

Fabio Petrella

Soil Researcher at I.P.L.A.

fabio.petrella@fastwebnet.it

Summary

Background: Environment, Soil, Agriculture-Forestry Expert

Goal: Extend my professional network

Experience

Soil Researcher at I.P.L.A. s.p.a.

May 1989 - Present (27 years 9 months)

Soil monitoring, carbon science and pedology

Technical Manager at Fudex s.r.l.

January 1989 - May 1989 (5 months)

Improvement of food production lines (extrusion technique), and managing relationships with staff

Teaching Assistant, Contractor to C.N.R. projects, Scholar at University of Turin - Department of Agricultural Chemistry

February 1984 - December 1988 (4 years 11 months)

Field survey, analytical work in laboratory, data processing, scientific publications, assistance for didactical purposes, commissioner of exams

Teacher in agricultural valuation at Athenaeum School

1987 - 1988 (1 year)

Professor of rural valuation at technical school surveyors

Volunteer Experience

Responsible of the Environmental Working Group at I.A.A.S. (International Association of Agricultural Students)

June 1987 - June 1989

Coordination and promotion of initiatives at student level about environmental problems in the countries belonging to this organisation

Publications

Soil C:N stoichiometry controls carbon sink partitioning between above-ground tree biomass and soil organic matter in high fertility forests

Authors: Fabio Petrella, Giorgio Alberti, Sara Vicca, Franco Miglietta, Mirco Rodeghiero, Maria Francesca Cotrufo, Riccardo Valentini, Alessandro Peressotti

Forest ecosystems worldwide are currently acting as carbon (C) sinks. Several factors may, however, influence the magnitude and direction of the net C balance, including recovery from historical land use (e.g., abandoned agricultural land reverting to forested land), increases in atmospheric CO₂ concentration and nitrogen (N) deposition, and climate change. Nonetheless, while much research has been done to understand the controls on net ecosystem C balance, we know little about the controls on C sink partitioning between plant biomass and soil organic matter (SOM) pools. Soils may store C for long periods of time, accumulating on average three times the C in terrestrial vegetation. On the other hand, more N is required per unit of C stored in soil as compared to plant biomass. Hence, while an allocation to SOM may increase C sequestration in the long term, a preferential allocation to plant biomass is a more nutrient-efficient C sequestration process in the shorter term.

The Lands of Barolo and Barbaresco The complexity of Piedmont soils

TONG - About Wine - N°16/Autumn 2013 October 2013

Authors: Fabio Petrella, Silvia Guidoni, Matteo Giovannozzi

The comparison between the soils of the two areas are conducted according to:

- low variability in pedogenetic features between the two areas due to the same kind of parent material and to the agricultural processes that lead to a continuous rejuvenation of the soil profile.
- physical-chemical parameters
- content of sand in the soil particle size distribution.
- Water stress in the soil-plant system, under typical conditions of draught in summertime.
- Geological analysis: sandstones are the typical marine sediments from which soil can enrich in its sandy content. In the Lequio formation it is frequent to find levels of sandy sediments, but also in other formations where finer particles prevail, it is possible to find sandy layers.

At the present state of knowledge we can hypothesize that Barbaresco land is more homogenous as for soil texture, on the contrary in the Barolo valley a higher variety of texture can be found due to a greater variation in marine sediments originating the soil parent material.

Therefore it can be also possible to recognize a more significant presence of Barolo wine sub-types attributable to soil texture sub-types with a greater variation in sand content.

Interconnection between carbon and nutrient cycling in fragile forest ecosystems

Bordeaux Sciences AGRO May 2013

Authors: Fabio Petrella, Luisella Celi, Eleonora Bonifacio, Marta Petrillo, Daniel Said Pullicino

Temperate broad-leaved semi-natural forests of central European plains are of great natural, cultural and landscape value. However, they are frequently restricted to relict spots in poorly fertile areas. In these fragile ecosystems element biogeochemistry and nutrient supply are tightly connected to soil organic matter (SOM) decomposition and C turnover. Disturbances, such as the introduction of alien species, may easily disrupt the fragile equilibrium and rapidly lead the ecosystem to nutrient limitation. In this work we evaluated the effect of American red oak (*Quercus rubra* L.) introduction in a broad-leaved semi-natural forest in NW Italy

(*Quercus*, *Tilia*, *Acer*, *Fraxinus* and *Ulmus* spp.) on SOM dynamics while assessing the consequent effect on nutrient cycling and bioavailability. We selected two adjacent sites covered by red oak plantation for 80 years (RO) and semi-natural broad-leaved forest (NF). Both sites have the same soil type (Typic Fragiudalfs) characterized by the presence of a fragipan horizon (60-80 cm) which causes periodical hydromorphic conditions and limits root penetration. SOM dynamics were evaluated by determining decomposition rate, and distribution between labile and recalcitrant pools. Total and available contents of major nutrients (N, P, K, Ca, and Mg) were also determined. We speculate that the accumulation of organic matter in RO could be due to the presence of allelopathic compounds, such as condensed tannins, which inhibit microbial activity rather than to a greater abundance of recalcitrant components. We show that the invasiveness of red oak in the area could be explained by modifications in carbon and nutrient cycling, that lead to unfavorable conditions for re-colonization by autochthonous species.

Impact of woody encroachment on soil organic carbon and nitrogen in abandoned agricultural lands along a rainfall gradient in Italy

Regional environmental Change (IF: 1.29) 2011

Authors: Fabio Petrella, Giorgio Alberti, Vincenzo Leronni, Paola Mairota, Alessandro Peressotti, Riccardo Valentini

Land use changes represent one of the most important components of global environmental change and have a strong influence on carbon cycling. As a consequence of changes in economy during the last century, areas of marginal agriculture have been abandoned leading to secondary successions. The encroachment of woody plants into grasslands, pastures and croplands is generally thought to increase the carbon stored in these ecosystems even though there are evidences for a decrease in soil carbon stocks after land use change. In this paper, we investigate the effects of woody plant invasion on soil carbon and nitrogen stocks along a precipitation gradient (200–2,500 mm) using original data from paired experiment in Italian Alps and Sicily and data from literature (Guo and Gifford *Glob Change Biol* 8(4):345–360, 2002).

VALIDATION OF THE EU SOIL SAMPLING PROTOCOL TO VERIFY THE CHANGES OF ORGANIC CARBON STOCK IN MINERAL SOILS (PIEMONTE REGION, ITALY)

JRC, IES February 21, 2006

Authors: Fabio Petrella, Stolbovoy Vladimir, Nicola Filippi, Luca Montanarella, Javier Gallego, Senthil-Kumar Selvaradjou

Soil organic carbon (SOC) is a measure of the total amount of organic compounds or carbon (C) in soil independently of their origin or decomposition. Interest in SOC is common among soil scientists and related practitioners because of its importance for principle physical, chemical and biological soil ecological functions and that SOC is a universal indicator of soil quality. Consequently, variations in levels of soil organic carbon can have serious implications on many environmental processes such as soil fertility, erosion and greenhouse gas fluxes. To bring any new method into practice requests considerable validation efforts. This validation exercise is essential to set up boundary conditions for the method and to adopt the method to a practical field survey procedure. For validate the AFRSS, a number of testing plots have been selected in a range of soil conditions across the EU. One of these areas is the Piemonte Region in Northern Italy.

Heavy metals in agricultural soils from Piedmont, Italy. Distribution, speciation and chemometric data treatment.

Chemosphere 49 545-557 2002

Authors: Fabio Petrella, O. Abollino M. Aceto M. Malandrino E. Mentasti C. Sarzanini

The distribution and speciation of heavy metals in five agricultural soils of Piedmont Region (north-western Italy) were investigated. Ten metals, namely Al, Cd, Cr, Cu, Fe, Mn, Ni, Pb, Ti and Zn were considered. Analytical determinations were performed by atomic emission or atomic absorption spectroscopy after microwave sample dissolution in acid solution. Total metal concentrations fit in the typical concentration ranges for unpolluted soils, with the exception of cadmium and lead content in some horizons. The effect of sampling depth on concentrations was discussed. Speciation studies were carried out by applying Tessier's procedure, which allows to subdivide the total metal content into five fractions, representing portions bound to different components of the soil. Moreover, the element labilities in two soils were evaluated by extraction with EDTA. Correlations among the variables and/or similarities among the sampling points were identified by principal component analysis and hierarchical cluster analysis.

Decline of Quercus robur forests in northwestern Italy: current situation and tentative aetiology

IOBC wprs Bulletin Vol. 76 2012

Authors: Fabio Petrella, Lione, Guglielmo, Ebone, A. , Terzuolo, P. G., Nicolotti, G.* and Gonthier, Paolo

Quercus robur decline is a widespread phenomenon in northwestern Italy. In order to determine the incidence, the severity and the evolution of the decline, Q. robur crown transparency was assessed starting from 2007 in 11 study sites. In 2007, the mean crown transparency ranged from 35% to 74% depending on sites. No significant variation was observed among crown transparency levels in the 3 sampling periods (2007-2008-2009) at any sites. Soil and climate conditions of study sites were investigated in order to find possible correlations with crown transparency. Drought in spring may be the main factor triggering off oak decline in northwestern Italy. Ongoing experiments indicate that the availability of water and light may have effect only in the medium and long time period.

FORESTE E SUOLI DEL PIEMONTE NELLA MITIGAZIONE DELL'EFFETTO SERRA

ATTI del Terzo Congresso Nazionale di Selvicoltura per il miglioramento e la conservazione dei boschi italiani ISBN 978-88-87553-16-1 October 19, 2008

Authors: Fabio Petrella, Terzuolo Pier Giorgio, Igor Boni

This work describes an integrated approach to define carbon stocks and increments in the seminatural Piedmontese ecosystems, by monitoring, measurement and estimation.

Used methods are coherent with the Kyoto protocol and its applications (IPCC Report 2000), moreover databases are extracted from the Pedological and Forestry Regional Inventory of the Piedmontese Region-IPLA and from the National Forestry Inventory (IFNI85).

Obtained results show a higher amount of soil carbon stocks in Piedmont (175 Mt in the topsoil, 0-30 cm) compared with the forestry carbon stocks, which are around 80 Mt, biomass, necromass and litter included. Moreover significant amounts of global stocks are measured even in ecosystems not subjected to use changes, around 3 t/ha/yr, as well as in the soil only, under wood arboriculture after cropland.

The Carbon Sequestration Potential of Soils: Some Data from Northern Italian Regions

Italian Journal of Agronomy January 2011

Authors: Fabio Petrella, Ciro Gardi, Stefano Brenna, Silvia Solaro

It is well known that soil plays, within terrestrial ecosystems, an essential role in many biogeochemical cycles and in the regulation of greenhouse gas fluxes. Less known, and often underestimated, is the importance of carbon sequestration potential of soil, especially through humified carbon. Even within the agro-forestry practices of the Kyoto Protocol, most of the attention is devoted to the biomass carbon storage, rather than soil carbon sequestration. The highest potentialities for carbon sequestration are related to the arable lands, that accounts for the 11% of earth surface; the increase of 0.1% of organic carbon content in the 0-30 cm layer of cultivated soils, achievable with minor adjustment of agronomic practices, is equivalent to the sequestration of 5,000 millions t of carbon. On the other hand, the conversion of a grasslands into cultivated land determine, during 50-70 years, a release of 80-150 t CO₂ ha⁻¹. Within this paper the estimate of soil organic carbon of three Northern Italian regions is presented.

Stoccaggio di carbonio nel suolo in arboricoltura

Sherwood 196 - Compagnia delle Foreste s.r.l. September 2013

Authors: Fabio Petrella, Igor Boni

Soils and wood-arboriculture. Results of the monitoring in Piedmont. The Piedmontese soils in wood-arboriculture are monitored, also under Kyoto protocol commitments. In this paper main results are reported showing clearly that wood-arboriculture plants are able to increase soil carbon stocks and contribute to a general improvement of soil quality.

Atlante pedologico del Piemonte. La fertilità biologica dei suoli.

Atti del workshop: Giornata mondiale del Suolo "Biodiversità e pedodiversità: affinità e divergenze nell'areale italiano" Roma, 1 e 2 dicembre 2011. Edizioni Le Penseur. June 2011

Authors: Fabio Petrella

L'informazione pedologica risulta di grande utilità per il conseguimento degli obiettivi operativi della misura 111 dei PSR, in quanto costituisce una realizzazione di azioni di formazione ed informazione per le imprese agricole, per supportarle nel perseguimento degli obiettivi ambientali, in particolare rispetto alla gestione sostenibile delle risorse naturali, comprese le norme sulla condizionalità, sulla silvicoltura e sulla tutela delle acque, promuovendo la creazione di reti e sistemi per lo scambio di informazioni e per la diffusione delle innovazioni e delle buone pratiche.

È infatti fondamentale la conoscenza del suolo per indirizzare la gestione agraria verso l'applicazione delle norme di condizionalità, protezione del territorio e buone pratiche previste dall'Europa, inclusa la biodiversità che è obiettivo strategico di primaria importanza.

La presente sperimentazione ha dunque anche la finalità di ottenere risultati spendibili per introdurre gli indici di biodiversità del suolo come indicatori ufficiali per la valutazione degli effetti delle politiche rurali.

A questo scopo l'IPLA, in collaborazione con il CRA-RPS e il finanziamento della Regione Piemonte, sta procedendo al completamento dell'Atlante dei Suoli del Piemonte attraverso

un'attività triennale che consente di trasferire il tema della biodiversità dei suoli agrari su base territoriale, lavoro che è il primo esempio in Italia e forse in Europa, e nel contempo di concludere la collana cartografica per le aree mancanti.

The soils on the flysch area of western Liguria (Italy)

Catena, vol.15, p: 381-392, Braunschweig 1988

Authors: Fabio Petrella, Ermanno Zanini, Enza Arduino

The soils on the flysch area of Western Liguria (Italy) are described for the first time. Soils have developed in the alpine variant of the Mediterranean morphoclimatic system. The study area includes the higher part of the Arroscia and Tanarello catchment basins (province of Imperia). It is subdivided into three fundamental geological units which comprise part of the limestones of the outer margin in the paleoeuropean domain (Jurassic-Eocene) and part of the turbiditic sediments in the paleogeographic oceanic domain (Upper Cretaceous-Eocene). Twentythree profiles were described within morphological and vegetational units according to the different geolithological substrata. Lithology of the parent material, vegetation and morphology appear to be the main soil forming factors. The soils are shallow and can be severely limited in fertility. They are classified as Rendolls, Udorthents, Eutrochrepts, Haplumbrepts and Hapludalfs according to the U.S.D.A. Soil Taxonomy.

Confronto tra metodi per la valutazione dell'attitudine dei suoli allo spandimento dei liquami zootecnici.

Italian Journal of Agronomy, 1998, 4, 244-252 1998

Authors: Fabio Petrella, Carlo Grignani, Laura Zavattaro

La valutazione dell'attitudine dei suoli a ricevere reflui zootecnici e' elemento fondamentale nelle normative che mirano a proteggere le acque sotterranee dall'inquinamento di nitrati. Sono stati proposti diversi metodi sintetici per l'attribuzione di classi di rischio ai diversi suoli, ma le verifiche sperimentali di tali metodi non sono numerose. Nel presente lavoro tre fra i piu' diffusi metodi di valutazione sono stati applicati a cinque suoli con diverse colture per biennio, per un totale di 11 situazioni tipiche dell'agricoltura intensiva in territorio piemontese. Gli indici ottenuti sono stati confrontati con previsioni di campo della lisciviazione di nitrati (derivanti dalla combinazione del bilancio idrico calcolato e di misure dirette di concentrazione di nitrati nella soluzione circolante del suolo). Nel complesso e' apparso come le caratteristiche pedologiche del suolo abbiano avuto una grande influenza sull'entita' delle perdite per lisciviazione. Tutti e tre i metodi hanno consentito di classificare i suoli in modo congruo rispetto ai risultati sperimentali, ma con diversa accuratezza a seconda dei parametri presi in considerazione. Tra questi, in particolare, oltre a parametri classici quali granulometria o contenuto di sostanza organica, e' emersa l'importanza di considerare l'incidenza della ciottolosita' del suolo e della profondita' di falda. Le numerose limitazioni emerse per l'applicabilita' dei metodi sono evidenziate e discusse

Lo studio della capacità d'uso dei suoli dell'Alta valle Arroscia: contributo del progetto CNR-IPRA per la corretta gestione territoriale della Comunità Montana.

Atti Incontro di Studio sulle Zone Marginali e loro possibilità di recupero. Pieve di Teco-Colle di Nava 22 aprile 1987. 1987

Authors: Fabio Petrella, Ermanno Zanini

Dai dati ottenuti nello studio geopedologico è stata redatta una cartografia a scala 1:25000 propedeutica agli interventi di programmazione territoriale della Comunità Montana. Detto strumento intende sintetizzare le qualità del territorio in esame in termini di capacità d'uso agro-silvo-pastorale

Caratteristiche pedogenetiche e fertilità dei suoli dell'alta valle Arroscia (Liguria occidentale): note illustrative della carta dei suoli 1:25.000

Atti Ist.Bot.Orto Bot.Lab.Crittogamico Univ. Pavia, serie VII, suppl. vol. 6. 1987

Authors: Fabio Petrella, Ermanno Zanini

In questa nota viene riferito sull'indagine svolta nell'alta valle Arroscia, area di estrema variabilità geomorfologica e vegetazionale, di transizione tra ambiente continentale e mediterraneo, in cui pur presentandosi una prevalenza netta dei suoli poco evoluti, sono riscontrabili differenze anche notevoli e significative per valutazioni attitudinali e di capacità d'uso

Soil carbon monitoring in forestry and arboriculture ecosystems of north-western Italy, according to a new orientation of agro-forestry production

IOP Conf. Series: Earth and Environmental Science 6 (2009) 372037 2009

Authors: Fabio Petrella, Mauro Piazzi

This work describes an integrated approach to define carbon stocks and increments in the seminatural Piedmontese ecosystems, by monitoring, measurement and estimation. Estimation is coherent with the Kyoto protocol and its applications (IPCC Report 2000), moreover databases are extracted from the Pedological and Forestry Regional Inventory of the Piedmontese Region-IPLA and from the National Forestry Inventory (IFNI85). Obtained results show a higher amount of soil carbon stocks in Piedmont (175Mt in the topsoil, 0-30 cm) compared with the forestry carbon stocks, which are around 80 Mt, biomass, necromass and litter included. Measurements are based on sampling biomasses and soils in arboriculture and forestry under different management, in order to analyse the most efficient forestry system according to both productive criteria and carbon absorption increase. Monitoring is constituted by an eddy covariance tower for CO₂ global balance in a oak-wood ecosystems. The station is financed on behalf of Piedmont Region and national and international projects. Crossed verification shows data from the three different sources are consistent between them and with published literature, moreover the best potential for CO₂ stocks increase is tied to change of use from intensive agriculture to arboriculture under specified pedoclimatic conditions

Conservazione del suolo e gestione selvicolturale sostenibile ai fini della generazione di crediti forestali in Piemonte

Reticula n°7/2014 ISPRA December 2014

Authors: Fabio Petrella, Francesca Pierobon, Marco Allocco

Il settore Foreste della Regione Piemonte ha dedicato da tempo attenzione al tema della conservazione del suolo e dello stoccaggio di carbonio. Nel 2012 l'Istituto per le Pian-te da Legno e per l'Ambiente (IPLA) e Regione Piemonte hanno avviato uno studio per analizzare le potenzialità della creazione di un mercato volontario di crediti di carbonio in Regione Piemonte per la mitigazione del cambiamento cli-matico tramite l'attività di gestione forestale.

Il presente lavoro si pone i seguenti obiettivi:

- # presentare i risultati della valutazione delle potenzialità dell'applicazione del mercato del carbonio in Regione Piemonte applicata al caso studio della Valle Varaita;
- # effettuare una stima del beneficio in termini di riscaldamento globale associato al potenziale aumento del contenuto di carbonio nei suoli a seguito di una gestione forestale conservativa.

Alien red oak affects soil organic matter cycling and nutrient availability in low-fertility well-developed soils

Springer International June 4, 2015

Authors: Fabio Petrella, Luisella Celi, Eleonora Bonifacio, Marta Petrillo, Fulvia Tambone

Background and Aims. Invasive alien species can dramatically change the litter and organic matter (OM) decomposition rate, nutrient cycling and availability, thus threatening the ecosystem functionality. We assessed the effect of red oak (QR) introduction on low fertility well-developed soils, originally covered by *Quercus robur* L. (QC).

Methods. We determined litter and soil OM composition and decomposition rate by combining morphological features with ¹³C NMR spectroscopy, NaClO oxidation and soil respiration. Total and available nutrients were also determined.

Results. The sites showed different humus forms: Dymull-Hemimoder in QC and Mor in QR. The Oi horizons had a similar composition, but the higher presence of tannins and alkyl C/O alkyl and aryl/O alkyl C ratios in QR indicated that litter was less degradable. This was confirmed by soil respiration tests, with a higher preservation of the NaClO resistant fraction along the profile, mainly due to selective accumulation of alkyl components. This was accompanied by high retention of phosphorus in the organic horizons and drastic reduction of both total and available P in the mineral horizons. Calcium was strongly affected too.

Conclusions. In these well-developed soils red oak changed organic matter dynamics, reduced P availability and cation biocycling, leading the ecosystem functionality towards a no-return threshold.

Projects

Soil biodiversity in viticulture and wine production: influence of climate and agronomic factors

September 2011 to Present

Members: Fabio Petrella, Silvia Guidoni, Matteo Giovannozzi, Elena Mania

On behalf of the Piedmontese Regional Administration and of Syngenta, a broad survey is conducted, in collaboration with prof. Guidoni of the Agriculture Faculty of the Turin University, in the Barolo area to investigate the influence of pedoclimatic and agronomic factors on soil biodiversity and behaviour, also trying to find possible relations with wine production. Laboratory analysis are carried on by determination of biodiversity indicators such as QBS (Soil Biological Quality Index) and soil carbon (respiration index, microbial carbon, etc).

Turin Carbon (under approval)

April 2013 to Present

Members: Fabio Petrella, Igor Boni, Terzuolo Pier Giorgio

DEVELOPMENT AND INTEGRATED PLANNING OF URBAN GREEN FOREST AND PROPERTIES OF THE CITY OF TURIN AIMED AT COMPENSATION OF EMISSIONS AND THE GENERATION OF CARBON CREDITS

Atlas of Piedmont soils at 1:75000 scale

2009 to Present

Members: Fabio Petrella, Federico Mensio

Collection of basic and derivated pedological maps at 1:50000 scale for the Piedmont region. Redaction of 4 plasticized volumes in a reduced format at 1:75000 scale, accompanied by guidelines and formed into rings for practical consultation in field operations.

Soil Biodiversity Mapping in plain and hilly areas of Piemonte

2011 to Present

Members: Fabio Petrella, Matteo Giovannozzi; Nicoletta Alliani

According to official methodologies of the Agricultural Ministry of Italy, one of the most representative indicators of soil biological fertility is determined in the main space-time pedological transects of the Piedmontese plain and hilly area.

Data are spatialized into the soil units of the pedological maps of the Soil Atlas.

Soil carbon monitoring in Piemonte in forestry and arboriculture sites

2004 to Present

Members: Fabio Petrella, Igor Boni

Strategical sampling, according to EU protocols, of carbon soils in forestry and arboriculture plots, started in 2004, brings to calculations of carbon stocks and increments under different vegetation and soil types.

Monitoring of an Atmosphere-Forestry Ecosystem Gas-Fluxes Exchange by Eddy Covariance Station at "La Mandria" regional park

2002 to Present

Members: Fabio Petrella, Giovanni Manca

Since 2002 a complete work of data collection, hardware and software management, instruments and station equipments routine and extra-routine maintenance, data elaboration for global carbon annual balance

Forum for the Agroforestry Carbon Credits Italian Market

January 2012 to Present

Members: Fabio Petrella, Franco Miglietta

Platform of discussion for italian experts to discuss and promote the National Market of Carbon Credits in Agroforestry, also supporting the proposal by a panel of experts for a Carbon Credits National Guideline.

Courses

Licentiate degree, Rural Engineering

Agricultural University of Turin

Soil Chemistry

Mineralogy

Agricultural hydraulics

Topography and rural buildings

Mountain agriculture
Agricultural industries

Diploma, Literatures, Sciences

Liceo Classico C.Cavour
Mathematics & Physics
Latin & Greek
Italian literature
Philosophy and History
Biological sciences and chemistry

Soil Researcher

I.P.L.A. s.p.a.
Corso di approfondimento in Geologia applicata -
Politecnico Torino - 28/5.12/6 2006
Scuola di Biodiversità e Bioindicazione - CRA-RPS
Roma -2007-2010-2011

Languages

English

(Professional working proficiency)

Skills & Expertise

Soil biodiversity
Association Management
Soil Carbon
Soil Fertility
Soil Sampling
Soil Mapping
Soil Science
Teaching
Soil Evaluation
Field surveys and sampling
Truffle soil monitoring
Soil
Carbon
Biodiversity
Carbon Credits
Ecology
Climate Change
Remote Sensing
Environmental Science

Science

Sustainability

Research

Environmental Awareness

GIS

Sustainable Development

Environmental Impact Assessment

ArcGIS

Geographic Information Systems (GIS)

Education

Agricultural University of Turin

Licentiate degree, Rural Engineering, 1977 - 1984

Activities and Societies: International Association of Agricultural Students

Liceo Classico C.Cavour

Diploma, Literatures, Sciences, 1972 - 1977

Activities and Societies: Volley team

Interests

Feng Shui Teacher and Consultant - www.fabiopetrella.it

Fabio Petrella

Soil Researcher at I.P.L.A.

fabio.petrella@fastwebnet.it



1 person has recommended Fabio

"Fabio è un pedologo di grande esperienza in campo agrario e forestale che, nell'ultimo decennio di attività, ha molto approfondito e applicato le tecniche di monitoraggio sul bilancio idrico dei suoli e della CO2 in formazioni boschive campione facenti parte di reti di controllo regionali e nazionali."

— **mario palenzona**, managed Fabio at I.P.L.A. s.p.a.

[Contact Fabio on LinkedIn](#)