PERSONAL INFORMATION

Helder Filipe dos Santos Viana

Escola Superior Agrária de Viseu (ESAV).
Quinta da Alagoa, Estrada de Nelas, Ranhados, 3500-606 Viseu, Portugal

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Sex Male | Nationality Portuguese

WORK EXPERIENCE

(Since 2002)

Assistant Professor

Agrarian Superior School - Polytechnic Institute of Viseu (IPV
Quinta da Alagoa, Estrada de Nelas. 3500-606 Viseu, Portugal

- Lecturer of: Silviculture, Forest Inventory, Forest mensuration and biometrics, Methods and technology of forest management, Remote Sensing, Landscape Ecology.

Higher education

(Since 2014)

Researcher

CI&DETS - Center for Studies in Education, Technologies and Health of IPV
Unidade de I&D do Instituto Politécnico de Viseu. Av. Cor. José Maria Vale de Andrade
Campus Politécnico. 3504 - 510 VISEU

Research

(Since 2012)

Researcher

CITAB- Centre for the Research and Technology of Agro-Environmental and Biological Sciences of Trás-os-Montes e Alto Douro.
Quinta de Prados, Pavilhão 2, 5000 Vila Real, Portugal

Research

(2001/2002)

Forest Engineer

Silvinor, Eng Florestal / Forestry Association of Encosta da Serra da estrela
3500-009 Viseu / 6290-361 Gouveia

- Forest management, forest projects, forest Inventories, measurement of areas with GPS, elaboration of digital cartography; management of Land information system (GIS), rural extension.

Forest management

(2000)

Remote sensing technician

Novageo / Ecostatus / Erena - ERENA - Ordenamento e Gestão de Recursos Naturais, LDA
Morada: Rua Robalo Gouveia, 1-1A . 1900-392 Lisboa

- Photointerpretation, Geographical information Systems, vineyard cadastre

Agricultural Cadastre

(1999)

Consultant

Agroreal, Prestação de Serviços Agrários.
R. Visconde Carnaxide 65, Bl. B - r/c, lj C. 5000-556 Vila Real

- Elaboration of digital cartography, management of Land information system (GIS).

Agricultural consultant

EDUCATION AND TRAINING

(2006 - 2012)

Ph.D. in Agricultural and Forestry Sciences

EQF 8 /ISCED 844

University of Trás-os-Montes and Alto Douro (Portugal)

- Modelling, Remote Sensing, Geographic Information Systems, Assessment of forest biomass and carbon Stocks

(2001/2002 and 2004/2005)

Master in Engineering of Forest Resources

EQF 7 / ISCED 747

University of Trás-os-Montes and Alto Douro (Portugal)

- Modelling and Data Analysis; Sampling and Delineation; Multidimensional analysis; Geoestatistics; Operational Research; Territory planning; Mediterranean ecosystems; Landscape Ecology; Forest Ecosystem restoration; Conservation of Natural resources and Agricultural Development; Economy of Natural resources; Disturbance in Forest Ecosystems; Certification and Organization of Companies; Legislation and Forest Politics

(1994 - 2000)

Bachelor in Forest Engineering

EQF 6 / ISCED 646

University of Trás-os-Montes and Alto Douro (Portugal)

- Base disciplines:
  Cartography; Topography; Statistics; Introduction to Computer science and programming; Design and Analysis of Experiments; Soils and Fertility; Climatology; Geology and Mineralogy, Microbiology
- Specialty disciplines:
  Remote sensing; Territory management; Forest inventory; Silviculture; Tropical forestry; Forest Ecology; Forest Planning; Forest Exploration; Dendrology; Forest Fires; Faunistic resources

PERSONAL SKILLS

Mother tongue(s): Portuguese

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	A1	A1	A2	A2	A2
French	A1	A1	A2	A2	A2
Spanish	A1	A1	A2	A2	A2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- good communication skills and ability to adapt to multicultural environments gained through my experience abroad as a member of the International Association of Agricultural Students, while student; in short duration teaching missions; in meetings and working groups as a member of International projects e.g. (EURIS, WESST, COST); in meetings during my Ph.D. work and in international conferences.

Organisational / managerial skills

- Organization of several national and international events in the speciality

Computer skills

- good command of Microsoft Office™ tools (Word™, Excel™, PowerPoint™);
- good command of CAD, GIS and Remote sensing software (Microstation™, ArcGis 10.x™, QGIS, gvSIG; IDRISI™);
- Good command of statistical software (JMP™, SAS);
- knowledge of graphic design applications (Corel Draw™, PhotoShop™).

ADDITIONAL INFORMATION

Steering positions

- Since 2014 - Director of the Department of Ecology and Sustainable Agriculture of IPV
- •Since 2014 - Member of Steering Committee of Association for Development and Research of Viseu (ADIV).
- Since 2013 - Director of the Bachelor in Forestry Engineering.
- Since 2013 - Director of the Bachelor in Ecology and Landscape Management.
- 2007/2008 to 2009/2010 - Director of the Bachelor in Forest Engineering.
- 2003/2004 to 2006/2007 - Director of the Bachelor in Agricultural Engineering Variant Forestry.

Relevant publications

Papers

- Viana, H.; Lopes, D.; Aranha, J. 2009. Predição de biomassa arbustiva lenhosa empregando dados de inventário e o índice de diferença normalizada extraído em imagens Landsat 5 TM. ISPV Millenium 37.
- Viana, H., Cohen, W.B., Lopes, D., Aranha, J., 2010. Assessment of forest biomass for use as energy. GIS-based analysis of geographical availability and locations of wood-fired power plants in Portugal. Applied Energy 87, 2551-2560. (IF2011: 5.106 IF5-year (cites in 2011): 4.456; Q1).
- Viana, H., Aranha, J., Lopes, D., Cohen, W.B., 2012. Estimation of crown biomass of Pinus pinaster stands and shrubland above-ground biomass using forest inventory data, remotely sensed imagery and spatial prediction models. Ecological Modelling 226, 22-35. (IF5-year (cites in 2011): 2.714; Q2).
- Aranha, J.; Calvão, A.; Lopes, D.; Viana, H. 2012. Quantificação da biomassa consumida nos últimos 20 anos de fogos florestais no Norte de Portugal. Revista informativa da Ordem dos Engenheiros Região Norte, INFO 26. Edição nº 26 de Janeiro de 2012.
- Viana, H., Vega-Nieva, D., Ortiz Torres, L., Lousada, J., Aranha, J., 2012. Fuel characterization and biomass combustion properties of selected native woody shrub species from central Portugal and NW Spain. Fuel 102, 737–745. (IF5-year (cites in 2011): 3.791; Q1).
- Viana, H., Fernandes, P. Aranha, J., 2013. Equações para estimar a biomassa aérea das principais lenhosas arbustivas no Norte e Centro do país. Silva Lusitana, Ano XXI, Nº Especial, 99-109.
- Viana, H., Marques, C.P., Fonseca, T., 2013. Equações Predição da biomassa aérea da Pinus pinaster Aiton. por um Sistema de equações aditivas integrado no simulador open source ModisPinaster. Silva Lusitana, Ano XXI, Nº Especial, 77-86.
- Lopes D, L Nunes, N Walford, J Aranha, C Sette, H Viana, C Hernandez, 2014. A simplified methodology for the correction of Leaf Area Index (LAI) measurements obtained by ceptometer with reference to Pinus Portuguese forests. iForest - Biogeosciences and Forestry 0:185-191.
- Ferreira, J., Viana, H., Esteves, B., Cruz Lopes, L., Domingos, I., 2014. Life cycle assessment of residual forestry biomass chips at a power plant: a Portuguese case study. Int J Energy Environ Eng 5, 1-7.
- Lopes, D., Nunes, L., Walford, N., Aranha, J., Sette, C., Viana, H., Hernandez, C., 2014. A simplified methodology for the correction of Leaf Area Index (LAI) measurements obtained by ceptometer with reference to Pinus Portuguese forests. iForest - Biogeosciences and Forestry 0, 185-191.
- Liang, J., T. et. al. 2016. Positive biodiversity-productivity relationship predominant in global forests. Science 354.
- Lopes, D.; Walford, Nigel; Viana, H. and Sette Junior, C. R., 2016. A proposed methodology for the correction of the leaf area index measured with a ceptometer for pinus and eucalyptus forests. Revista Árvore, Viçosa-MG, v.40, n.5.

Books / CD / e-learning

- Viana, H.; Amaral, N. & Ladeira, R. (2005). O Risco de Incêndio no Distrito de Viseu. Uma visão integrada das estruturas existentes. Colecção: Ser e Estar nº 6. Governo Civil do Distrito de Viseu, Viseu, 222 pp. Depósito Legal: 223039/05.
- Amaral, N.; Bica, A.; Ferreira, A.; Mendes, A.; Viana, H.; Pato, L.; Fachada, M. & Serra, N. (2006). Estudo e Diagnóstico de Necessidades de Formação Profissional Florestal na Região Dão-Lafões. Ed Lusitânia, Viseu 164 pp.
- Viana H., Ferreira J.V. (2006). Wood Energy Resources. A Self-study Educational e-learning module of Wood Energy Supply System Training (WESST) Project. Module 5, Leonardo da Vinci Programme - Pilot Project, Ref.IRL-04-B/P-FP-153217. In: www.wesst.com.
- Viana, H., Lopes, D., Aranha, J., 2011. Assessment of Forest Aboveground Biomass Stocks and Dynamics with Inventory Data, Remotely Sensed Imagery and Geostatistics, in: Shaukat, S.S. (Ed.), Progress in Biomass and Bioenergy Production. InTech, 6, pp. 107-130. ISBN: 978-953-307-491-7.

Projects

- Study of the Forest Resources Sustainability, applying GIS and Remote sensing technologies. Evaluation of the Viability for installing Heating and electric power plant using Forest Biomass residues in the District of Viseu (Central Portugal). ADIV-IPV, 145pp, (July/August 2006);
- European Project WESST - wood energy supply systems training, supported by “Leonardo da Vinci” program. Partners: Polytechnic Institute of Viseu (Portugal), Sylviron Limited (Irlanda), Clark Mactavish (UK), VITRA (Slovenia), Waterford Institute of Technology (Ireland), Larenstein International College (Holland), Oulu Polytechnic, School of Renewable Natural Resources (Finland), IVALSA (Italy) (January of 2004 to December of 2006);
- European Project EURIS - Europeans Using Roundwood Innovatively & Sustainably (2003 - 2004), supported by “Leonardo da Vinci” program. Partners: Clark Mactavish (UK) e Sylviron (Ireland), IVALSA (Italy), Krajina (Slovakia), Larenstein International College (Holland), Waterford Institute of Technology (Ireland), Polytechnic Institute of Viseu (Portugal).
- COST (Intergovernmental framework for European Cooperation in Science and Technology) Action FP1301 - Innovative management and multifunctional utilization of traditional coppice forests - an answer to future ecological, economic and social challenges in the European forestry sector (EuroCoppice). 2013.

Editorial/Review experience:

- International Journal of Remote Sensing: 2008; 2009; 2010; 2011
- International Journal of Geographical Information Science: 2011
- DYNA: 2013
- Energy & Fuels: 2013
- Geoinformatics and Geostatistics: An overview: 2014
- Remote Sensing: 2014
- Sustainability: 2014; 2016
- Land: 2014
- Baltic Forestry: 2015
- Forests 2014; 2015; 2016
- Biofuels, Bioproducts & Biorefining: 2015
- Centro de Información Tecnológica (CIT): 2015
- Journal of Renewable and Sustainable Energy: 2015
- Revista Brasileira de Biometria: 2016

Membership of professional bodies

- Senior member of the Order of the Portuguese Engineers n: 64597

Scientific interests

- Biomass
- Modelling and mapping biomass and carbon stocks
- Bioenergetic cultures
- Coppice
- Biodiversity
- Spatial analysis
- Satellite Image Processing
- Land use land cover change

Viseu, October, 2016