

Course Handbook

PEGASO Spatial Data Infrastructure: training for geonode development

Version 1.1

Pegaso Project

People for Ecosystem based Governance
in Assessing Sustainable development of
Ocean and coast

Funded by the European Union
under FP7 – ENV.2009.2.2.1.4
Integrated Coastal Zone Management

Specific Programme FP7

Collaborative Projects
Large scale integrating Project

Grant agreement n°: 244170

Dissemination Level*	✓ PU	PP	RE	CO
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Project Acronym / number	PEGASO	244170
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Project title	People for Ecosystem based Governance in Assessing Sustainable development of Ocean and coast.
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*PU: Public; PP: Restricted to other programme participants (including the Commission Services);
RE: Restricted to a group specified by the Consortium (including the Commission Services);
CO: Confidential, only for members of the Consortium (including the Commission Services).

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The appropriate paragraph has to be taken according to the respective dissemination status.

Project coordination

Universitat Autònoma de Barcelona
UAB / Spain

www.pegasoproject.eu



Course DESCRIPTION		
E-LEARNING:	Web supplemented via Moodle E-Learning Platform	
TECHNICAL PREREQUISITE(S):	<p>Operating system: Windows. Windows XP recommended Linux (only for advanced users)</p> <p>CPU: Pentium 4 3Ghz</p> <p>RAM 1 GB</p>	
MODULE CO-ORDINATOR(S):	Pablo Fernandez-Moniz (UPO)	
TEACHING STAFF RESPONSIBLE FOR COURSE DELIVERY:	Pablo Fernandez-Moniz; Emlia Guisado; Gonzalo Malvarez; ADDITIONAL TRAINERS	
HOURS:		
	Lectures	48 hrs (4h per week)
	Student Interaction	20 hrs
	Tutorials	12 hrs
	Independent study (including assessment)	90 hrs
TOTAL EFFORT HOURS:	160	
ACADEMIC SUBJECT:	Geographic Information Technologies	
RATIONALE		
PEGASO's Description of Work document introduces the relevance and responsibility for the implementation of a Spatial Data Infrastructure. This task (3.2), consists in the development and		



implementation of participants' geonodes for PEGASO's SDI.

In order to build a geonode in each organisation, this short course aims at the development of capacities at a basic level for partners involved in the project to achieve the complete implementation of their geonodes.

The provision of the E-learning based course is a first step in the capacity building plan in WP3 which will be completed in the hands on practical course in Oostende in October 2012.

Course CONTENT AND STRUCTURE

Module 1: Firsts steps on the SDI

In this module a general introduction to the SDI, the methodology of the training course and the schedule is provided. An overview of the importance and role of SDI in Pegaso project will be analysed, focusing later on the use of the Inspire Directive in the European context. Further, the Pegaso data Harmonization guidelines will be discussed, and finally we will learn how to use OGC standards and Metadata specification.

1.1 Start up of the SDI training. From 16th April to 30th April.

Week 1

- SDI training starts up.
 - Welcome to SDI training.
- SDI Importance
 - Why using SDI. Importance of sharing our data and the contextualization with the Inspire directive
- Contextualization of the SDI in Pegaso project
 - Usefulness of SDI in Pegaso Project.

1.2 Introduction to SDI and Geographic data. From 30th April to 14th May

Week 2

- Data harmonization in Pegaso
 - Data structure in Pegaso.
- OGC and services
 - What is OGC and its standards. Services available.

Week 3

- How to connect to SDI servers
 - Installation of a desktop GIS and loading different services (WMS, WFC and WCS). How to use a light client.

- Metadata in Geographic information
Standards for geospatial metadata: the baseline ISO 19115; ISO 19139 for implementation of data metadata and the ISO 19119 for services metadata.

Module 2: SDI in action. From 14th May to 29th June

This module will be based on Geoserver functionality. To start, some issues about internet communication will be discussed to achieve knowledge about these tools. Further, a revision of the state of the art and availability of Map Servers software will be made, and finally we will learn how they work. The module will end with the provision of the capacity on how to set up the environment configuration and the variety of services on Geoserver: WMS, WFS and WCS.

2.1 Geoserver installation.

Week 4 and 5

- How does Geoserver work? Geoserver installation in our localhost

2.2 Setting up a WMS service.

Week 6 and 7

- Setting up a WMS service.

2.3 Setting up a WFS service.

Week 7 and 8

- Setting up a WFS service.

2.4 Setting up a WCS service.

Week 9 and 10

- Setting up a WCS service.

Module 3: Integrating our SDI with all partners. Geonetwork. From 2nd July to 15th July

Through this module we will demonstrate how to explore data on Geonetwork (the software used by the Pegaso SDI), to continue with the knowledge of how to fill metadata (create the metadata information needed for the SDI). Finally, a full training in how to connect and share our SDI will be provided.

Week 11 and 12

- Integrating our data on Geonetwork
Methodology to share our data with other partners.
- Metadata
Metadata in Geonetwork.



RECCOMENDED READING LIST

- Peter A. Burrough and Rachael A. McDonnell, 1998. Principles of Geographical Information Systems, Oxford University press
- Chamg, kang-tsung, 2002. Introduction to Geographic Information Systems. McGraw Hill Companies.
- Goodchild Michael F, Maguire David J., Longley Paul A., Rhind David W. 2002. Geographic Information Systems & Science. John Wiley & songs Ltd. NY.
- Coleman, D.J. and McLaughlin, J. 1998, Defining global geospatial data infrastructure (GGDI): components, stakeholders and interfaces, Geomatica, Canadian Institute of Geomatics.
- De Mers, Michael N. 1997. Fundamentals of geographic information systems. John Wiley & songs Ltd. NY.
- Geoserver manual: <http://docs.geoserver.org/stable/en/user/>
- Geonetwork manual: http://geonetwork-opensource.org/_static/geonetwork24_eng.pdf

SDI Training website and password

Dear Guest,

Welcome to the SDI training course which starts on 16th of April. Please click on the link to access the e-learning platform (moodle) that holds the course. Log in using the username and password provided.

URL: <http://sdipegaso.gstgis.com/>

Username: user : guest_user

Password: GuestUp07



CALENDAR

MARCH							APRIL 2012							MAY 2012						
							L	M	X	J	V	S	D	L	M	X	J	V	S	
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							9	10	11	12	13	14	15	14	15	16	17	18	19	
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							30													
JUNE 2012							JULY 2012							AUGUST 2012						
L	M	X	J	V	S	D	L	M	X	J	V	S	D	L	M	X	J	V	S	
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11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31		
							30	31												

Duration	Modules	Dates
8	Start up on the SDI training	16 April – 30 April
8	Introduction to SDI and Geographic data	30 April – 14 May
28	SDI in action	14 May – 29 May
8	Operating with Geonetwork	2 July – 15 July