

Ecosystems, established in Florence (Italy) in 1984, is a company specialized in consulting and planning studies for the creation of "ready to use" information systems, to manage and process environmental data. If required, hardware and third part software can be supplied.

We have planned and developed software products and have supplied services, reaching a highly specialized know-how: our experience allows us to be one of the most reliable and experienced companies in the world in the planning and management of Environmental Information Systems.

Ecosystems has a large experience in management and planning, installation and tailoring of environmental information systems and monitoring systems, staff training, software support both in remote and on-site, tests and all kinds of operative support to users (outsourcing, data-entry, etc.)

Our experience started with the development of Hydrodat (an environmental information system that had more than 25 installations in Italy when we changed it over to Intersistemi Italia S.p.A. in 1999). Later we developed similar products for third parties (information systems and LIMS, highly specialized to manage and process environmental data). Now Ecosystems offers its experience to solve any kind of problems about planning, services to manage data (data management), full service for automatic and semiautomatic monitoring systems, training, assistance, tele-assistance, data-entry, memorization or reformat of already existing data on paper or magnetic media.

Ecosystems has also experience in SW planning for the management of museums data and in service of informative support to third parties. For this service the company realized thematic maps of about 200.000 ha in the province of Siena (Italy) for the Consorzio Azimuth, and other thematic maps (DTM, slopes, three-d models, etc.) for other customers.

## Some of the most important activities of Ecosystems:

- 2025 Early evaluation and first planning of water balance evaluation in three exhausted mines in Southern Tuscany, on request of Riccoboni Holding S.p.A..
- 2025 Water levels data processing in a section of the Lavello stream near Avenza (MS), on request of Riccoboni Holding S.p.A..
- 2025 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of W.S.P. Italia S.r.l..
- 2024 Data aquistion of water levels in a section of the Lavello stream near Avenza (MS), on request of E.T.S. S.r.l. and Riccoboni Holding S.p.A..
- 2024 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of W.S.P. Italia S.r.l..
- 2023 Data aquistion of water levels in a section of the Lavello stream near Avenza (MS), on request of W.S.P. Italia S.r.l..
- 2023 First planning of underground water levels and flow direction in an area of Basilicata, on request of W.S.P. Italia S.r.l..
- 2023 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of W.S.P. Italia S.r.l..
- 2022 Data aquistion of water levels in some sections of the Lavello stream near Avenza (MS) , on request of Golder Associates S.r.l..
- 2022 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Golder Associates S.r.l..
- 2021 Final planning of water levels in some sections of the Lavello stream near Avenza (MS), on request of Golder Associates S.r.l..
- 2021 Early planning of water levels in some sections of the Lavello stream monitoring near Avenza (MS) on request of Golder Associates S.r.l..
- 2021 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Golder Associates S.r.l..
- 2021 Early planning of cracks monitoring in Capo Colonna small Church structures on request of Golder Associates S.r.l..
- 2020 Support to the Management of the Archeological Museum of Capo Colonna (KR) for technical documentation check and upgrading, on request of Golder Associates S.r.l..

- 2020 Mainteinance and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Golder Associates S.r.l..
- 2019 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Syndial S.p.A..
- 2019 Executive planning of weather monitoring on remediation areas on request of Syndial S.p.A..
- 2019 Executive planning of the monitoring of salt water intrusion in 11 sampling point of a remediation area (S.I.N.) on request of Syndial S.p.A..
- 2018 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Golder Associates S.r.l..
- 2017 A proposal for the realization of a new kind of datalogger proposed by Ecosystems is cofinanced by the Tuscany Regional Administration as part of the administration's plan for small & medium industries support.
- 2017 Mainteinance and upgrading of the remote data transfer system of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Syndial S.p.A..
- 2016 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Syndial S.p.A.
- 2016 Executive planning of possible revamping the piezometers monitoring in a remediation area near Ferrandina (MT) on request of Syndial S.p.A..
- 2015 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of Syndial S.p.A..
- 2015 Winner of a tender for SW development, consultant services, engineering service and g.p. services supply on request of Saipem S.p.A..
- 2015 Mainteinance of the geognostic and environmental monitoring system around the protected area of the Biviere lake near Gela (CL) on request of SAIPEM S.p.A..
- 2014 Design and full re-building of geognostic and environmental monitoring system around the protected area of the Biviere lake near Gela (CL) on request of SAIPEM S.p.A..
- 2014 Enhancement and upgrading of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2014 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.

- 2013 The group of companies and professionals whose Ecosystems is part wins the tender for the realization of the environmental databases and other activities for the valorization and disclosure of environmental data according with EMAS procedures, announced by the Natural Park of Mont Avic (AO).
- 2013 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2013 Realization of a structural monitoring system for an archeological target using laser distance meter on request of SAIPEM S.p.A.
- 2013 Planning and realization od an environmental data timing, management and transmission system on request of SAIPEM S.p.A.
- 2013 Support along 6 months with a senior project manager at the management of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2012 Planning of the structural monitoring of an archeological target using laser telemetry on request of SAIPEM S.p.A.
- 2012 Winner of a tender for SW development, consultant services, engineering service and g.p. services supply on request of Saipem S.p.A..
- 2012 Early project for structural monitoring of an archeological target using laser telemetry on request of SAIPEM S.p.A.
- 2012 Restoring and mainteinance of the data transmission devices for geognostic and environmental monitoring system data around the protected area of the Biviere lake near Gela (CL) on request of SAIPEM S.p.A..
- 2012 Comparative analisys between structural monitoring systems (Laserscan, Laser Telemetry and IBIS-radar) of an archeological target on request of SAIPEM S.p.A.
- 2012 Mainteinance of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2011-2013 QuiT project. Together with the Department of Evolutionistic Biology of the University of Florence.
- 2011 Restoring and mainteinance of the geognostic and environmental monitoring system around the protected area of the Biviere lake near Gela (CL) on request of SAIPEM S.p.A..
- 2011 Enlarging and restoring of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2010 Enlarging and restoring of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2010 Winner of a tender for the request for a senior project manager at the evolutive steps of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).

- 2010 Planning of an enlargement of the geognostic and environmental monitoring system around the protected area of the Le Biviere lake near Gela (CL).
- 2010 Winner of a tender for SW development, consultant services, engineering service and g.p. services supply on request of Saipem S.p.A..
- 2009 Enlarging and restoring of the geognostic and environmental monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2009 Restoring of the photovoltaic power supply of the Archeologic Museum of Capo Colonna (KR) on request of SAIPEM S.p.A.
- 2009 Winner of a tender for the request for a senior project manager at the evolutive steps of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2008 Winner of a tender for SW development, consultant services, engineering service and g.p. services supply on request of Snamprogetti S.p.A (now Saipem S.p.A.).
- 2008 Planning of the photovoltaic power supply of the Archeologic Museum of Capo Colonna (KR) on request of Snamprogetti S.p.A.
- 2008 Early project of a F.O. sensors monitoring system on a pipeline trunk in sliding area for Enser S.r.l.
- 2008 Planning and R/D procedures for the aquisition of accelerometric response using National Instruments CompactRIO FPGA hardware architecture on request of Snamprogetti S.p.A.
- 2008 Support with a senior project manager at the evolutive steps of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2006-2007 Planning and execution of a remediation plan on the geognostic and meteorological monitoring systems near the archeological area of Hera Lacinia Temple, Capo Colonna (KR), on request of Snamprogetti S.p.A.
- 2006 Training on security systems and geognostic data acquisition to the staff of Archeological Museum of Hera Lacinia Temple, Capo Colonna (KR) on request of Archeological Superintendence of Calabria Region.
- 2006 Support with a senior project manager at the evolutive steps of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2006 Planning and early project of an experimental sotware for the aquisition of accelerometric response using National Instruments CompactRIO FPGA hardware architecture on request of Snamprogetti S.p.A.
- 2005 According with the statements the EC tender for project management of environmental software evolution in ARPAT (Tuscany Regional Environmental Protection Agency) won in 2003, Ecosystems is reconfirmed in support for next steps of evolution of the project.

- 2005 Partecipation, as refrence technical firm, to an early integrated project for a large river renaturalization plan.
- 2005 Support with experienced staff to the G.I.S. operations related with environmental database management, on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2005 Development of a geognostic data management software for an archeological area monitoring on request of Snamprogetti S.p.A..
- 2004 Support with experienced staff to the G.I.S. operations related with environmental database management, on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2004 Deployment of a first level experimental system for structural monitoring using fiber optic based sensors.
- 2004 Deployment of a geologic data monitoring system on an archeological area near Crotone, on request of Aquater S.p.A..
- 2004 Development of a second level experimental project for pipeline structural monitoring using fiber optic based sensors.
- 2003 Support with two senior project managers at the management and planning of the upgrade of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2003 Support with experienced staff to the data entry of PCB data, on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2003 Support with a senior project manager at the development and management of the Help-Desk software system for support of the users of departimental laboratory information system, on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency.
- 2003 Support with a senior project manager at the development of the Technical Specifications for the tender that will be managed by ARPA Sicilia (Sicily Regional Environmental Protection Agency) for its Environmental and Laboratory Information System.
- 2003 Support with experienced staff to the G.I.S. operations related with waste database management, on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).
- 2003 Development of a general project for pipeline structural monitoring using fiber optic based sensors.
- 2003 Winner of an EC tender for project management of environmental software evolution in ARPAT (Tuscany Regional Environmental Protection Agency).
- 2002 Support with a senior project manager at the operative start-up of the Regional Environmental Information System of Tuscany Region (SIRA), on request of General Direction of ARPAT (Tuscany Regional Environmental Protection Agency).

2001 / 2002 – Planning and teaching of a corse about informatic support to environmental data, modelling and mapping management, on request of I.A.L. Toscana by Arezzo Province Administration.

2001 – Analisys and early project or the Water Qualità Information System of the Department of Environment of Sardinia Region, on request of Intersistemi Italia S.p.A..

2001 – Analisys and project development of a new interface between Hydrodat and G.I.S. systems, on request of Intersistemi Italia S.p.A..

2000 / 2001 – Analisys and early project of an automated support system for the management of UNI EN ISO 14000 operations work-flow, on request of Intersistemi Italia S.p.A..

1999 / 2001 – When the Hydrodat<sup>®</sup> System was made over to Intersistemi Italia S.p.A., Ecosystems acquired a three years technical support package for Intersistemi Italia S.p.A..

1999 / 2000 – Planning and project development of the automated riconnaissance system of field sampling points using transponders ("TAG") and portable terminals, on request of Intersistemi Italia S.p.A..

1999 – Planning and teaching of the corse of Geomorphology and Earth Sciences in a regional course at Centro di Formazione di Sinalunga of di Siena Province Administration.

1999 – Analisys and planning of release 1 of HYDRODAT 32 (Windows 32) Information System. Release of technical documentation according with UNI EN ISO 9001 standard of Intersistemi Italia S.p.A..

1998 – Analisys, and early project of an automated riconnaissance system of field sampling points using transponders ("TAG") and portable terminals.

## 1988 / 1998 - HYDRODAT® Project:

1988 – Analisys and software development of an information system for geothermal fluids composition data management, on request of Geochemistry Department of CNR.

1989 - Analisys and software development of the information system for water quality data management of the Tevere River, on request of A.C.E.A. (Rome).

1990 / 91 - Analisys and software development of the Laboratory Information Management System provided with support of environmental data management, on request of UNISYS Italia S.p.A. by A.I.M. (Vicenza) - A.M.A.G. (now Azienda Padova Servizi S.p.A., Padoa).

1991 - Analisys and software development of the Laboratory Information Management System provided with support of environmental data management, for the laboratory of U.S.L. n° 16 (Modena) (now Emilia-Romagna Regional Environmental Protection Agency, Department of Modena), on request of C.N.R..

1991 – Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the Florence WaterWork laboratories (now Publiacque S.p.A.).

1991 - Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the Tevere River Basin Authority. 1991 - Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the Bergamo WaterWork laboratories (now Bergamo Ambiente e Servizi S.p.A.).

1991 / 93 — Planning, analisys, project development and software development of the automated monitoring system of Mantignano Plant of Florence WaterWork (now Publiacque S.p.A.).

- 1992 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the ACEA laboratories (Rome).
- 1992 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water and gas quality laboratory of Fiorentinagas pluriservizi S.p.A. (E.N.I. Group,), Florence.
- 1992 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water quality laboratory of A.M.I.R. S.p.A., Rimini.
- 1993 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water quality laboratories of Società Metropolitana Acque Torino S.p.A..
- 1993 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water quality laboratory of Vicenza Treatment Plants, A.I.M. S.p.A, Vicenza.
- 1993 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water quality laboratories of Società Acque Potabili S.p.A. (E.N.I. Group), Turin.
- 1994 / 96 Analisys and user interface development of the Surface Water Information System of the Ministry of Environment, on request of Olivetti Information Services S.p.A., Syntax Stato branch (Rome), by CO.RE.S.I.A.
- 1994 / 95 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the environmental analisys laboratory of Pistoia area (now Tuscany Regional Environmental Protection Agency, Department of Pistoia), on request of Pistoia Province Administration.
- 1995 / 96 Analisys and project development of the Laboratory Information Management System provided with support of environmental data management for the water quality laboratories of A.G.S.M. S.p.A. (Verona).
- 1997 / 98 Analisys, project management and software development for UNI EN 45001 compliance of laboratories provided with Hydrodat.
- 1991 / 1998 Analisys, project management, and software development of automated data acquisition from continuous minitoring systems of environmental data (HW and SW parts of HydroLog® project).
  - 1991 / 93 Analisys, planning, project management and software development of HydroLog<sup>®</sup> authomated data acquisition system and its integration with HYDRODAT<sup>®</sup> information system at Mantignano Plant of Florence WoterWork (now Publiacque S.p.A.).
  - 1991 / 93 Analisys, planning, project management and software development of analogic continuous data jogging remote data acquisition and remote valves control at the Mantignano Plant of Florence WaterWork (now Publiacque S.p.A.).
  - 1995 / 96 Analisys, planning, project management and software development of HydroLog<sup>®</sup> authomated data acquisition system at the laboratories of A.G.S.M. S.p.A. (Verona).
- 1995 Planning, management and teaching in a 50 hours course of informatic application to environmental data managemen, on request of CE.FOR.COOP (Florence), by Pisa Province Administration.
- 1991 / 1994 Data memorization, data processing and automated mapping of 200.000 ha in Siena province, on request of Consorzio Azimut (Florence) by Siena Province Administration.
- 1991 / 1993 Planning, analisys and project of a model for the quality evaluation of rivers water.
- 1992 Data memorization, data processing and automated mapping of Albegna River area for E.I.A. studies for a dam project, on request of Consorzio Azimut (Florence).

1989 – Analysis and preliminary planning of a structural monitoring system for a tunnel in land slide area along the Aosta-Pré St. Didier railway, on request of Geofisica Toscana S.r.l. (Florence).

1988 / 89 - Data processing and 3d DTM of the project area of controlled waste depository of Urban Solid Waste of Rio Scarpino (Genoa), on request of R.S.T.A. s.c.r.l. (Genoa).

1988 / 89 – Data memoriziation, data processing and automated mapping of slopes using 3d DTM in some areas of Tuscany, included Florence area, on request of Geotecno Studio Associato (Florence).

1987 / 89 – Planning, project and software development of a prototypal information system of the Natural History Museum of Florence University, on request of the Florence University's Museum of Natural History.

1988 – Planning, analisys, project and software development of a windows system in AOS/VS operating system environment, on request of Geochemistry Department of CNR.

1986 – Data processing and 3d DTM of a quarry restoration followed by partial reuse as controlled waste depository of Urban Solid Waste near Rio Moia (Reggio Emilia), on request of Ecoter pool s.c.r.l. (Reggio Emilia).

1985 / 86 – Data processing and automated mapping of cultivation availability of terrains in Foggia and Bari provinces (Italy), on request of Soils Sciences and Plants Nutrition Department of the Florence University.

1985 / 86 – Planning, project and software development of an information system for petrographic analisys data, on request of Earth Sciences Department of Florence University.