PROJECT FINAL REPORT

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Final publishable summary report

1 Executive Summary

The Mediterranean region is experiencing a broad range of threats to water security. According to latest climate projections, as published in the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC 2013) or the European Environmental Agency (EEA 2012), the region is at risk due to its pronounced susceptibility to changes in the hydrological budget and extremes, which is expected to have strong negative impact on the management of water resources and on key strategic sectors of regional economies. However, the current potential to develop appropriate regional adaptation measures towards climate change impacts suffers heavily from large uncertainties.

CLIMB put a major focus on the assessment and quantification of uncertainties in climate change impacts, related vulnerabilities and risk, by means of a comprehensive multi-model ensemble approach. In its 4-year design, a network of 20 partners from 9 countries, analyzed ongoing and future climate induced changes in hydrological budgets and extremes across the Mediterranean and neighboring regions. The work plan was focused on seven circum-Mediterranean river or aquifer systems, where the consortium employed a novel combination of field monitoring and remote sensing, data assimilation, integrated hydrologic modeling and socioeconomic factor analyses targeted to reduce existing uncertainties in climate change impact analysis.

Advanced climate scenario analysis was utilized and available ensembles of regional climate model simulations were audited and downscaled. This process provided the drivers for an ensemble of hydrological models with different degrees of complexity in terms of process description and level of integration. The results of hydrological modeling and socio-economic factor analysis were applied to develop a risk model via a spatial Vulnerability and Risk Assessment Tool, serving as a platform for dissemination of project results, including communication and planning for local and regional stakeholders, namely the CLIMBPortal. An important output of the research in the individual study sites is the development of recommendations for an improved monitoring and modeling strategy for climate change impact assessment.

The results from CLIMB largely confirm, but specify on the catchment scale the current state of the art on climate change research for the Mediterranean region, demonstrating that climate change is impacting water resources in a manifold and distinct fashion. Triggered mostly by a strong increase in temperature and a moderate to strong reduction and seasonal re-distribution of precipitation, impacts will mostly be felt in water resources management, agriculture, tourism and its consequent implications on income, value-at-risk and water security under increasing water scarcity. Selected results indicate that i) climate change contributes, yet in strong regional variation, to water scarcity in the Mediterranean; other factors, e.g. pollution or poor management practices are regionally still dominant, ii) rain-fed agriculture needs to adapt to seasonal changes; stable or increasing productivity likely depends on additional irrigation, iii) tourism could benefit in shoulder seasons, but may expect income losses in the summer peak season due to increasing heat stress, iv) local & regional water managers and water users, lack, as yet, awareness of climate change induced risks, with emerging focus areas are supplies of domestic drinking water, irrigation, hydro-power and livestock, and, v) data and knowledge gaps in climate change impact and risk assessment are wide-spread and ask for coordinated monitoring programs. Site-specific recommendations for adaptation to climate change have been developed in a dialogue with local and regional stakeholder networks.

However, while substantial progress has been made, uncertainties in climate projections and subsequent (hydrological) impact assessment remain and still impose strong limitations on water-related decision-making under conditions of climate change. This is particularly true due to the general lack of regional data and the yet unresolved mismatch of spatial and temporal scales of operation from different scientific perspectives.

2 Project Context and Objectives

2.1 Project Context

According to current climate projections, Mediterranean countries are at high risk for an even pronounced susceptibility to changes in the hydrological budget and extremes. These changes are expected to have severe direct impacts on the management of water resources, agricultural productivity and drinking water supply. The different regions of the Mediterranean landscape are already experiencing and expecting a broad range of natural and man-made threats to water security, such ass include severe droughts and extreme flooding, salinization of coastal aquifers, degradation of fertile soils and desertification due to poor and unsustainable management practices. It can be foreseen that, unless appropriate adaptation measures are undertaken, the changes in the hydrologic cycle will give rise to an increasing potential for tensions and conflict among the political and economic actors in this vulnerable region.

A number of major obstacles exist to implementation of adaptation measures designed to achieve sustainable management of water resources in Southern Europe, North Africa and the Middle East. Effective adaptation measures need to be prepared in a multi-disciplinary approach. While there is scientific consensus that climate induced changes on the hydrology of Mediterranean regions are presently occurring and are projected to amplify in the future, very little knowledge is available about the quantification of these changes, suffering from a lack of suitable and cost effective hydrological monitoring and modeling systems. Current projections of future hydrological change, based on regional climate model results and subsequent hydrological modeling schemes, are highly uncertain and poorly validated. The conditions required to develop and implement appropriate adaptation strategies are lacking. To the extent that adaptation initiatives are being proposed and adopted, they are primarily by perceptions of individual stakeholders and are rarely based on a multi-disciplinary assessment covering both natural and associated social and economic changes.

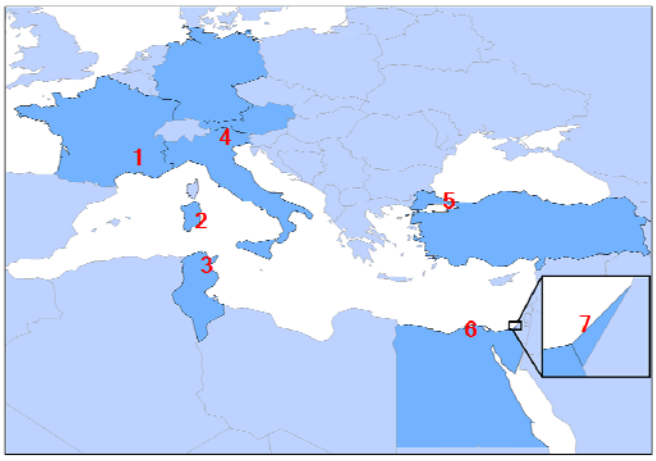
In its four-year-design, CLIMB aims at the improvement of modeling capabilities and the development of appropriate tools to advance the capability to assess climate effects on water resources and uses. The project consortium employed a combination of novel field monitoring concepts, remote sensing techniques, integrated hydrologic (and biophysical) modeling and socioeconomic factor analyses to reduce existing uncertainties in climate change impact analysis and to create an integrated quantitative risk and vulnerability assessment tool. Together, these provided the necessary information to design appropriate adaptive water resources management instruments and select suitable agricultural practices under climate change conditions. The integrated risk and vulnerability analysis tool enabled the assessment of risks for conflict-inducing actions, e.g. migration. Results were communicated to stakeholders and decision makers in a transparent, easy-to-understand form, enabling them to utilize the new findings in regional water resource and agricultural management initiatives as well as in the design of mechanisms to reduce potential for conflict.

To better assess the manifold consequences and uncertainties in climate impact on man-environment systems, CLIMB (ENV) was embedded in a coordinated topic in EU-FP7, bringing it together with the projects CLICO (SSH) and WASSERMed (ENV) in the research cluster CLIWASEC (Climate Change, Water and Security; www.cliwasec.eu), for an improvement of scientific synergy and policy outreach.

2.2 Project Objectives

The CLIMB consortium specified the following major objectives: An analysis of climate change impacts on available water resources is undertaken in study sites located in Sardinia, Northern Italy, Southern France, Tunisia, Turkey, Egypt and the Palestinian-administered area Gaza. The work plan is targeted to selected

mesoscale river or aquifer catchments, with areas in the order of up to a few thousand square kilometers in the above mentioned partner and SICA countries, representing water management units for regional water authorities (see Figure 1).



1) Thau – 280 km² - Coastal Lagoon - France
2) Rio Mannu – 473 km² - Sardinia, Italy
3) Chiba - 286 km² - Cap Bon – Tunisia
4) Noce - 1367 km² – Southern Alps – Italy
5) Izmit Bay – 673 km² - Kocaeli - Turkey
6) Nile Delta – 1000 km² - Nile - Egypt
7) Gaza Aquifer – 365 km² - Gaza – Palest.-admin. areas

Fig. 1: The CLIMB case studies

Small-scale experimental sites within the watersheds are evaluated in depth for the extension and adaptation of existing and novel hydrological modeling tools. The site specific analyses enables improved assessment and quantification of region-specific vulnerability and risk factors for agricultural, drinking, residential and industrial water. Advanced climate scenario analysis techniques are employed and dynamical and statistical downscaling of available ensembles of regional climate model simulations is performed. This process provides the drivers for an ensemble of hydro(-geo)logical models with different degrees of complexity in terms of process description and level of integration. The outputs of the climate-hydrological modeling chain are focused to deliver estimates of changes in hydrological components such as water balance, total available water, drought indicators, frequencies of extreme values in stream discharge, soil moisture or groundwater balance.

Field monitoring and measurement strategies for surface and subsurface hydrological processes are tested and adjusted to the specific requirements in the study sites. Synergistic radar and optical remote sensing techniques are employed to provide steady state parameters (e.g. land use, land cover, soil hydraulic properties), to retrieve dynamic model parameters (e.g. soil moisture and roughness, vegetation structures), to monitor process variables (e.g. infiltration, water stress) and to validate model results. Data assimilation procedures are developed in order to incorporate relevant data and process understanding into existing modeling concepts, contributing to the reduction of uncertainty in predicted hydrological quantities.

An important output of the research in the individual study sites is the development of a set of recommendations for an improved monitoring and modeling strategy for climate change impact assessment. Once the model concepts are adjusted to represent the current-state hydrology in the study sites, they are tested over a range of selected climate change scenarios to project future hydrological budgets and extremes.

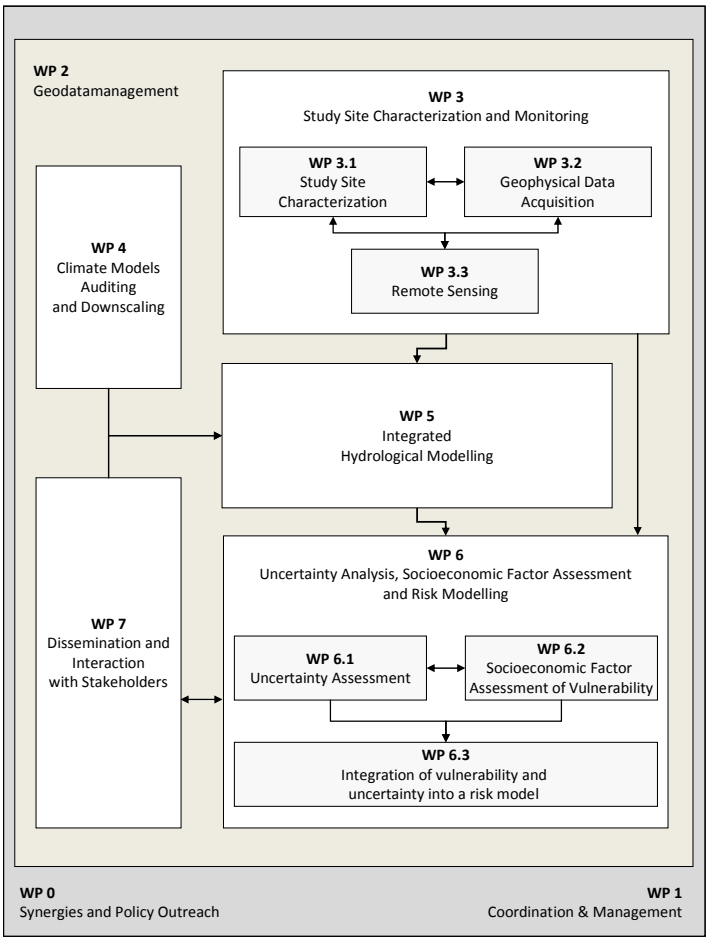
The integration of hydrological model results and socio-economic factor analysis enables the development of a GIS-based, modular Vulnerability and Risk Assessment Tool. This tool serves as a platform for the dissemination of project results, including communication with and planning for local and regional stakeholders as well as for the discussion and comparison of results with the teams working in the before mentioned CLIWASEC cluster.

All activities are conducted and evaluated in close co-operation with regional agriculture and water resources experts. This co-operation serves both to ensure a focus on adaptation measures appropriate for the region and ensure an optimized dissemination of project results. Valid findings are made available for improved site-specific monitoring and modeling systems for water resources and use assessments under changing climate and land use conditions.

2.3 Project Structure and Strategy

To cover many of the most evident and expected climate change and water security related problems in the region of interest, the Consortium has identified seven study sites in Southern Europe, North Africa and the Middle East.. The selected sites allow for the scientific analyses of the projected future course and impact of droughts and extreme flooding, salinization of coastal aquifers, degradation of fertile soils and water scarcity due to unsustainable management.

The project duration was first set to 48 months, then extended to 50 months. This duration was necessary and justified due to the difficult data situation in the region, the complexity of methods, the interdependency of work packages (WP) and the necessity to coherently disseminate the results and implications to local and regional stakeholders throughout and especially at the end of the project. All efforts in the scientific WPs are dedicated towards a gradual reduction of uncertainty in assessing climate change impacts on the hydrology of the sites under investigation and provide a better basis for achieving water security in southern Europe and the targeted SICA regions.



The work plan is divided in eight work packages. While WP 0 identifies and fosters the scientific synergies between CLIMB, WASSERMed and CLICO for the sake of a more focused and efficient policy outreach, WP 1 manages and co-ordinates the CLIMB Consortium internally. WP 2 provides and develops the common data infrastructure for and throughout the project. The WPs 3-6 focus on scientific research, development and innovation of technologies. None of these WPs stands alone, but are interconnected by means of interfaces, dependencies and feedback loops to ensure an iterative reduction of uncertainty and a more accurate assessment of water related ecological and economic risk. WP 7 is devoted to the interaction with stakeholders (see Figure 2).

Fig. 2: CLIMB Structure and Workflow

The workflow builds upon the scientific progress and accounts for a coherent dissemination of project findings. The characterization of the various study sites (WP 3) is the scientific starting point of the project. All activities in WP 3 are accompanied by intense field campaigns for data collection, conducted by concerted partner actions in each site. WP 3 is sub-divided into three focal areas: i) screening and collecting existing ecological, meteorological, hydrological and socio-economical data (WP 3.1), ii) conducting hydro-geophysical field measurements to gather relevant information for in-depth hydrological process understanding (WP 3.2) and the parameterization of hillslope-scale hydrological models and iii) to up-scale and regionalize process descriptions using multi-sensorial and multi-scale remote sensing imagery (WP 3.3) and determine spatiotemporal distributions of crucial parameters (e.g. land use, soil moisture, roughness, infiltration, plant growth) for model applications at the catchment scale (WP 5).

The principle idea behind the structuring of WP 3 and WP 5 is the conviction that the gradual improvement of data availability and accuracy, consequently leads to improved model parameterizations and thus to a reduction of uncertainties in hydrological modeling. Most importantly, the partners complement each other in providing and interfacing surface water and groundwater models of different complexity and level of integration. This ensures that for each identified climate change related water security issue and site, there is an ensemble of hydrological models in changing configurations. This provides the opportunity to combine, compare, and cross-validate a wide methodological range in this field and supports the reduction of data- and model-prone uncertainties and the identification of the most efficient model complexity given specific boundary conditions and data availability. After calibration and validation of the model ensembles to current climate conditions, they are run over a range of selected climate change scenarios (elaborated in WP 4) to project hydrological budgets and extremes.

In parallel, WP 4 aims at designing robust procedures allowing auditing (intercomparison and verification) of products coming from different global and regional climate models. These procedures account for the statistics of average and extreme fields, for water balance conservation in the atmosphere and for problems related to spatial and temporal grid discretizations adopted in the different models. Further, the WP 4 bridges between the typical scale of climate models and the smaller scale required for hydrological modeling at the catchment scale (WP 5).

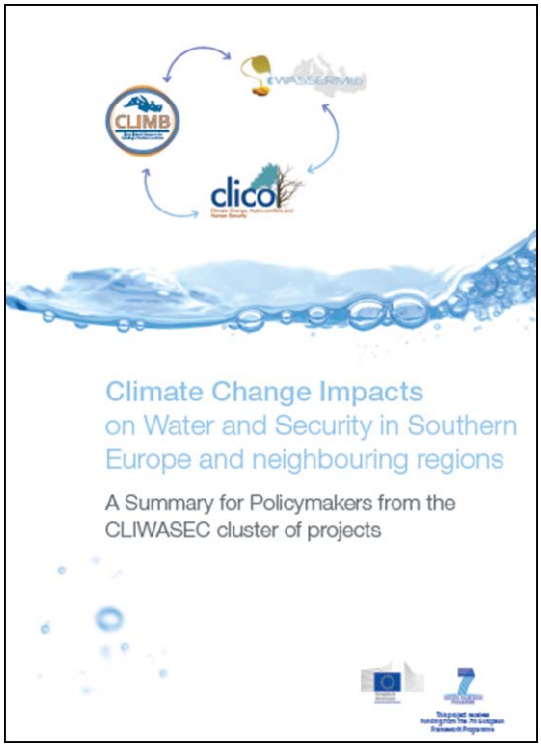
WP 6 establishes a comprehensive risk modeling approach for water resource problems under expected climate change in the selected study sites, integrating and quantifying the existing uncertainties (WP 6.1), stemming from insufficient data, inaccurate model descriptions, future climate projections and socio-economic vulnerability factors (WP 6.2). The results of the risk model are used to elaborate recommendations for future water management. The integration of hydrological model results and socio-economic factor analysis determines the development of a GIS-based, modular *Vulnerability and Risk Assessment Model* (WP 6.3), which serves as a platform for the dissemination of project results and as a communication and planning tool for local and regional stakeholders (WP 7).

3 Main Scientific and Technical Results

Findings from the CLIMB project are presented in the order of successive work packages and interacting working tasks. It includes a short introduction to the work of the CLIWASEC cluster and focuses on the main scientific and technical results.

3.1 CLIWASEC – Scientific Synergy and Policy Outreach (WP 0)

CLIMB, WASSERMed and CLICO joined forces to identify and foster scientific synergies and to establish a more focused and efficient policy outreach strategy. Major building blocks of this collaboration contained scientific exchange and review, identify and utilize complementary monitoring and modeling methods, harmonize and share data and discuss dissemination strategies or elaborate and propose adaptation alternatives. The projects agreed on joint annual general assemblies, a joint dissemination plan for presenting the results of the three projects in the scientific literature and the setting up a cluster project web-portal, which hosts and advertises further related projects. Policy briefs of the projects findings were prepared and posted on the cluster website on an event basis. At any time, regional, national and international stakeholders and policy bodies were and are still invited to express their research needs and recommendations.



To optimize benefits from the variety of cluster partners' competences, joint research was devoted towards a better understanding and description of interfaces in such complex systems. Two main challenges were addressed: i) bridging scales and ii) quantifying and reducing uncertainty. Collaboration was build on the mutual integration of different methods from natural and social sciences. It contributed to better conceptualize each project's research findings and propose solutions for water resource management under climate change, especially when a variety of different situations were covered in complementary case studies. The main findings of the CLIWASEC cluster were presented in a 'Summary for Policymakers' on climate change impacts on water an security in southern Europe and neighbouring regions (Figure 3).

Fig. 3: The CLIMB conceptual framework

3.2 Geodatamanagement – the CLIMBPortal (WP 2)

Managing Geodata was at the core of CLIMB. The WP 2 provided and developed the common data infrastructure for and throughout the project. In order to discover, visualize and provide access to selected main results of the project, a CLIMBPortal has been established under http://lgi-climbsrv.geographie.uni-kiel.de, focusing on the utilization by scientists, regional planners and stakeholders (Figure 4). The CLIMBPortal serves as the central platform for interchanging spatial data and information. It stores and provides spatially distributed data about the current state and the future changes of the hydrological conditions within the seven CLIMB test sites around the Mediterranean. Maps of the outcome of the hydrological models - validated by

the CLIMB partners - have been constructed and are offered to the public in forms of web mapping services (WMS). A selection of common indicators (e.g. runoff, drought index) including their changes over time are provided in different spatial resolution. Besides map information, the portal enables the graphical display of time series of selected variables calculated by the individual models applied within the CLIMB-project. Its implementation is based on GeoNode in v2.0.

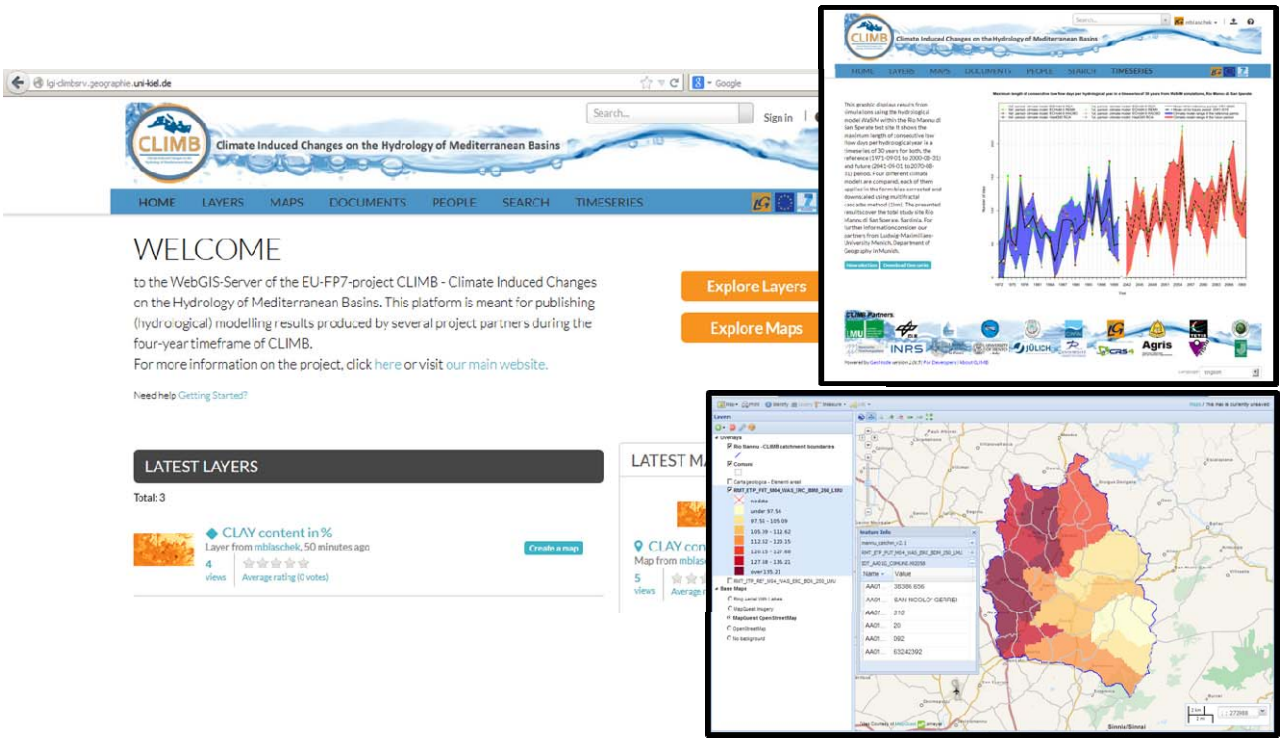


Fig. 4: The CLIMB-Portal (http://lgi-climbsrv.geographie.uni-kiel.de)

Among the major benefits of the CLIMB-Portal are solutions to i) the problem of heterogeneous data and file formats, ii) the missing of formerly unavailable ISO-compliant metadata, or iii) the lack of uniform presentations of model results. In addition, it offers i) compliance to required geospatial standards (e.g. INSPIRE), ii) maps and figures of easy-to-interpret hydrological indicators, iii) access to underlying data for registered users, iv) a WebGIS-client that integrates external Web Mapping Services and v) an open source solution for long-term availability of CLIMB results.

3.3 Environmental Monitoring and Data Collection (WP 3)

It is important to recognize that initially the case study characterization was limited to the available data, in several ways much to poor to perform a sophisticated modeling exercise. CLIMB activities included specifically designed field campaigns and data analysis, which greatly increased the level of understanding of conditions at each study site. These field activities were conducted at the required scale, either on the basin scale or even local fields, to perform a better understanding of the hydrological processes and to estimate the most sensitive parameters for the modeling phase. Additional data collection may be necessary to fully understand specific processes; however, the executed field monitoring was selected to the extent practicable to fill data gaps and move forward with the implementation of hydrological models.

A guidance report was elaborated, early in the project period, to overview the main study site characterization requirements from the different CLIMB basins, leading to a sufficient overall site description. It is organized according to major site descriptors that require identification, for each case study, from existing

monitoring programs and geographic information data bases. The site attributes were selected in order to provide an understanding of the basin management processes, highlight the physical basin characteristics, compare observations among study sites and establish a basis for hydrological modeling activities. A standardized description of each site attribute was also provided by the guidance report. The general attributes for each basin included location and ownership of information, land use/land cover basic site classification, basic hydrologic basin descriptors extracted from the basin topography, main surface and groundwater field monitoring activities, existing hydraulic structures (dams, hill dams, artificial recharge sites, etc), sources of pollution and general socio-economic information about the region.

Interaction between study site leaders:

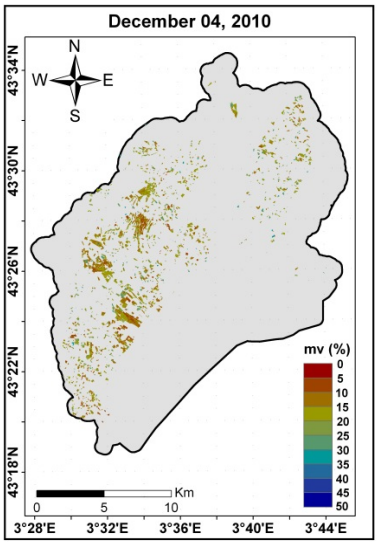
Interaction between study site leaders provided a way to reconcile standards and requirements for basin descriptors among different protocols used by the different national databases. An effort was made by all partners to be as consistent as possible in the classification and the means of the site attributes. Transformation of geographic attributes from national coordinate systems to UTM system was needed and conducted

Data collection and analysis:

Field data collection efforts included topographic surveys, vegetation surveys, collection of water and soil samples and hydro-geophysics surveys. In addition to these efforts, an assessment of hydrologic features for each basin, analysis of the soil sampling data, and analysis of vegetation data and hydro-geophysics interpretation were also performed. Recent Land use/land cover (LULC) maps were also elaborated for all study sites. Multiple classification techniques are used to extract the spatial-temporary evolution of LULC information from multispectral remotely sensed images.

Elaboration of a Basin Information Repository:

A CLIMB basin Information Repository was constructed for all CLIMB basins and implemented as a database developed in Microsoft Access. This repository provides a screening of all available information related to basic characteristics of topography, soils and land uses within the basins, available resources for surface water and groundwater, existing climatic data as well as general socio-economic conditions and sources of pollutions. It provides key site characteristics, the state of monitoring within each basin and a tool for comparison between the CLIMB case studies. It is thus undoubtedly a previously unavailable and very comprehensive compilation of data in each of the CLIMB case studies.



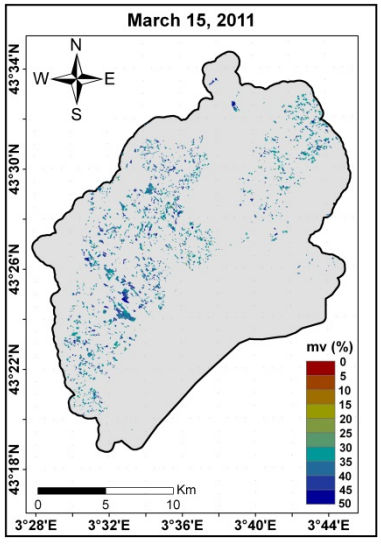


Fig. 5a and 5b: Examples of soil moisture maps over bare agricultural areas in the Thau basin, France.

Remote Sensing Products

CLIMB employed radar and optical remote sensing data to provide crucial spatial information for the parameterization, calibration and spatial validation of the hydrological models. Focus was given to the following parameters and state variables (1) landuse/landcover (LULC), (2) soil moisture, (3) vegetation parameters (albedo and leaf area index (LAI)), (4) infiltration information and (5) snow cover. Figure 5a and 5b shows two examples of remote sensing soil moisture products, derived from using an inversion technique based on neural networks, which were used to improve model parameterizations in the Thau catchment, France (Baghdadi et al. 2012).

Policy Implications and Research Needs

The Basin Information Repository reveals serious informational, temporal and spatial data gaps in the investigated region.

Surface water is poorly monitored in most case studies. Climatic parameters, such as temperature, humidity, rainfall, wind velocity etc., key parameters for defining climate conditions, are not available in sufficient resolution and density.

Remote sensing and specifically designed geophysical field campaigns proved useful to fill some of the existing gaps, but certainly not all. Improvement can be expected from the upcoming ESA Sentinel satellite missions.

Thus, it will be important to establish specific monitoring plans for climate change follow up studies in the Mediterranean basin. The specific needs are often site specific and thus need a local and regional approach.

Research is still needed to a) better understand hydrological processes, specific to semi-arid climates, and b) to develop modeling schemes which are robust even under scarce data conditions.

3.4 Climate Model Auditing and Downscaling (WP 4)

Accurate assessment of future hydrological tendencies, as well as their impact on the agricultural and socio-economical sectors, depend critically on several sources of uncertainty. Climate model signals constitute the main forcing in a multi-model cascade (i.e. climatological, hydrological, socio-economical, crop evolution models etc.), implemented for the evaluation of climate change impacts. That said, uncertainty reduction of the climatological representation at hydrologically relevant scales has been the main objective of the CLIMB workpackage WP4 “Climate Models auditing and downscaling”, as a means of providing reliable inputs for subsequent hydrological modeling.

Climate Models selection

An intercomparison of the performances of several climate models was conducted, taking into account their effectiveness in reproducing the precipitation and temperature fields as well as the climatologies in all Mediterranean catchments considered in the CLIMB project. The set of climate model outputs was extracted from the FP6 ENSEMBLES project database, generated by coupling different GCM (Global Climate Model) and RCM (Regional Climate Models) outputs. To evaluate climate model performances, E-OBS precipitation and temperature datasets were used as reference fields: being distributed on the same grids as ENSEMBLES outputs, E-OBS allowed for standardization of the intercomparison for all considered catchments and climate models. Model selection was further constrained in order to maintain at least two different RCMs nested in the same GCM, and two different GCMs forcing the same RCM. The four best-performing GCM-RCM combinations were selected to drive hydrological model simulations for the CLIMB activities: a) 'HCH-

RCA'= HadCM3 - High Sensitivity (UK) driving RCA (Sweden); b) 'ECH-RMO'= ECHAM5/MPI (Germany) driving RACMO2 (Netherlands); c) 'ECH-REM'= ECHAM5/MPI (Germany) driving REMO (Germany); d) 'ECH-RCA'= ECHAM5/MPI (Germany) driving RCA (Sweden).

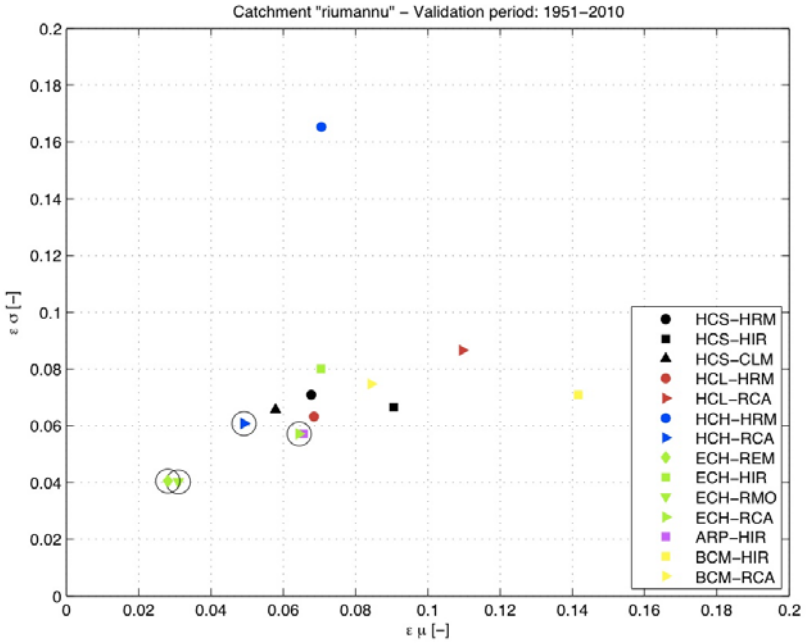


Fig. 6: Climate Models selection.

Scatterplot of weighted precipitation and temperature errors in the mean and standard deviation of monthly climatologies over the 60-yr verification period (1951- 2100), for each of the 14 ENSEMBLES models with respect to E-OBS observational reference. Large circles indicate the four best performing selected models. Catchment: Rio Mannu, Sardinia (Italy).

Large-scale bias corrections

Most Climate Models, including the four best-performing ones used in the CLIMB project, display more or less deficiencies in reproducing the hydrological balance, climatological features and seasonality in several of the major river-catchments around the Globe. These problems are further amplified when considering smaller-sized catchments, as happens in CLIMB. Thus, we proceeded with calibration and bias correction of the climatic signals in each catchment area considered. More precisely, we used E-OBS precipitation and temperature data and a procedure based on probability distribution matching to correct biases and distribution errors in past- and future-climate signals.

Local-scale bias corrections

E-OBS products, while being a useful reference for a standard intercomparison evaluation among different areas, may fail to reproduce small scale features of precipitation and temperature fields in the targeted catchments. One major uncertainty is certainly related to the low density of meteorological stations pooled together in order to analyze and construct the E-OBS fields. Indeed, such a network may not be sufficient to accurately represent the local climatologies. This problem is particularly relevant for the precipitation fields, which are typically characterized by a small correlation range. In order to tackle the issue, the mean areal monthly precipitations and temperatures were calculated for each catchment area using local data (i.e. made available from CLIMB partners), and used to evaluate and properly correct the residual biases. Figure 7 shows an example of residual bias correction for a catchment in Italy.

Small scale interpolation and downscaling

An additional source of uncertainty is related to the smoothing effect induced by the coarse grid resolution of climate models (about 25 km resolution). Their outputs are incapable of reproducing the small-scale variability introduced by orographic effects and the intrinsic intermittency of meteorological fields. This is especially the case for precipitation, where interest is in the representation of hydrological balances and, more in

general, the soil-water-atmosphere transfer processes at catchment scales. In the CLIMB project we applied different downscaling schemes to interpolate, to smaller scales (1-5 km resolution), the main variables controlling the hydrologically relevant exchanges. A multifractal model for space-time rainfall downscaling was applied to statistically reproduce the scale-invariance and small scale fluctuations found in the observed fields. Orographic effects were further introduced using a modulating function. Temperature fields were interpolated using a distance-depended weighting function, and a dynamic lapse rate to account for elevation variations. The later was calculated locally allowing for time-variations. Relative humidity was interpolated using a similar approach as that used for the temperature field, by considering the corresponding dew-point temperature. The wind speed and direction as well as the solar radiation were interpolated using a morphometric approach that accounts for the small scale terrain elevation, azimuth and slope. Figure 8 shows an example of interpolated precipitation fields.

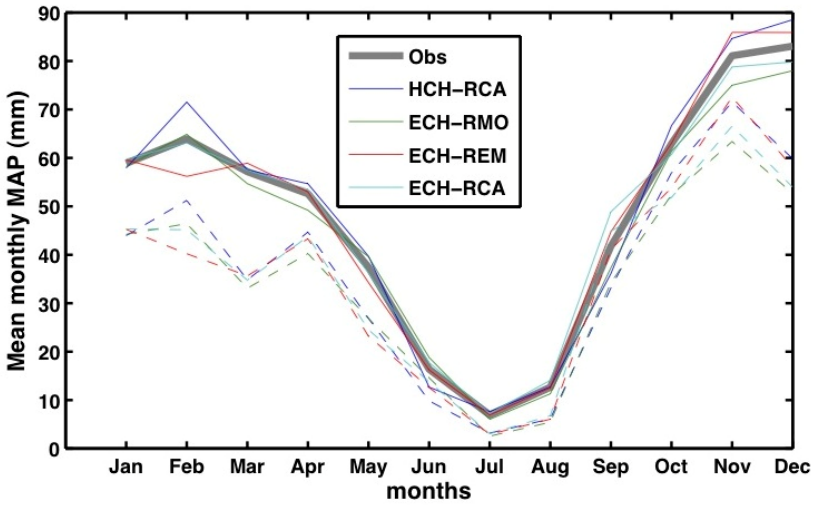


Fig. 7: Local scale bias corrections.

Comparison of mean monthly observed MAP (mean areal precipitation; grey thick line) and mean monthly RCMs MAP, before correction (dashed lines) and after correction (continuous line). Catchment: Rio Mannu, Sardinia (Italy).

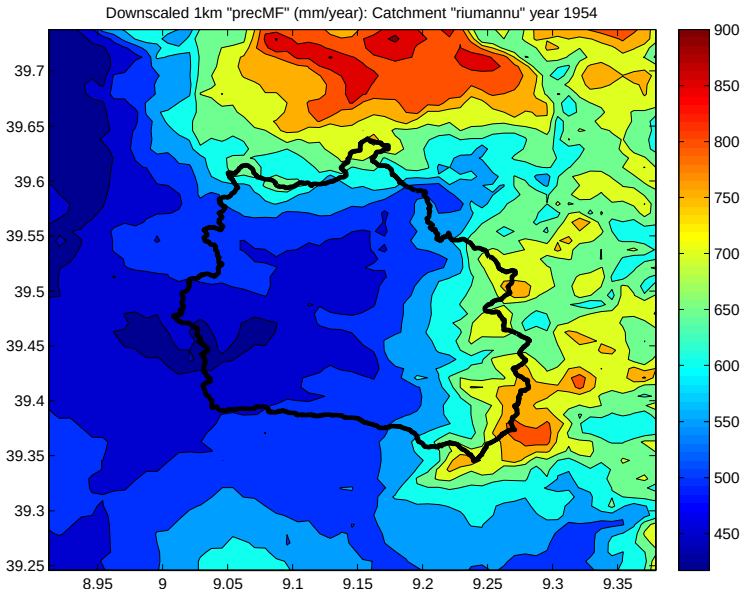


Fig. 8: Small scale interpolation and downscaling.

Annual mean of high resolution precipitation field (about 1 km) after bias correction and application of a space-time rainfall downscaling model.

Overall uncertainty of climate forcing

All steps described above aimed at reducing the uncertainties related to the climatic component, while introducing the natural small scale variability unresolved at climate model grid scales. Hence, the main achieve-

ment of WP4 is the evaluation of climate model uncertainties at local scales, and the quantification of their contribution to the overall uncertainty of climate change impact assessments. As an example, Figure 9 compares the initial spread in the climatology of all climate models extracted from ENSEMBLES, with the spread of the four best performing ones selected for subsequent hydrological simulations.

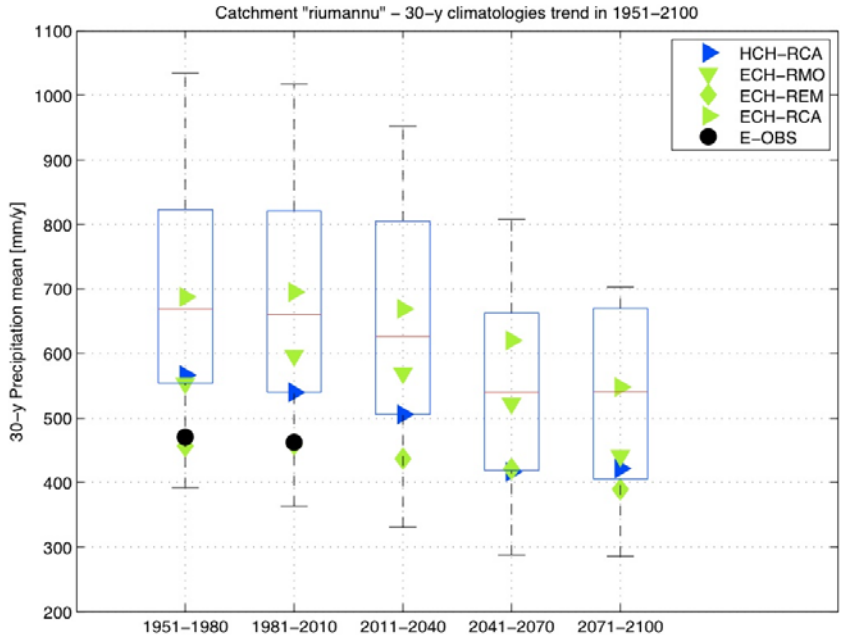


Fig. 9: Overall climate forcing uncertainty.

Boxplot of climatological means of precipitation (mm/y) over five 30-year periods between 1951 and 2100 for the 14 ENSEMBLES models: lines of boxplots correspond to median and quartiles, whiskers extend to the minimum and maximum values from the RCMs. Symbols are superimposed for the 4 best performing RCMs and E-OBS climatologies. For E-OBS, climatologies are computed only for the first two 30-year periods.

3.5 Integrated Hydrological Modeling (WP 5)

The objective of this WP was to apply hydrological modeling in order to predict the response of the watershed to changing driving forces such as climate, land use, urbanization, and human activities. In order to better quantify the hydrological model uncertainty, an ensemble of different models with varying complexity in parameter space was applied in each study site. The activities can be classified into two categories: i) small- to medium-scale modeling to study and identify key hydrological processes and improve the predictive capability of hydrological models and ii) large-scale modeling to assess the impact of changes in climate, land use and water demand on water resources evaluated at the watershed scale. These activities were conducted in tight collaboration with the other WPs, and in particular with WP 3 and WP 4, which provided the input to the modeling activities, and with WP 6 which used the data from the modeling activity to conduct risk assessment. Modeling was conducted in a unique multimodel ensemble framework in order to properly address structural and parametric uncertainty.

The hydrological model ensemble has been applied to the study catchments, using as input the results of the climatic models for the reference (REF, 1971-2000) and the future periods (FUT, 2041-2070). Overall, most catchments show in the 2041-2070 scenario a reduction of precipitation and an increase of temperature, which lead to an increase of potential evapotranspiration. However, the actual evapotranspiration reduces with respect to the control period as an effect of a drier soil (i.e. a lower soil water content). An exception of this general behavior is the Noce catchment in the Southern Alps, where the increase of both temperature and precipitation lead to an increase of actual evapotranspiration on the future scenario. The most relevant changes observed in the study sites are summarized below, supported by a selected representative figure.

3.5.1 CHIBA, Tunisia

In the Chiba catchment, located in the Cap Bon region of Tunisia, hydrological simulations have been conducted with the models SWAT (CERTE, UT) and WASIM (DLR, LMU). The mean annual precipitation is projected to reduce of 18% in the future scenario accompanied by an increase in the range of 7-12% of potential evapotranspiration as an effect of the increase of temperature. However, due to a reduction of the soil water content (in the range 14-22%) the actual evapotranspiration reduces of about 11%, with a slight difference between the two models (about 1%). As expected, the difference between precipitation and actual evapotranspiration, which is the water potentially available, reduces of 43% and 52%, according to the simulations conducted with PROMET and SWAT, respectively. Most importantly, the runoff reduces significantly, ranging between 39% and 51%, again according to PROMET and SWAT, respectively. Despite the differences, due to the different epistemic error, both models agree in projecting a dramatic reduction of the available water resources, both in term of surface water and recharge to the underlying aquifers (percolation reduces of 52% in WASIM and 22% in SWAT. The reduction of the runoff seems distributed over the entire hydrological year with the larger reduction in the winter months, when runoff reaches its maximum. Figure 10 shows the evolvement of a Drought Index, indicating the number of months in a 30-year period (REF, lower row vs. FUT, upper row) with a significant mean monthly soil water deficit, modeled with the hydrological model WASIM and driven by the four selected climate forcings in WP 4.

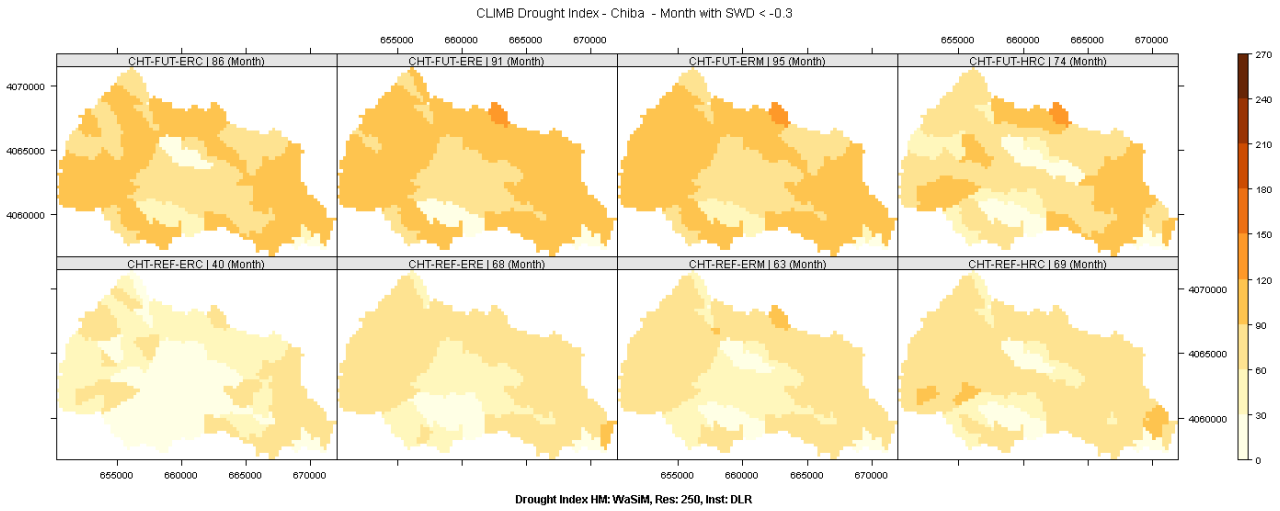


Fig. 10: Drought Index value in Chiba for the reference and future period as predicted by the WaSIM using various climate forcing.

3.5.2 KOCAELI, Turkey

Three hydrological models (PROMET (VISTA), mGROWA (FZJ), MIKE-3 (YTU)) were applied in this site, driven by the same set, but regionally adjusted set of climate forcing. Due to the global warming predicted in the climate models and the resulting shift of rainfall periods with increasing precipitation during the winter months and decreasing precipitation during the summer months, total runoff is simulated to increase in winter. The level of groundwater recharge within the hydrological winter half year seems to remain stable. However, the increasing temperature in future spring and summer months combined with low precipitation will probably lead to a more extensive depletion of the soil water storage and thereby to an increasing irrigation demand on agricultural land in order to keep agricultural yields constant. HCH-RCA, in comparison to the other climate models, predicts the driest conditions for the future with a decrease of 106 mm (-13.1 %) in mean annual precipitation and an increase of mean annual temperatures of 3 °C (+23.3 %). This leads to a

decrease in percolation of water from the lowest modelled soil layer, which indicates a decrease of ground water recharge and an increase in drought risk (Figure 11). MIKE 3 HD simulation runs were performed for the Izmit Bay using river discharge data provided by the PROMET (VISTA) and mGROWA (FZJ) models. The simulations were carried out to assess possible variations in sea level in Izmit Bay. The results obtained have shown that the maximum sea level change was found to be 0.6 m. The most important result obtained out of these model runs was that the sea level change can be observed clearly in the inner sections of the bay where the maximum sea depth is 35 m. It was also found out that these changes were more prominent for the future periods, especially for the year 2068.

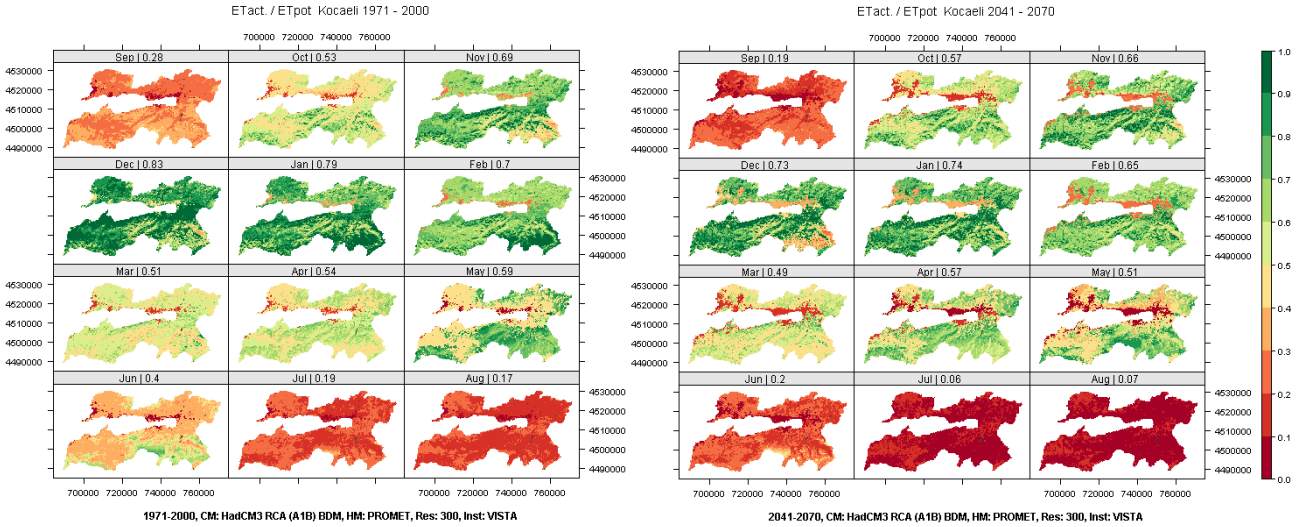


Fig. 11: PROMET monthly mean actual evapotranspiration divided by potential evapotranspiration as an indicator for drought conditions. REF period 1971-2000 (left), FUT period 2041-2070 (right). 300m spatial resolution. Climate model forcing is HadCM3 RCA.

3.5.3 NOCE, Italy

In the Noce catchment located in the Southern Alps hydrological simulations have been conducted with PROMET (VISTA) and GeoTransf (UNITN). Despite the diversity in the modeling approach these two models project a similar catchment functioning in the future scenario. Due to the combined effect of the rise of temperature and of the increase of precipitation (6.4-8.7%) the actual evapotranspiration increases (10.51-12.29%), but to a less extent with respect to the precipitation, leading to a slightly larger amount of water resources available in the future period (Figure 12).

The total runoff increases by 16.5% and 15.6% according to PROMET and GeoTransf, reepctively. This is a significant amount, which correspond to 125 mm, with PROMET and 107 mm, with GeoTransf, of additional runoff. However, this volume is not uniformly distributed through the year. Due to the larger temperature in winter the freeing line is expected to rise and consequently more winter precipitations than in the past will be liquid. This leads to an increase of the winter runoff and a parallel significant reduction of the runoff in late spring and beginning of the summer, from May to August). Overall, the distribution of the runoff trough the year is projected to be less variable than in the reference period. The difference between the two models increases when considering percolation, which with some approximations can be considered as the recharge of the aquifers, PROMET projects a slight reduction (-2.5%), with GeoTransf projects a moderate increase (+15%). Both models agree in projecting a quite large reduction of Snow Water Equivalent (-65% and -63% with PROMET and GeoTransf, respectively) during the winter, and this is in agreement with the considerations above.

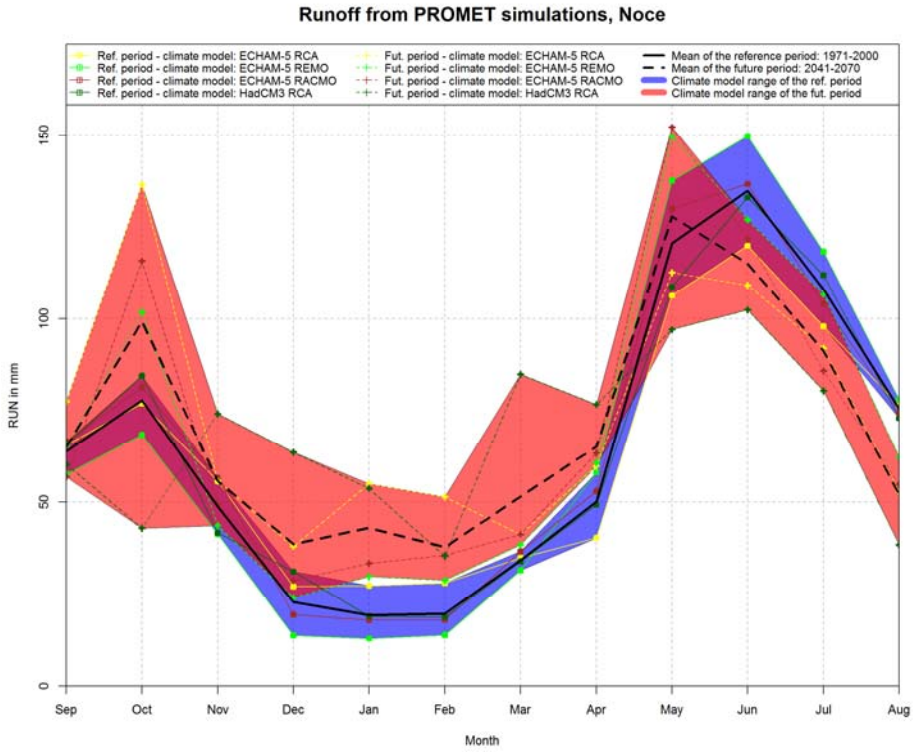


Fig. 12: PROMET modelled run-off for the REF (blue) and the FUT period (red) and for all 4 climate models (range). Displayed are mean monthly sums for the whole Noce catchment.

3.5.4 RIO MANNU, Italy (Sardinia)

In the Rio Mannu, located in the southern part of Sardinia, hydrological simulations have been conducted by using SWAT (CRS4), WaSIM (LMU) and tRIBS (CINFAI). Similarly to the other catchments in the Mediterranean area the annual precipitation reduces of about 12%, while the potential evapotranspiration increases (+0.75% with SWAT and 14% with PROMET) due to the increase in temperature. However, both PROMET and SWAT project a similar reduction in the actual evapotranspiration due to the smaller soil water content (-10.2% with SWAT and -8.9% with PROMET). The total water potentially available (the difference between precipitation and actual evapotranspiration) reduces between 14.8% and 22.6% as projected by SWAT and PROMET, respectively. This results in a significant reduction of the runoff, which is projected to reduce of 15.5%, 19.7% by SWAT and PROMET, respectively. tRIBS provide results in line with those of the other two models but with larger reductions, with the reduction of runoff of 31%.

The models seem to represent the current hydrological situation in a plausible manner. All water balance components like precipitation, discharge, potential evaporation, actual evapotranspiration, and percolation show significant changes in the modeled future time series. Temporal changes within a hydrological year and over the complete simulation time series are more distinct than spatial changes. Over the whole hydrological year higher temperatures and higher values of potential evaporation are projected. Precipitation rates are expected to slightly increase in the winter months (January), but will decline for most of the other month with strongest impacts in spring. This might cause situations of water shortage at earlier times of the year. Strongest changes within the hydrological year have been determined for actual evaporation, soil water content and soil water deficit in spring and autumn. The strong decline of actual evapotranspiration and soil moisture in the spring time is a consequence of the decreased precipitation rates. The major area of the catchment is used for intensive agricultural production. Especially this agricultural production in the

catchment is endangered by those climate change impacts in the future spring season. It can be assumed that the irrigation water demands will rise while water availability is dropping in the spring time and/or that the growing season is shifting to an earlier onset of the year.

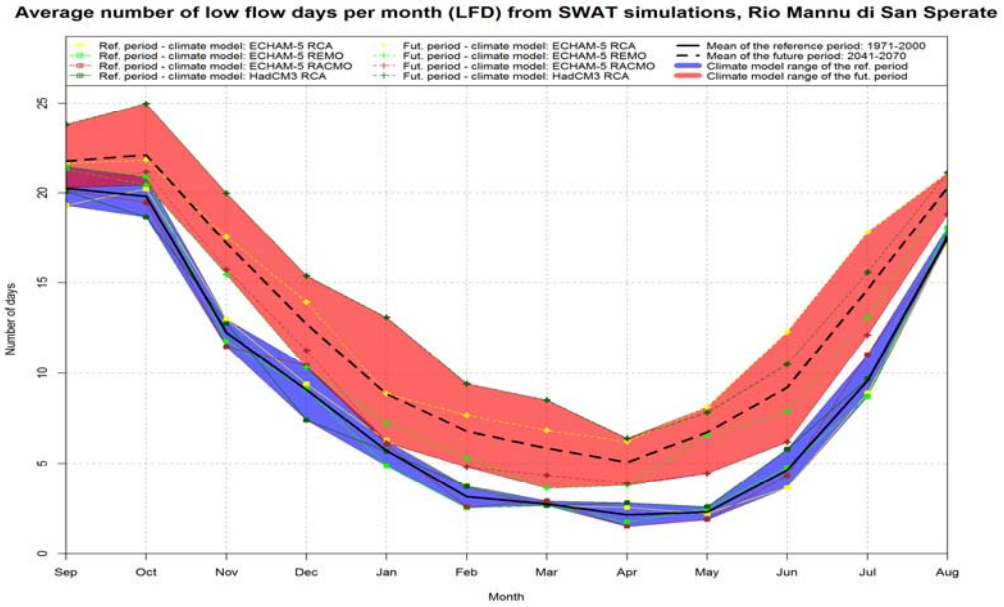


Fig. 13: SWAT modelled change in the number of low flow days between FUT (red) and REF (blue)

3.5.5 THAU, France

Two hydrological models were applied to the Thau region in southern France, SWAT (CERTE, UT) and mGROWA (FZJ). For precipitation, projections of the climate models suggest a general decrease of rainfall. In winter a marked decrease in precipitation is likely to occur ranging between -15% to -25% in the Thau catchment. The decrease in precipitation is likely to be more pronounced in summer than in the other seasons where it can reach -30%. According to the SWAT simulations, the Thau catchment will experience a decrease in monthly flow discharge from April to December, with May being the most altered month (-70%), while insignificant increase in monthly discharge of January and March is projected. Although 95% of the projected magnitudes of change confirm that summer monthly discharges are likely to decrease at the horizon 2040, the corresponding projected amplitude of change is uncertain. This uncertainty tends to increase in the direction and amplitude of change as moving from the dry season (May to September) to the wet season (October to April) which confirms the results of the projected change in precipitation and low and high flow frequency.

According to mGROWA, total runoff is projected to decrease as well. Additionally, drought severity will increase in any possible future development path under consideration. The increasing temperature in future spring and summer months combined with low precipitation will probably lead to a more extensive depletion of the soil water storage and thereby to an increasing irrigation demand on agricultural land in order to keep agricultural yields constant. Groundwater recharge levels within the hydrological winter half year seem to remain stable only in one GCM-RCM-combination, whereas the others tend to project significant lower levels (Figure 14). It can be concluded from the bandwidth represented by the ensemble that groundwater withdrawals have to be restricted in order to maintain the groundwater resources of the region, which are in general very little. As a consequence of climate change, the region will be even more dependent from water import to satisfy a present-day demand.

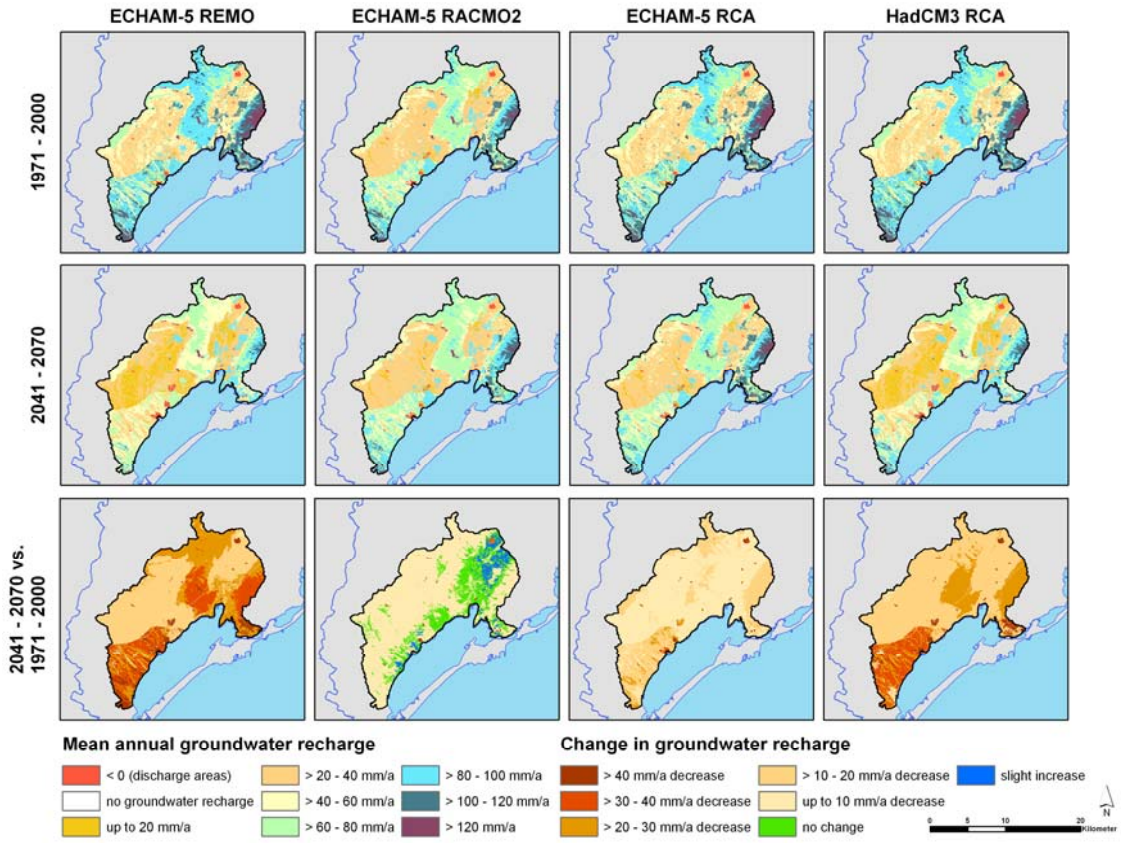


Fig. 14: Mean annual groundwater recharge simulated using mGROWA based on the climate model ensemble and change in the future period against the past period, Thau case study area.

3.5.6 GAZA, Palestinian Administered Areas

The hydrological model WaSIM (LMU) and the hydrogeological model CODESA-3D (CRS4, IUG) were applied in combination to this aquifer site. Three out of the four applied RCMs project a severe decrease in precipitation for the future period 2041 – 2070. However, the RCM driven by HadCM3 indicates a slight increase in precipitation. As the limiting factor for evapotranspiration is water availability, the real evapotranspiration is hence slightly decreasing by up to 5%. Due to raising temperatures, however, potential evapotranspiration is increasing, causing a smaller share of actual to potential evapotranspiration, shown here as evapotranspiration index ETI. The ETI is especially reduced in spring months, causing further irrigation needs for agricultural purposes during this sensitive period. The deterioration in the water balance of ~25% leads to further exploitation of the groundwater aquifer, if irrigation methods will not be improved in the future, or stronger regulations for the water consumptions are met in the Gaza Strip. The almost dramatic increase in drought months (Figure 15) emphasizes the need for adaptation strategies to maintain agricultural activities in the area and preserve the groundwater aquifer. Considering the ongoing salinization, caused by sea water intrusion, a certain water level in the aquifer is essential to preserve the areal freshwater reserves.

Since the water demand is estimated to increase, according to future trends in the Gaza Strip until 2035, three different scenarios have been considered:

1) the ‘worst scenario’, which assumes the estimated increasing of pumping;

2) the ‘best scenario’, according to a management scenario which considers a decrease of pumping;

3) the ‘intermediate scenario’, representing an ‘averaged ‘management scenario between 1) and 2)

The more striking result obtained within the Gaza coastal aquifer study is that the only way to prevent and control sea water intrusion consists in assessing and properly adapting a groundwater management strategy; in fact, different climate scenarios lead to differences in the groundwater system that can hardly be appreciated when compared with pumping effects.

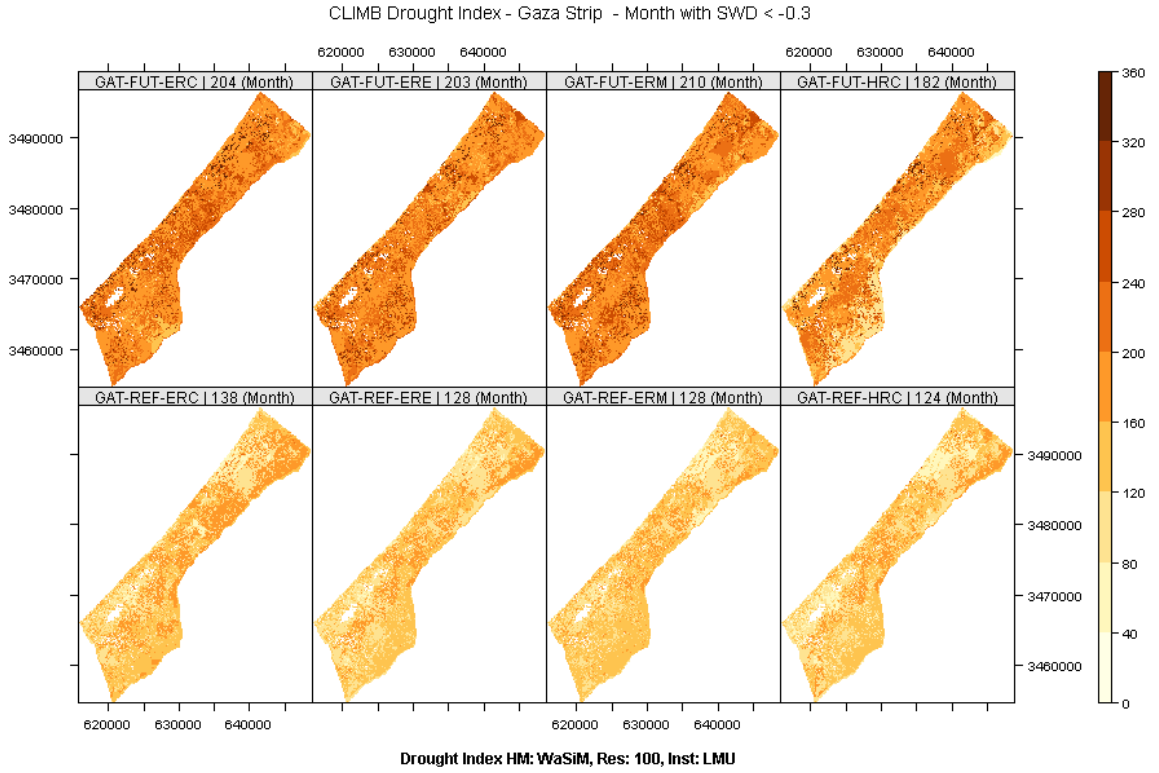


Fig. 15: Total number of months in a thirty year period, reference (lower row) and future period (upper row) for all four RCMs, with mean soil water deficits <-0.3 according to the CLIMB Drought Index.

3.5.7 NILE DELTA, Egypt

The hydrological model WaSIM (LMU) and the hydrogeological model MODFLOW (UZ) were applied for reaches of the Nile Delta between the Gharbia Governorate and Alexandria. The water balance simulation model WaSiM was forced with an ensemble of four GCM-RCM combinations, resulting in 4 scenarios for future conditions. Simulations where carried out for the reference period 1971-2000 and the future period 2041-2070. All four of the applied RCMs project a decrease in precipitation for the future period 2041 – 2070, however, magnitude varies strongly from 1.7 to 23%, but for absolute annual precipitation rates of 30 to 50 mm. As the limiting factor for evapotranspiration is water availability, the real evapotranspiration is hence slightly decreasing by up to 2.5% for all RCM simulations (Figure 16). Due to raising temperatures, however, potential evapotranspiration is increasing by about 5%, causing a smaller share of actual to potential evapotranspiration, shown here as evapotranspiration index ETI. The ETI is especially reduced in early spring, causing further irrigation needs for agricultural purposes during this sensitive period. Due to the small share of precipitation to evapotranspiration the water balance is already far negative, due to irrigation from the groundwater and from surface water. As the changes in precipitation are comparatively small, in absolute numbers, to evapotranspiration, the effect on the water balance is almost negligible. However, the precipitation decrease causes less recharge for the aquifer, and also less water in the Nile upstream available for irrigation, which leads to further exploitation of the groundwater aquifer, if irrigation methods will not be improved in the future, or stronger regulations for the water consumptions are met in the Nile Delta.

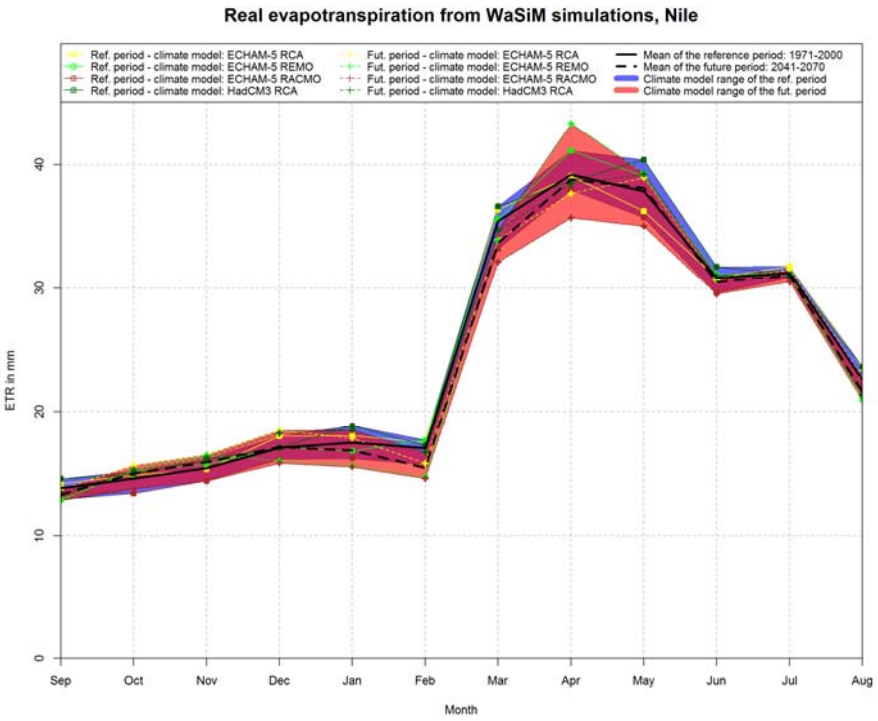


Fig. 16: Real evapotranspiration for the Nile Delta resulting from WaSiM simulations. Red band shows the range of the four future runs, forced with different RCM scenarios, blue band the range for corresponding reference period

3.6 Uncertainty Analysis, Socioeconomic Factor Assessment and Risk Modeling (WP 6)

The main objective of the WP was to establish a comprehensive risk modeling approach for water resource problems under anticipated climate change in two selected Mediterranean Basins. Taking advantage of data and information provided by WP3, WP4 and WP5, the risk assessment of income losses (and out-migration) expected to arise directly from climate change and/or indirectly from climate induced changes in the hydrology of the two super sites Rio Mannu di San Sperate (Italy) and Chiba basin (Tunisia) was conducted. The related analyses focused on two highly water intensive sectors of substantial economic importance for the two studied river basins or their close surroundings, namely agriculture and tourism. Key results of the analyses were incorporated into the comprehensive risk assessment that was established. This holistic risk assessment for the two super sites comprised the analysis of the factors that will influence the supply and the demand of water under future scenarios, taking into account direct climate change stressors and interacting stressors that will exacerbate the impact of climate change on water security under future scenarios. The holistic risk assessment was summarized in terms of water supply/demand matrices, including quantitative information from the hydrological modelling (water supply) and from socio-economic modelling (water demand) as well as further important qualitative information. Results from uncertainty analysis were considered as well. Overall, the water supply/demand matrices compiled within WP6 are supposed (i) to help getting a more comprehensive picture of the trends to be expected with respect to water use conflicts between stakeholders, (ii) to serve as an impetus for a fruitful discussion between water managers, water users, government officials as well as other stakeholders and experts, and (iii) to support the identification of priority fields for adaptation. Basic suggestions on potential adaptation strategies and future water resource management options were elaborated. The main achievements summarize as follows:

A new comprehensive uncertainty framework for water related risk assessment has been developed for all test sites within WP6

The concept focuses on investigating two kinds of uncertainties within the hydrological impact modelling of WP5 as well as the socio-economic vulnerability factor/risk assessment (related to income loss) for the agricultural sector and tourism. One kind of uncertainty arises due to the effect of using several climate data sets on a final and robust model configuration of a respective hydrological impact model or vulnerability model, named Climate Signal Uncertainty Study (CUS). The second kind of uncertainty stems from the effect of performing CUS with several hydrological impact models or different settings of a vulnerability model named Model Structure Uncertainty Study (MUS). CUS and MUS will be investigated in the super sites Chiba basin, Tunisia, as well as Rio Mannu di San Sperate, Sardinia, for the two hydrological impact models WaSiM (Water balance Simulation Model) and SWAT (Soil Water Assessment Tool) because those hydrological impact models are applied in both super sites. The vulnerability models are used within the socio-economic vulnerability factor/risk assessment modelling only. Those efforts are focused on the two super sites as well. Figure 17 illustrates the structure of the uncertainty assessment within CLIMB.

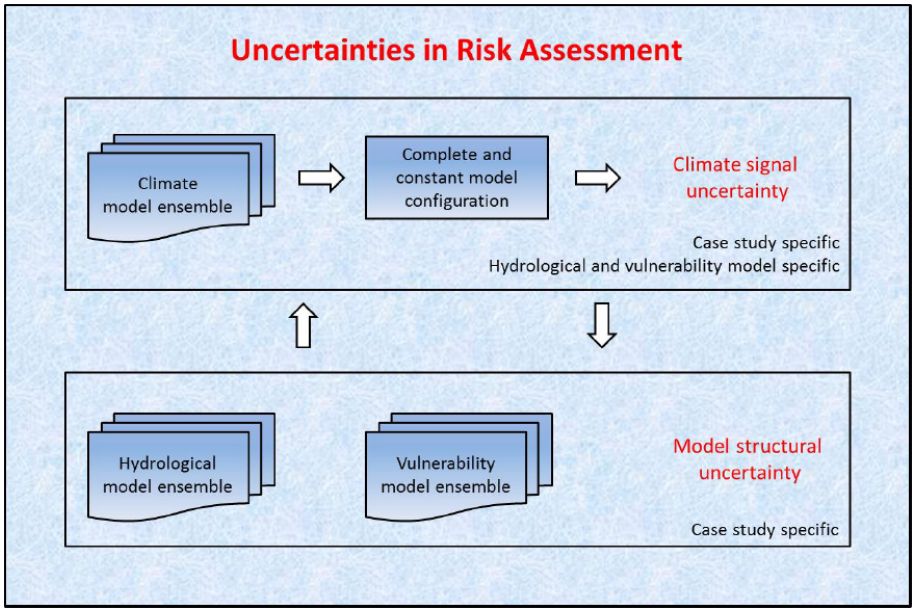


Fig. 17: Structure of the uncertainty assessment within CLIMB.

Quantification of climate change impacts on water components and associated uncertainties

In Chiba basin WaSiM and SWAT project a decline in PRC (precipitation) of about -18% between 1971-2000 and 2041-2070. SWC (soil water content) dwindles in the range of -15% (WaSiM) and -25% (SWAT) respectively. TAW (total available water) shows a reduction of roughly -30% in both hydrological impact models. Model structure uncertainty (MUS) is small for projections related to PRC and TAW. MUS is medium when looking at SWC. Uncertainty errors of the analyses stemming from using four different climate models (Climate Signal Uncertainty Study CUS) are below 10% for all three indicators (PRC: ~3%, SWC: ~3%, TAW: ~8%). In Rio Mannu WaSiM and SWAT project a decline in PRC of -13%, SWC dwindles about -11% and TAW is reduced by -14% (SWAT) to -21% (WaSiM). MUS is small for PRC as well as SWC and medium for TAW. Uncertainty errors of the analyses due to CUS are below 10% except for TAW derived from the model WaSiM (18%). Besides smaller differences, both hydrological impact models show

comparable trends and magnitudes of change for the two super sites Chiba basin, Tunisia, as well as Rio Mannu di San Sperate, Sardinia. Those findings are useful for the subsequent assessment of associated risks for crop yield reduction as well as income loss in the agricultural sector.

A comprehensive risk model has been designed for and implemented in the two super sites Chiba basin, Tunisia, as well as Rio Mannu di San Sperate, Sardinia

Findings about climate induced changes derived within the hydrological impact modelling efforts in WP5 and associated uncertainties are combined with the socio-economic vulnerability factor/risk assessment for the agricultural sector and tourism in order to create a comprehensive risk model of income loss for each sector. For the agricultural sector, an empirical approach as well as the AQUACROP model are used to simulate crop yield responses associated to the simulated climate change impacts stemming from WP5 for two crops, namely tomatoes (Chiba basin only) and winter wheat (both super sites), and for two kinds of management practices, namely under rain-fed and irrigation conditions. For the tourism sector, temperature and precipitation data from climate models are driving a special tourism model which assesses the impact of changing climate conditions on revenues in tourism. For both sectors, four different combinations of global and regional climate models are used for the reference (REF) and scenario period (FUT), each covering a time span of 30 years. This results in considerable uncertainty due to a span of simulated annual values. Figure 18 shows sources of uncertainty and their propagation in CLIMB. The hydrological impact modelling was performed with four climate models (CUS) and two hydrological impact models WaSiM and SWAT (MUS) in the super sites Chiba basin, Tunisia, as well as Rio Mannu di San Sperate, Sardinia. The climate signal uncertainty and model structure uncertainty resulting from a span of the results from those efforts are used as input for the comprehensive subsequent risk assessment in WP6. A series of quantitative (derived within preceding modelling efforts) and qualitative aspects (directly or indirectly derived from modelling work and local knowledge) are brought together to create a holistic picture for the risk assessment (Figure 19).

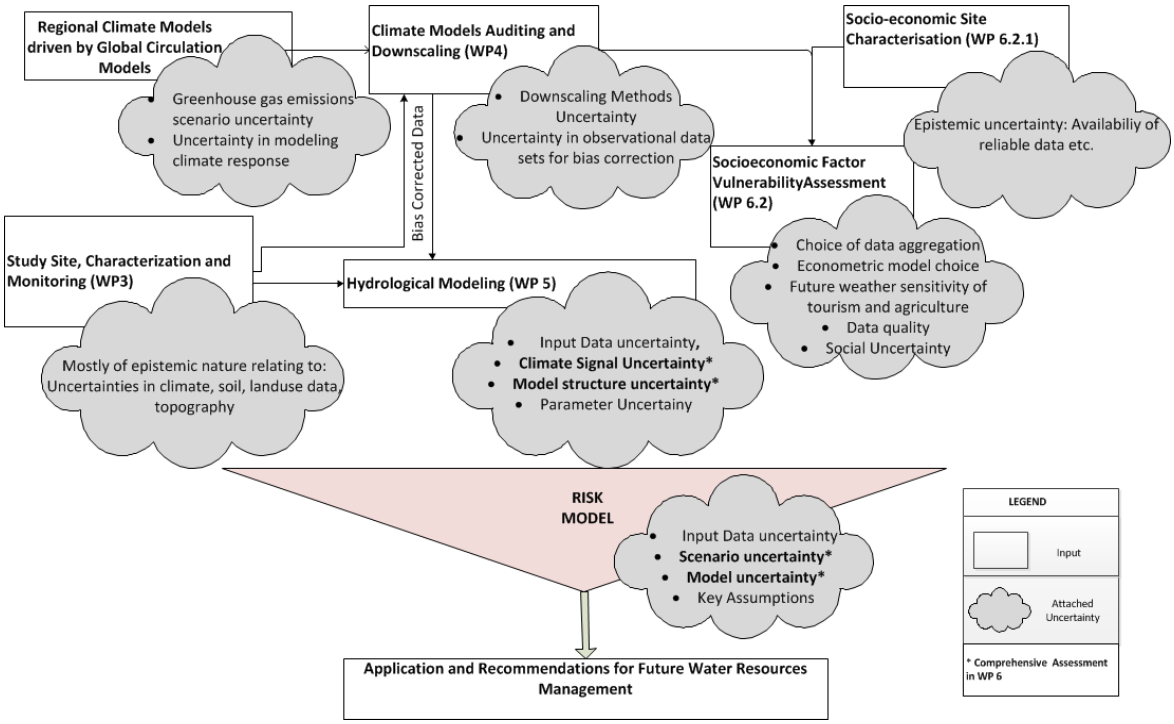


Fig. 18: Propagation of uncertainties in CLIMB.

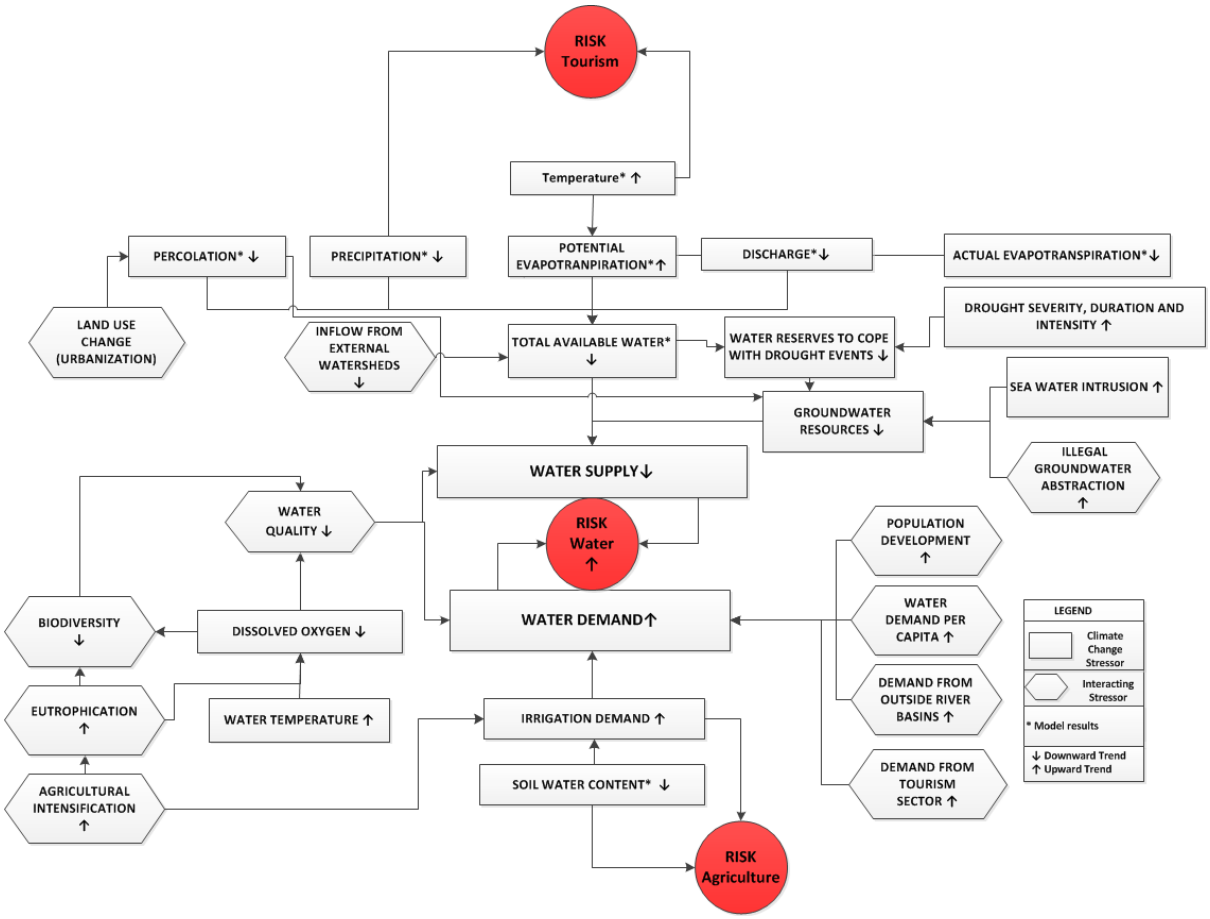


Fig. 19: Causal chains of climate induced changes affecting the hydrology of the two super sites Chiba basin, Tunisia, as well as Rio Mannu di San Sperate, Sardinia, and interacting stressors leading to an increase in risk in the water sector. Risk is described here as a more qualitative likelihood of occurrence that the water supplies cannot meet the water demand in a specific case study site.

Risk assessment in Agriculture (example: Chiba basin)

Risk assessment for the agricultural sector in Chiba basin investigates climate change impacts on crop yields of tomato and wheat. The risk analysis indicates the following:

- Tomato yields with unlimited water for irrigation are expected to increase by 20-23% in 2040-2070 as compared to the present. However to achieve these yields, the amount of water required for irrigation is expected to increase by approximately 11%
- The yields are sensitive to the amount of irrigation water required. There is an irrigation threshold below which the risk of crop failure increases and the yields decrease. The modelled yields are for irrigation at this threshold value.
    a. If irrigation requirements are kept constant and “business as usual management” then yields are expected to decrease by 2%
    b. If irrigation decreases by 10% as expected and “business as usual management” then yields are modelled to decrease by 45%
    c. If irrigation decreases by 10% as expected but only August 15th plantings are allowed then yields are modelled to decrease by 24%
- The water efficiency of the tomato production can improve by using mulches as an adaptation measure.

- Wheat yields, without irrigation, are expected to increase by 7 – 16% in 2040-2070 as compared to 1971-2000
- Introducing irrigation increases yields by 30% but may require about 2,000 m^3/ha/year in 2040-2070
- Using empirical modelling and assuming no increase in producing area or irrigation, climate change is expected to
  1. Increase the production of vegetables by 12%;
  2. increase the production of citrus fruit by 2%;
  3. increase the production of legumes fruit by 8%;

Risk assessment in Tourism

Using a simple climatic beach index about tourists' perceptions on unacceptably temperature and rain conditions for "sea, sand and sun" (3S) tourism, potential impacts of climate change on tourism in the wider surroundings of the two super sites were analysed. According to this index, climatic conditions for the dominant tourism type in the surroundings of the two super sites – i.e. 3S tourism – are expected to further improve in shoulder seasons, but may deteriorate in the current summer peak season (particularly in July and August) due to increased heat stress. Hence, based on the currently observed relationship between tourism demand (indicated by overnight stays) and the applied climatic beach index, there is a chance of climate-induced income gains during the shoulder seasons in spring and autumn and a risk of climate-induced income losses during the summer months. Annual net impacts are however expected to be (slightly) positive (Figure 20).

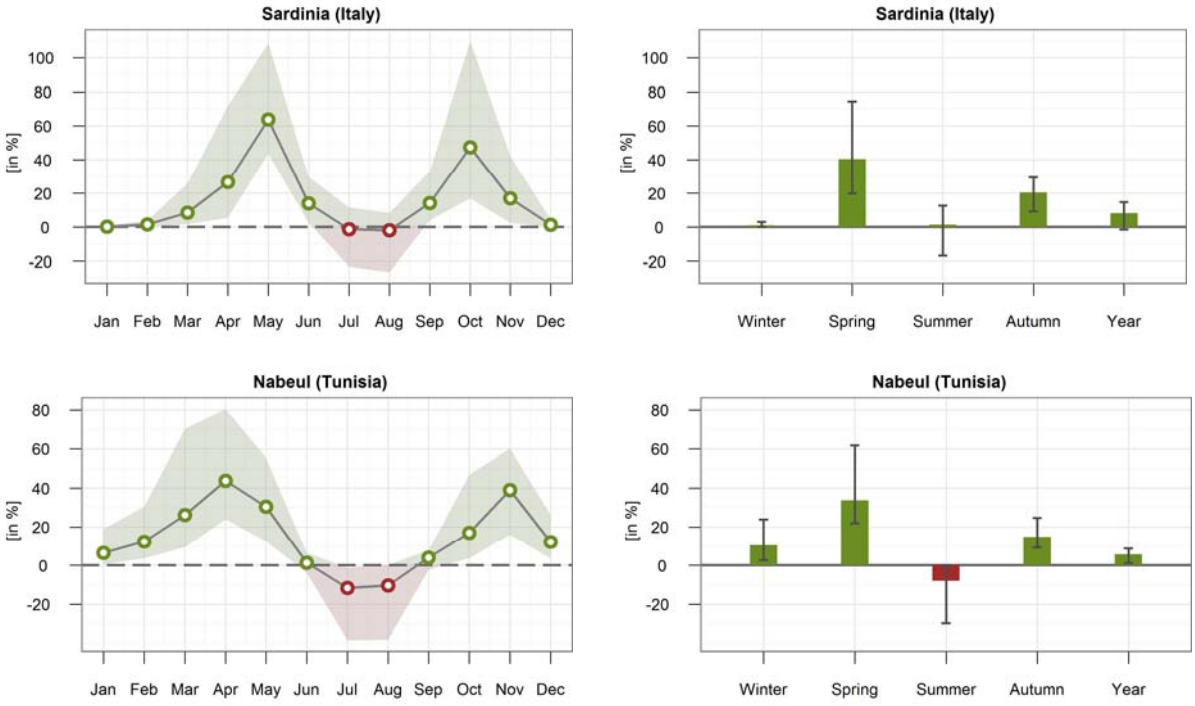


Fig. 20 : Expected change in overnight stays due to a change from reference climatic conditions (1971-2000) to future climatic conditions (2041-2070). Shaded areas and error bars represent the uncertainty resulting from the consideration of four different climate forcings and two different versions of a simple climatic beach index, whereas circles and bars indicate the average of the eight different modelling results.

3.7 Dissemination and Stakeholder Interaction (WP 7)

In order to have an operational dissemination of hydrological modeling results, the WP7 of CLIMB addressed the question of security threats through an analysis of water uses and rivalries in each case study investigated. Stakeholders have been considered into two main categories: water users and water managers. Individual interviews, meetings and implementation of questionnaires have been used in each case study to provide the following results. As far case studies of CLIMB represent a diversity of geographic and political situations around the Mediterranean Basin, we present here the results of all the case studies assuming it represent an assessment of an average situation of water uses within the « Mediterranean Region ».

In order to describe threats on water uses conflicts, results of two main outputs are commented :

- the rating of level of priorities of water uses
- the main pressures on water resources for the past and the next 20 years

3.7.1 The ranking of priority of water uses

Within the different sites, stakeholders have a clear representation of what should be the first priority of water uses: domestic use to supply (Figure 21) inhabitant requirements. However, considering the second level of priority (Figure 22), it seems not so clear if irrigation should be the prior allocation instead of other uses as livestock supply or industrial needs. This representation differs from water managers and water users, water managers considering irrigation and hydropower when there is this activity as the second level of priority. Confusion begins at third level (Figure 23) of water allocation with an extension of the water uses list.

This demonstrates the need to communicate the water management plan and the diversity of water uses within the managed areas to prevent conflicts. In fact, some water users are not aware of the multiplicity of water uses in their water basin as for the origin of the water. This is less true where water governance is really efficient, mainly in the French and in the Gaza sites. However, these tensions between water uses would maybe not occur during severe droughts events where stakeholders would understand the need to supply domestic water use first but probably more during less intense water scarcity events when the existing water would have to be shared within different water uses and water users.

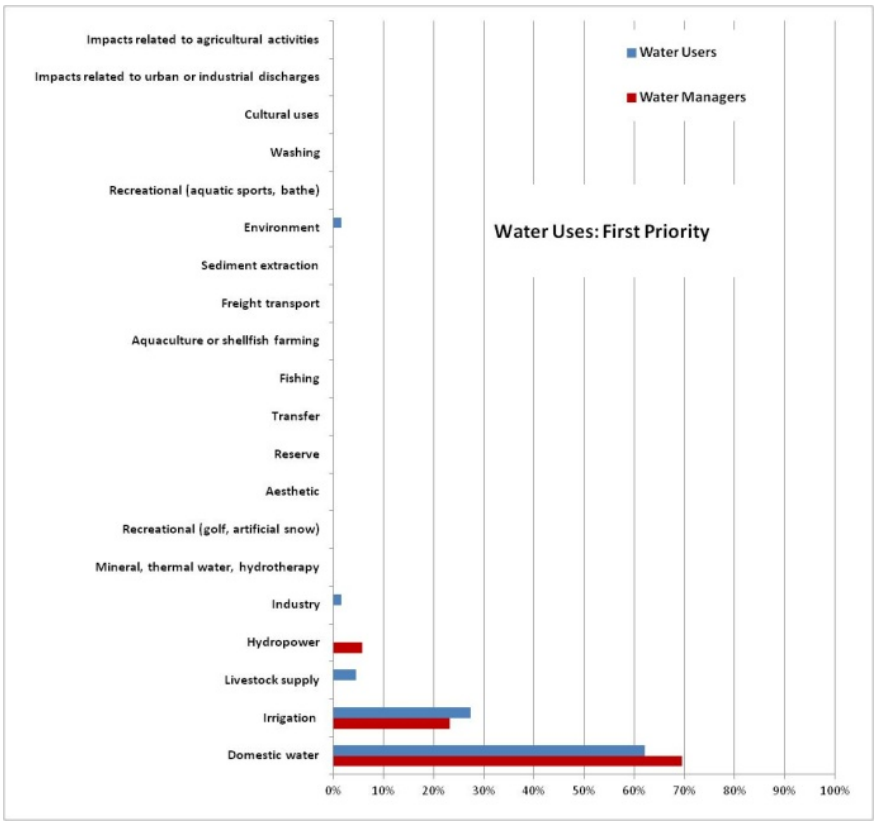


Fig. 21: First priority water uses in the case studies

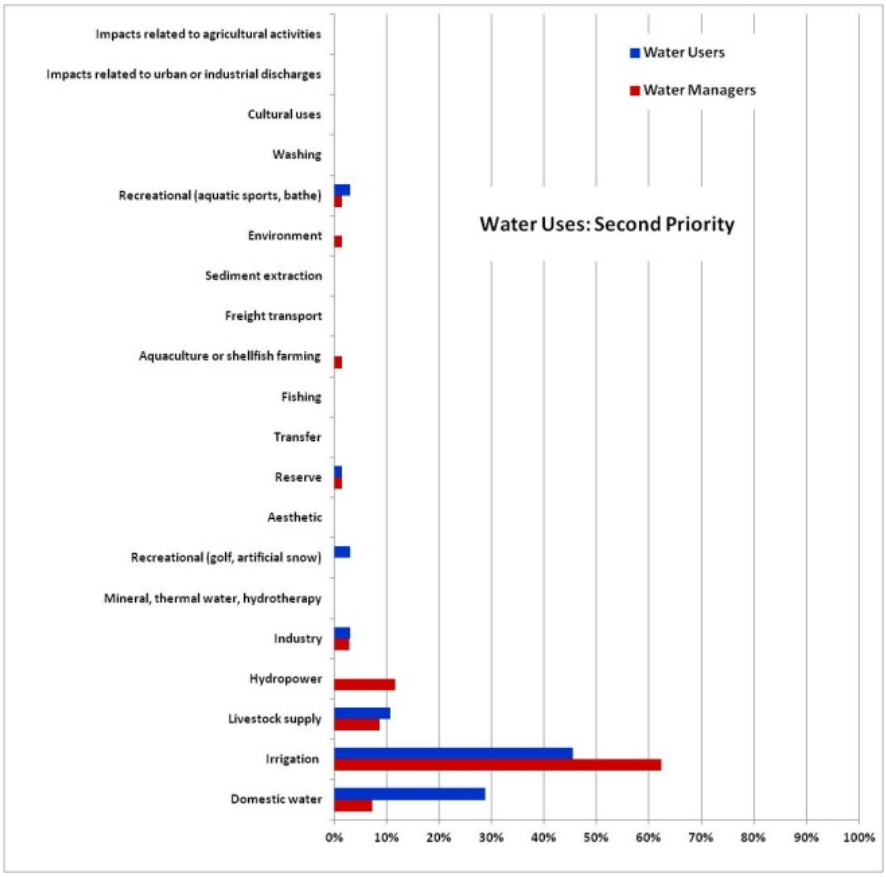


Fig. 22: Second priority water uses in the case studies

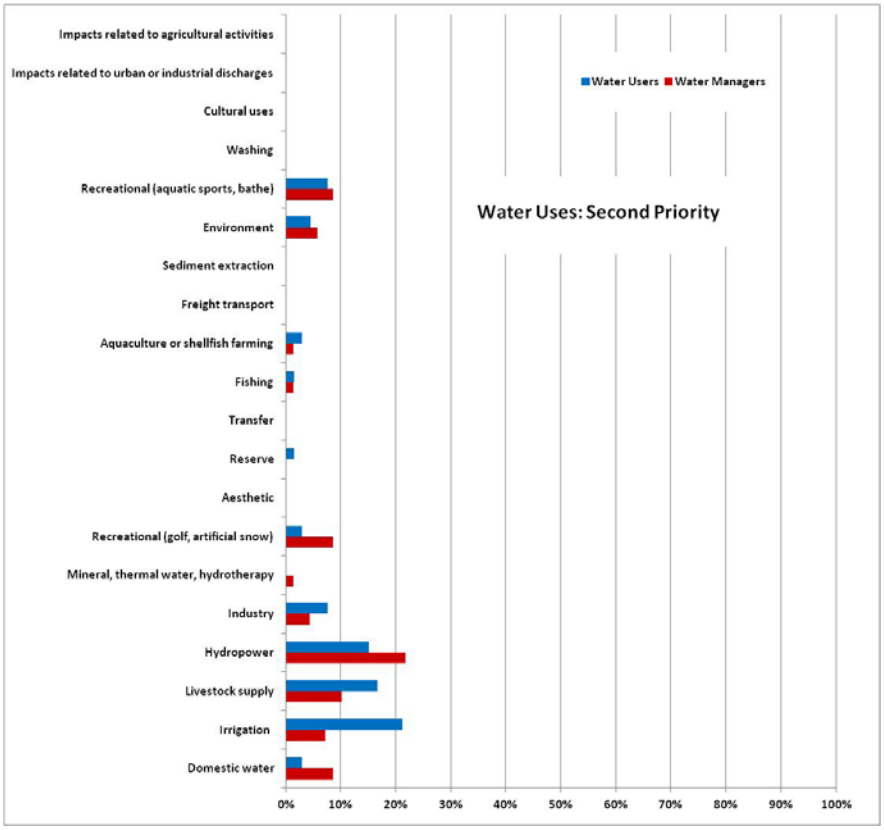


Fig. 23: Third priority water uses in the case studies

3.7.2 Main pressures during the past 20 years and for the next 20 years

It is notable that for the Mediterranean Region represented by CLIMB case studies, the main pressure on water resource during the last 20 years has been linked to population growth and urbanisation even before irrigation (Figure 24). For the near future, stakeholders assume urbanisation will not increase as in the past but consider however an increase of domestic water use. Then, tourism is not considered as a major demand. This latest confirms the difficulty for stakeholders to represent the entire water catchment with, in fact, for all cases, an important tourism pressure due to the interconnection of water resource origin.

Stakeholders are devided for two main features. Firstly for the evolution of water needs for irrigation. Some consider it will increase and others trust it will decrease. In fact, this issue is really site-specific: in some cases agricultural areas can not be extended thus with an assumed stability of water demand, as in the North Italian case study with an entire conversion of apple trees to drop irrigation while agricultural areas can not be extended. For other, as for the Gaza strip, population growth will imply new water demands for irrigation to supply agricultural productions. Secondly, for the evolution of water availability. As for the situation within the past, stakeholders are devided in considering the availabilty of water but with, for the near future, a more common view from water managers that water availability will increase. Contrary to this, both managers and users assess new water resources will be required.

These results are important as they reflect the lack of knowledge from water users of water management solutions implemented. In fact, to answer to the increase of water demand, external water resources have been integrated : in the Sardinian case study, water resource has been politicaly regionalised to confirm one unique water authority and connect the different basins, up to technological constraints limits. In the French case study, to comply with population growth pressure and the salinisation of local water resources, connexion with two external hydrological basins, the Hérault and the Rhône rivers, have been managed. For the Tunisian case study, if there is a local dam collecting runoff waters, water resource is national with major transfers from the North to the South. It is more complex for the Gaza strip and the Nile delta case studies because of geopolitical issues in these transboundary rivers.

Water use for environmental (regulatory) purposes is supposed to increase. This can be mainly attributed to the European sites with the implementation of the WFD and the concept of minimum ecological flow.

The decrease of water quality, not really attributed to the salinisation of water resources, is assumed to be more important for both water managers and water users. This reflects the awareness of stakeholders of the impact of human activities on water quality.

The results have underlined that the terms « climate change » have almost not been cited by stakeholders during both interviews and open questions in the questionnaires. It is emphasised by the fact that the evolution of rainfalls quantity is not considered as an issue for the next 20 years. This confirms the need to continue efforts on disseminating, in relation with local water managers, the state of knowledge on climate change impacts in the Mediterranean Region.

To conclude on the analysis of water uses and water rivalries in the Mediterranean Region represented by 7 case studies with CLIMB, the main answer to the increase of water demand, without considering climate change as a driving force, has been a progressive externalisation of water resource. It seems there is no limit to this extension within national borders and clear limits with international ones.

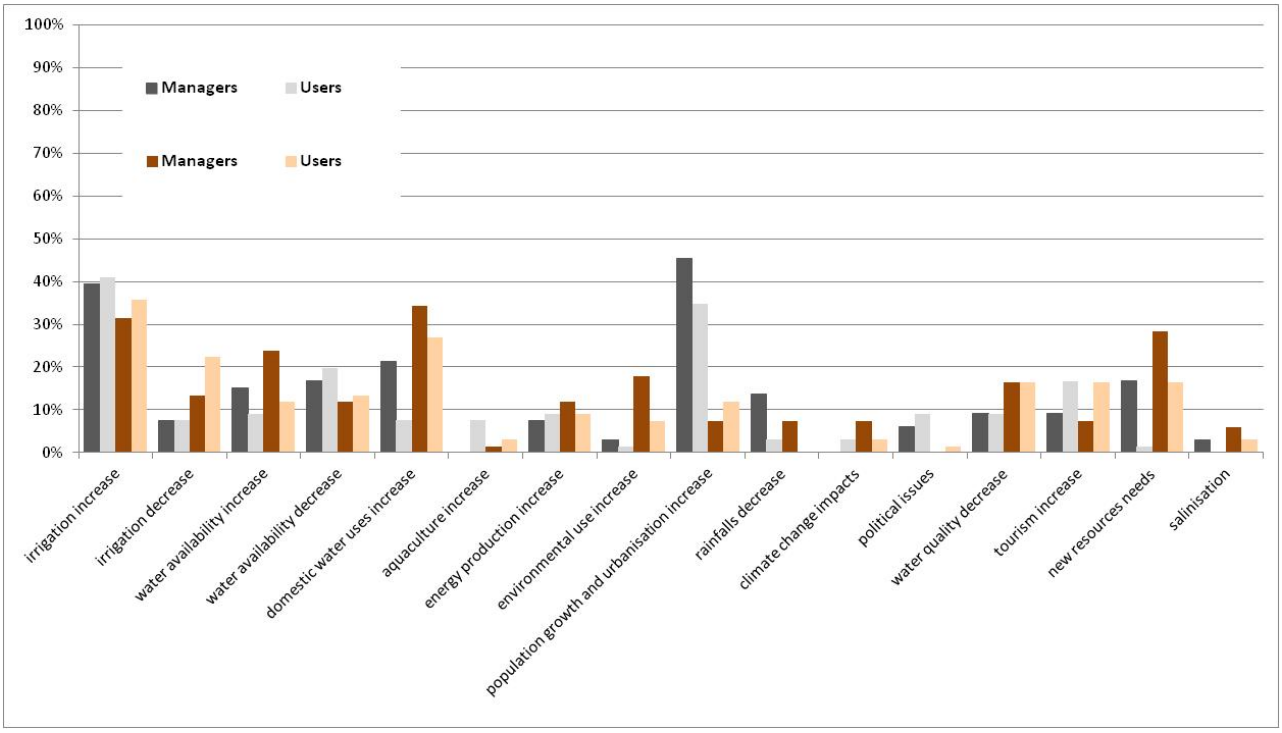


Figure 24 : Results of the main causes of water use evolution in the case studies of CLIMB according to water managers and water users for the last 20 years (grey) and for the next years (colour)

It has also been spotlighted that all analysed water management plans are mentioning desalinization as an option, for the European case studies as for the other ones. Is seems this represent the next step of water supplying in the Mediterranean Region. This important output raises some questions to water policy:

- Are the national and international legislations ready to answer potential issues linked to this new water resource ?
- Should this new water resource be included in hydrological modelling for water management planification scenarios ?

The last observation, valid for all sites, is actors' predictions of increases in water needs over time, with desalination and reuse options presented to be intensified.

3.7.3 Conclusions around climate change impacts on water uses in CLIMB case studies

How do stakeholders prepare and plan to adapt themselves to the impacts of climate change on local water uses? From the stakeholders' point of view, could these changes produce or increase the rivalries on water resources?

The first observation is that for all sites, the interviewees did not mention all water uses within the boundaries of the site. This means that users and in some cases also water managers, do not fully represent the uses of water in the studied regions. At the same time, this lack of awareness could have a substantial effect on decisions, especially in times of water shortage and probably impact competition for water access.

As an example, the multi-sector and comprehensive management practices applied in the Rio Mannu Basin in Sardinia, including interconnection between the various basins, are a pivotal feature and one that creates potential rivalries and conflicts at the regional scale. Whereas previously low water conditions could only be

handled using resources available in the basins, the new interconnection system increases the basin's water supply through transfers from regions with more plentiful reserves. While basins with shortages are thus able to access additional water volumes, which serves to reduce internal rivalries surrounding water, the regional scale becomes the stage of other possible rivalries among actors who had not been in competition previously, since they hadn't been sharing resources existing on their territory. Consequently, an interconnection-based management strategy has indeed expanded the water supply, yet by the same occasion the "multi-sector" system composed of hydraulic facilities imposes a multiyear scheduling on authorities that's capable of preventing crisis situations by means of "rationalizing" (managers' parlance) uses, an option that was simply infeasible when these facilities were being supervised either by distinct managers (typical in the wide array of *Consorzi di Bonifica* entities) or by individual river basin (Tirso, Flumendosa). The crises experienced have underscored limitations in the former system, which was highly fragmented and organized along sector-specific lines. As part of this reorganization however, basin hydrological criteria no longer influence water management policy. Regional authorities have adopted a scope of water management that covers the entire regional territory. The exchanges between water industry actors are no longer taking place within the confines of a basin but can extend beyond, in transgressing the hydrographic boundaries. Such exchanges are no longer tied to a physical space and lose their territorial rationale to focus solely on the political arena and the ability of individual actors to impose their project. This situation is identical to that found in Tunisia, where the Chiba Basin also receives water flowing from the North, but for how long will residents and users in the Northern territories accept an outflow of their water? The same configuration applies to the Thau Lagoon, which just began importing Rhone River water via the Aquadomitia project.

The third observation pertains to handling uncertainties and the risk associated with water supply interruptions. During decision-making processes, especially when a shortage hits, authorities must choose between two competing risk-taking strategies and two perceptions of risk. The first approach stems from the manager, for whom risk-taking (as in whether or not to use resources presently stored to absorb a future drought risk) is associated with measuring tomorrow's potential damage (relative to urban uses) as regards urban uses. The second approach is offered by agricultural producers, for whom the potential risk of a future lack of water motivates guaranteeing the full season's production, which thus rejects the notion of rationing present stored volumes. These various perceptions of risk may cause situations of conflict, particularly in the context of climate change.

Given these considerations, the presence of artificial reservoirs in the region (Rio Mannu, Noce, Chiba) provides for a multi-year regulation of natural water supply through successfully managing this uncertainty over time. The mere presence of these reservoirs however is not sufficient to effectively manage the variability in natural water inflows. The periodic scheduling of water regulation in reservoirs is a key parameter for coping with climate-related uncertainties. As a case in point, performing such regulation results from a combination of several factors, involving the relative ratio between volumes allocated to various uses, reservoir reloading time, the temporal variability (i.e. from one reservoir to another) in natural inflows, and the geographic locations of all such inflows. These factors need to be cumulated alongside a set of social factors associated with water uses, including the procedure and techniques for generating agricultural water, the relationship between service users and the water resource, crop choices, etc.).

A fourth observation pertains to the effects of tourist activities on three study sites, namely Noce, Thau and Chiba. The real challenges are correlated with the needs of such use, i.e. winter tourism for Noce and beach stays for the other two sites. In the former case, the most minimal snowfall leads to greater reliance on artificial production by means of snow blowers, which implies an additional use of water at a time of rising demand for drinking water in the basin given the presence of tourists and holiday-makers. Moreover, a shorter season combined with the need to climb higher to practice winter sports might represent a revenue loss rela-

tive to this economic activity and thereby stimulate an intensification of other activities, notably agriculture (which dips into basin water and is at times carried out by the same set of actors in a solidarity move). Recreation needs in connection with summertime tourism activities and beach resorts (swimming pools, hotels, etc.) exert considerable pressure on urban water uses. Such pressure further complicates resource use since water is being supplied via the public network. As a final point, the economic activities related to these recreational uses offer substantial economic growth potential.

3.7.4 Conclusions on the Climb dissemination process

This process of using interactions with stakeholders to disseminate CLIMB outputs was interesting, considering that scientists are comfortable with uncertainties and assess it, but could be uncomfortable to disseminate it, while stakeholders at local level are pragmatic and capable to deal day-to-day with uncertainties.

The qualitative analyse of water uses in both current and through climates changes scenarios situations permitted to provide lots of information. At the meantime, the process was very time consuming, even for case study leaders. Nevertheless, the process answered its objectives by completing the representation of the case study by case study leaders and by increasing its local area network. This has been confirmed at the occasion of the final dissemination meetings when they took place in the case studies.

This situation of reciprocity contributed to a real interface of learning through a continuous process. It should permit, locally, to avoid maladaptation and decrease vulnerability. The CLIMB method permitted to transfer knowledge between entities, in fact, using completely different languages:

- Scientists/Managers/Users/Policymakers/Politicians,
- Italian, French, Arabic, Turk, English, German,
- Cultural differences and different perceptions of interactions ways!

The transfer of theoretical and empirical knowledge has not been only top down but also bottom up:

- Addressed to scientists and stakeholders (managers and users) and translate “knowledge” in “know-how” to both,
- Combine time scales usually disconnected: creation of research outputs and its use by end-users.

This has been possible because of:

- Interdisciplinary teams, as in particular the WP7 leader with geographers, hydrologists, social anthropologists, public policy scientists and political scientists,
- Dissemination cells with the local pivote role of a case study leader whose interest is to keep a local dialogue with stakeholders,
- Support from the European Commission in granting substantial importance to dissemination processes.

4 Potential Impact and Main Dissemination Activities

4.1 Potential Impact

The strategic impact of the CLIMB project is fully in line with the research and dissemination requirements described in the objectives of the Environment Theme under FP7. Being a fully integrated approach to understand, analyze and predict climate change and its impacts, the project was specifically dedicated to the focal areas described in sub-activity 6.1.1 (Pressures on Environment and Climate) for 2009. CLIMB's work plan was targeted towards a substantial advancement of process knowledge and modeling capabilities for a better understanding of the interactions between the biosphere, ecosystems and human activities and thus to better assess climate effects on water resources and uses. The project combined genuine science activities with a strong link to practical application in the targeted regions of the Mediterranean area and thus provided a balance between the three building blocks of environmental research, namely understanding, assessing impact and responding to threats to security in man-environment systems.

An increase in general knowledge of water management issues in (semi-)arid climate, that can be applicable to some EU areas more prone to changes brought about by climate change and/or global warming, led to the development of innovative practical and/or theoretical approaches and technologies in environmental monitoring and environmental modeling.

Taking into account the latest advancements in the field of climate change impacts on the environment, the development of new technologies was focused on the provision of new monitoring systems and modeling tools to significantly reduce uncertainties of climate change impacts on the hydrology in the specified regions as outlined in Call ENV2009-1.1.5.2. The systematic approach and the resulting tools, in particular the CLIMBPortal, is internationally recognized and is expected to be widely adopted by following research activities and operational water resources managers for the development of sound and sustainable adaptation measures to counteract adverse effects of climate change.

Expertise was intensively shared and exchanged with numerous other FP7-projects, such as DEWFORA, DROUGHT-R&SPI and particularly WASSERMed and CLICO within the CLIWASEC research cluster, but also with larger initiatives, such as the Mediterranean Water Scarcity and Drought Working Group (MED-EUWI) or the Mediterranean branch of the Global Water Partnership (GWP-Med). This is considered very beneficial to provide supportive guidance for a more concise implementation process for current water-related directives, such as the EU Water Framework Directive (2000/60/EC) or the EU-Flood Risk Management Directive (2007/60/EC).

More specifically, the work in CLIMB provided a Summary for Policymakers comprising the final results of the CLIWASEC cluster and a Special Report on model comparison from two of the three projects. In its effort to grant easy-access to data and results from the project, CLIMB developed a WebGIS-Server and Client architecture open to the public. It disseminates the impacts of climate change on selected hydrological indicators, including a rigorous assessment of related uncertainties, as determined from the multi-model ensembles employed in the seven case studies. Further, it comprises a risk modeling tool, assessing the value-at-risk due to water shortages in agriculture and the tourism sector, based on the identification of key socio-economic indicators. Site-specific adaptive measures are proposed and recommendations for future water resources management are given, taking into account a thorough diagnosis of climate change impacts on water uses and rivalries. It is expected that CLIMB results can be regionalized in general for water-stressed areas, in which climate and socioeconomic conditions render water-related problems compelling and urgent. This can happen in various ways to:

- foster and intensify the dialogue between scientists, managers, water experts and stakeholders in addressing local impacts of climate changes and identifying means for their assessments
- awareness among stakeholders about climate change impacts on water resources and land uses, which will lead to adequate approaches and adaptation strategies for water resources management and for food security
- empower stakeholders and scientists by providing new tools of decisions making in assessing climate change impacts

These science-management-policy links are indispensable to provide visibility of the research findings beyond the borders of the scientific community and will allow for an uptake of research results into policy and management practice. The diversity of study sites in CLIMB supports additional benefits for the development and implementation of adaptation measures, as larger scale stakeholder networks can develop when commonalities in problems and problem prevention can be addressed and mutually discussed through the respective connection to the CLIMB Consortium, which provided a forum to discuss the implications of the scientific results. An important output of the research in the individual study sites was the development of a set of recommendations for an improved monitoring and modeling strategy for climate change impact assessment, addressing in particular the minimum requirements towards data collection and model complexity to achieve sufficient predictive power for climate change impact assessment in the targeted regions and beyond.

4.2 Main Dissemination Activities

The CLIMB project promoted practical application of new strategies to assess climate induced changes on the hydrology of Southern Europe and neighboring countries and provides the transfer of existing and emerging knowledge in climate change impact research to different stakeholders. The main **goal** was the maximum use of project results by addressing researchers, policy makers, decision makers etc. The main **target groups** are scientists (universities, research organizations), commercial organizations (SMEs, industry), stakeholders (public authorities/organizations, NGOs), and politicians. For a complete list of all dissemination activities, please refer to section 6 (Table 6.2) of this report.

The CLIMB results have been exploited and disseminated inside and outside the consortium, composed of representatives from the academic world (universities, research institutes), SMEs, and non-profit organizations:

- **Partners** with the relevant knowledge in: climate change impacts, hydrological modeling, risk assessment, economic assessment etc.
- Different types of **organizations**: universities, research institutions, SMEs, and non-profit organizations
- Different participating **countries in CLIMB** (European member states, International Cooperation partner countries, Canada)

Within the scientific community the CLIMB results have been distributed via publications in peer-reviewed scientific journals, the *Special Sessions* at internationally renowned scientific conferences and conjoint publications of *Special Issues* in appropriate cross-cutting scientific journals with WASSERMed and CLICO as partner projects in the research cluster CLIWASEC. For the latter, it is planned to establish an own Special Issue on ‘Climate, Water and Security in the Mediterranean and neighboring regions’ in the highly-ranked scientific journal STOTEN (‘Science of the Total Environment’).

Interaction with stakeholders and potential end-users

The dissemination of project related awareness, knowledge in a transparent, easy-to-digest and user-friendly way and impact on the utmost important **level of stakeholders and potential end-users** is challenging and requires special attention. CLIMB maintained close connection to stakeholders in all case study sites by means of regular consultations, to catalyse dissemination and application of the results. The main objective was to convince stakeholders and end-users of the feasibility and usefulness of the CLIMB project results:

- Creation of a strong network on water resources issues in the Mediterranean region (e.g. via frequent local workshops). Workshops, for end-users and developers, offered opportunities to the project to gather feedback from the target groups and address the needs of the stakeholders involved (09.07.2010 + 14.09.2010; 17.06.2011; 24.02.2013: Thau / France; 01.06.2010 + 09.12.2012: Cap Bon / Tunisia; 05.10.2010: Noce / Italy; 01.02.2011 + 04.02.2011 + 02.04.2012: Sardinia, Italy; 11.11.2012: Senorbì / Italy; 14.02.2010 + 14.03.2010 + 01.02.2012: Al Gharbiyah / Egypt)

- Improvements of models, new assessment tools have been communicated to stakeholders and decision makers in a form that enabled an easy utilization of the new findings in regional water resource and agricultural management initiatives as well as in the design of mechanisms to reduce potential for conflict.
- Arrangement of national meetings focused on the demonstration of concepts, tools and results for users and policy makers to discuss and consequently improve the potential of these tools to support decision making at larger spatial scales.
- Special design of CLIMBs annual general assembly's (Cairo, Cagliari, Munich, Istanbul, Brussels) that included meetings, workshops and excursions for stakeholders and end-users, for them to better familiarize with the concepts and techniques developed and applied and to strengthen the science-policy interfaces. CLIMB aimed to capture decision-makers interest by providing constructive and substantial recommendations, elaborated by means of direct communications with regional stakeholders or in response to the thematic priorities issued by the EC.

Fig. 25: CLIMB meetings with stakeholders and organization of General Assemblies

Dissemination materials and tools

For the promotion of the CLIMB-project and its activities several digital tools have been used (public accessible website: www.climb-fp7.eu, frequently updated electronic study site-newsletters, press releases etc.) to support the awareness rising on the project and the exploitation of project results. The CLIMB website is the primary dissemination route for the presentation of the project, in addition to the online provision of press releases. The website is structured in different areas with respective subfolders (News & Events, Project, Partners, Media, Links, Dissemination, and Publications). CLIMB has also set up and maintained the CLIWASEC cluster webportal on climate change, water and security (www.cliwasec.eu), providing links to websites of the CLIMB, WASSERMed and CLICO projects.

CLIMB leaflet and CLIWASEC leaflet

A CLIMB leaflet in English and the languages which have been represented in the project via the participating countries (Arabic, French, German, Italian, and Turkish) included the general information about the CLIMB project (motivation, objectives, outreach, the structure, the partners, the study sites and the contact information).

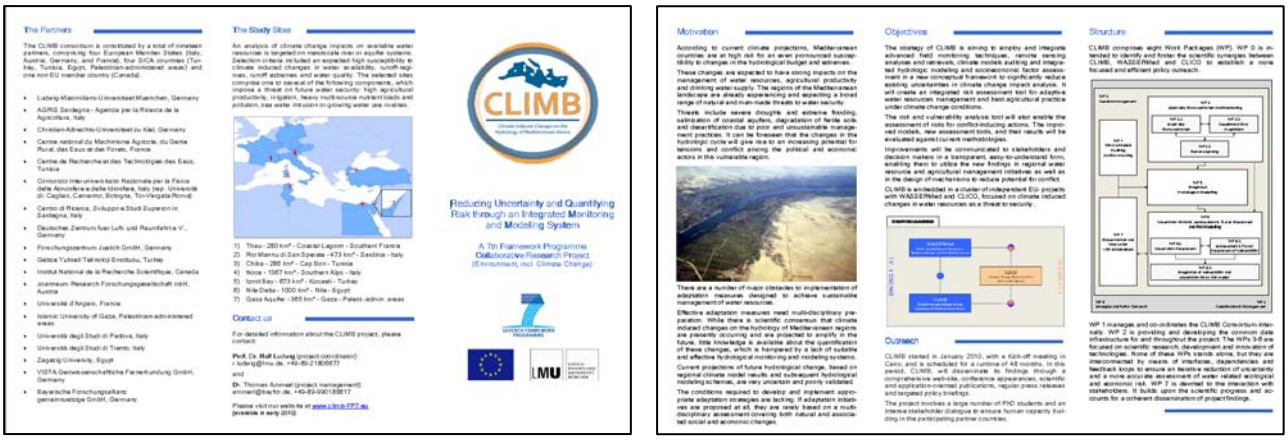


Fig. 26: The CLIMB leaflet

Also in the research cluster CLIWASEC where CLIMB has been cooperating with the other FP7-projects WASSERMed and CLICO a leaflet has been designed and distributed for dissemination purposes.

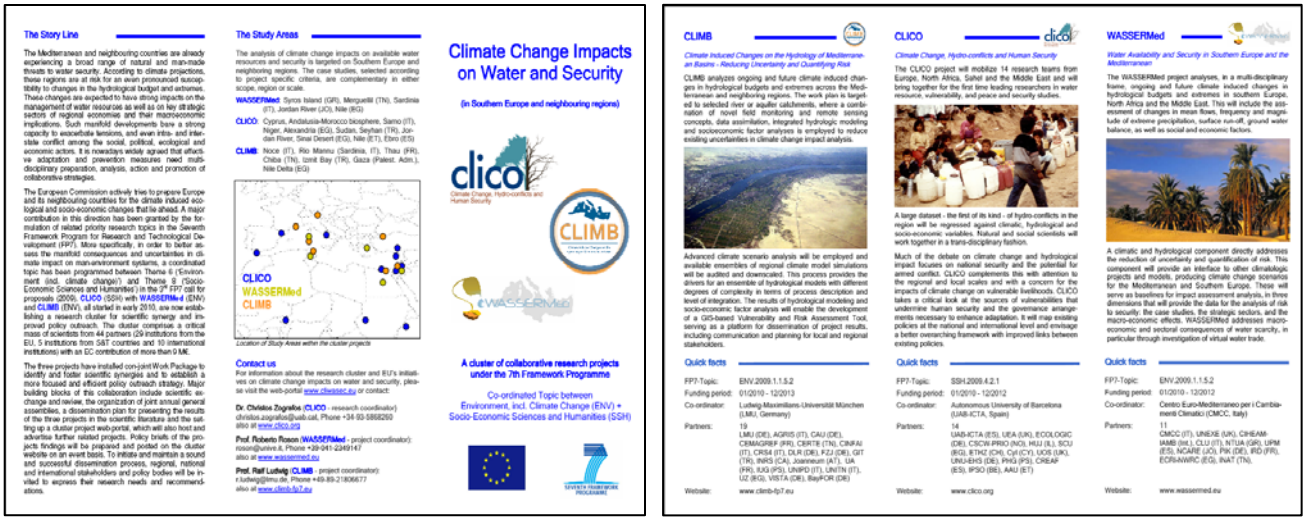


Fig. 27: The CLUSTER leaflet (version 1, 2010)

CLIMB-Posters

Posters with the general scope of CLIMB, the outcomes of the several work-packages as well as the challenges in the different study sites have been designed and regularly updated to deal with the specific scope of respective events.

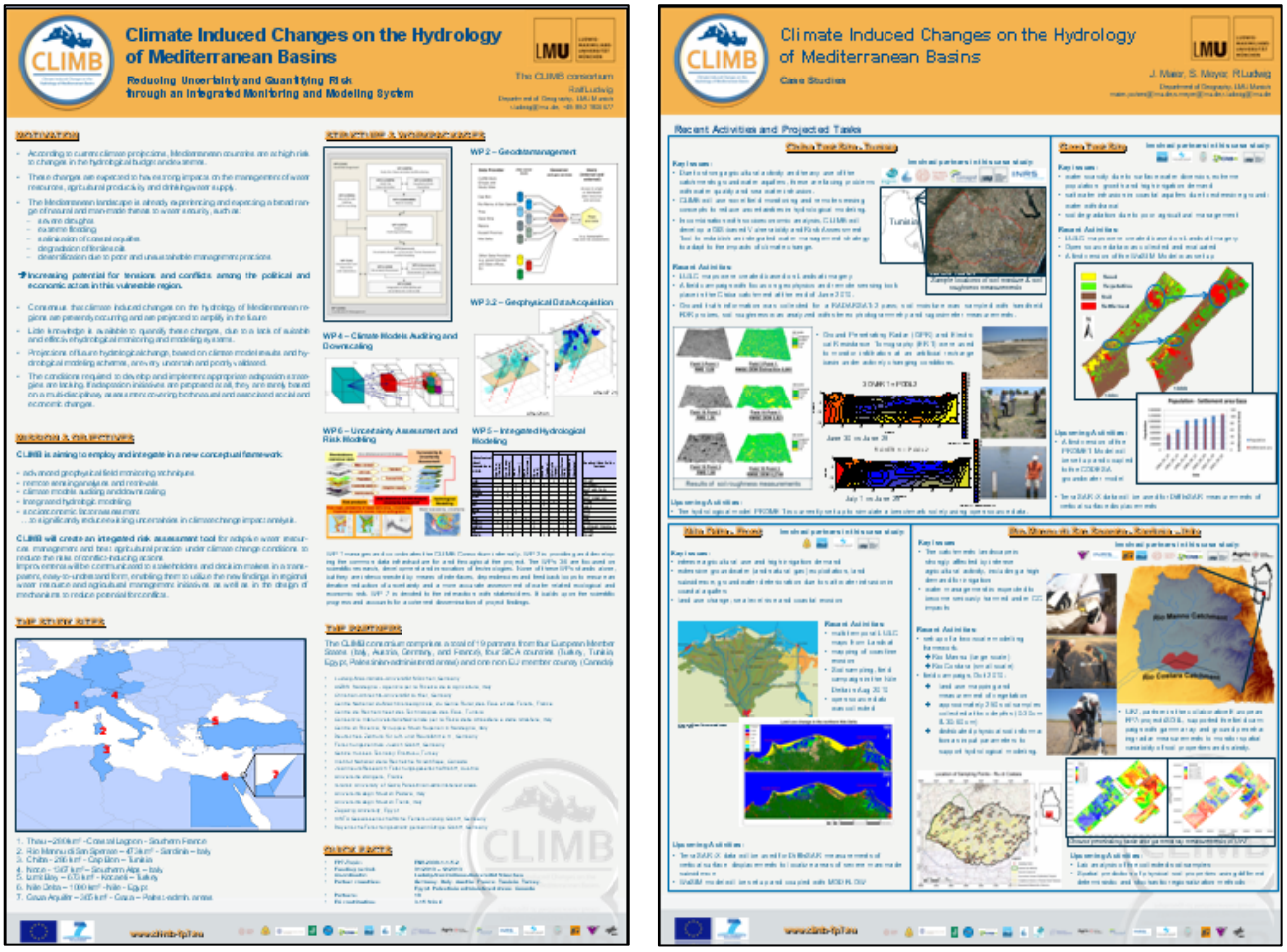


Fig. 28: CLIMB posters with general scope (left) and specific scope (right)

During several occasions, those CLIMB posters have been presented at scientific conferences, trade fairs, researcher´s nights, stakeholder meetings, General Assemblies etc. Therefore different inter-sectoral target groups in all countries with CLIMB partners have been reached (science, industry, policy, decision makers, civil society)

26.04.2010: Integrated River Basin Management under the Water Framework Directive (Lille / France)
10.06.2010: 7th Intern. Recycling Env. Technologies and Waste Management Trade Fair (Istanbul / Turkey)
24.09.2010: La nuit des chercheurs (Angers / France)
02.02.2011: CLIWASEC-stakeholder meeting (Cagliari / Italy)
05.04.2011, 22.04.2012, 11.04.2013: EGU General Assembly (Vienna / Austria)
30.08.2011: Pedometrics conference (Prag / Czech Republic)
13.02.2012: CLIMB General Assembly (Munich / Germany)
22.04.2012: EGU General Assembly (Vienna / Austria)
01.11.2012: INNOVATION TURKIYE EXPO (Istanbul / Turkey)
08.10.2013: GlobalSoilMap conference 2013 (Orléans, France)

Press releases and articles to attract and maintain media attention

CLIMB disseminated the project results and ongoing activities via public media, newspapers and magazines.

PRESSEINFORMATION

Pressemitteilung

Press release

Climate Change: Geoportal Enables Regional Projections

Fig. 29: Examples of press releases during the running period of CLIMB (11.01.2010; 15.02.2012; 21.11.2013)

Der Osten Deutschlands trocknet aus

Klimawandel: Massive Veränderungen

Klimawandel verändert Mittelmeerraum

Wie sich der Mittelmeerraum verändert

Dem Mittelmeerraum droht die Versalzung

Fig. 30: Impact of CLIMB in science-oriented and popular press

CLIMB videos

Water in Africa in a changing climate

CLIMB produced videos which were recorded during stakeholder workshops in the different case study sites. Those videos can be accessed via http://www.climb-fp7.eu/media/films.php.

Tthe video “Water in Africa in a changing climate” has been produced in 2013 by Séverine Dieudonné, featuring CLIMBs co-ordinator Ralf Ludwig and Nile delta case study leader Prof. Badr Mabrouk.

Fig. 31: Video “Water in Africa in a changing climate” on YouTube

(http://www.youtube.com/watch?v=4p1Nvuxk3LU)

Fig. 32: CLIMB in public TV stations (Left: General Assembly in Cagliari/Italy 2011, centre: Conference "Environmental Protection is a must in Alexandria / Egypt 2010; right: International Water Technology Conference in Alexandria / Egypt 2011)

In total, the distribution of the more than 450 registered dissemination activities during the runtime of CLMB is displayed in Figures 33 and 34. Accordingly, scientific conferences (38%) rank first among dissemination activities, followed by meetings & workshops (29%), PR-material (23%) and scientific publications (10%). 36% of all registered activities are covered by the coordination unit (22% BayFOR, 14% LMU).

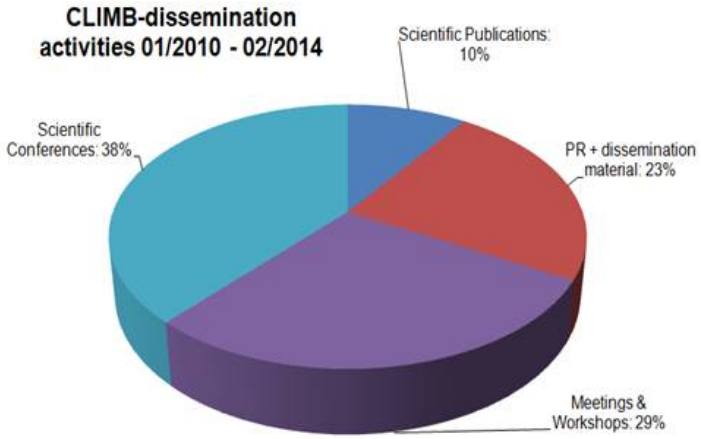


Fig. 33: Distribution of dissemination activities during the CLIMB runtime.

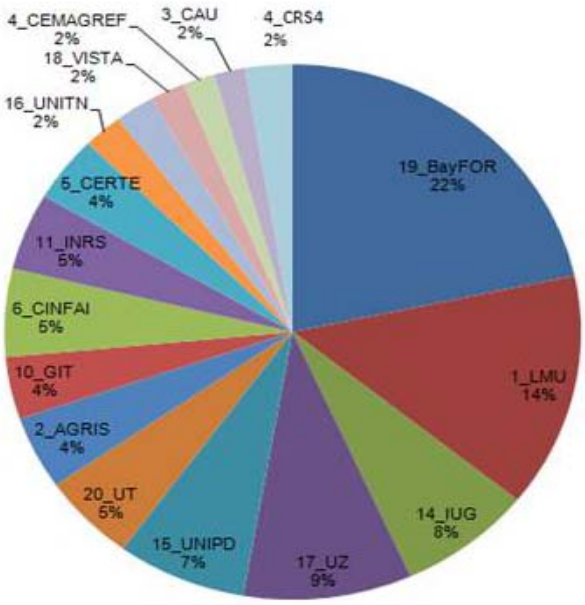


Fig. 34: Distribution of dissemination by partner during the CLIMB runtime.

5 Website and Contacts

5.1 Website

The CLIMB project website has been initiated in early 2010. www.climb-fp7.eu presents the basic ideas behind CLIMB, informs about the actual status and latest news of the project and provides information about the research team and plenty of Downloadables.

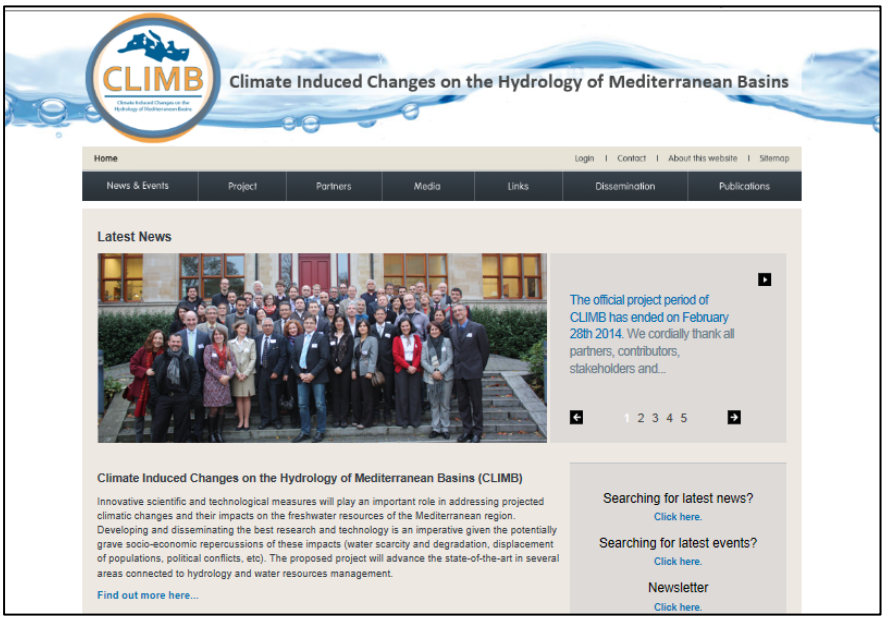


Fig. 35: The CLIMB homepage (www.climb-fp7.eu)

5.2 Logo

The creation of the project's image started with the design of a distinctive logo. This logo has been included in the design and production of the CLIMB website, the leaflet, as well as in all the internal and external communication material produced by the consortium.

Fig. 36: CLIMB-Logo

5.3 Contact Details

The Coordination Team

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6 Use and Dissemination of Foreground

Table 6.A1 List of scientific (peer reviewed) publications, starting with the most important ones

TABLE 6.A1: LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS, STARTING WITH THE MOST IMPORTANT ONES

NO.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers[1] (if available)	Is/Will open access[2] provided to this publication?
1	*Coupling water flow and solute transport into a physically-based surface–subsurface hydrological model*	*S. Weill a,A. Mazzia, M. Putti, C. Paniconi*	*Advances in Water Resources*	*Volume 34, Issue 1, January 2011*	*ScienceDirect*	*http://www.sciencedirect.com*	*10/10/2010*	*128-136*		*Yes*
2	*Geodateninfrastrukturen und ihre Anwendungen in der Praxis*	*M. Nolde, R. Duttmann, M. Blaschek, U. Klein*	*PIK - Praxis der Informationsverarbeitung und Kommunikation*	*Volume 33 (4) 0930-5157*	*Walter de Gruyter*		*01/12/2010*	*245-252*		*Yes*
3	*CLIMATE CHANGE IMPACT ASSESSMENT FOR A SMALL RIVER BASIN USING A*	*M. SULIS, C. PANICONI, C. RIVARD, R.*	*Canadian Society for Bioengineering (CSBE/SCGAB)*	*CIGR XVIIth World Congress*	*CBE Journal*	*http://www.bioeng.ca/publications*	*06/07/2010*	*1-7*		*Yes*

[1] A permanent identifier should be a persistent link to the published version full text if open access or abstract if article is pay per view) or to the final manuscript accepted for publication (link to article in repository).
[2] Open Access is defined as free of charge access for anyone via the internet. Please answer "yes" if the open access to the publication is already established and also if the embargo period for open access is not yet over but you intend to establish open access afterwards.

	PROCESS-BASED NUMERICAL MODEL OF COUPLED SURFACE WATER/GROUND WATER FLOW	*HARVEY, D. CHAUMONT*								
4	*Retrieval of soil moisture content from SAR data to support water resources management and agricultural practice*	*R. Filion, M. Dissanska, G. Mascaro, I. Gherboudj, L. Dong, M. Bernier, R. Ludwig, A. Soddu, K. Huong Hoang, R. Deidda, and C. Paniconi*	*Proceedings, ESA Living Planet Symposium*	*Special Publication SP-686*	*European Space Agency*	*Bergen-Norway*	*28/06/2010*	*N.A.*		*Yes*
5	*CLIMATE INDUCED CHANGES ON THE HYDROLOGY OF MEDITERRANEAN BASINS– A RESEARCH CONCEPT TO REDUCE UNCERTAINTY AND QUANTIFY RISK*	*R. Ludwig, A. Soddu, R. Duttmann, N. Baghdadi, S. Benabdallah, R. Deidda, M. Marrocu, G. Strunz, F. Wendland, G. Engin, C.*	*Fresenius Environmental Bulletin*	*Vol. 19 - No. 10a 2010*	*PSP-Parlar Scientific Publication*	*Freising-Germany*	*02/02/2010*	*2379 - 2384*		*No*

		Paniconi, F. Prettenthaler, I. Lajeunesse, S. Afifi, G. Cassiani, A. Bellin, B. Mabrouk, H. Bach and T. Ammerl								
6	*The water´s edge*	*R. Ludwig, T. Ammerl*	*Public Service Review: European Science and Technology*	*Issue 6*	*PSCA International Ltd*	*Staffordshire*	*20/04/2010*	*164-165*		*Yes*
7	*Understanding water worries*	*R. Ludwig, S. Benabdallah, A. Soddu, I. La Jaunesse*	*International Innovation - Disseminating science, research and technology: Environment*	*August 2011*		*http://www.climb-fp7.eu/publications/dokumente/ResMedia_Climb.pdf*	*19/08/2011*	*47-49*		*Yes*
8	*Towards an inter-disciplinary research agenda on climate change, water and security in Southern Europe and neighboring countries*	*Ludwig, R., Roson, R., Zografos, C. and G. Kallis*	*Environmental Science and Policy*	*Volume 14*	*Elsevier*		*24/08/2011*	*794-803*		*No*
9	*Modélisation numérique de la recharge artificielle du site de Korba (Tunisie) par les eaux usées*	*A. Chemingui, C. Paniconi, F. Jarraya*	*Proceedings, GeoHydro 2011 Conference*	*-*		*http://www.geohydro2011.ca/gh2011_user/cle_usb/pdf/doc-2317.pdf*	*28/08/2011*	*1-4*		*Yes*

	traitées et assimilation des données hydrogéophysiques	*Horriche*								
10	*Successes and challenges from recent applications of an integrated, physically-based model of groundwater/surface water interactions*	*C. Paniconi, M. Sulis, M. Camporese, C. Rivard*	*Proceedings, GeoHydro 2011 Conference*	*-*		*http://www.geohydro2011.ca/gh2011_user/cle_usb/pdf/doc-2213.pdf*	*28/08/2011*	*1-6*		*Yes*
11	*Hydrological responses to downscaled climate model outputs using an integrated, physically-based model of groundwater/surface water interactions*	*M. Sulis, C. Paniconi, D. Huard, D. Chaumont*	*Proceedings, GeoHydro 2011 Conference*	*-*		*http://www.geohydro2011.ca/gh2011_user/cle_usb/pdf/doc-2282.pdf*	*28/08/2011*	*1-4*		*Yes*
12	*A potential use for the C-band polarimetric SAR parameters to characterise the soil surface over bare agriculture fields*	*N. Baghdadi, R. Cresson, E. Pottier, M. Aubert, Z. Mehrez, A. Jacome, S. Benabdallah*	*IEEE Transactions on Geoscience & Remote Sensing*	*Volume: 50, Issue: 10*			*29/02/2012*	*3844 - 3858*		*No*
13	*Klimawandel und Wasserknappheit führen zu massiven Veränderungen im Mittelmeerraum*	*E. Rouard (BayFOR)*	*http://www.bayfor.org/de/oeffentlichkeitsarbeit/presse/klimawandel-*	*February 2012*		*Press release on the homepage of the Bavarian Alliance*	*15/02/2012*	*N.A.*		*Yes*

	CLIWASEC Internationale Fachtagung		*und-wasserknapp heit-f-hren-zu-mas*							
14	*IFAT Entsorga 2012 - Umweltschutz und nachhaltiges Ressourcenmanag ement im Brennpunkt*	*E. Rouard (BayFOR)*	*Press release on the homepage of the Bavarian Alliance*	*April 2012*			*12/04/2012*	*N.A.*		*Yes*
15	*An intercomparison and verification of outputs of several climate models on representative Mediterranean catchments*	*R. Deidda, G. N. Caroletti, V. Lucarini, M. Marroccu, M. Puliga, G. Pusceddu, A. Speranza*	*Geophysical Research Abstracts*	*Vol. 14, EGU2012-14167*			*22/04/2012*	*N.A.*		*Yes*
16	*Estimation of soil parameters over bare agriculture areas from C-band polarimetric SAR data using neural networks*	*N. Baghdadi, R. Cresson, M. El Hajj, R. Ludwig, I. La Jeunesse*	*Hydrology and Earth System Sciences*	*Volume 9*		*http://www.hydrol-earth-syst-sci-discuss.net/9/2897/2012/hessd-9-2897-2012.html*	*01/05/2012*	*2897-2933*		*Yes*
17	*Quantifying and reducing uncertainty in the assessment of water-related risks in southern Europe and neighbouring countries*	*J. Post*	*IEMSS2012*	*N.A.*			*01/07/2012*	*N.A.*		*Yes*
18	*Water Resources Management Strategy*	*G. Engin*	*BALWOIS 2012*	*N.A.*		*http://balwois.com/2012/USB/pa*	*28/05/2012*	*1-6*		*Yes*

	Establishment For The Semi-Arid Regions Affected By Climate Change					*pers/235.pdf*				
19	*Assimilation of vegetation parameters and snow cover derived from EO in the hydrological model promet in the frame of climb project*	*P. Klug*	*Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International*	*Digital Object Identifier : 10.1109/IGARSS.2012.6351431*			*01/06/2012*	*836 - 839*		*No*
20	*Spatial variability of selected superficial soil properties (related to soil moisture) and C-band SAR polarimetric parameters at the field plot level*	*A. Jacome, K. Chokmani, M. Bernier, M. Nolin, S. Perrault, M. Niang*	*N.A.*	*N.A.*		*33rd Canadian Symposium on Remote Sensing, Ottawa, Canada*	*11/06/2012*	*N.A.*		*No*
21	*Assimilation of vegetation parameters and snow cover derived from eo in the hydrological model promet in the frame of CLIMB project*	*P. Klug*	*Geosciences Journal*	*ISSN: 2153-6996*	*Korean Association of Geoscience Societies*	*Munich / Germany*	*01/06/2012*	*836 - 839*		*No*
22	*Hydrologic response to multimodel climate output using a physicallybased model of groundwater/surface water interactions*	*M. Sulis, C. Paniconi, M. Marrocu, D. Huard, and D. Chaumont*	*Water Resources Research*	*48; W12510*	*American Geophysical Union*		*13/12/2012*	*1-18*		*No*

23	*Focused inversion of vertical radar profile (VRP) traveltime data*	*Giulio Vignoli, Rita Deiana, and Giorgio Cassiani*	*Geophysics*	*Vol. 77, No. 1*	*Society of Exploration Geophysicists*		*03/02/2012*	*9-18*		*No*
24	*Mixing, entropy and reactive solute transport*	*Gabriele Chiogna, David L. Hochstetler, Alberto Bellin, Peter K. Kitanidis and Massimo Rolle*	*Geophysical Research Letters*	*VOL. 39, L20405,*	*American Geophysical Union*		*23/10/2012*	*1-6*		*No*
25	*Ensemble Kalman filter versus particle filter for a physically-based coupled surface–subsurface model*	*Damiano Pasetto, Matteo Camporese, Mario Putti*	*Advances in Water Resources*	*47*	*Elsevier Limited*		*27/06/2012*	*1-13*		*No*
26	*POD-based Monte Carlo approach for the solution of regional scale groundwater flow driven by randomly distributed recharge*	*Damiano Pasetto, Alberto Guadagnini, Mario Putti*	*Advances in Water Resources*	*34 (2011)*	*Elsevier Limited*		*28/07/2012*	*1450-1463*		*No*
27	*Morphodynamic controls on redox conditions and on nitrogen dynamics within the hyporheic zone: Application to gravel bed rivers with alternate-bar*	*A. Marzadri, D. Tonina, and A. Bellin*	*Journal of Geophysical Research*	*117 (2012)*	*American Geophysical Union*		*20/09/2012*	*G00N10 (1-14)*		*No*

	morphology									
28	*Bad behavior of Godunov mixed methods for strongly anisotropicadvection–dispersion equations*	*Annamaria Mazzia, Gianmarco Manzini, Mario Putti*	*Journal of Computational Physics*	*230 (2011)*	*Academic Press Inc.*		*09/08/2011*	*8410-8426*		*No*
29	*Noninvasive Monitoring of Soil Static Characteristics and Dynamic States: A Case Study Highlighting Vegetation Effects on Agricultural Land*	*Giorgio Cassiani, Nadia Ursino, Rita Deiana, Giulio Vignoli, Jacopo Boaga, Matteo Rossi, Maria Teresa Perri, Michael Blaschek, Rainer Duttmann, Swen Meyer, Ralf Ludwig, Antonino Soddu, Peter Dietrich, Ulrike Werban*	*Vadose Zone Journal*	*3 / 11*	*Soil Science Society of America*		*16/03/2011*	*0 -*		*No*
30	*Obstacles to data access for research related to climate and water: implications for*	*Beniston, M., Stoffel, M., Harding, R.,*	*Environmental Science and Policy*	*17*	*Elsevier BV*		*15/03/2012*	*41-48*		*Yes*

	science and EU policy	*Kernan, M., Ludwig, R., Moors, E., Samuels, P. and K. Tockner*								
31	*Progress in the understanding of narrow directional microwave scattering in agricultural fields*	*Wegmüller, U., Santoro, M, Mattia, F., Marzahn, P., Ludwig, R. and N. Floury*	*Remote Sensing of Environment*	*Vol. 115 (10)*	*Elsevier Inc.*		*17/10/2011*	*2423-2433*		*No*
32	*Integration of research advances in modelling and monitoring in support of WFDriver basin management planning in the context of climate change*	*Philippe Quevauviller, Damia Barceló, Martin Beniston, Slobodan Djordjevic, Richard J. Harding, Ana Iglesias, Ralf Ludwig, Antonio Navarra, Alícia Navarro Ortega, Ole Mark, Roberto Roson, Daniel Sempere,*	*Science of the Total Environment*	*440 (2012)*	*Elsevier*		*07/09/2012*	*167-177*		*Yes*

		Markus Stoffel, Henny A.J. van Lanen, Micha Werner								
33	*Validation of the AIEM Through Correlation Length Parameterization at Field Scale Using Radar Imagery in a Semi-Arid Environment*	*Dong, Lu; Baghdadi, Nicolas; Ludwig, Ralf*	*IEEE Geoscience and Remote Sensing Letters*	*10 (3)*	*Institute of Electrical and Electronics Engineers Inc.*		*01/05/2013*	*461-466*		*No*
34	*Uncertainty analysis in model parameters regionalization: a case study involving the SWAT model in Mediterranean catchments (Southern France)*	*H. Sellami , I. La Jeunesse , S. Benabdallah , N. Baghdadi , M. Vancloster*	*Hydrology and Earth System Sciences*	*Vol. 10/Issue 4*	*European Geosciences Union*		*01/01/2013*	*4951-5011*		*Yes*

Table 6.A2 List of all dissemination activities

TABLE 6.A2: LIST OF ALL DISSEMINATION ACTIVITIES								
NO.	Type of activities[3]	Main leader	Title	Date/Period	Place	Type of audience[4]	Size of audience	Countries adressed
1	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser-Management f. d. Mittelmeerraum: Geographen der LMU koordinieren millionenschweres EU-Projekt*	*11/01/2010*	*www.idw-online.de*	*Scientific community (higher education, Research) - Medias*	*9999*	*Germany*
2	*Flyers*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB-leaflet in different languages (English, German, Italian, French, Turkish, Arabic)*	*11/01/2010*	*Munich / Germany*	*Scientific community (higher education, Research) - Policy makers - Medias*	*9999*	*Austria, Canada, Egypt, France, Germany, Italy, Palestinian administered areas, Tunisia, Turkey*
3	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser-Management für d. Mittelmeerraum: Geographen d. LMU koordinieren millionenschweres EU-Projekt*	*11/01/2010*	*www.innovations-report.de*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Germany*
4	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser-Management f. d. Mittelmeerraum: Geographen d. LMU koordinieren millionenschweres EU-Projekt*	*11/01/2010*	*www.schattenblick.de*	*Civil society*	*9999*	*Germany*

[3] A drop down list allows choosing the dissemination activity: publications, conferences, workshops, web, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters, Other.

[4] A drop down list allows choosing the type of public: Scientific Community (higher education, Research), Industry, Civil Society, Policy makers, Medias, Other ('multiple choices' is possible).

5	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Klimawandel: Mittelmeer-Länder stehen vor politischen Unruhen*	*11/01/2010*	*www.lifegen.de*	*Civil society*	*9999*	*Germany*
6	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser-Management für den Mittelmeerraum: Uni München koordiniert EU-Projekt zum Klimawandel*	*11/01/2010*	*www.co2-handel.de*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Germany*
7	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser-Management f. d. Mittelmeerraum: Geographen d. LMU koordinieren millionenschweres EU-Projekt*	*12/01/2010*	*www.fona.de*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Germany*
8	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wassermanagement für den Mittelmeerraum*	*12/01/2010*	*www.uni-muenchen.de*	*Scientific community (higher education, Research)*	*9999*	*Worldwide (www)*
9	*Articles published in the popular press*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Wasser am Mittelmeer*	*13/01/2010*	*Süddeutsche Zeitung Munich (Campus München)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Germany*
10	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Dürre und Fluten - Wassermanagement fuer Mittelmeerregion wegen Klimawandelfolgen*	*13/01/2010*	*www.klima-media.de*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Germany*
11	*Articles published in the popular press*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Knappe Ressourcen richtig managen*	*15/01/2010*	*Bayerische Staatszeitung*	*Civil society - Policy makers - Medias*	*9999*	*Germany*
12	*Interviews*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Kampf der Wasserknappheit*	*25/01/2010*	*Bayern 2 - IQ Wissenschaft und Forschung*	*Scientific community (higher education, Research) - Civil society - Policy makers - Medias*	*9999*	*Germany*
13	*Presentations*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB FP7, climate changes, agroclimatology*	*30/01/2010*	*Cagliari / Italy*	*Scientific community (higher education, Research) - Policy makers*	*50*	*Italy*

14	*Articles published in the popular press*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Noi, sentinelle del deserto che avanza*	*03/02/2010*	*L'unione sarda / Italy*	*Civil society - Policy makers - Medias*	*9999*	*Italy*
15	*Interviews*	*ZAGAZIG UNIVERSITY*	*1st Formal meeting with FP7 team Zagazig and University representatives*	*14/02/2010*	*Zagazig / Egypt*	*Scientific community (higher education, Research)*	*20*	*Egypt*
16	*Web sites/Applications*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Climate Induced Changes on the Hydrology of Mediterranean Basins*	*16/02/2010*	*www.bayfor.org/de/eu-projekte/projekt-climb.php*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Worldwide (www)*
17	*Publication*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*EU-Forschungsprojekt CLIMB: WasserFairTeilung im Mittelmeerraum*	*01/03/2010*	*BayFOR-Newsletter 2010-1*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*5000*	*Germany*
18	*Web sites/Applications*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Climate Induced Changes on the Hydrology in Mediterranean Basins*	*03/03/2010*	*www.lgi.geographie.uni-kiel.de/forschung/aktuelle-projekte/climb.html*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*9999*	*Germany*
19	*Interviews*	*ZAGAZIG UNIVERSITY*	*2nd Formal meeting with FP7 team Zagazig and University representatives*	*14/03/2010*	*Zagazig / Egypt*	*Scientific community (higher education, Research)*	*18*	*Egypt*
20	*Press releases*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*The EU-project CLIMB: "Climate Induced Changes on the Hydrology in Mediterranean basins*	*20/03/2010*	*www.climb-fp7.eu/home/home.php*	*Scientific community (higher education, Research)*	*9999*	*Austria, Canada, Egypt, France, Germany, Italy, Palestinian administered areas, Tunisia, Turkey*
21	*Web sites/Applications*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*New tools for analyzing the impact of climate change*	*28/03/2010*	*www.agropolis.org/gcard/pdf/sheet-8.pdf*	*Scientific community (higher education, Research) - Policy makers*	*9999*	*Worldwide (www)*
22	*Conference*	*CENTRE NATIONAL DU*	*De nouveaux outils pour analyser l'impact*	*28/03/2010*	*Global Conference on Agricultural*	*Scientific community (higher education,*	*400*	*France*

		MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS	*du changement climatique*		*Research for Development (GCARD) / Montpellier / France*	*Research) - Policy makers*		
23	*Conference*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate-Induced Changes In The Mediterranean Region & Water Resources Management*	*08/04/2010*	*Yokohama / Japan*	*Scientific community (higher education, Research)*	*30*	*Japan*
24	*Interviews*	*ZAGAZIG UNIVERSITY*	*Meetings with local representatives at the northern part of the Nile-Delta*	*10/04/2010*	*Alexandria / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*3*	*Egypt*
25	*Conference*	*ZAGAZIG UNIVERSITY*	*Climate induced changes on the hydrology of Mediterranean basins - an European Environment project*	*18/04/2010*	*Environmental protection is a must (Alexandria / Egypt)*	*Scientific community (higher education, Research) - Policy makers - Medias*	*220*	*Egypt, Morocco, Saudia Arabia, Tunisia (Maghreb)*
26	*Posters*	*UNIVERSITE D'ANGERS*	*Stakeholder interaction and dissemination activities in the FP7-CLIMB project*	*26/04/2010*	*Integrated River Basin Management under the Water Framework Directive*	*Scientific community (higher education, Research) - Policy makers*	*200*	*European countries*
27	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Climate change impacts on water and security: orientations of the research foreseen over 2010-2013*	*27/04/2010*	*Conference on Integrated River Basin Management under the Water Framework Directive (Lille / France)*	*Scientific community (higher education, Research) - Policy makers*	*200*	*European countries*
28	*Presentations*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB FP7, climate changes, agroclimatology*	*29/04/2010*	*Sardinia / Italy*	*Scientific community (higher education, Research) - Policy makers*	*30*	*Italy*
29	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Hydro-geophysics for hillslope hydrology*	*04/05/2010*	*European Geosciences Union General Assembly 2010 (EGU 2010)*	*Scientific community (higher education, Research)*	*5000*	*Worldwide*
30	*Presentations*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*Assessment and management of water resources in*	*07/05/2010*	*European Geosciences Union General Assembly*	*Scientific community (higher education, Research)*	*5000*	*Worldwide*

			developing, Mediterranean, and dryland countries		*2010 (EGU 2010)*			
31	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Assessment and management of water resources in developing, Mediterranean, and dryland countries*	*07/05/2010*	*European Geosciences Union General Assembly 2010 (EGU 2010) - Vienna / Austria*	*Scientific community (higher education, Research)*	*5000*	*Worldwide*
32	*Presentations*	*UNIVERSITE D'ANGERS*	*Assessment and management of water resources in developing, Mediterranean, and dryland countries*	*07/05/2010*	*European Geosciences Union General Assembly 2010 (EGU 2010) - Vienna / Austria*	*Scientific community (higher education, Research)*	*5000*	*Worldwide*
33	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*xxx*	*30/05/2010*	*International Disaster and Risk Conference (IDRC) Davos 2010 / Switzerland*	*Scientific community (higher education, Research)*	*9999*	*Worldwide*
34	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with Tunisian stakeholders*	*01/06/2010*	*Tunisia*	*Civil society - Policy makers*	*11*	*Tunisia*
35	*Presentations*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Clustering EU-projects for an integrated perspective on climate change and water security in the Med*	*01/06/2010*	*ARW - Environmental Security Water Security, Management and Control (Marrakech/Morocco)*	*Scientific community (higher education, Research) - Policy makers - Medias*	*50*	*Morroco, Egypt, Tunisia, Germany, Italy, France, Greece, USA*
36	*Presentations*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*CLIMATE INDUCED CHANGES ON THE HYDROLOGY OF MEDITERRANEAN BASINS (CLIMB)*	*03/06/2010*	*Kemer-Antalya / Turkey*	*Scientific community (higher education, Research)*	*50*	*Turkey*
37	*Interviews*	*Islamic University of Gaza*	*Formulation of Stakeholder local committee*	*08/06/2010*	*Gaza / Palestininan administered areas*	*Scientific community (higher education, Research) - Policy makers*	*15*	*Palestininan administered areas*
38	*Posters*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*CLIMATE INDUCED CHANGES ON THE HYDROLOGY OF MEDITERRANEAN*	*10/06/2010*	*7th Intern. Recycling Environmental Technologies and*	*Industry*	*9999*	*International*

			BASINS (CLIMB)		*Waste Management Trade Fair (Istanbul / Turkey)*			
39	*Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Multidisciplinary, Integrated Approaches in Near-surface Geophysics*	*15/06/2010*	*72nd EAGE Conference & Exhibition incorporating SPE EUROPEC 2010 (Barcelona /Spain)*	*Scientific community (higher education, Research)*	*1000*	*International*
40	*Publication*	*Institut national de la recherche scientifique*	*Climate change impact assessment for a small river basin using a process-based numerical model*	*15/06/2010*	*XVIIth World Congress of the International Commission of Agriculture (Quebec City / Canada)*	*Scientific community (higher education, Research)*	*1000*	*International*
41	*Workshops*	*ZAGAZIG UNIVERSITY*	*Stakeholder-Workshop with CocaCola-Egypt on water risk, assessment and management*	*16/06/2010*	*Government of Alexandria / Egypt*	*Industry*	*13*	*Egypt*
42	*Workshops*	*ZAGAZIG UNIVERSITY*	*Stakeholder-Workshop with CocaCola-Egypt on water risk, assessment and management*	*16/06/2010*	*Gharbeya Government Nile Delta - Tanta / Egypt*	*Industry - Policy makers*	*16*	*Egypt*
43	*Workshops*	*ZAGAZIG UNIVERSITY*	*Stakeholder-Workshop with CocaCola-Egypt on water risk, assessment and management*	*17/06/2010*	*Qalyoubiya Government Nile Delta - Qalyoub / Egypt*	*Industry - Policy makers*	*20*	*Egypt*
44	*Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*HILLSLOPE CONTROLS ON THE HYDROLOGIC RESPONSE FROM A COUPLED SURFACE/SUBSURFACE MODEL*	*22/06/2010*	*XVIII International Conference on Water Resources CMWR 2010 (Barcelona / Spain)*	*Scientific community (higher education, Research)*	*50*	*International*
45	*Presentations*	*Islamic University of Gaza*	*Management of Water Ressources in Gaza - Problems und*	*23/06/2010*	*Munich/Germany - Department of Geography*	*Scientific community (higher education, Research)*	*40*	*Germany*

			Solutions					
46	*Presentations*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Climate Induced Changes on Water Resources: a need for quantifying risks and reducing uncertainties*	*23/06/2010*	*IPCC Workshop on Sea Level Rise and Ice Sheet Instabilities (Kuala Lumpur / Malaysia)*	*Scientific community (higher education, Research)*	*220*	*International*
47	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Trainingsworkshop on the European FP7 - the FP7-CLIMB-project as a successfull example*	*23/06/2010*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry - Policy makers*	*16*	*Germany*
48	*Workshops*	*UNIVERSITE D'ANGERS*	*Chiba basin Stakeholders Meeting*	*28/06/2010*	*Borj Cedria / Tunisia*	*Policy makers*	*6*	*Tunisia*
49	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB-Newsletter No. 0*	*01/07/2010*	*www.climb-fp7.eu/dissemination/downloads.php*	*Scientific community (higher education, Research) - Policy makers*	*9999*	*Worldwide (www)*
50	*Conference*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIWASEC–A cluster of FP7 research projects on climate change, water and security in Southern Europe*	*06/07/2010*	*International Workshop on Climate Change Impacts and Adaptation (Brussels / Belgium)*	*Scientific community (higher education, Research) - Policy makers*	*150*	*European countries*
51	*Press releases*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Im Gazastreifen wird das Wasser knapp*	*08/07/2010*	*Schwäbische Zeitung*	*Civil society - Policy makers - Medias*	*9999*	*Germany*
52	*Publication*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*NATO-Workshop zu Umwelt- und Wassersicherheit*	*09/07/2010*	*www.bayfor.org/en/public-relations/newsletter/archiv.php*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*5000*	*Germany*
53	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with stakeholders*	*09/07/2010*	*Thau / France*	*Scientific community (higher education, Research)*	*6*	*France*
54	*Workshops*	*ZAGAZIG UNIVERSITY*	*Stakeholder-Workshop with CocaCola-Egypt on water risk, assessment and management*	*13/07/2010*	*Alexandria Government Nile Delta Crush Factory*	*Scientific community (higher education, Research) - Industry - Policy makers*	*15*	*Egypt*
55	*Workshops*	*Islamic University of Gaza*	*Stakeholder local committee Gaza*	*14/07/2010*	*Gaza / Palestinian administered areas*	*Policy makers*	*60*	*Palestinian administered areas*

56	*Workshops*	*ZAGAZIG UNIVERSITY*	*Stakeholder-Workshop with CocaCola-Egypt on water risk, assessment and management*	*10/08/2010*	*Daqahliya Government Nile Delta - Mansura / Egypt*	*Scientific community (higher education, Research) - Industry - Policy makers*	*18*	*Egypt*
57	*Presentations*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Climate change impact assessment*	*01/09/2010*	*Munich / Germany*	*Scientific community (higher education, Research)*	*5*	*China*
58	*Workshops*	*ZAGAZIG UNIVERSITY*	*Visit to Sidi Abdel Rahman - Orascom Project*	*01/09/2010*	*Matruh Government northern coast / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*7*	*Egypt*
59	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with stakeholders*	*14/09/2010*	*Thau / France*	*Policy makers*	*7*	*France*
60	*Presentations*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Participation at a brokerage-event for SMEs in environmental research - presentation of CLIMB*	*15/09/2010*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*350*	*International*
61	*Posters*	*UNIVERSITE D'ANGERS*	*La nuit des chercheurs: the FP7 CLIMB-project*	*24/09/2010*	*La nuit des chercheurs (Angers / France)*	*Civil society*	*1000*	*France*
62	*Web sites/Applications*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB-Newsletter No. 1*	*01/10/2010*	*CLIMB-Website (www.climb-fp7.eu)*	*Scientific community (higher education, Research) - Policy makers*	*9999*	*Worldwide (www)*
63	*Conference*	*UNIVERSITE D'ANGERS*	*The FP7-CLIMB-project*	*01/10/2010*	*SUDEM-CLI project: 3rd workshop (Louvain / Belgium)*	*Scientific community (higher education, Research)*	*35*	*European countries*
64	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with stakeholders*	*05/10/2010*	*Noce / Italy*	*Civil society*	*14*	*Italy*
65	*Workshops*	*Islamic University of Gaza*	*Coordinate activities with the relevant local institutions*	*06/10/2010*	*Gaza / Palestinian administered areas*	*Scientific community (higher education, Research) - Policy makers*	*4*	*Palestinian administered areas*
66	*Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Sharp inversion of VRP travel-time data*	*27/10/2010*	*GNGTS – 29° congresso nazionale (Prato / Italy)*	*Scientific community (higher education, Research)*	*100*	*Italy*

67	*Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*14. Workshop Large Scale Hydrological Modelling*	*03/11/2011*	*Tutzing / Germany*	*Scientific community (higher education, Research)*	*50*	*Germany*
68	*Conference*	*Institut national de la recherche scientifique*	*Modeling hydrosphere interactions: assessing process representations at the hillslope, subcatchment*	*17/11/2010*	*4th Ouranos Symposium on Regional Climate Change and Adaptation (Quebec / Canada)*	*Scientific community (higher education, Research)*	*200*	*International*
69	*Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*FP7-ENV-CLIMB project*	*22/11/2010*	*EU – Russia collaboration for the evaluation of climate change impacts (Barnaul / Russia)*	*Scientific community (higher education, Research)*	*80*	*Russia, European countries*
70	*Conference*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Climate Induced changes on the hydrology of Mediterranean basins: Site Characterisation*	*28/11/2010*	*Symposium Tunisia-Japan (Tunis / Tunisia)*	*Scientific community (higher education, Research)*	*100*	*Tunisia, Japan*
71	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*FP7-ENV-CLIMB-project*	*29/11/2010*	*Sixteenth Conference of the Parties (COP16) (Booklet) (Cancún / Mexico)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*International*
72	*Conference*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Der Blick über den Tellerrand: Klimawandel im Mittelmeerraum*	*01/12/2010*	*Klimaforum 2010 (Munich / Germany)*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*250*	*Germany*
73	*Workshops*	*ZAGAZIG UNIVERSITY*	*Field trip to the studied area on Nile delta specially northern coast*	*07/12/2010*	*Nile-Delta / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*5*	*Egypt*
74	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*iningsworkshop on the European FP7 - the FP7-CLIMB-project as a successfull example*	*07/12/2010*	*Nuremberg / Germany*	*Scientific community (higher education, Research) - Industry - Policy makers*	*32*	*Germany*
75	*Workshops*	*Islamic University of Gaza*	*Coordination with the German DAAD office at the Palestinian*	*10/12/2010*	*Gaza / Palestinian administered areas*	*Scientific community (higher education, Research)*	*2*	*Palestinian administered areas, Germany*

			Authority					
76	*Conference*	*Institut national de la recherche scientifique*	*Simulating hydrologic interactions with a model formulation based on DEM-derived surface flow paths*	*13/12/2010*	*American Geophysical Union Fall Meeting (San Francisco / USA)*	*Scientific community (higher education, Research)*	*100*	*International*
77	*Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Ensemble Kalman Filter vs Particle Filter for a Physically Based Coupled Model of Surface-Subsurface*	*13/12/2010*	*American Geophysical Union Fall Meeting (San Francisco / USA)*	*Scientific community (higher education, Research)*	*100*	*International*
78	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Klimawandel und Wasser – Schwierigkeiten der Klimafolgenforschung*	*16/12/2010*	*Geographical Society Trier / Germany*	*Scientific community (higher education, Research) - Civil society*	*200*	*Germany*
79	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Presentation of CLIMB at the IUG Campus in Gaza City*	*19/12/2010*	*Gaza City / Palestinian administered areas*	*Scientific community (higher education, Research) - Policy makers*	*40*	*Palestinian administered areas*
80	*Publication*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Geodateninfrastrukturen und ihre Anwendungen in der Praxis*	*21/12/2010*	*PIK - Praxis der Informationsverarbeitung und Kommunikation (www.reference-global.com/doi/abs/)*	*Scientific community (higher education, Research) - Policy makers*	*9999*	*Germany*
81	*Web sites/Applications*	*Islamic University of Gaza*	*Website of the IUG published a report on the cooperation between IUG and FP7-CLIMB-project*	*01/01/2011*	*Gaza / Palestinain administered areas*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Arab Countries*
82	*Publication*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Coupling water flow and solute transport into a physically-based surface–subsurface hydrological mo*	*01/01/2011*	*Advances in Water Resources (2011) 128–136, doi: 10.1016/j.advwatres .2010.10.001*	*Scientific community (higher education, Research)*	*9999*	*International*
83	*Articles published in the popular press*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB FP7*	*03/01/2011*	*Cagliari / Italy*	*Civil society*	*10*	*Italy*
84	*Exhibitions*	*BAYERISCHE FORSCHUNGSA*	*CLIMB Roll-up*	*11/01/2011*	*Munich / Germany*	*Scientific community (higher education,*	*9999*	*European countries + International*

		LLIANZ GEMEINNUTZIGE GMBH				*Research) - Policy makers*		
85	*Media briefings*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Press kit - CLIMB project (incl. posters of all study sites, leaflets of CLIMB + CLIWASEC, papers)*	*11/01/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Policy makers*	*5000*	*Germany*
86	*Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Workshop on science and data gaps in EU Climate Change and water-related projects*	*12/01/2011*	*Riederalp / Switzerland*	*Scientific community (higher education, Research)*	*60*	*European countries*
87	*Conference*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Second General Assembly CLIMB-project and General Assembly CLIWASEC-cluster*	*31/01/2011*	*Cagliari / Italy*	*Scientific community (higher education, Research) - Policy makers*	*120*	*Italy*
88	*Web sites/Applications*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Jahresversammlung des EU-Forschungsclusters CLIWASEC: Gebündelte Fachkompetenz*	*31/01/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Policy makers*	*9999*	*Germany / Worldwide (www)*
89	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with stakeholders*	*01/02/2011*	*Sardinia, Italy*	*Civil society*	*19*	*Italy*
90	*Presentations*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*Potential of data mining methods for classification of radar images: Thau basin*	*01/02/2011*	*Master in computer science, Toulouse University (France)*	*Scientific community (higher education, Research)*	*50*	*France*
91	*Workshops*	*UNIVERSITE D'ANGERS*	*Rio Mannu basin Stakeholders Meeting*	*02/02/2011*	*Cagliari / Italy*	*Policy makers*	*80*	*Italy*
92	*Posters*	*Islamic University of Gaza*	*Climb Case Study: Gaza Site*	*02/02/2011*	*Gaza City / Palestinian administered areas*	*Civil society*	*100*	*Sardinia / Italy*
93	*Posters*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*CLIMB Case Study: Chiba river basin, Tunisia*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
94	*Posters*	*LUDWIG-*	*Climate induced*	*02/02/2011*	*CLIWASEC-*	*Scientific community*	*120*	*Italy*

		MAXIMILIANS-UNIVERSITAET MUENCHEN	*changes on water and security in Southern Europe and neighbouring regions*		*stakeholder meeting (Cagliari / Italy)*	*(higher education, Research) - Industry - Civil society - Policy makers - Medias*		
95	*Posters*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Climate Induced Changes on the Hydrology of Mediterranean Basins*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
96	*Posters*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*CLIMB Case Study: Kocaeli, Turkey*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
97	*Posters*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*CLIMB Case Study: Thau catchment, France*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
98	*Posters*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB Case Study: Nile Delta, Egypt*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
99	*Posters*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*CLIMB Case Study: Noce river basin, Italy*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
100	*Posters*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB Case Study: Rio Mannu di San Sperate, Italy*	*02/02/2011*	*CLIWASEC-stakeholder meeting (Cagliari / Italy)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Italy*
101	*Interviews*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB and water public management and policy*	*04/02/2011*	*Cagliari / Italy*	*Policy makers*	*12*	*Italy*
102	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ*	*Trainingsworkshop on the FP7 - FP7-CLIMB as a success story*	*16/02/2011*	*Weihenstephan / Germany*	*Scientific community (higher education, Research)*	*28*	*Germany*

		GEMEINNUTZIGE GMBH						
103	*Workshops*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Static and dynamic aspects of non-invasive monitoring of soil characteristics and conditions: implic*	*21/02/2011*	*AGRI-SENSING 2011: International Symposium on Sensing in Agriculture (Haifa / Israel)*	*Scientific community (higher education, Research)*	*100*	*International*
104	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*FP7-CLIMB-project*	*21/02/2011*	*WissensWerkstatt "Grüne Bildung für die Welt" (Feldafing / Germany)*	*Scientific community (higher education, Research) - Policy makers*	*40*	*Germany*
105	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Europäische Forschungsförderung - aktuelle Chancen und künftige Perspektiven - CLIMB als Beispiel*	*23/02/2011*	*Gründerzentrum Würzburg / Germany*	*Scientific community (higher education, Research) - Industry*	*25*	*Germany*
106	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Wasserforum International (Distribution of CLIMB-pressmaterial and CLIWASEC-leaflets)*	*24/02/2011*	*Hof / Germany*	*Scientific community (higher education, Research) - Policy makers*	*180*	*Germany, MENA-countries*
107	*Media briefings*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*CLIMB FP7 (PR material (Roll-up, press kit, leaflet etc.)*	*01/03/2011*	*Cagliari / Italy*	*Civil society*	*50*	*Italy*
108	*Publication*	*Islamic University of Gaza*	*Introduced the CLIMB Activities in the National and Regional Strategies - UNEP MAP Project Preparati*	*01/03/2011*	*Gaza City / Palestinian administered areas*	*Scientific community (higher education, Research)*	*80*	*International*
109	*Workshops*	*Islamic University of Gaza*	*Information on land use for academic, political and international institutions*	*01/04/2011*	*Gaza City / Palestinian administered areas*	*Scientific community (higher education, Research)*	*2000*	*Palestinian administered areas; international*
110	*Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Advances in borehole GPR data interpretation for hydrological purposes*	*03/04/2011*	*European Geosciences Union (EGU) General Assembly 2011*	*Scientific community (higher education, Research)*	*200*	*International*

					(Vienna / Austria)			
111	*Conference*	*Institut national de la recherche scientifique*	*Testing a process-based model of groundwater/surface water interactions at the hillslope, subcatchme*	*03/04/2011*	*European Geosciences Union General Assembly (Vienna / Austria)*	*Scientific community (higher education, Research)*	*9999*	*International*
112	*Interviews*	*ZAGAZIG UNIVERSITY*	*Meeting with Formal Representative of Egyptian Holding company for Water Supply*	*03/04/2011*	*Daqahliya Government Nile Delta (Egypt)*	*Scientific community (higher education, Research) - Policy makers*	*2*	*Egypt*
113	*Conference*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*EGU2011*	*03/04/2011*	*Vienna / Austria*	*Scientific community (higher education, Research)*	*9999*	*Vienna, Austria*
114	*Interviews*	*ZAGAZIG UNIVERSITY*	*Meeting with Formal Representative of Ministry of Irrigation and the Egyption Water Sector*	*04/04/2011*	*Ministry of Irrigation, Gizah Government (Egypt)*	*Scientific community (higher education, Research) - Policy makers*	*2*	*Egypt*
115	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Trainingsworkshop on the FP7 - FP7-CLIMB as a success story*	*05/04/2011*	*Rosenheim / Germany*	*Scientific community (higher education, Research)*	*32*	*Germany*
116	*Posters*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Sensitivity of the hydrological response in a Mediterranean catchment to different climate models*	*05/04/2011*	*EGU Vienna / Austria*	*Scientific community (higher education, Research)*	*50*	*International*
117	*Conference*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Study of intense precipitation events during the last 40 years in Sardinia (Italy)*	*08/04/2011*	*Vienna / Austria*	*Scientific community (higher education, Research)*	*9999*	*International*
118	*Conference*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Frequency, seasonal dependence and synoptic scale patterns of cyclones*	*08/04/2011*	*Vienna / Austria*	*Scientific community (higher education, Research)*	*9999*	*International*

119	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB – Climate Induced Changes on the Hydrology of Mediterranean Basins*	*28/04/2011*	*Water and Climate Change in the MENA-Region (Berlin / Germany)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*600*	*Europe, Middle East*
120	*Media briefings*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Jahresversammlung des EU-Forschungsclusters CLIWASEC: Gebündelte Fachkompetenz*	*02/05/2011*	*BayFOR-Newsletter*	*Scientific community (higher education, Research) - Policy makers*	*5000*	*Germany / Worldwide (www)*
121	*Interviews*	*ZAGAZIG UNIVERSITY*	*Meeting with Formal Representative of Egyptian Holding company for Water Supply (5 meetings)*	*03/05/2011*	*Gharbeya Government Nile Delta (Egypt)*	*Scientific community (higher education, Research) - Policy makers*	*2*	*Egypt*
122	*Interviews*	*ZAGAZIG UNIVERSITY*	*Meeting with Formal Representative of Egyptian Holding company for Water Supply*	*04/05/2011*	*Beiheira Government Nile Delta (Egypt)*	*Scientific community (higher education, Research) - Policy makers*	*2*	*Egypt*
123	*Conference*	*Institut national de la recherche scientifique*	*Étude des impacts de techniques de mise à l'échelle de modèles de climat sur la réponse hydrologique*	*09/05/2011*	*79ème Congrès de l'Association Francophone pour le Savoir (Sherbrooke / Canada)*	*Scientific community (higher education, Research)*	*200*	*International*
124	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Trainingsworkshop on the FP7 - FP7-CLIMB as a success story*	*23/05/2011*	*Munich / Germany*	*Scientific community (higher education, Research)*	*30*	*Germany*
125	*Conference*	*Institut national de la recherche scientifique*	*Validation et analyse de sensibilité d'un modèle de prédiction de l'humidité du sol en Montérégie*	*25/05/2011*	*25ème Congrès de l'Association Québécoise de Spécialistes en Sciences du Sol (Wendake,Québec/ Canada)*	*Scientific community (higher education, Research)*	*180*	*International*
126	*Conference*	*ZAGAZIG UNIVERSITY*	*Climate Change Impacts In The Nile Delta–A Perspective From The Climb*	*28/05/2011*	*15th International water technology conference (Alexandria / Egypt)*	*Scientific community (higher education, Research) - Policy makers*	*200*	*Egypt, Morroco, Tunisia, South Africa, Germany, Italy, France, Greece, USA*

			Project					
127	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*European Research Funding for MENA countries - the CLIMB project and CLIWASEC-cluster*	*28/05/2011*	*15th International Water Technology Conference (Alexandria / Egypt)*	*Scientific community (higher education, Research) - Industry - Policy makers*	*200*	*Egypt, Morroco, Tunisia, South Africa, Germany, Italy, France, Greece, USA*
128	*Flyers*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIWASEC leaflet*	*31/05/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Policy makers - Medias*	*5000*	*At all relevant conferences*
129	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Dong L., Baghdadi N., and Ludwig R., 2011. Retrieving surface soil moisture using radar imagery in a*	*01/06/2011*	*IEEE Transactions on Geoscience and Remote Sensing.*	*Scientific community (higher education, Research)*	*9999*	*Paper*
130	*Publication*	*Institut national de la recherche scientifique*	*Étude du potentiel des données polarimétriques RADARSAT-2 pour le suivi de l'humidité du sol en mili*	*01/06/2011*	*INRS-ETE, Quebec City, Canada (Technical Report R-1194)*	*Scientific community (higher education, Research)*	*9999*	*Paper*
131	*Workshops*	*Islamic University of Gaza*	*Meeting with water managers*	*01/06/2011*	*Gaza City / Palestinian administered areas*	*Scientific community (higher education, Research) - Industry - Policy makers*	*30*	*Palestinian administered areas*
132	*Publication*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*2011, Sharp inversion of Vertical Radar Profile (VRP) travel-time data*	*01/06/2011*	*Geophysics*	*Scientific community (higher education, Research)*	*9999*	*International*
133	*Web sites/Applications*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Forschung entwickeln und managen - Kooperationsprojekte effektiv unterstützen*	*01/06/2011*	*www.projectplace.de/Kunden/Kundenbeispiele/Bayerische-Forschungsallianz-GmbH/*	*Scientific community (higher education, Research) - Industry*	*9999*	*Germany*
134	*Web sites/Applications*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Kieler Geo-Studierende erleben Forschungsalltag hautnah*	*01/06/2011*	*CAU-Website (www.lgi.geographie.uni-kiel.de/aktuelles/sose2011)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Worldwide (www)*
135	*Workshops*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*IMCM2011*	*06/06/2011*	*Castellaneta Marina (TA) / Italy*	*Scientific community (higher education, Research)*	*70*	*Italy, Spain, Switzerland*

136	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Trainingsworkshop on the Seventh Framework Programme of the European Commission - the FP7-CLIMB-proj*	*14/06/2011*	*Augsburg / Germany*	*Scientific community (higher education, Research)*	*18*	*Germany*
137	*Presentations*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Stakeholder Meeting*	*15/06/2011*	*Izmit, Kocaeli / Turkey*	*Scientific community (higher education, Research) - Industry - Policy makers*	*30*	*Turkey*
138	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Distribution of leaflets CLIMB + CLIWASEC*	*16/06/2011*	*Infoday "Ocean of tomorrow" (Brussels / Belgium)*	*Scientific community (higher education, Research)*	*200*	*European countries*
139	*Interviews*	*UNIVERSITE D'ANGERS*	*Interviews with stakeholders*	*17/06/2011*	*Thau / France*	*Policy makers*	*4*	*France*
140	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Distribution of leaflets CLIMB + CLIWASEC*	*17/06/2011*	*Infoday "Environment" (Brussels / Belgium)*	*Scientific community (higher education, Research)*	*800*	*European countries and some third partner countries*
141	*Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*The FP7-CLIMB-project*	*22/06/2011*	*Mitmachen beim Nachhalten - Hochschultage Sustain IT! Nachhaltigkeit+Klimaschutz (Berlin / Germany)*	*Scientific community (higher education, Research) - Industry - Policy makers*	*2000*	*Germany*
142	*Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Trainingsworkshop on the FP7 - FP7-CLIMB as a success story*	*28/06/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*19*	*Germany*
143	*Presentations*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Strumenti modellistici integrati a supporto della mitigazione degli effetti climatici nella gestione*	*29/06/2011*	*Cagliari / Italy*	*Civil society*	*9999*	*Italy*
144	*Publication*	*BAYERISCHE FORSCHUNGSA*	*European and International Funding*	*01/07/2011*	*Water Security in the Mediter.Region.*	*Scientific community (higher education,*	*100*	*International*

		LLIANZ GEMEINNUTZIGE GMBH	*Programmes for Environmental Research with African Countries*		*Intern.Evaluation of Management,Control&Governance Approaches*	*Research) - Civil society - Policy makers*		
145	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*EU-Fördermöglichkeiten zur Kooperation von Wissenschaft und Wirtschaft (KMU)*	*06/07/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*19*	*Germany*
146	*Presentations*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Validazione e confronto incrociato degli scenari prodotti da differenti modelli climatici*	*06/07/2011*	*Cagliari / Italy*	*Scientific community (higher education, Research)*	*30*	*Italy*
147	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Characterization of contaminated sites via geophysical and direct push methods*	*10/07/2011*	*Ordine degli Ingegneri di Padova / Italy*	*Scientific community (higher education, Research)*	*60*	*Italy*
148	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Workshop-Reihe im Umweltbereich: UTG und europäische Förderung für KMU in F&E-Projekten*	*13/07/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*20*	*Germany*
149	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Blick in die Zukunft – der 5. Wissenschaftstag der Europäischen Metropolregion Nürnberg*	*15/07/2011*	*Nuremberg / Germany*	*Scientific community (higher education, Research)*	*300*	*Germany*
150	*Presentations*	*Islamic University of Gaza*	*Present results of CLIMB project WPs and activities*	*18/07/2011*	*Cairo / Egypt*	*Scientific community (higher education, Research)*	*15*	*Egypt*
151	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Workshop im Umweltbereich: Nationale Förderprogramme - CLIMB as a successful FP7*	*19/07/2011*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*60*	*Germany*

			Environment project					
152	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Modellazione idrologica di un bacino rappresentativo della Sardegna in condiz.di cambiamento climat.*	*26/07/2011*	*Rome / Italy*	*Scientific community (higher education, Research)*	*35*	*Italy*
153	*Publication*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Understanding water worries*	*19/08/2011*	*International innovation magazine*	*Scientific community (higher education, Research)*	*30000*	*International*
154	*Publication*	*Institut national de la recherche scientifique*	*Modélisation numérique de la recharge artificielle du site de Korba (Tunisie) par les eaux usées*	*28/08/2011*	*Quebec City / Canada (Proceedings, GeoHydro 2011 Conference)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Canada*
155	*Publication*	*Institut national de la recherche scientifique*	*Successes&challenges from recent applications of an integrated,physically-based model of groundwater*	*28/08/2011*	*Quebec City / Canada (Proceedings, GeoHydro 2011 Conference)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Canada*
156	*Publication*	*Institut national de la recherche scientifique*	*Hydrological responses to climate model outputs using an integrated,physically-based groundwater*	*28/08/2011*	*Quebec City / Canada (Proceedings, GeoHydro 2011 Conference)*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Canada*
157	*Posters*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Pedometrics conference*	*30/08/2011*	*Prag, Czech Republic*	*Scientific community (higher education, Research)*	*100*	*International*
158	*Organisation of Workshops*	*Islamic University of Gaza*	*Coordinate activities with the relevant local institutions*	*01/09/2011*	*Gaza Strip / Palestine*	*Policy makers*	*4*	*Palestine*
159	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ*	*Workshop-Reihe im Umweltbereich: Fördermöglichkeiten*	*05/09/2011*	*Hof / Germany*	*Scientific community (higher education, Research)*	*19*	*Germany*

		GEMEINNUTZIGE GMBH	*im 7. Forschungsrahmenprogramm-CLIMB*					
160	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*Modelcare 2011*	*18/09/2011*	*Leipzig / Germany*	*Scientific community (higher education, Research)*	*500*	*All over the world*
161	*Organisation of Workshops*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Introduction to the concept of hydrogeophysics and case studies*	*19/09/2011*	*Turin / Italy (Workshop W11 at GEOITALIA 2011)*	*Scientific community (higher education, Research)*	*40*	*National (Italy)*
162	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Rio Mannu study case: activities state and next steps*	*22/09/2011*	*Cagliari / Italy (CLIMB partners meeting)*	*Scientific community (higher education, Research)*	*7*	*Italy*
163	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*16th Intern. Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region*	*24/09/2011*	*Ioannina / Greece*	*Scientific community (higher education, Research)*	*240*	*International*
164	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*EU-Japan Workshop on Climate Change Research*	*09/10/2011*	*Brussels / Belgium*	*Scientific community (higher education, Research)*	*70*	*International*
165	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Hydro-geophysical techniques for groundwater characterization:the link betw. measurements&modelling*	*09/10/2011*	*Minneapolis / USA (Geological Society of America, Annual Meeting in Minneapolis)*	*Scientific community (higher education, Research)*	*150*	*International (USA)*
166	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Umweltforschung im Mittelmeerraum: Das EU-Projekt CLIMB (Die Lange Nacht der Wissenschaften)*	*22/10/2011*	*Nuremberg / Germany*	*Civil society*	*700*	*Germany*

167	*Presentations*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*The effect of climate change on water resources and the CLIMB project*	*27/10/2011*	*Gebze / Kocaeli / Turkey*	*Scientific community (higher education, Research)*	*300*	*Turkey*
168	*Web sites/Applications*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Launch of website of CLIMB in Turkish*	*01/11/2011*	*Web*	*Scientific community (higher education, Research)*	*9999*	*Türkey*
169	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Die Folgen des Klimawandels für die Hydrologie mediterraner Flussgebiete*	*01/11/2011*	*Umweltcluster Bayern / Umwelt, Technologie und Energie in Bayern*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*5000*	*Germany*
170	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*14. Workshop Large Scale Hydrological Modelling*	*03/11/2011*	*Tutzing / Germany*	*Scientific community (higher education, Research)*	*50*	*Germany*
171	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*The Use of Science in Policy-Making - distribution of CLIMB and CLIWASEC leaflets*	*07/11/2011*	*Brussels / Belgium*	*Scientific community (higher education, Research)*	*300*	*International*
172	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Geophysical monitoring of soil static and dynamic characteristics*	*14/11/2011*	*Trieste / Italy*	*Scientific community (higher education, Research)*	*100*	*National (Italy)*
173	*Exhibitions*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*GEO VIII Exhibition, German stand*	*15/11/2011*	*Istanbul / Turkey*	*Scientific community (higher education, Research)*	*200*	*International*
174	*Flyers*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CONHAZ Final Synthesis Conference*	*17/11/2011*	*Leipzig, Germany http://conhaz.org/project/synthesis-conference*	*Scientific community (higher education, Research)*	*120*	*Germany*
175	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET*	*Workshop on German-Palestinian Cooperation*	*20/11/2011*	*Ramallah / Palestine*	*Scientific community (higher education, Research)*	*55*	*Germany, Palestine*

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176	*Thesis*	*ZAGAZIG UNIVERSITY*	*Hydrological Studies, Geophysical & Geological to resolve some ….*	*24/11/2011*	*Tanta University, Zagazig / Egypt*	*Scientific community (higher education, Research)*	*50*	*Egypt*
177	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*The challenge of analysing climate change impacts on the hydrology*	*28/11/2011*	*Madrid / Spain www.idaea.csic.es/scarceconsolider/images/book%20of%20abstracts%202nd%20SCARCE.pdf*	*Scientific community (higher education, Research)*	*70*	*Spain*
178	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Hakim Gabtni - GFHN-GEOFCAN seminar*	*29/11/2011*	*Orleans / France*	*Scientific community (higher education, Research)*	*50*	*Orleans / France*
179	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Horriche, Feten Jarraya - GFHN-GEOFCAN seminar*	*29/11/2011*	*Orleans / France*	*Scientific community (higher education, Research)*	*50*	*Orleans / France*
180	*Publication*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Hakim Gabtni - Les Bulletin du GFHN*	*01/12/2011*	*France*	*Scientific community (higher education, Research)*	*100*	*France*
181	*Publication*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Horriche, Feten Jarraya - Les Bulletins du GFHN*	*01/12/2011*	*France*	*Scientific community (higher education, Research)*	*100*	*France*
182	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Climate change impacts on water and security*	*01/12/2011*	*Directorate-General for Research and Innovation, Cooperation Programm, Environment theme*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*English speaking countries*
183	*Publication*	*LUDWIG-*	*Der Einfluss des*	*01/12/2011*	*Generaldirektion*	*Scientific community*	*9999*	*Germany*

		MAXIMILIANS-UNIVERSITAET MUENCHEN	*Klimawandels auf Wasser und Sicherheit*		*Forschung und Innovation, Spazifisches Programm "Zusammenarbeit"*	*(higher education, Research) - Industry - Civil society - Policy makers - Medias*		
184	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Impatti del cambiamento climatico sull´acqua e sulla sicurezza*	*01/12/2011*	*Direzione generale per la ricerca e l´innovazione*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Italy*
185	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Impacto del cambio climático en el agua y la seguridad*	*01/12/2011*	*Dirección-General de Investigación e Innovación, Programa de cooperación*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Spain*
186	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Impacts du changement climatique sur l´au et la sécurité*	*01/12/2011*	*Direction générale pour la recherche et l´innovation*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*France*
187	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*تـــــــأثيرات □□□□□ علـــي المنـــــــاخ و الميـــــــاه فـــي الأمـــــن أوروبـــــا جنـــوب المنـــــــاطق و المجـــــــاورة*	*01/12/2011*	*Directorate-General for Research and Innovation, Cooperation Programm, Environment theme*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*9999*	*Arab Countries*
188	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Europäische Fördermöglichkeiten zur Kooperation von Wissenschaft und Wirtschaft (KMU)*	*06/12/2011*	*Nuremberg / Germany*	*Scientific community (higher education, Research) - Industry*	*15*	*Germany*
189	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Financial Dutch about Agriculture West Nile Delta*	*12/12/2011*	*Cairo / Egypt (Academy of Scientific Researchers & Dutch Embassy)*	*Scientific community (higher education, Research)*	*70*	*Egypt*

190	*Media briefings*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*A plan of cooperation for retrieving data on touristic sector&agriculture activities (Rio Mannu)*	*12/12/2011*	*virtual Cagliari - Graz*	*Scientific community (higher education, Research)*		*Italy, Austria*
191	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Cultivation in Nile Delta how we …*	*13/12/2011*	*Cairo / Egypt*	*Scientific community (higher education, Research)*	*70*	*Egypt*
192	*Publication*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*Sensitivity of C-band polarimetric SAR data to soil surface parameters over bare agriculture fields*	*01/01/2012*	*Munich / Germany International Geoscience and Remote Sensing Symposium (IGARSS)*	*Scientific community (higher education, Research)*	*500*	*International*
193	*Articles published in the popular press*	*Islamic University of Gaza*	*Impacts of Climate Changes on Gaza Aquifer*	*02/01/2012*	*IUG website*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*200000*	*Palestine*
194	*Organisation of Conference*	*Islamic University of Gaza*	*Seawater Intrusion in the Gaza Aquifer (Palestine) under climate induced changes*	*05/01/2012*	*Marrakech / Morocco*	*Scientific community (higher education, Research) - Civil society*	*300*	*Morocco*
195	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIWASEC-CLUSTER day during the FP7-CLICO General Assembly*	*18/01/2012*	*Brussels / Belgium*	*Scientific community (higher education, Research)*	*65*	*International*
196	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Veranstaltung zu europäischen Förderprogrammen für Forschung & Entwicklung im Umwelt&Energiebereich*	*26/01/2012*	*Deggendorf / Germany*	*Scientific community (higher education, Research) - Industry*	*16*	*Germany*
197	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Climatic Changes and its Impacts on Nile*	*28/01/2012*	*Cairo / Egypt*	*Scientific community (higher education,*	*9*	*Egypt*

			Delta			*Research)*		
198	*Interviews*	*ZAGAZIG UNIVERSITY*	*Questionnaires of Stakeholders Interaction*	*01/02/2012*	*Al Gharbiyah Government*	*Civil society - Policy makers*	*60*	*Egypt*
199	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Forschungs-Cluster gegen Wasserknappheit,CLIWASEC erforscht Folgen des Klimawandels im Mittelmeer*	*01/02/2012*	*Aviso – Zeitschrift für Wissenschaft und Kunst in Bayern*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*25000*	*Germany*
200	*Organisation of Workshops*	*Islamic University of Gaza*	*Seawater intrusion, Land use Land Covers in Gaza Site*	*02/02/2012*	*Islamic University of Gaza, Gaza / Palestine*	*Scientific community (higher education, Research) - Policy makers*	*15*	*Palestine*
201	*Presentations*	*Islamic University of Gaza*	*Gaza Site Results and WPs*	*13/02/2012*	*Ludwig Maximilian University of Munich / Germany*	*Scientific community (higher education, Research) - Policy makers*	*50*	*Germany*
202	*Posters*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Rio Mannu Study Case*	*13/02/2012*	*CLIMB GA, Munich / Germany*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*120*	*Germany, Italy, France, Austria, Tunisia, Egypt, Palestinian admin. areas, Canada, Turkey, Spain*
203	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Hydrological modeling using tRIBS in the Sardinian Study Case*	*13/02/2012*	*CLIMB GA, Munich / Germany*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*120*	*Germany, Italy, France, Austria, Tunisia, Egypt, Palestinian admin. areas, Canada, Turkey, Spain*
204	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB consortium*	*15/02/2012*	*Munich / Germany*	*Scientific community (higher education, Research)*	*120*	*International*
205	*Press releases*	*BAYERISCHE FORSCHUNGSA*	*Klimawandel und Wasserknappheit*	*15/02/2012*	*http://www.bayfor.org/de/oeffentlichkeits*	*Scientific community (higher education,*	*188*	*Germany*

		LLIANZ GEMEINNUTZIGE GMBH	*führen zu massiven Veränderungen im Mittelmeerraum*		*arbeit/presse/klimawandel-und-wasserknappheit-f-hren-zu-mas*	*Research) - Policy makers - Medias*		
206	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Adapting Egypt's Agriculture to Climate Change*	*26/02/2012*	*DAAD – German Academic Exchange Service in Cairo – Zamalek*	*Scientific community (higher education, Research) - Policy makers*	*70*	*Egypt*
207	*Publication*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*A potential use for the C-band polarimetric SAR parameters to characterise the soil surface*	*29/02/2012*	*IEEE TGRS: IEEE Transactions on Geoscience & Remote Sensing*	*Scientific community (higher education, Research)*	*500*	*International*
208	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*HDF - Wir bringen Ihr F&E-Projekt auf Förderkurs: CLIMB as a successful FP7 Environment project*	*01/03/2012*	*Garching / Germany*	*Scientific community (higher education, Research)*	*400*	*Germany*
209	*Presentations*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Validazione e confronto incrociato degli scenari prodotti da differenti modelli climatici*	*04/03/2012*	*Cagliari / Italy*	*Scientific community (higher education, Research)*	*30*	*Italy*
210	*Organisation of Conference*	*ZAGAZIG UNIVERSITY*	*Climate Change – How Vulnerable is Egypt?*	*12/03/2012*	*El Sawy Culturewheel, Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*70*	*Egypt*
211	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*To Assist in the Design of Groundwater*	*20/03/2012*	*Ministry of Housing & Institute of Housing, Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*11*	*Egypt*
212	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIG*	*CLIMB as a successful FP7 Environment project (Meeting with EU*	*27/03/2012*	*Meeting at the Ca' Foscari University; Venice / Italy*	*Scientific community (higher education, Research)*	*30*	*Italy*

		E GMBH	representatives)					
213	Organisation of Conference	CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL	Geoinformatik 2012 – Flyer	28/03/2012	Braunschweig / Germany	Policy makers	200	Germany, Austria, Switzerland
214	Presentations	BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH	Innovationsentwicklung über europäisch geförderte Forschungs- und Entwicklungsprojekte: CLIMB	28/03/2012	Würzburg / Germany	Industry	30	Germany
215	Videos	UNIVERSITA DEGLI STUDI DI TRENTO	Video of activities conducted in the Noce river basin	29/03/2012	Vermiglio / Italy	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias	9999	Italy
216	Interviews	Agris Sardegna - Agenzia per la Ricerca in Agricoltura	interviews of Stakeholders - public bodies leaders involved in water management	02/04/2012	Agris office, public offices, farms / Italy	Policy makers	6	Italy
217	Presentations	LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN	Cluster on Climate change, Water and Security in Southern Europe and neighbouring regions (CLIWASEC)	02/04/2012	Barcelona, http://ec.europa.eu/research/conferences/2012/euro-mediterranean/index_en.cfm?pg=home	Scientific community (higher education, Research)	600	International
218	Presentations	GEBZE YUKSEK TEKNOLOJI ENSTITUSU	Information Sharing Meeting on Climate Change Projects in Turkey	04/04/2012	Ankara / Turkey	Scientific community (higher education, Research)	20	Turkey
219	Organisation of Conference	UNIVERSITA DEGLI STUDI DI TRENTO	IRMS users meeting	11/04/2012	San Michele A. A. / Italy	Scientific community (higher education, Research)	150	Italy
220	Press releases	BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIG	IFAT Entsorga 2012 - Umweltschutz und nachhaltiges Ressourcenmanagem	12/04/2012	www.bayfor.org/de/oeffentlichkeitsarbeit/presse/ifat-entsorga-2012	Scientific community (higher education, Research) - Industry	200	Germany

		E GMBH	*ent im Brennpunkt*					
221	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*tRIBS hydrologic model applied in the Sardinian Case Study*	*16/04/2012*	*CLIMB Workshop on 'Hydro-climatic indicators of climate change', Trento / Italy*	*Scientific community (higher education, Research)*	*15*	*Germany, Austria, Italy, France, Turkey, Tunisia, Egypt, Canada, Palestinian administered areas*
222	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Harmonization of a hydrological model intercomparison*	*16/04/2012*	*Trento, CLIMB Workshop on 'Hydro-climatic indicators of climate change'*	*Scientific community (higher education, Research)*	*30*	*Germany, Austria, Italy, France, Turkey, Tunisia, Egypt, Canada, Palestinian administered areas*
223	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*To Assist in the Design of Groundwater*	*17/04/2012*	*Ministry of Housing & Institute of Housing, Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*12*	*Egypt*
224	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Geophysical mapping of soil static characteristics&monitoring of soil dynamic states:agrical.land*	*22/04/2012*	*EGU General Assembly 2012, Session SSS5.15 Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International (EU)*
225	*Publication*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Intercomparison&verification of outputs of climate models on representative Mediterranean catchments*	*22/04/2012*	*EGU 2012, Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International*
226	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Reduced Monte Carlo methods for the solution of stochastic groundwater flow problems*	*22/04/2012*	*EGU General Assembly 2012, Session HS8.1.1 Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International (EU)*
227	*Posters*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Improving convergence and mass balance in Richards equation-based solvers*	*22/04/2012*	*EGU General Assembly 2012, Session HS8.2.1 Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International (EU)*
228	*Organisation of*	*Institut national de*	*Surface-subsurface*	*23/04/2012*	*European*	*Scientific community*	*100*	*International*

	Conference	*la recherche scientifique*	*model intercomparison: first results in the diagnosis of hydrology and feedbacks*		*Geosciences Union - EGU - General Assembly, Vienna / Austria*	*(higher education, Research)*		
229	*Organisation of Conference*	*Institut national de la recherche scientifique*	*Improving convergence and mass balance in Richards equation-based solvers*	*23/04/2012*	*European Geosciences Union - EGU - General Assembly, Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International*
230	*Organisation of Conference*	*Institut national de la recherche scientifique*	*Impact of climate change on groundwater/surface water interactions projected by multimodel ensemble*	*23/04/2012*	*European Geosciences Union - EGU - General Assembly, Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International*
231	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project - Bayerisches Exzellenz-Programm Europa*	*24/04/2012*	*Munich / Germany*	*Policy makers*	*18*	*Germany*
232	*Presentations*	*Islamic University of Gaza*	*Water management, results of CLIMB project and WPs*	*25/04/2012*	*Al-Arish / Egypt*	*Scientific community (higher education, Research)*	*50*	*Egypt*
233	*Presentations*	*Islamic University of Gaza*	*Water management, results of CLIMB project and WPs*	*26/04/2012*	*Cairo / Egypt*	*Scientific community (higher education, Research)*	*20*	*Egypt*
234	*Organisation of Conference*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Intercomparison&verification of outputs of climate models on representative Mediterranean catchments*	*26/04/2012*	*Vienna / Austria*	*Scientific community (higher education, Research)*	*100*	*International*
235	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*A Greener Cairo – Visions & Realities*	*26/04/2012*	*DAAD – German Academic Exchange Service in Cairo, Zamalek /*	*Scientific community (higher education, Research) - Policy makers*	*70*	*Egypt*

					Egypt			
236	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Environmental Aspects of Decision Plans*	*30/04/2012*	*Ministry of Housing & Institute of Housing, Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*15*	*Egypt*
237	*Publication*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*Estimation of soil parameters over bare agriculture areas from C-band polarimetric SAR data ...*	*01/05/2012*	*HESS: Hydrology and Earth System Sciences www.hydrol-earth-syst-sci-discuss.net/9/2897/2012/html*	*Scientific community (higher education, Research)*	*200*	*International*
238	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Europäische Förderprogramme für F&E im Bereich Umwelt & Energie - CLIMB project*	*03/05/2012*	*Amberg-Weiden / Germany*	*Scientific community (higher education, Research) - Industry*	*13*	*Germany*
239	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*European funding programs for research & development in the water sector - 16. IWTC 2012*	*07/05/2012*	*Istanbul / Turkey*	*Scientific community (higher education, Research)*	*200*	*International*
240	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project (IFAT ENTSORGA 2012)*	*07/05/2012*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*100*	*Worldwide*
241	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Current developments and perspectives of research on climate change and water in the Mediterranean*	*13/05/2012*	*Rome/Italy, www.circeproject.eu/images/stories/event_docs/circe_final_conference_draft_agenda.v6.pdf*	*Scientific community (higher education, Research)*	*70*	*International*
242	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project (Universities of Applied Sciences GO*	*15/05/2012*	*Munich / Germany*	*Scientific community (higher education, Research)*	*40*	*Germany*

			Europe)					
243	*Presentations*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate Change: Situation in our region - What can we do?*	*17/05/2012*	*Kocaeli / Turkey*	*Scientific community (higher education, Research)*	*100*	*Turkey*
244	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Le indagini geofisiche – le linee guida dell'Associazione delle Società di Geofisica (ASG)*	*18/05/2012*	*Centro di GeoTecnologie, San Giovanni Valdarno / Italy*	*Scientific community (higher education, Research)*	*50*	*National (Italy)*
245	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project" (Trainingsworkshop „Europäische Förderprogramme")*	*24/05/2012*	*Rosenheim / Germany*	*Scientific community (higher education, Research) - Industry*	*27*	*Germany*
246	*Organisation of Workshops*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Discussion on cropping systems models for case study Sardinia*	*25/05/2012*	*DIT Univ. of Cagliari, Cagliari / Italy*	*Scientific community (higher education, Research)*	*26*	*Italy, Germany, France, Austria, Tunisia, Canada*
247	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Environmental Aspects of Decision plans*	*27/05/2012*	*Ministry of Housing & Institute of Housing, Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*13*	*Egypt*
248	*Publication*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Water resources management strategy establishment for the semi-arid regions affected by CC*	*28/05/2012*	*Ohrid / Macedonia*	*Scientific community (higher education, Research)*	*100*	*Macedonia*
249	*Publication*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Assimilation of vegetation parameters & snow cover derived from EO in the hydrological model promet*	*01/06/2012*	*IGARSS 2012, Munich / Germany*	*Scientific community (higher education, Research)*	*200*	*International*
250	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Unser EU-Projekt hilft Ländern,die vom Klimawandel bedroht sind*	*01/06/2012*	*Aufbruch Bayern: für Familie, Bildung, Innovation*	*Scientific community (higher education, Research) - Industry - Civil society - Policy*	*200*	*Germany*

						makers - Medias		
251	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project (Trainingsworkshop „Europäische Förderprogramme")*	*05/06/2012*	*Ruhstorf an der Rott / Germany*	*Scientific community (higher education, Research) - Industry*	*28*	*Germany*
252	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Confronto e validazione degli output di vari modelli climatici regionali su bacini idrologici ...*	*07/06/2012*	*Arcavacata di Rende (CS), Italy*	*Scientific community (higher education, Research)*	*50*	*Italy*
253	*Publication*	*Institut national de la recherche scientifique*	*Spatial variability of selected superficial soil properties & C-band SAR polarimetric parameters*	*10/06/2012*	*http://www.climb-fp7.eu/news/events_details.php?events_id=78 Ottawa / Canada*	*Scientific community (higher education, Research)*	*200*	*International*
254	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project" Trainingsworkshop European R&D-projects*	*13/06/2012*	*Hof / Germany*	*Scientific community (higher education, Research) - Industry*	*19*	*Germany*
255	*Organisation of Conference*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Uncertainties and adaptation to CC*	*13/06/2012*	*Meudon / France*	*Scientific community (higher education, Research) - Civil society*	*70*	*International*
256	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*13/06/2012*	*Hof / Germany*	*Scientific community (higher education, Research) - Industry*	*19*	*Germany*
257	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*Two-phase simulation of a variable rate infiltration experiment*	*17/06/2012*	*Urbana-Champaign / USA*	*Scientific community (higher education, Research)*	*500*	*All countries*
258	*Organisation of Workshops*	*UNIVERSITE FRANCOIS*	*The CLIMB project and its international*	*18/06/2012*	*Munich / Germany*	*Scientific community (higher education,*	*100*	*Germany, China*

		RABELAIS DE TOURS	*cooperation challenges in the ERASMUS context*			*Research) - Civil society*		
259	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*19/06/2012*	*Deggendorf / Germany*	*Scientific community (higher education, Research) - Industry*	*22*	*Germany*
260	*Organisation of Workshops*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Downscaling and uncertainties*	*19/06/2012*	*Munich / Germany (CLIMB partners meeting)*	*Scientific community (higher education, Research)*	*30*	*Germany, Austria, Italy, France, Turkey, Tunisia, Egypt, Canada, Palestinian administered areas*
261	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Some presentation from the WP4 working group:Deidda,Marroccu,Caroletti,Lucarini,Puliga,Speranza*	*20/06/2012*	*Munich / Germany*	*Scientific community (higher education, Research)*	*15*	*Germany, Italy, Austria, France, Tunisia, Canada, Palestinian admin. areas*
262	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Downscaling and uncertainties*	*20/06/2012*	*Munich / Germany*	*Scientific community (higher education, Research)*	*30*	*Germany, Austria, Italy, France, Turkey, Tunisia, Egypt, Canada, Palestinian administered areas*
263	*Organisation of Workshops*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Harmonisation Strategy for the hydrological impact modelling in a given case study site (CLIMB)*	*21/06/2012*	*Munich / Germany (CLIMB partners)*	*Scientific community (higher education, Research)*	*30*	*Mediterranean*
264	*Presentations*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Attività del programma CLIMB del VII P.Q.*	*26/06/2012*	*Cagliari, Agris central office*	*Scientific community (higher education, Research)*	*45*	*Italy*
265	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*27/06/2012*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*28*	*Germany*
266	*Organisation of Conference*	*UNIVERSITE FRANCOIS*	*Control or manipulate the uncertainty? from*	*28/06/2012*	*Paris / France*	*Scientific community (higher education,*	*60*	*International*

		RABELAIS DE TOURS	*beaches of Brittany to CC*			*Research)*		
267	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*29/06/2012*	*Regensburg / Germany*	*Scientific community (higher education, Research) - Industry*	*26*	*Germany*
268	*Publication*	*DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV*	*Quantifying&reducing uncertainty in assessment of water-related risks in Europe&neighb. countries*	*01/07/2012*	*IEMSS 2012, Leipzig / Germany*	*Scientific community (higher education, Research)*	*80*	*International*
269	*Presentations*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*A regression kriging approach to predict soil surface properties in a Mediterranean basin*	*02/07/2012*	*Bari / Italy*	*Scientific community (higher education, Research)*	*100*	*European countries*
270	*Presentations*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Attività del programma CLIMB del VII P.Q., updates on cropping systems models*	*07/07/2012*	*Cagliari, Agris central office / Italy*	*Scientific community (higher education, Research)*	*23*	*Italy*
271	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*10/07/2012*	*Aschaffenburg / Germany*	*Scientific community (higher education, Research) - Industry*	*400*	*Germany*
272	*Organisation of Workshops*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Impact du changement climatique sur les hydro-systèmes en région méditerranéenne.*	*10/07/2012*	*Orléans / France*	*Scientific community (higher education, Research)*	*45*	*Mediterranean*
273	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*A joint research effort of the Water Science Alliance in the Mediterranean*	*11/07/2012*	*Berlin / Germany*	*Scientific community (higher education, Research)*	*150*	*Germany*
274	*Exhibitions*	*BAYERISCHE*	*Blick in die Zukunft –*	*15/07/2012*	*Nuremberg /*	*Scientific community*	*300*	*Germany*

		FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH	*der 5. Wissenschaftstag der Europäischen Metropolregion Nürnberg*		*Germany*	*(higher education, Research)*		
275	*Organisation of Workshops*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*NATEG DAYS 2012: (North American Tunisian Engineers Group)*	*15/07/2012*	*Monastir / Tunisia*	*Scientific community (higher education, Research)*		*Monastir / Tunisia*
276	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project*	*20/07/2012*	*Nuremberg / Germany*	*Scientific community (higher education, Research) - Industry*	*800*	*Germany*
277	*Organisation of Conference*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Assimilation of vegetation parameters&snow cover derived from eo in the hydrological model promet...*	*24/07/2012*	*Munich / Germany*	*Scientific community (higher education, Research)*	*80*	*Germany*
278	*Media briefings*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Jahresbericht 2011*	*01/09/2012*	*www.bayfor.org/media/uploads/ktml/files/jahresbericht2011/jahresbericht2011_bayfor_de_web_092*	*Scientific community (higher education, Research) - Civil society*	*9999*	*Germany*
279	*Publication*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*Clustering und interkulturelle Kommunikation*	*01/09/2012*	*Europäische Dimensionen, Jahresbericht 2011*	*Civil society*	*1500*	*Germany*
280	*Posters*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Universal Cokriging of alr-transformed soil separates at field scale using geophysical sensing data*	*01/09/2012*	*Tübingen / Germany*	*Scientific community (higher education, Research)*	*100*	*Germany*

281	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Introduction to the concept of hydrogeophysics and case studies*	*01/09/2012*	*Torino / Italy*	*Scientific community (higher education, Research)*	*50*	*Italy*
282	*Organisation of Workshops*	*Islamic University of Gaza*	*Coordinate activities with the relevant local institutions*	*02/09/2012*	*Gaza Strip / Palestine*	*Policy makers*	*20*	*Gaza Strip / Palestine*
283	*Posters*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Universal Cokriging of alr-transformed soil separates at field scale using geophysical sensing data*	*07/09/2012*	*Tübingen / Germany*	*Scientific community (higher education, Research)*	*30*	*Germany*
284	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*IDRA 2012*	*10/09/2012*	*Brescia / Italy*	*Scientific community (higher education, Research)*	*500*	*Italy*
285	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*EU-Forschungs-Cluster CLIWASEC: intern.Projektverbund für die Klimafolgenforschung im Mittelmeerraum*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
286	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*EU-Forschungsprojekt CLIMB: die Folgen von Klimawandel und Wasserknappheit im Mittelmeerraum*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
287	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Massive ökologische Konsequenzen und wirtschaftliche Verteilungskämpfe*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
288	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Internationale CLIWASEC-Fachtagung schildert Auswirkungen der Klimaänderung für die Wasserversorgung*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*

289	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Unsicherheiten der Klimamodellierung, Herausforderung bei Prüfung und Downscaling der Klimamodelle*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
290	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Hydrologische Modellensembles: das Fundament für weitere Analysen*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
291	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Geodatenmanagement auf hohem Niveau*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*Germany*
292	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIWASEC-Projektergebnisse in Politik und Öffentlichkeit tragen*	*13/09/2012*	*gwf - Wasser|Abwasser*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1500*	*International*
293	*Organisation of Workshops*	*Islamic University of Gaza*	*Introduction to Models and Groundwater Modeling*	*23/09/2012*	*Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*20*	*Egypt*
294	*Presentations*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Status of activities in WP4 downscaling of variable of interest.*	*24/09/2012*	*Pula / Italy*	*Scientific community (higher education, Research)*	*15*	*Germany, Italy, Austria, France, Tunisia, Canada, Palestinian admin. areas*
295	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Model-Harmonisation-Strategy-Rio Mannu-basin (study site workshop)*	*24/09/2012*	*Pula / Italy*	*Scientific community (higher education, Research)*	*25*	*International*
296	*Organisation of Conference*	*Islamic University of Gaza*	*Report on Gaza study site activities CLIMB Gaza site*	*26/09/2012*	*Pula / Italy (CLIMB partners meeting)*	*Scientific community (higher education, Research)*	*25*	*Italy*

297	*Publication*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Water rivalries and climate change in the Mediterranean: how many pertinent spatial scales?*	*30/09/2012*	*Toulouse / France*	*Scientific community (higher education, Research)*	*40*	*Mediterranean*
298	*Organisation of Workshops*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Applications and studies on the AquaCrop model*	*10/10/2012*	*Eng. DIT, University, Cagliari / Italy*	*Scientific community (higher education, Research)*	*8*	*Italy*
299	*Organisation of Workshops*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*WP4-6 on the Sardinia Case study*	*13/10/2012*	*Pula / Italy*	*Scientific community (higher education, Research)*	*20*	*Italy*
300	*Organisation of Workshops*	*Islamic University of Gaza*	*CLIMB Results of Gaza Site*	*14/10/2012*	*IUG - The Arab Environmental Day; Gaza / Palestine*	*Scientific community (higher education, Research)*	*100*	*Palestine*
301	*Publication*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Changement climatique en Méditerranée*	*15/10/2012*	*MICROSCOOP, CNRS Centre Poitou-Charentes journal, Special Issue, October 2012*	*Scientific community (higher education, Research)*		*Mediterranean*
302	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB - Klimawandel und Wasserknappheit im Mittelmeerraum (12. Münchner Wissenschaftstage)*	*20/10/2012*	*München / Germany*	*Civil society*	*2000*	*Germany*
303	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Delegation visit to Montreal with Bavarian State Minister on Economy*	*22/10/2012*	*Montreal / Canada*	*Scientific community (higher education, Research) - Industry*	*50*	*Canada, Germany*
304	*Publication*	*JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH*	*Hotspot Mittelmeer - Folgen des Klimawandels auf Italien und Tunesien*	*01/11/2012*	*Ökologisches Wirtschaften 4/2012*	*Scientific community (higher education, Research)*		*Germany, Austria*
305	*Posters*	*GEBZE YUKSEK TEKNOLOJI*	*Climate Induced Changes on the Hydrology of*	*01/11/2012*	*INNOVATION TURKIYE EXPO,*	*Civil society*	*9826*	*Istanbul / Turkey*

		ENSTITUSU	*Mediterranean Basins*		*Istanbul / Turkey*			
306	*Interviews*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB: Den Klimawandel verstehen*	*03/11/2012*	*http://www.bayfor.org/media/uploads/kml/files/BayFORNews/BayFOR-NEWS_November_2012.pdf*	*Scientific community (higher education, Research) - Industry*	*5000*	*Germany*
307	*Presentations*	*Islamic University of Gaza*	*Effects of Climate Changes on Water Demand and Water Supply in Gaza Strip - Palestine*	*06/11/2012*	*Feldafing / Germany*	*Scientific community (higher education, Research)*	*60*	*Germany*
308	*Flyers*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB - Klimawandel und Wasserknappheit im Mittelmeerraum*	*06/11/2012*	*Feldafing / Germany*	*Scientific community (higher education, Research) - Industry*	*40*	*International*
309	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB workshop of Dissemination activities*	*08/11/2012*	*Kiel / Germany*	*Scientific community (higher education, Research)*	*11*	*International*
310	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*CLIMB: den Klimawandel verstehen*	*09/11/2012*	*BayFOR News*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*4700*	*Germany*
311	*Organisation of Workshops*	*Islamic University of Gaza*	*CLIMB workshop of Dissemination activities*	*09/11/2012*	*Kiel / Germany (CLIMB partners meeting)*	*Scientific community (higher education, Research)*	*11*	*Germany*
312	*Interviews*	*Agris Sardegna - Agenzia per la Ricerca in Agricoltura*	*Interactions with stakehoders and questionnaires*	*11/11/2012*	*Senorbì / Italy*	*Civil society - Policy makers*	*30*	*Italy*
313	*Interviews*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Podium discussion on Horizon2020, the EU Framework Programme for Research and*	*22/11/2012*	*Bremen / Germany*	*Scientific community (higher education, Research)*	*100*	*International*

			Innovation					
314	*Flyers*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB - Klimawandel und Wasserknappheit im Mittelmeerraum(Informationsveranstaltung zu Horizon 2020)*	*22/11/2012*	*München / Germany*	*Scientific community (higher education, Research) - Industry*	*180*	*Germany*
315	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*WCI in Hadrumete International Workshop*	*22/11/2012*	*Sousse / Tunisia*	*Scientific community (higher education, Research)*	*23*	*Tunisia*
316	*Organisation of Workshops*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Side Event: Climate Change Impacts on Water Resources*	*23/11/2012*	*Istanbul / Turkey*	*Scientific community (higher education, Research)*	*150*	*Turkey*
317	*Publication*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*The Effect of Climate Change on Mediterranean Water Basins and the CLIMB Project*	*23/11/2012*	*Istanbul / Turkey*	*Scientific community (higher education, Research)*	*150*	*Turkey*
318	*Presentations*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Uncertainties in assessing climate change impacts on the hydrology of Mediterranean basins*	*26/11/2012*	*Valence / Spain*	*Scientific community (higher education, Research)*	*60*	*Spain*
319	*Presentations*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Water scarcity in Mediterranean induces an increase of water users in hydro systems: with no risks?*	*26/11/2012*	*Valence / Spain; http://www.icra.cat/activities/scarce-annual-conference/117*	*Scientific community (higher education, Research)*	*60*	*Spain*
320	*Flyers*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project (der Hochschultag Niederbayern-Oberpfalz)*	*29/11/2012*	*Regensburg / Germany*	*Scientific community (higher education, Research) - Industry*	*360*	*Germany*
321	*Organisation of*	*UNIVERSITE*	*Cooperation between*	*30/11/2012*	*Valence, Spain*	*Scientific community*	*60*	*Spain*

	Conference	*FRANCOIS RABELAIS DE TOURS*	*CLIMB and SCARCE*			*(higher education, Research)*		
322	*Publication*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*European environmental research funding for Mediterranean and Mena countries*	*01/12/2012*	*Fresenius Environmental Bulletin*	*Scientific community (higher education, Research) - Industry - Policy makers*	*200*	*Germany*
323	*Presentations*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate Change Impacts in Turkey*	*01/12/2012*	*Ankara / Turkey*	*Civil society*	*50*	*Turkey*
324	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Monitoring soil-vegetation interactions using non-invasive geophysical techniques*	*01/12/2012*	*AGU Fall Meeting, San Francisco / USA; http://fallmeeting.agu.org/2012/eposters/eposter/h33a-1286/*	*Scientific community (higher education, Research)*	*150*	*International*
325	*Presentations*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*A comparison between hydrological model predictions and micro-gravity time-lapse distributed surveys*	*01/12/2012*	*AGU Fall Meeting, San Francisco / USA; http://fallmeeting.agu.org/2012/eposters/eposter/h33a-1283/*	*Scientific community (higher education, Research)*	*150*	*International*
326	*Organisation of Conference*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*Mixing, entropy and reactive solute transport*	*03/12/2012*	*AGU Fall Meeting, San Francisco / USA*	*Scientific community (higher education, Research)*	*20000*	*International*
327	*Flyers*	*BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH*	*CLIMB as a successful FP7 Environment project (Workshop: Wie manage ich ein EU-Projekt?)*	*04/12/2012*	*Munich / Germany*	*Scientific community (higher education, Research) - Industry*	*35*	*Germany*
328	*Organisation of Workshops*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Workshop on European Satellite Snow Monitoring Perspectives*	*04/12/2012*	*Darmstadt / Germany*	*Policy makers*	*50*	*International*
329	*Organisation of*	*UNIVERSITE*	*WP7: Social Network*	*05/12/2012*	*Louvain la Neuve /*	*Scientific community*	*30*	*Belgium*

	Workshops	*FRANCOIS RABELAIS DE TOURS*	*Analyses*		*Belgium*	*(higher education, Research)*		
330	*Interviews*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Interviews with stakeholders*	*09/12/2012*	*Tunis / Tunisia*	*Policy makers*	*16*	*Tunisia*
331	*Publication*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Dong L. et al.(2011): Retrieving surface soil moisture using radar imagery in a semiarid environment*	*01/01/2013*	*Geoscience and Remote Sensing Letters, IEEE*	*Scientific community (higher education, Research)*	*1000*	*Paper*
332	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Road Map for Climate Change in Egypt*	*13/01/2013*	*Cairo / Egypt*	*Scientific community (higher education, Research)*	*15*	*Egypt*
333	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Sustainable development - Climate Talks*	*27/01/2013*	*Cairo / Egypt*	*Scientific community (higher education, Research) - Policy makers*	*45*	*Egypt*
334	*Publication*	*CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS*	*Sensitivity of multi-frequency polarimetric SAR data to soil moisture&surface roughness ...*	*01/07/2013*	*http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6340308*	*Scientific community (higher education, Research)*		*International*
335	*Oral presentation to a scientific event*	*Institut national de la recherche scientifique*	*Climate change impacts on groundwater recharge in the Chiba catchment, Cap-Bon peninsula (Tunisia)*	*10/01/2013*	*66th Canadian Geotechnical Conference / Joint NAGS/IAH-CNC Conference, Montreal, Canada*	*Scientific community (higher education, Research)*	*80*	*Canada, International*
336	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Case Study Implementation: Chiba basin*	*15/01/2013*	*CLIMB GA, Istanbul, Turkey*	*Scientific community (higher education, Research) - Industry - Policy makers*	*30*	*Turkey, International*
337	*Organisation of*	*Institut national de*	*CATHY model setup*	*16/01/2013*	*Istanbul, Turkey*	*Scientific community*	*35*	*Turkey*

	Workshops	*la recherche scientifique*	*for the Chiba site*			*(higher education, Research)*		
338	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Rio Mannu Case Study: tRIBS hydrologic model application*	*16/01/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research)*	*50*	*International*
339	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Models (CMs) Auditing & Downscaling*	*16/01/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research)*	*50*	*International*
340	*Oral presentation to a scientific event*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Chiba catchment hydrological modeling (Cap-Bon, Tunisia) using CATHY*	*16/01/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research)*	*30*	*International*
341	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*CLIWASEC Cluster Day on Science-Policy Interfacing*	*17/01/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers*	*60*	*European countries*
342	*Organisation of Conference*	*Islamic University of Gaza*	*Inevitability of the Urban Agriculture in Gaza Strip – Future Vision*	*20/01/2013*	*Gaza, Palestinian Administered areas*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*300*	*Palestine*
343	*Exhibitions*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Days of presentation of the Faculty, presentation of activities within CLIMB*	*09/02/2013*	*Tours, France*	*Scientific community (higher education, Research)*	*80*	*France*
344	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Ground water salization and water treatment requires for drinking and*	*11/02/2013*	*Zagazig university water risk center*	*Scientific community (higher education, Research)*	*30*	*Egypt*

			agriculture					
345	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Soil salinzation and crop changes*	*18/02/2013*	*Gharbia Governorate*	*Industry - Civil society*	*30*	*Egypt*
346	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Models (CMs) Auditing & Downscaling*	*20/02/2013*	*Potenza, Italy*	*Scientific community (higher education, Research)*	*50*	*Italy*
347	*Oral presentation to a wider public*	*Islamic University of Gaza*	*Coordinate activities with the relevant local related institutions*	*21/02/2013*	*Gaza Strip, Palestinian Administered areas*	*Industry - Civil society*	*3*	*Palestine*
348	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Water Availability and Security in Southern Europe and the Mediterranean (WASSERMed Final Conference) - presentation and panel discussion on ongoing funding options*	*21/03/2013*	*Milano, Italy (http://www.wassermed.eu/images/stories/Final%20Conference.pdf)*	*Scientific community (higher education, Research)*	*60*	*European countries*
349	*Interviews*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Dissemination of CLIMB results*	*24/02/2013*	*Sète, Thau case study*	*Industry - Policy makers*	*8*	*France*
350	*Oral presentation to a scientific event*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Japanese Delegation from RESTEC (Remote Sensing Technology Center of Japan)*	*27/02/2013*	*Munich, Germany*	*Scientific community (higher education, Research)*	*2*	*Japan*
351	*Organisation of Workshops*	*VISTA Geowissenschaftliche Fernerkundung GmbH*	*Alpine Convention - Water Management Platform - Expert Meeting "Climate change: threat or opportunity? Changing business in*	*04/03/2013*	*Bolzano, Italy*	*Scientific community (higher education, Research)*	*30*	*International*

			a changing climate"					
352	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Erfolgreich in Unterfranken - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*07/03/2013*	*Bad Kissingen, Germany (http://www.bayfor.org/de/oeffentlichkeitsarbeit/veranstaltungen/erfolgreich-*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*200*	*Germany*
353	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Innovation durch Kooperation - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*14/03/2013*	*Bamberg, Germany (http://www.bayfor.org/de/oeffentlichkeitsarbeit/veranstaltungen/innovation-durch-k*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*150*	*Germany*
354	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Erfolgreich in Mittelfranken - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*21/03/2013*	*Bad Windsheim, Germany (http://www.bayfor.org/de/oeffentlichkeitsarbeit/veranstaltungen/erfolgreich-*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*120*	*Germany*
355	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Hydrological impact of climate change in a Mediterranean catchment with limited data availability*	*09/04/2013*	*EGU - Vienna, Austria*	*Scientific community (higher education, Research)*	*30*	*International*
356	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Time-lapse 3D electrical resistivity tomography to monitor soil-plant interactions*	*10/04/2013*	*EGU General Assembly, Vienna*	*Scientific community (higher education, Research)*	*100*	*International*
357	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Hydro-geophysical monitoring and stochastic inverse modeling of a controlled irrigation experiment*	*10/04/2013*	*EGU General Assembly, Vienna*	*Scientific community (higher education, Research)*	*100*	*International*

358	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Measuring and Modelling water related soil - vegetation feedbacks in a fallow plot*	*10/04/2013*	*EGU General Assembly, Vienna*	*Scientific community (higher education, Research)*	*100*	*International*
359	*Posters*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Response of durum wheat to water variability under climate change scenarios in southern Sardinia*	*11/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*150*	*International*
360	*Posters*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Downscaling of RCM outputs for representative catchments in the Mediterranean region, for the 1951-2100 time-frame*	*11/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*150*	*International*
361	*Oral presentation to a scientific event*	*REGIONE AUTONOMA DELLA SARDEGNA*RAS*	*Response of durum wheat to water variability under climate change scenarios in southern Sardinia*	*11/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*150*	*International*
362	*Posters*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*A Simulation/Optimization approach to manage groundwater resources in the Gaza aquifer (Palestinian Territories) under climate change conditions*	*11/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*150*	*International*
363	*Posters*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Downscaling of RCM outputs for representative catchments in the Mediterranean region, for the 1951-2100*	*12/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*80*	*International*

			time-frame					
364	*Posters*	*REGIONE AUTONOMA DELLA SARDEGNA*RAS*	*Response of durum wheat to water variability under climate change scenarios in southern Sardinia*	*12/04/2013*	*EGU, Vienna*	*Scientific community (higher education, Research)*	*100*	*International*
365	*Web sites/Applications*	*Islamic University of Gaza*	*Update website of the IUG University "in Arabic language, CLIMB new activities*	*14/04/2013*	*IUG-Website*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*20000*	*Arab countries*
366	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Global climatic changes and sea water intrusion and its effect on Egyptian shores*	*22/04/2013*	*Alexandria, Borg El Arab, Green Oasis Resort*	*Scientific community (higher education, Research)*	*17*	*Egypt*
367	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Entwicklungs- und Schwellenländer als Zielmärkte für deutsche Umwelttechnologien - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*24/04/2013*	*Augsburg, Germany*	*Scientific community (higher education, Research) - Industry - Policy makers*	*100*	*Germany*
368	*Oral presentation to a scientific event*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*CB-WR-MED Conference/ 2nd AOP'Tunisia Conference for Sustainable Water Management*	*24/04/2013*	*Tunis, Tunisia*	*Scientific community (higher education, Research) - Industry - Policy makers*	*200*	*Mediterranean countries*
369	*Oral presentation to a scientific event*	*DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV*	*Setting up the water balance simulation model WaSiM for the assessment of climate change impacts in*	*28/04/2013*	*ICMSAO 2013, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Policy makers*	*20*	*Tunisia, Arab countries*

			Chiba basin, Tunisia					
370	*Flyers*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Stakeholder interaction on CLIMB*	*28/04/2013*	*ICMSAO 2013, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Industry*	*120*	*Tunisia, Mediterranean Countries*
371	*Oral presentation to a scientific event*	*Institut national de la recherche scientifique*	*Implementation of a hydrological model of groundwater recharge for the Chiba catchment (Cap-Bon, Tunisia)*	*29/04/2013*	*5th International Conference on Modeling, Simulation and Applied Optimization, Hammamet, Tunisia*	*Scientific community (higher education, Research)*	*120*	*Tunisia, Arab countries*
372	*Oral presentation to a scientific event*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Assessment of the SWAT model prediction uncertainty using the GLUE approach A case study of the Chiba catchment (Tunisia)*	*29/04/2013*	*5th International Conference on Modeling, Simulation and Applied Optimization, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*Tunisia, Arab countries*
373	*Oral presentation to a scientific event*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Implementation of a hydrological model of groundwater recharge for the Chiba catchment (Cap-Bon, Tunisia)*	*29/04/2013*	*5th International Conference on Modeling, Simulation and Applied Optimization, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*Tunisia, Arab countries*
374	*Web sites/Applications*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Update newsletter Thau Case study*	*01/05/2013*	*CLIMB Website*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1000*	*International*
375	*Oral presentation to a wider public*	*Islamic University of Gaza*	*National Report ENPI CLIMA South Support to Climate Change mitigation and adaptation in the ENPI South region - Palestine*	*02/05/2013*	*Gaza Strip, Palestinian Administered areas*	*Policy makers*	*20*	*Palestine*

376	*Organisation of Conference*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Informationsveranstaltung zu „Horizon 2020" in Nürnberg - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*06/05/2013*	*Nuremberg, Germany*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*130*	*Germany*
377	*Organisation of Workshops*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate change change and its effects*	*09/05/2013*	*High School of Sarkuysan, Turkey*	*Civil society*	*60*	*Turkey*
378	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Models (CMs) Auditing & Downscaling*	*13/05/2013*	*Bari, Italy*	*Scientific community (higher education, Research)*	*25*	*Italy*
379	*Oral presentation to a wider public*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate change change and its effects*	*14/05/2013*	*Primary School of Esref Bey, Turkey*	*Civil society*	*150*	*Turkey*
380	*Oral presentation to a wider public*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Climate change change and its effects*	*14/05/2013*	*Girls Vacational High school of Colakoglu, Turkey*	*Civil society*	*100*	*Turkey*
381	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Infoveranstaltung „Fördermöglichkeiten für Öko-Innovationen" - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*15/05/2013*	*Nuremberg, Germany*	*Scientific community (higher education, Research) - Industry*	*50*	*Germany*
382	*Oral presentation to a scientific event*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Application géophysique, hydrodynamique et géochimique pour l'étude de l'intrusion marine à Korba-El Mida*	*18/05/2013*	*The 5th Tunisian Applied Geology-JTGA 2013, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Industry*	*50*	*Tunisia*

383	*Oral presentation to a scientific event*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Evaluation de l'impact des changements de l'usage des sols sur les ressources en eaux du bassin versant de l'oued Chiba*	*18/05/2013*	*The 5th Tunisian Applied Geology-JTGA 2013, Hammamet, Tunisia*	*Scientific community (higher education, Research) - Industry*	*50*	*Tunisia*
384	*Organisation of Workshops*	*Islamic University of Gaza*	*Toward Adaptation Strategy for Climate Change in Palestine*	*22/05/2013*	*Gaza Strip, Plastinian administered areas*	*Scientific community (higher education, Research) - Policy makers*	*30*	*Palestine*
385	*Oral presentation to a wider public*	*UNIVERSITE FRANCOIS RABELAIS DE TOURS*	*Presentation of CLIMB main results*	*24/05/2013*	*Sète, Thau case study*	*Industry - Policy makers*	*7*	*France*
386	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Sink holes, land subsidence and building its effect on buildings*	*27/05/2013*	*Alexandria Lagoon Resort, Egypt*	*Industry - Policy makers*	*16*	*Egypt*
387	*Organisation of Workshops*	*Islamic University of Gaza*	*Climate variability and change*	*28/05/2013*	*Videoconference between Gaza and West Bank*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*40*	*Palestine*
388	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*EU-Palestinian Cooperation in Research and Innovation - presentation of CLIMB and attendance at panel discussion to demonstrate the possibilities within European programs for research and development*	*29/05/2013*	*Ramallah, Palestinian administered areas*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*70*	*Palestine, Israel*
389	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la*	*Climate variability and durum wheat adaptation using the*	*01/06/2013*	*Naples, Italy*	*Scientific community (higher education, Research)*	*150*	*Italy*

		Fisica delle Atmosfere e delle Idrosfere	*aquacrop model in southern Sardinia*					
390	*Oral presentation to a scientific event*	*YILDIZ TECHNICAL UNIVERSITY*	*Climate Change and Future of Water*	*03/06/2013*	*Summer School organized by Netherlands Institute for Higher Education in Ankara*	*Scientific community (higher education, Research)*	*150*	*Turkey*
391	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Simulations using tRIBS in the Sardinian Case Study*	*06/06/2013*	*Munich, Germany*	*Scientific community (higher education, Research)*	*12*	*Germany, China, Italy*
392	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate simulations with tRIBS in the Rio Mannu basin*	*07/06/2013*	*Munich, Germany*	*Scientific community (higher education, Research)*	*15*	*Germany, Italy, France, Tunisia, Austria*
393	*Oral presentation to a scientific event*	*ZAGAZIG UNIVERSITY*	*Land subsidence in Northern Part of Nile Delta*	*07/06/2013*	*Academy of science in Cairo, Egypt*	*Scientific community (higher education, Research) - Civil society - Policy makers*	*30*	*Egypt*
394	*Oral presentation to a scientific event*	*Islamic University of Gaza*	*Toward A Road Map to Face Climate Change in Egypt*	*09/06/2013*	*Cairo, Egypt*	*Scientific community (higher education, Research) - Civil society - Policy makers - Medias*	*20*	*Egypt*
395	*Oral presentation to a wider public*	*REGIONE AUTONOMA DELLA SARDEGNA*RAS*	*Water in Sardinia - Programma di Sviluppo Rurale (PSR) 2014-2020*	*14/06/2013*	*Cagliari, Italy*	*Industry - Civil society - Policy makers*	*30*	*Italy*
396	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI TRENTO*	*SIAM geosciences*	*17/06/2013*	*Padova, Italy*	*Scientific community (higher education, Research)*	*500*	*International*
397	*Oral presentation*	*UNIVERSITA*	*CLIMB at the SPA*	*19/06/2013*	*Naples, Italy*	*Scientific community*	*150*	*International*

	to a scientific event	*DEGLI STUDI DI TRENTO*	*conference*			*(higher education, Research)*		
398	*Organisation of Workshops*	*Islamic University of Gaza*	*Pal-Eng Meeting, KIT*	*19/06/2013*	*Hamburg, Germany*	*Scientific community (higher education, Research) - Civil society - Policy makers*	*80*	*Germany, other European countries*
399	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Monitoring soil-plant interactions in an apple orchard using 3D electrical resistivity tomography*	*20/06/2013*	*Naples, Conference on Four Decades of Progress in Monitoring and Modeling of Processes in the Soil-P*	*Scientific community (higher education, Research)*	*100*	*International*
400	*Oral presentation to a scientific event*	*REGIONE AUTONOMA DELLA SARDEGNA*RAS*	*Climate variability and durum wheat adaptation using AQUACROP model in Southern Sardinia*	*21/06/2013*	*Naples, Italy*	*Scientific community (higher education, Research)*	*200*	*Italy*
401	*Oral presentation to a scientific event*	*Institut national de la recherche scientifique*	*Climate variability and durum wheat adaptation using the AquaCrop model in southern Sardinia*	*21/06/2013*	*International Conference on Monitoring and Modeling of Processes in the Soil-Plant-Atmosphere System*	*Scientific community (higher education, Research)*	*200*	*Italy*
402	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Erfolgreich in Oberfranken - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*27/06/2013*	*Schlüsselfeld, Germany*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*70*	*Germany*
403	*Oral presentation to a scientific event*	*ZAGAZIG UNIVERSITY*	*Toward a new map for climatic changes in the Nile Delta*	*30/06/2013*	*Academy of science Zagazig*	*Scientific community (higher education, Research) - Civil society - Policy makers*	*36*	*Egypt*

404	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*The CLIMB project*	*01/07/2013*	*36th WEDC International Conference in Egerton University, Nakuru, Kenya*	*Scientific community (higher education, Research)*	*250*	*Kenya*
405	*Organisation of Workshops*	*Institut national de la recherche scientifique*	*Preliminary CATHY model results for Chiba aquifer*	*06/07/2013*	*Munich, Germany*	*Scientific community (higher education, Research)*	*27*	*Germany*
406	*Oral presentation to a scientific event*	*ZAGAZIG UNIVERSITY*	*Changing In Ground Water Levels and quality in nile delta , with time*	*15/07/2013*	*Gharbia Governorate _Tanta, Egypt*	*Scientific community (higher education, Research)*	*40*	*Egypt*
407	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Den Blick öffnen - der 7. Wissenschaftstag der Europäischen Metropolregion Nürnberg - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*26/07/2013*	*Coburg, Germany*	*Scientific community (higher education, Research) - Industry - Policy makers*	*110*	*Germany*
408	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Subsidence and geophysical in using in Nile delta*	*12/08/2013*	*Zagazig University Water Risk Center Zagazig, Egypt*	*Scientific community (higher education, Research)*	*30*	*Egypt*
409	*Oral presentation to a scientific event*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Correlation between radar backscatter from SAR imagery and surface soil moisture variations over Sardinia, Italy*	*28/08/2013*	*34th Canadian Symposium on Remote Sensing, Victoria, Canada*	*Scientific community (higher education, Research)*	*150*	*Italy*
410	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Simulations using tRIBS in the Rio Mannu basin*	*05/09/2013*	*University of Trento, Italy*	*Scientific community (higher education, Research)*	*15*	*Italy*
411	*Organisation of*	*ZAGAZIG*	*Changes in soil map*	*09/09/2013*	*Zagazig University_*	*Scientific community*	*23*	*Egypt*

	Workshops	*UNIVERSITY*	*of Nile Delta*		*Academic Science building, Egypt*	*(higher education, Research) - Civil society*		
412	*Oral presentation to a scientific event*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Der Einsatz neuronaler Netze bei der Interpolation von Bodeneigenschaften im mediterranen Raum*	*11/09/2013*	*Jahrestagung der DBG 2013 – V7: Rostock, Germany*	*Scientific community (higher education, Research)*	*50*	*Germany*
413	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*17th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region - Talk on "CLIWASEC, A RESEARCH CLUSTER ON CLIMATE CHANGE IMPACTS ON WATER AND SECURITY IN SOUTHERN EUROPE AND NEIGHBORING COUNTRIES"*	*28/09/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research)*	*200*	*International*
414	*Oral presentation to a scientific event*	*INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE*	*Climate change impacts on groundwater recharge in the Chiba catchment, Cap-Bon peninsula (Tunisia)*	*30/01/2013*	*GeoMontreal 2013, Montreal, Canada*	*Scientific community (higher education, Research)*	*200*	*International*
415	*Oral presentation to a scientific event*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Nutrient Modeling in coastal Waters of Izmit Bay*	*01/10/2013*	*17th MESAEP Symposium in Istanbul, Turkey*	*Scientific community (higher education, Research)*	*100*	*International*
416	*Web sites/Applications*	*GEBZE YUKSEK TEKNOLOJI*	*Prolongation of website of CLIMB in*	*01/10/2013*	*GIT-website*	*Scientific community (higher education,*	*2000*	*Turkey, International*

		ENSTITUSU	*Turkish*			*Research) - Industry - Civil society - Policy makers - Medias*		
417	*Exhibitions*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Deutscher Geographentag in Passau - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*02/10/2013*	*Passau, Germany*	*Scientific community (higher education, Research) - Civil society - Policy makers - Medias*	*7000*	*Germany, Austria, Switzerland*
418	*Organisation of Workshops*	*Institut national de la recherche scientifique*	*Effect of sever pumping for bean wells on sea water intrusion*	*07/10/2013*	*Port demotion plastic company, Port Said, Egypt*	*Scientific community (higher education, Research) - Industry*	*20*	*Egypt*
419	*Posters*	*CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL*	*Geophysical sensing data in a universal cokriging approach to model soil seperates at field scale*	*08/10/2013*	*GlobalSoilMap conference 2013: Orléans, France*	*Scientific community (higher education, Research)*	*150*	*International*
420	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Lange Nacht der Wissenschaften - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*09/10/2013*	*Nuremberg, Germany*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*1000*	*Germany*
421	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Presentation of EU-CERTE collaboration within the FP7th program*	*20/10/2013*	*Kick-off meeting project FP4BATIW in Tunis, Tunisia*	*Scientific community (higher education, Research)*	*80*	*Tunisia, several European countries*
422	*Oral presentation to a wider public*	*GEBZE YUKSEK TEKNOLOJI ENSTITUSU*	*Dissemination activities and feed backs from water managers at Kocaeli test site*	*25/10/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research) - Industry - Policy makers*	*20*	*Turkey*

423	*Oral presentation to a wider public*	*YILDIZ TECHNICAL UNIVERSITY*	*Introduction of the CLIMB projectsand the recent developments*	*25/10/2013*	*Last modeling activities and the results obtained*	*Scientific community (higher education, Research) - Industry - Policy makers*	*20*	*Turkey*
424	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Time-lapse ERT for the monitoring of soil-plant interactions in the root zone*	*28/10/2013*	*Denver, Geological Society of America 2013 Meeting*	*Scientific community (higher education, Research)*	*100*	*International*
425	*Oral presentation to a scientific event*	*ZAGAZIG UNIVERSITY*	*Integrated perspective on climate change and water Scientific in Nile delta Egypt*	*04/11/2013*	*Zagazig University, Egypt*	*Scientific community (higher education, Research)*	*28*	*Egypt*
426	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*17th International Water Technology Conference (IWTC) in Istanbul/Türkei - Talk on CLIMB/CLIWASEC*	*05/11/2013*	*Istanbul, Turkey*	*Scientific community (higher education, Research) - Industry - Policy makers*	*270*	*European and African countries, Turkey*
427	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Fachtagung „Grüne Fabriken“ - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*06/11/2013*	*Munich, Germany*	*Scientific community (higher education, Research) - Industry*	*60*	*Germany*
428	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*WissensWerkstatt: Wasserqualität – Herausforderung für die internationale Zusammenarbeit - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*11/11/2013*	*Feldafing, Germany*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*45*	*Germany, Eastern European countries*
429	*Oral presentation to a scientific*	*UNIVERSITA DEGLI STUDI DI*	*Time Lapse 3D Electrical tomography*	*20/11/2013*	*Trieste, GNGTS national congress*	*Scientific community (higher education,*	*50*	*Italy*

	event	*PADOVA*	*for soil-plant dynamics interactions*		*2013, Italy*	*Research)*		
430	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Environmental monitoring for Climate Change Analysis*	*21/11/2013*	*CLIMB & CLIWASEC Final Conference in Bruxelles, Belgium*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*European countries, Canada, Egypt, Tunisia*
431	*Oral presentation to a scientific event*	*JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH*	*Reducing uncertainty, assessing vulnerability and quantifying risk*	*21/11/2013*	*CLIMB & CLIWASEC Final Conference in Brussels, Belgium*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*European countries, Canada, Tunisia, Egypt*
432	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Moderation of panel discussion*	*21/11/2013*	*CLIMB and CLIWASEC Final Conference in Brussels, Belgium*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*European countries, Canada, Egypt, Tunisia*
433	*Organisation of Workshops*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX*	*Roundtable discussion*	*26/11/2013*	*FETRIC WORKSHOP: Expression of Interest to participate to Stakeholders' Meeting in Tunisia*	*Scientific community (higher education, Research) - Industry - Policy makers - Medias*	*70*	*Tunisia*
434	*Oral presentation to a scientific event*	*YILDIZ TECHNICAL UNIVERSITY*	*Climate change induced effects on water resources*	*27/11/2013*	*International Conference on Global Climate Change, Istanbul, Turkey*	*Scientific community (higher education, Research) - Industry*	*180*	*Turkey*
435	*Oral presentation to a scientific event*	*FORSCHUNGSZENTRUM JUELICH GMBH*	*mGROWA applications in Germany and the Mediterranean area*	*06/12/2013*	*Agencija RS za okolje / Slovenian Environment Agency Ljubljana, Slovenia*	*Scientific community (higher education, Research) - Policy makers*	*20*	*Slovenia*
436	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Global climate change its effect in Egyptian water*	*09/12/2013*	*Maady Club, Egypt*	*Scientific community (higher education, Research) - Industry -*	*18*	*Egypt*

						Policy makers		
437	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Coupled vs. uncoupled hydrogeophysical inversion via ensemble Kalman filter assimilation of ERT-monitored tracer test data*	*11/12/2013*	*San Francisco, AGU Fall meeting 2013, USA*	*Scientific community (higher education, Research)*	*100*	*International*
438	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Time-lapse ERT for the monitoring of soil-plant interactions in the root zone*	*12/12/2013*	*San Francisco, AGU Fall meeting 2013, USA*	*Scientific community (higher education, Research)*	*100*	*International*
439	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*Climate Models Auditing and downscaling*	*13/12/2013*	*Rome, Italy*	*Scientific community (higher education, Research)*	*20*	*Italy*
440	*Oral presentation to a scientific event*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Auftaktveranstaltung zu Horizon 2020 im Bereich Energie - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*17/12/2013*	*Munich, Germany*	*Scientific community (higher education, Research) - Industry - Policy makers*	*120*	*Germany, Austria*
441	*Exhibitions*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*Erfolgreich in Niederbayern - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*16/01/2014*	*Deggendorf, Germany*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias*	*200*	*Germany*
442	*Organisation of Workshops*	*VISTA Geowissenschaftliche Fernerkundung*	*The CLIMB project*	*27/01/2014*	*Workshop on Linked Open Data and feasibility of LOD for CLIMB*	*Scientific community (higher education, Research)*	*15*	*Greece*

		GmbH			*(report) in Athens, Greece*			
443	*Organisation of Workshops*	*BAYERISCHE FORSCHUNGSALLIANZ (BAVARIAN RESEARCH ALLIANCE) GMBH*	*„Europäische Förderprogramme für Forschung und Innovation im Bereich Umwelt & Energie" - - CLIMB as a successful FP7 Environment project (distribution of dissemination material)*	*28/01/2014*	*Weiden, Germany*	*Scientific community (higher education, Research) - Industry*	*25*	*Germany*
444	*Oral presentation to a scientific event*	*UNIVERSITA DEGLI STUDI DI PADOVA*	*Introduction to CLIMB project - WP4 results*	*30/01/2014*	*UNICA - Cagliari, Italy*	*Scientific community (higher education, Research)*	*50*	*Italy*
445	*Oral presentation to a scientific event*	*REGIONE AUTONOMA DELLA SARDEGNA*RAS*	*CLIMB, cambiamenti climatici, caso studio Sardegna*	*30/01/2014*	*Cagliari, Regione Sardegna, Italy*	*Policy makers*	*60*	*Itlay*
446	*Oral presentation to a scientific event*	*Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere*	*"Impatto del cambiamento climatico sul bacino del Rio Mannu con il modello tRIBS"*	*30/01/2014*	*UNICA - Cagliari, Italy*	*Policy makers*	*50*	*Italy*
447	*Oral presentation to a scientific event*	*CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA*	*Climate change impact on the hydrological balance of the Rio Mannu basin*	*30/01/2014*	*Cagliari, Regione Sardegna, Italy*	*Policy makers*	*25*	*Italy*
448	*Organisation of Workshops*	*ZAGAZIG UNIVERSITY*	*Discussion of CLIMB results*	*25/02/2014*	*Cairo academy of science, Egypt*	*Scientific community (higher education, Research)*	*12*	*Egypt*
449	*Oral presentation to a wider public*	*CENTRE DE RECHERCHES ET DES TECHNOLOGIES*	*CLIMB Posters, booklets and flyers*	*25/02/2014*	*CERTE - Portes Ouvertes: Open doors for stakeholders,*	*Scientific community (higher education, Research) - Industry - Civil society - Policy*	*60*	*Tunisia*

		DES EAUX			*Tunisia*	*makers - Medias*		
450	*Organisation of Workshops*	*Islamic University of Gaza*	*CLIMB Final Workshop, Final Stakeholder Meeting, Gaza Case Study Results*	*26/02/2014*	*Gaza Strip, Palestinian administered areas*	*Scientific community (higher education, Research) - Industry - Civil society - Policy makers*	*150*	*Palestine*
451	*Organisation of Workshops*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Session HS5.3 at EGU 2014*	*02/05/2014*	*Vienna, EGU 2014 General Assembly*	*Scientific community (higher education, Research)*	*60*	*multiple*
452	*Oral presentation to a scientific event*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Climate Induced Changes on the Hydrology of Mediterranean Basins - Implications for Science and Policy*	*26/11/2013*	*Cadiz, Spain*	*Scientific community (higher education, Research)*	*100*	*Spain and others*
453	*Oral presentation to a scientific event*	*LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN*	*Climate Induced Changes on the Hydrology of Mediterranean Basins - Implications for Science and Policy*	*15/05/2014*	*Louvain-La-Neuve, Belgium*	*Scientific community (higher education, Research)*	*35*	*Belgium and others*