincia di Vercelli | GIS technology<br>GI applications for Water resources, Nature conservation |
| 38 | Regione Piemonte | GIS technology |
| 39 | Research Institute of Geodesy, Topography and Cartography (VGTK) | GIS technology |
| 40 | SEMIDE-EMWIS | GI applications for Water resources |
| 41 | Technical University of Denmark | GIS technology |
| 42 | UNEP/GRID Warsaw | GIS technology<br>GI applications for Nature conservation, Natura 2000, INSPIRE, Environmental Reporting |
| 43 | UNESCO IHE, Institute for Water Education | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape, Urban Water Management |
| 44 | Universidad Rey Juan Carlos | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 45 | Università Ca' Foscari – Interdepartemental Centre IDEAS | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 46 | Università degli Studi di Cagliari – Dipartimento di Ingegneria del Territorio (DIT), Sezione Urbanistica (SU) | GI applications for Nature conservation, urban / regional planning, EIA, VAS |
| 47 | Università degli Studi di Cagliari – Dipartimento Scienze della Terra | GI applications for Nature conservation, Coastal management and landscape |
| 48 | Università degli Studi di Milano – Bicocca | GI applications for Nature conservation, Natural hazards and risks |
| 49 | Università degli Studi di Pavia | GI applications for Water resources, Nature conservation |
| 50 | University of Architecture, Civil Engineering and Geodesy | GIS technology<br>GI applications for Water resources, Nature conservation, Early warning and crisis management, 3D cartographic visualization, educational GIS and cartography |
| 51 | University of Girona | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape |
| 52 | University of Munster | GIS technology<br>GI applications for Water resources, Nature conservation |
| 53 | University of Nice – Sophia Antipolis | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 54 | University of Seville | GI applications for Coastal management and landscape |
| 55 | University of West Hungary | GIS technology<br>GI applications for Land Management, Cadastre |
| 56 | USRIEP Ukrainian Scientific and Research Institute of Ecological Problems | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 57 | Vrije Universiteit Amsterdam | GIS technology |

| N. | Partner | Sector of interest |
|---|---|---|
| | | GI applications for Water resources, Nature conservation |
| 58 | Vrije Universiteit Brussel | GI applications for Water resources |
| 59 | VSB Technical University of Ostrava | GIS technology<br>GI applications for Water resources, Public administration, labour market |

New Associated Partners after project approval

| | | |
|---|---|---|
| 60 | Provincia di Bologna (IT) | GIS technology<br>GI applications for Cadastral services |
| 61 | Petroleum - Gas University of Ploiesti (RO) | GIS technology<br>GI applications for Water resources, Nature conservation |
| 62 | ESRI-Europe (NL) | GIS technology |
| 63 | Intergraph Italia LLC (IT) | GIS technology |
| 64 | Institute of Water Problems - BAS (BG) | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 65 | Technical University of Sofia (BG) | GIS technology<br>GI applications for Nature conservation |
| 66 | Distance Learning University (PT) | GI applications for Water resources, Nature conservation, Coastal management and landscape |
| 67 | University of Trieste (IT) | GIS technology<br>GI applications for Nature conservation, Coastal management and landscape |
| 68 | University Ca Foscari (IT) | GI applications for Nature conservation, Coastal management and landscape, Marine Archaelogical and Geophysical Prospection |
| 69 | Scientific Information Center of the Interstate Commission for Water Coordination (UZ) | GIS technology<br>GI applications for Water resources, Nature conservation, Coastal management and landscape |

Any interested organisation is invited to contact the Project Co-ordinator (see below) to join the VESTA-GIS Network or to receive more information about it.

## News and Events

- 11th AGILE Conference - "Taking Geoinformation Science One Step Further", 5-8 May 2008, Girona, Spain (http://www.agile2008.es)
- BRIDGING THE GAP - "Responding to Environmental Change – from Words to Deeds", 14-16 May 2008, Portorož, Slovenia. (http://www.bridgingthegap.si)
- INSPIRE Conference 2008 - "INSPIRE: Implementation and Beyond", 23-25 June 2008, Maribor, Slovenia (http://www.ec-gis.org/Workshops/inspire_2008/)
- GI FORUM - "Applied Geoinformatics (AGIT)", 1-4 July 2008, Salzburg, Austria (http://www.gi-forum.org)
- EUGISES 2008 - Sixth European GIS Education Seminar, 11th - 14th September 2008, Cirencester, UK. (http://www.eugises.eu)
- HYDROINFORMATICS 2009 - "Science and Information Technologies for Sustainable Management of Aquatic Ecosystems", A joint conference of The 8th International Conference on Hydroinformatics and The 7th International Symposium on Ecohydraulics. 12-16 January 2009, Conception, Chile (http://www.heic2009.org/)
- VI Convegno Nazionale per le Scienze del Mare , 4 - 8 November 2008, Lecce (IT), promoted by CoNiSMa and Antheus s.r.l (www.antheus.it)
- The INSA Lyon launches a new International Master in Information Systems (IMIS). This degree program aims at providing an outstanding academic training in computing and the intelligent application of technology to address business and research fields. More information at http://imis.insa-lyon.fr/

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