

Cover sheet

Project number: ERANetRUS-033
Project acronym: GEOURBAN
Project run time: July 2012
Reporting period: 1/1/2012 – 30/6/2012

Name and address of the coordinating institution	
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Name of the legal representative of the coordinating institution	
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Legal representative (I declare the accuracy of statement)	Place, date and signature (signed and stamped)
	  Heraklion, July 4, 2012

Project coordinator (I declare the accuracy of statement)	Place, date and signature (signed and stamped)
	  Heraklion, July 4, 2012

**Declaration by the scientific representative
of the project coordinator**

I, as scientific representative of the coordinator of this project and in line with the obligations as stated in the contract declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):
 - has fully achieved its objectives and technical goals for the period;
 - has achieved most of its objectives and technical goals for the period with relatively minor deviations.
 - has failed to achieve critical objectives and/or is not at all on schedule.
- The public website, if applicable
 - is up to date
 - is not up to date
- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (section 6) and if applicable with the certificate on financial statement.

Name of scientific representative of the Coordinator:

Dr. Nektarios Chrysoulakis

Place & Date: Heraklion, July 4, 2012

1. Publishable summary

The main objective of the GEOURBAN (Exploiting Earth Observation in Sustainable Urban Planning & Management) project is to bridge the gap between EO scientists and urban planners by demonstrating the ability of current and future EO systems to depict parameters of urban structure and urban environmental quality over large areas at detailed level. The innovative potential of the project lies in the development of a web-based information system which reflects the multidimensional nature of urban planning and management, as operationalized in intelligible and transferable indicators which are easily understood and applicable by non-experts. Three cities with different typologies and planning perspectives are included as case studies: Tyumen (Russia), Tel-Aviv (Israel) and Basel (Switzerland). The project consists of nine Work Packages (WPs), two horizontal (WP1: Management and WP9: Dissemination - Exploitation) and seven thematic WPs: WP2 specifies the urban planning and management requirements, providing guidelines to the other WPs. The EO-based indicators will be developed in WP3, taking into account these guidelines. The EO data will be analysed in WPs 4 and 5, whereas the capabilities of future missions will be explored in WP6. WPs 4, 5 and 6 will give inputs to WP3. The indicators that will be developed in WP3 will be integrated in the system to be developed in WP7. Finally, WP8 is dedicated to information system demonstration. During the 1st Semester of the project WPs 1, 2, 3, 4 and 9 were active. In WP1 all the tasks described in the Annex A were smoothly run and the main results were the Project kick-off meeting, the development of an Action List for the 1st Semester, the establishment of a Management Board and an Intellectual Property Right Committee, the elaboration of a Consortium Agreement and a Project Management plan, the Preparation of the 1st Interim Report and the organization of two Management Board Meetings. In WP2 most of the tasks described in the Annex A were smoothly run and the main results were the organization of Community of Practice (CoP) meetings in Basel and in Tel-Aviv and the elaboration of the Deliverable related to the users requirements. The CoP meeting in Tyumen will be held just before the 1st Progress Meeting to be held in Tyumen in late July. Therefore, the WP2 will be concluded within the second Semester. The WP3 should be not active in the 1st Semester according to Annex A, but it was started earlier to elaborate a preliminary GEOURBAN indicators list to be discussed and revised in the CoP meetings. In WP4 most of the tasks described in the Annex A were smoothly run and the main results were the Earth Observation data collection, the begin of the data processing and the elaboration of a protocol to for this processing. There is a slight delay in WP4 tasks because the data processing can not be completed before the Tyumen CoP meeting where the final list of indicators (WP3) will be discussed. In WP1 all the tasks described in the Annex A were smoothly run and the main results were the development of a Dissemination and Use plan, the development of a project website and the development of a project ftp server for secure information exchange among GEOURBAN partners. During the next Semester, the GEOURBAN indicators list will be finalized (WP3) and the Earth Observation data processing will be concluded (WPs 4 and 5).

2. & 3. Project objectives and Work progress and achievements during the period

Overview of the progress of the work in line with the structure of the Annex A to the contract.

WP 1: Project Management

Progress towards objectives and details for each task

- Communication with the Joint Call Secretariat (FORTH)
- Communication with the National Funding Sources (All Partners)
- Organization of the Kick-off Meeting in Heraklion, on February 8, 2012 (FORTH).
- Participation in the Kick-Off Meeting (All Partners).
- 1st Management Board Meeting in Heraklion, on February 8, 2012 (All Partners).
- Organization of the 1st Management Board (Skype) Meeting on May 11, 2012 (All Partners)
- Preparation of a draft version of the Consortium Agreement (FORTH).
- Adjustments and contribution to Consortium Agreement text (All Partners).
- Development of a draft of the Deliverable D.1.1: Project Management Plan (FORTH).
- Contribution to the Deliverable D.1.1 (All Partners).
- Assignment of contact person for Intellectual Property Rights Committee (All Partners)
- Development of a draft of the Deliverable D.1.2.1: 1st Interim Report (FORTH).
- Contribution to the Deliverable the Deliverable D.1.2.1 (All Partners).

- Preparatory action for the Organization of the GEOURBAN 1st Progress Meeting to be held in Tyumen on July 23-24, 2012 (FORTH, GRADI).

Results

- Minutes of the GEOURBAN Kick-off Meeting.
- Action List for the 1st Semester of the project.
- Minutes of the Management Board Meetings.
- Final Version of the Consortium Agreement.
- Deliverable D.1.1 submitted.
- Deliverable D.1.2.1 submitted.

Problems occurred or foreseen - issues imposing actions.

- No problems occurred or foreseen. There were no deviations from Annex A, therefore there were no issues imposing actions.

WP 2: Urban Planning Requirements relative to EO

Progress towards objectives and details for each task

- Organization of the Community of Practice (CoP) Meeting in Basel, on April 25 (UNIBAS, FORTH).
- Organization of the CoP Meeting in Tel-Aviv, on May 16, 2012 (GARD, FORTH).
- Organization of the Community of Practice (CoP) Meeting in Basel, on June 7, 2012 (UNIBAS).
- Preparation of the CoP Meeting to be held in Tyumen on July 23, 2012 (GRADI, FORTH).
- Preparation of a draft document on "Review of the current understanding of urban planning and management requirements" based on urban planning and management practice in Russia (GRADI).
- Preparation of a draft document on "Review of the current understanding of urban planning and management requirements" based on urban planning and management practice in Israel (GARD).
- Preparation of a draft document on "Review of the organization structures of urban planning authorities" based on urban planning and management practice in Switzerland (UNIBAS).
- Preparation of a draft version of D.2 based on the above reviews and on CoPs results (UNIBAS)

Results

- Minutes of the Basel CoP Meeting.
- GEOURBAN indicators list revised by Basel urban planners.
- Minutes of the Tel - Aviv CoP Meeting.
- GEOURBAN indicators list revised by Tel-Aviv urban planners.
- Draft version of the Deliverable D.2.

Problems occurred or foreseen - issues imposing actions.

- The GEOURBAN Management Board decided, in order to save some time and project resources, to organize the Tyumen CoP meeting just before the GEOURBAN 1st Progress Meeting to be held in Tyumen the last week of July. Therefore WP2 will be concluded after the Tyumen CoP meeting and the D.2 is expected to be submitted in August.

WP 3: EO-based Indicators Development

Progress towards objectives and details for each task

- Development of a preliminary indicators list (FORTH, DLR).
- Revision of a preliminary indicators list based on CoP Meetings outcomes (FORTH, DLR).

Results

- Preliminary indicators list.

Problems occurred or foreseen - issues imposing actions.

- No problems occurred or foreseen. There were no deviations from Annex A, therefore there were no issues imposing actions. WP3 was started earlier than the time that was initially planned (Month 6), in order to prepare a preliminary GEOURBAN indicators list, to be discussed with urban planners during the CoP meetings that were organized in the three Case Study cities.

WP 4: Micro-scale Applications

Progress towards objectives and details for each task

- Preparation and submission of data proposal to get free access to TerraSAR-X imagery (DLR).
- Preparation and submission of data proposal to get free access to RapidEye imagery (DLR).
- Ordering (one scene per GEOURBAN test area) and processing (settlement masks) of TerraSAR-X imagery (DLR).
- Adaptation of existing algorithm / software tool to model impervious surface based Landsat imagery to the processing of RapidEye data (DLR).
- Several test datasets were uploaded to the GEORUBAN ftp server. In a first step, test data sets consist mainly of subsets of Landsat data from several years for the three case studies. Additional test datasets (Quickbird, APEX hyperspectral) were uploaded for Basel (UNIBAS)
- Preparation of a draft version of the Deliverable D.4.1: EO Products Database (VHR) (KUZGUN).
- Literature review for a preparation of a draft version of the Deliverable D.4.2: EO Data Analysis Protocol (VHR) (KUZGUN).

Results

- Accepted TerraSAR-X research proposal (permission to order ~40 TSX images for GEOURBAN consortium).
- Accepted RapidEye research proposal (permission for DLR-DFD to order 3-5 images for each of the three GEOURBAN test sites).
- Provision of settlement masks derived from TerraSAR-X imagery to GEOURBAN consortium for each test area.
- Prototype algorithm / software tool for modelling of impervious surface based on RapidEye data.
- Draft versions of the Deliverables D.4.1 and D.4.2.

Problems occurred or foreseen - issues imposing actions.

- Not important problems occurred or foreseen. There is a slight deviation from Annex A, because the GEOURBAN Management Board decided to extend the duration of WP4 in the 2nd semester of the project, because a final list of indicators from WP3 is needed to proceed with VHR data processing. The final list of indicators can not be available before the Tyumen CoP meeting. Furthermore, it is possible for GEOURBAN consortium to order the RE data acquired for DLR research proposal from archive (reduced pricing for archive data; ~1€ per km²). Finally, there is a necessity to gain access to Very High Spatial Resolution Earth Observation for test areas Tyumen and Tel Aviv. Therefore, there will be some delay in the submission of Deliverables D.4.1 and D.4.2.

WP 9: Dissemination Exploitation

Progress towards objectives and details for each task

- Development of a ftp server, password protected for data and information exchange among GEOURBAN partners (FORTH)
- Development of a draft version of the Deliverable D.9.1: Dissemination and Use Plan (GARD).
- Contribution to the Deliverable D.9.1 (All Partners).
- Development of the Deliverable D.9.2: GEOURBAN Web Site (GARD).
- Contribution to the Deliverable D.9.2 (FORTH).
- Preparation of a GEOURBAN presentation in the 10th All-Russian conference "Urban Planning and Regional Development in Russia) to be held in Vyborg, St. Petersburg, on July 24-28, 2012 (FORTH, GRADI).

Results

- GEOURBAN ftp server operational: <http://iacm.forth.gr/egroupware>
- Deliverable D.9.1 submitted.
- GEOURBANWeb-Site operational: <http://geourban-fp7-eranet.com/> (Deliverable D.9.2 submitted).

Problems occurred or foreseen - issues imposing actions.

- No problems occurred or foreseen. There were no deviations from Annex A, therefore there were no issues imposing actions.