Συμβουλές για επιτυχημένες προτάσεις στον Ορίζοντα 2020

Αριστεία στην Επιστήμη: FET & MCSA

Αθήνα, 15 Μαρτίου 2016

Εθνικό Ίδρυμα Ερευνών

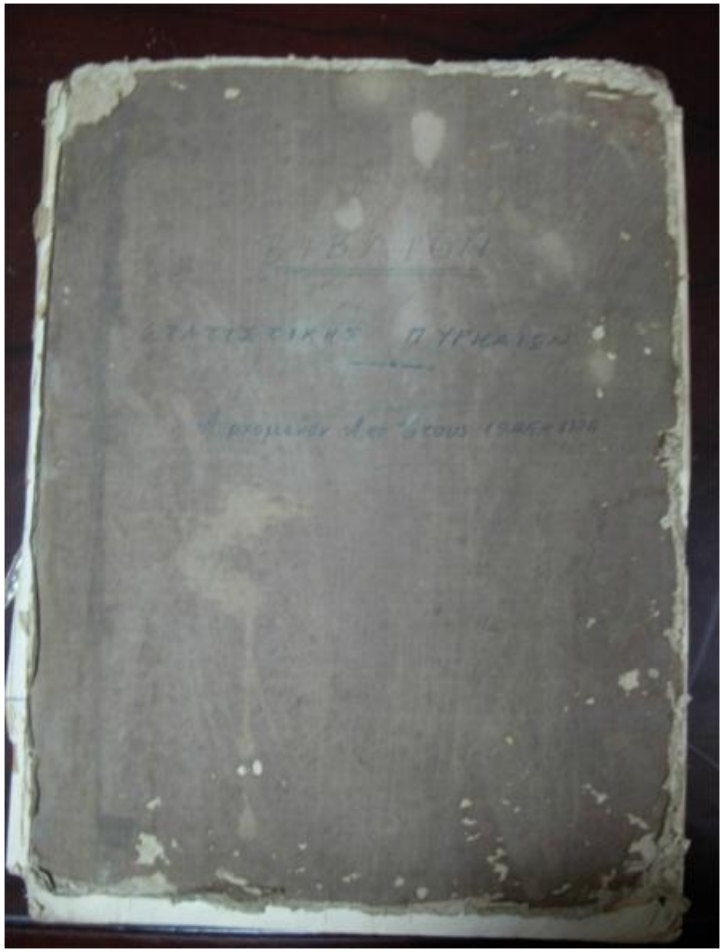
Δρ. Νίκος Κούτσιας
Επίκουρος Καθηγητής, Υπότροφος IF-2015

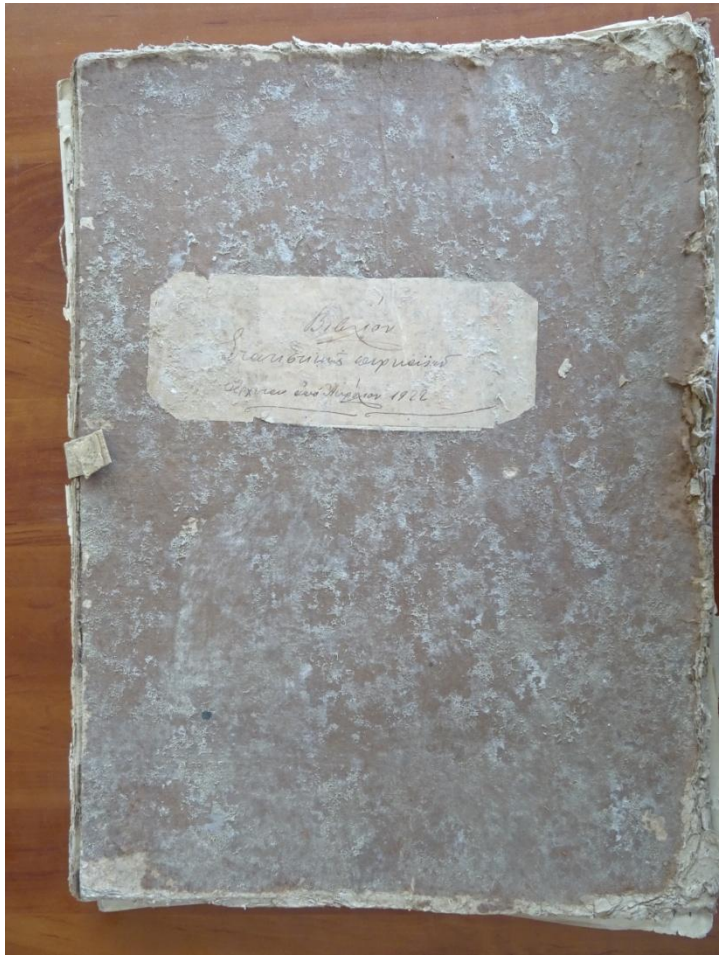
Πανεπιστήμιο Πάτρας

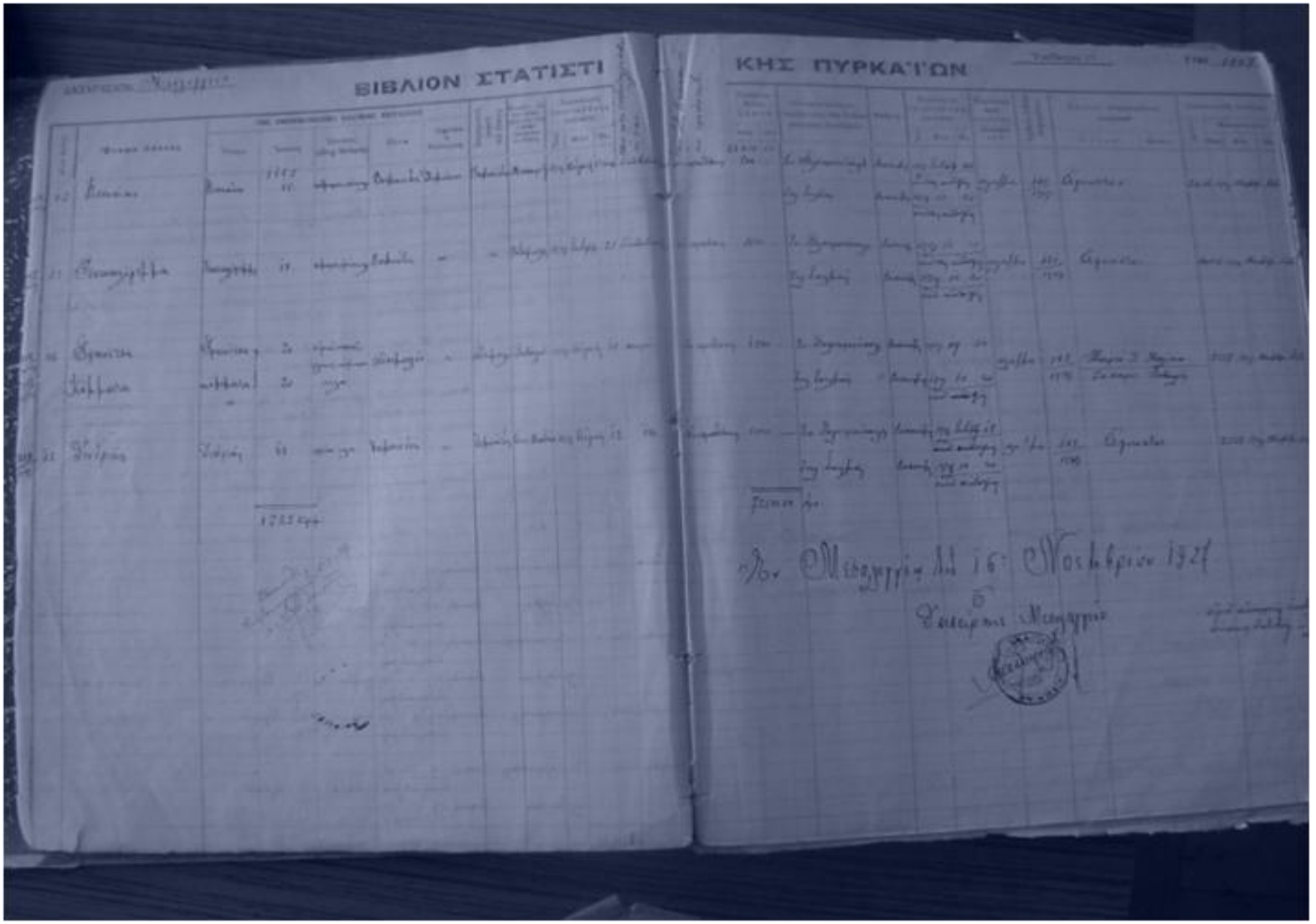
Κίνητρο

Συνέργεια

1922





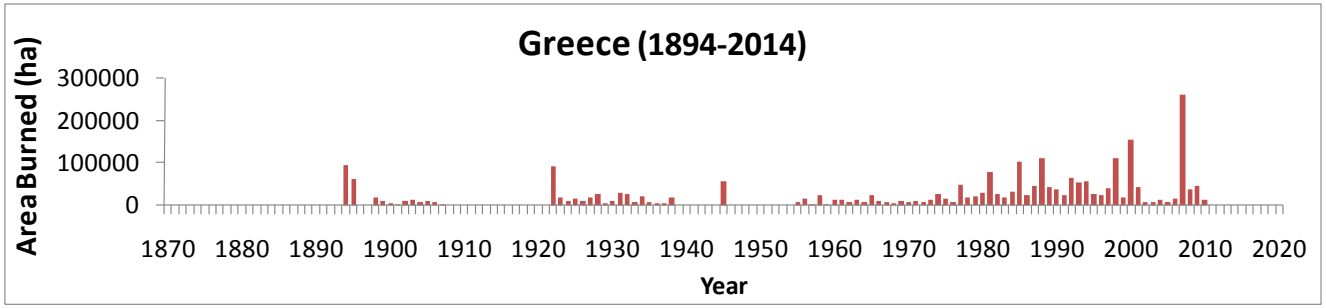

ΒΙΒΛΙΟΝ ΣΤΑΤΙΣΤΙ
ΚΗΣ ΠΥΡΚΑΪΩΝ

8. Πυρκαϊαὶ δασῶν *) — 8. Incendies de forêts *)

Ἐνδείξεις	Ἀριθ. πυρκαϊῶν Nombre d'incendies	Καεῖσα ἔκτασις Superficie incendiée στρ.-str.	Προξενηθεῖσα ζημια Dommages causés δρχ.-dr.	Μορφὴ πυρκαϊῶν Forme d'incendies: Κόμης-Des branches	Κορμοῦ Du tronc	Ἑρπουσα Rampants	Αἰτία πυρκαϊῶν Causes d'incendies: Ἐκ προθέσεως-Intentionnelles	Ἐξ ἀμελείας - De négligence	Τυχαῖαι Fortuites	Désignations
1926										
Δάση	284	37.287	9.634.810	36	36	212	35	63	186	Forêts
Δημόσια	168	15.628	1.336.500	13	30	125	26	35	107	de l'Etat
Ἰδιόκτητα	116	21.659	8.238.310	23	6	87	9	28	79	Privées
Βοσκότοποι	255	67.297	6.063.610	11	31	213	63	113	79	Pâturag. boisés
Δημόσιοι	187	38.618	4.678.360	4	28	155	50	73	64	de l'Etat
Ἰδιόκτητοι	68	28.679	1.385.250	7	3	58	13	40	15	Privés
Σύνολον	**539**	**104.581**	**15.638.420**	**47**	**67**	**425**	**93**	**176**	**265**	**Total**
1927										
Δάση	334	131.495	23.901.949	41	104	219	69	128	167	Forêts
Δημόσια	223	87.884	14.475.630	35	55	133	43	93	87	de l'Etat
Ἰδιόκτητα	141	46.611	14.429.250	6	49	86	26	35	80	Privées
Βοσκότοποι	271	41.255	2.714.515	41	42	188	64	81	126	Pâturag. boisés
Δημόσιοι	212	35.703	2.106 560	33	29	150	55	51	106	de l'Etat
Ἰδιόκτητοι	59	5.552	607.955	8	13	38	9	30	20	Privés
Σύνολον	**635**	**175.750**	**31.619.455**	**82**	**146**	**407**	**133**	**209**	**293**	**Total**

*) Κατὰ τὸ ἔτος 1928 συνέβησαν αἱ ἑξῆς πυρκαϊαί: Δημοσιων δασῶν 419, καεῖσα ἔκτασις 138.076 στρέμ., προξενηθεῖσα ζημία 23 περίπου ἑκατομ. δραχμῶν. Λοιπῶν δασῶν 146, καεῖσα ἔκτασις 35.238 στρέμ., ζημία 7,5 ἑκατομ. δραχμῶν. - Les incendies suivantes ont eu lieu en 1928: 419 de forêts de l'Etat, superficie incendiée 138.076 strem., dégâts causés 23 millions drachmes environ; d'autres forêts 146, superficie incendiée 35.238 strem., dégâts 7,5 millions drachmes.

Ανοιχτά δεδομένα


Greece (1894-2014)
Area Burned (ha)
300000
200000
100000
0
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Year

CSIRO PUBLISHING

International Journal of Wildland Fire **2013**, *22*, 493–507
http://dx.doi.org/10.1071/WF12003

On the relationships between forest fires and weather conditions in Greece from long-term national observations (1894–2010)

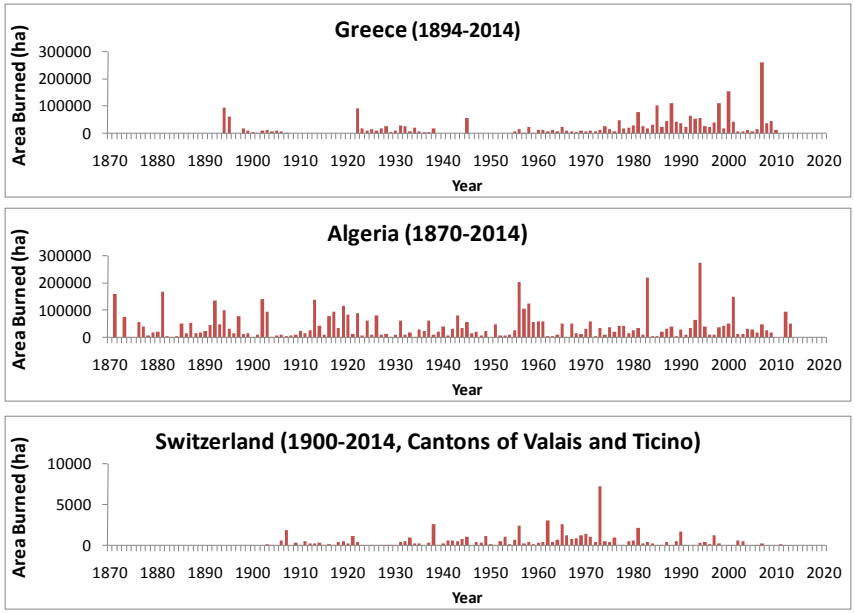
Nikos Koutsias[A,F], *Gavriil Xanthopoulos*[B], *Dimitra Founda*[C], *Fotios Xystrakis*[A], *Foula Nioti*[A], *Magdalini Pleniou*[A], *Giorgos Mallinis*[D] *and Margarita Arianoutsou*[E]

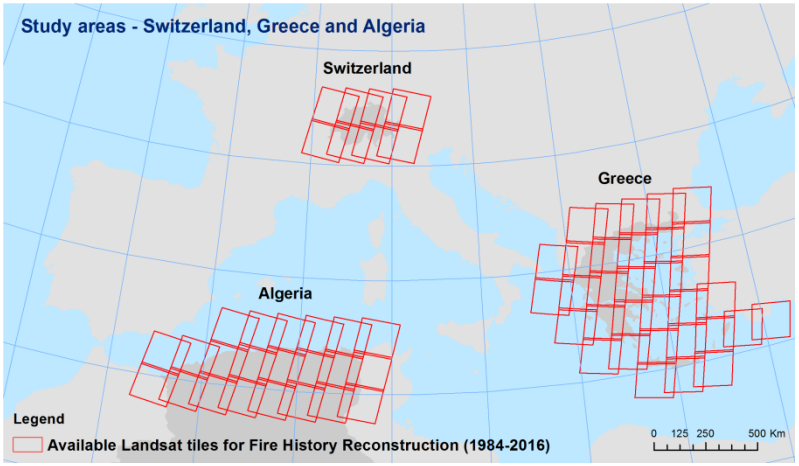
International Journal of Wildland Fire Annual Report 2014 CSIRO Publishing

Top 10 most highly cited papers in 2013–2014

Table 16

Authors	Title	Vol. (issue)	No. cites
N Koutsias, G Xanthopoulos, D Founda et al.	On the relationships between forest fires and weather conditions in Greece from long-term national observations (1894–2010)	22(4)	14
JT Abatzoglou, CA Kolden	Relationships between climate and macroscale area burned in the western United States	22(7)	12
S McCaffrey, E Toman, M Stidham, et al.	Social science research related to wildfire management: an overview of recent findings and future research needs	22(1)	12
RE Keane	Describing wildland surface fuel loading for fire management: a review of approaches, methods and systems	22(1)	10
C Miller, AA Ager	A review of recent advances in risk analysis for wildfire	22(1)	8





GRADIENT

Understanding fire, weather and land cover interactions from long-term terrestrial observations and satellite data in a north to south transect in Europe and North Africa

Ιδιαιτερότητα

Καινοτομία

Πρωτοτυπία

GRADIENT

Understanding fire, weather and land cover interactions from long-term terrestrial observations and satellite data in a north to south transect in Europe and North Africa

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3. **IMPLEMENTATION**

STOP PAGE COUNT

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5. **CAPACITIES OF THE PARTICIPATING ORGANISATIONS**
6. **ETHICAL ASPECTS**

	σελ.
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2. Impact	2
3. Implementation	3

1. Excellence (5 σελ)

1.1 *Quality, innovative aspects and credibility of the research*

Introduction, state-of-the-art, objectives and overview of the action

Research methodology and approach

Originality and innovative aspects of the research programme

1.2 Clarity and quality of transfer of knowledge/training for the development of the researcher in light of the research objectives

Explain how the *Experienced Researcher* will gain new knowledge during the fellowship at the hosting organisation(s)

Outline the previously acquired knowledge and skills that the researcher will transfer to the host organisation.

1.3 Quality of the supervision and the hosting arrangements

1.3.1 Qualifications and experience of the supervisor(s)

1.3.2 Hosting arrangements

1.4 Capacity of the researcher to reach and re-enforce a position of professional maturity in research

1. Excellence (5 σελ)

1.1 *Quality, innovative aspects and credibility of the research (3.5 σελ)*

Introduction, state-of-the-art, objectives and overview of the action

Research methodology and approach

Originality and innovative aspects of the research programme

Ήμουν πολύ συγκεκριμένος με:

- τι θα κάνω

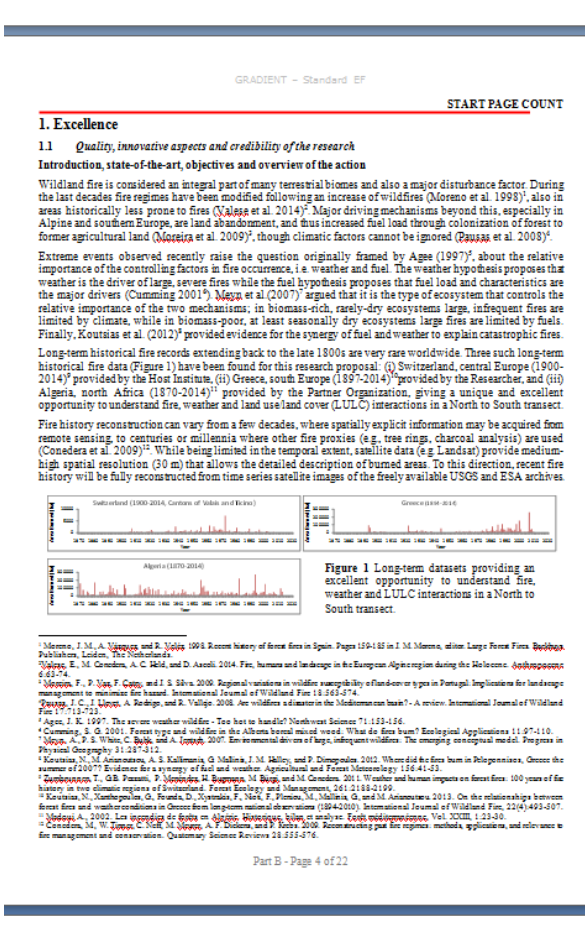
- πώς θα το κάνω

- έδειξα ότι μπορώ να το κάνω

- και ίσως το βασικότερο, είχα ήδη εξασφαλίσει τα κύρια δεδομένα

- το state-of-the-art ήταν καλογραμμένο και ολοκληρωμένο

- ανέδειξα με έντονο τρόπο την καινοτομία της πρότασης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START PAGE COUNT

1. Excellence

1.1 *Quality, innovative aspects and credibility of the research*

Introduction, state-of-the-art, objectives and overview of the action

Wildland fire is considered an integral part of many terrestrial biomes and also a major disturbance factor. During the last decades fire regimes have been modified following an increase of wildfires (Moreno et al. 1998)[1], also in areas historically less prone to fires (Valese et al. 2014)[2]. Major driving mechanisms beyond this, especially in Alpine and southern Europe, are land abandonment, and thus increased fuel load through colonization of forest to former agricultural land (Moreira et al. 2009)[3], though climatic factors cannot be ignored (Pausas et al. 2008)[4].

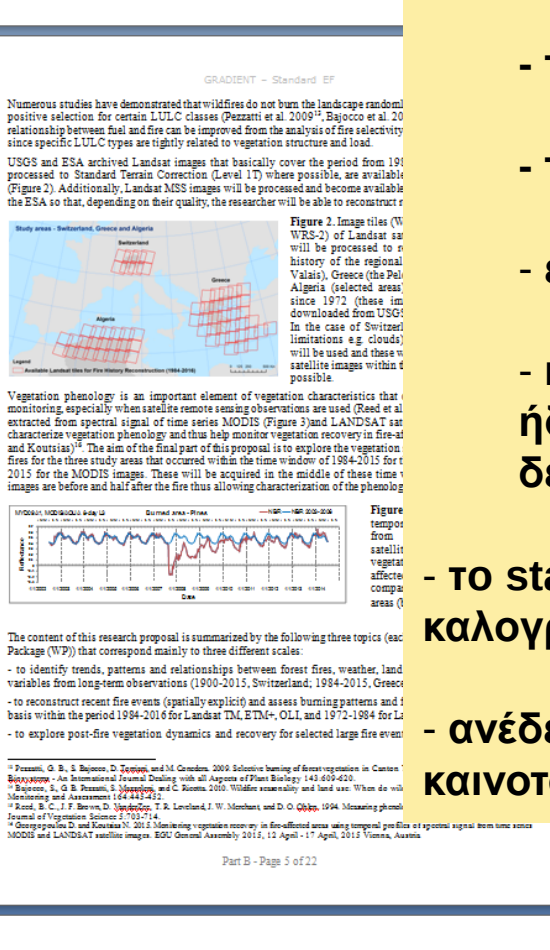
Extreme events observed recently raise the question originally framed by Agee (1997)[5], about the relative importance of the controlling factors in fire occurrence, i.e. weather and fuel. The weather hypothesis proposes that weather is the driver of large, severe fires while the fuel hypothesis proposes that fuel load and characteristics are the major drivers (Cumming 2001[6]). Meyn et al.(2007)[7] argued that it is the type of ecosystem that controls the relative importance of the two mechanisms; in biomass-rich, rarely-dry ecosystems large, infrequent fires are limited by climate, while in biomass-poor, at least seasonally dry ecosystems large fires are limited by fuels. Finally, Koutsias et al. (2012)[8] provided evidence for the synergy of fuel and weather to explain catastrophic fires.

Long-term historical fire records extending back to the late 1800s are very rare worldwide. Three such long-term historical fire data (Figure 1) have been found for this research proposal: (i) Switzerland, central Europe (1900-2014)[9] provided by the Host Institute, (ii) Greece, south Europe (1897-2014)[10]provided by the Researcher, and (iii) Algeria, north Africa (1870-2014)[11] provided by the Partner Organization, giving a unique and excellent opportunity to understand fire, weather and land use/land cover (LULC) interactions in a North to South transect.

Fire history reconstruction can vary from a few decades, where spatially explicit information may be acquired from remote sensing, to centuries or millennia where other fire proxies (e.g., tree rings, charcoal analysis) are used (Conedera et al. 2009)[12]. While being limited in the temporal extent, satellite data (e.g Landsat) provide medium-high spatial resolution (30 m) that allows the detailed description of burned areas. To this direction, recent fire history will be fully reconstructed from time series satellite images of the freely available USGS and ESA archives.

Figure 1 Long-term datasets providing an excellent opportunity to understand fire, weather and LULC interactions in a North to South transect.

[1] Moreno, J. M., A. Vázquez and R. Vélez. 1998. Recent history of forest fires in Spain. Pages 159-185 in J. M. Moreno, editor. Large Forest Fires. Backhuys Publishers, Leiden, The Netherlands.
[2] Valese, E., M. Conedera, A. C. Held, and D. Ascoli. 2014. Fire, humans and landscape in the European Alps region during the Holocene. Anthropocene 6:63-74.
[3] Moreira, F., P. Vaz, F. Catry, and J. S. Silva. 2009. Regional variations in wildfire susceptibility of land-cover types in Portugal: Implications for landscape management to minimize fire hazard. International Journal of Wildland Fire 18:563-574.
[4] Pausas, J. G., J. Llovet, A. Rodrigo, and R. Vallejo. 2008. Are wildfires a disaster in the Mediterranean basin? - A review. International Journal of Wildland Fire 17:713-723.
[5] Agee, J. K. 1997. The severe weather wildfire - Too hot to handle? Northwest Science 71:153-156.
[6] Cumming, S. G. 2001. Forest type and wildfire in the Alberta boreal mixed-wood: What do fires burn? Ecological Applications 11:97-110.
[7] Meyn, A., P. S. White, C. Buhk, and A. Jentsch. 2007. Environmental drivers of large, infrequent wildfires: The emerging conceptual model. Progress in Physical Geography 31:287-312.
[8] Koutsias, N., M. Arianoutsou, A. S. Kallimanis, G. Mallinis, J. M. Halley, and P. Dimopoulos. 2012. Where did the fires burn in Peloponnisos, Greece the summer of 2007? Evidence for a synergy of fuel and weather. Agricultural and Forest Meteorology 156:41-53.
[9] Zumbrunnen, T., Q.B. Pezzatti, P. Menéndez, H. Bugmann, M. Beniston, and M. Conedera. 2011. Weather and human impacts on forest fires: 100 years of fire history in two climatic regions of Switzerland. Forest Ecology and Management, 261:2188-2199.
[10] Koutsias, N., Xanthopoulos, G., Founda, D., Xystrakis, F., Nioti, F., Pleniou, M., Mallinis, G., and M. Arianoutsou. 2013. On the relationships between forest fires and weather conditions in Greece from long-term national observations (1894-2010). International Journal of Wildland Fire, 22(4):493-507.
[11] Medail, A., 2002. Les incendies de forêts en Algérie. Historique, bilan et analyse. Forêt méditerranéenne, Vol. XXIII, 1:23-30.
[12] Conedera, M., W. Tinner, C. Neff, M. Meurer, A. F. Dickens, and P. Krebs. 2009. Reconstructing past fire regimes: methods, applications, and relevance to fire management and conservation. Quaternary Science Reviews 28:555-576.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Numerous studies have demonstrated that wildfires do not burn the landscape randomly positive selection for certain LULC classes (Pezzatti et al. 2009[13], Bajocco et al. 20 relationship between fuel and fire can be improved from the analysis of fire selectivity since specific LULC types are tightly related to vegetation structure and load.

USGS and ESA archived Landsat images that basically cover the period from 19 processed to Standard Terrain Correction (Level 1T) where possible, are available (Figure 2). Additionally, Landsat MSS images will be processed and become available the ESA so that, depending on their quality, the researcher will be able to reconstruct

Figure 2. Image tiles (W WRS-2) of Landsat sa will be processed to r history of the regional Valais), Greece (the Pel Algeria (selected areas) since 1972 (these im downloaded from USGS In the case of Switzerl limitations e.g. clouds) will be used and these w satellite images within t possible.

Vegetation phenology is an important element of vegetation characteristics that monitoring, especially when satellite remote sensing observations are used (Reed et al extracted from spectral signal of time series MODIS (Figure 3)and LANDSAT sat characterize vegetation phenology and thus help monitor vegetation recovery in fire-a and Koutsias)[14]. The aim of the final part of this proposal is to explore the vegetation fires for the three study areas that occurred within the time window of 1984-2015 for t 2015 for the MODIS images. These will be acquired in the middle of these time images are before and half after the fire thus allowing characterization of the phenolog

Figure tempo from satellit vegetat affecte compa areas (

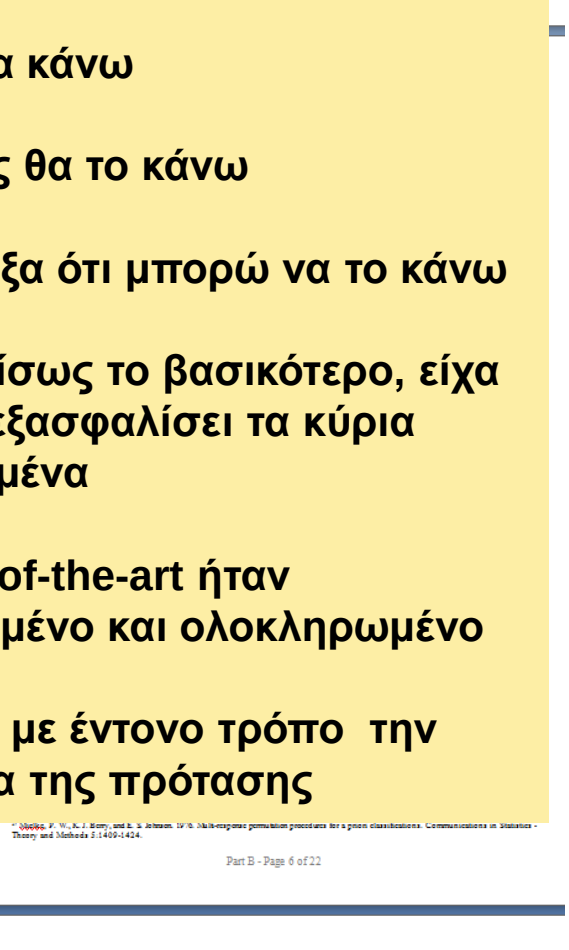
The content of this research proposal is summarized by the following three topics (eac Package (WP)) that correspond mainly to three different scales:

- to identify trends, patterns and relationships between forest fires, weather, land variables from long-term observations (1900-2015, Switzerland; 1984-2015, Greec

- to reconstruct recent fire events (spatially explicit) and assess burning patterns and basis within the period 1984-2016 for Landsat TM, ETM+, OLI, and 1972-1984 for La

- to explore post-fire vegetation dynamics and recovery for selected large fire even

[13] Pezzatti, G. B., S. Bajocco, D. Torriani, and M. Conedera. 2009. Selective burning of forest vegetation in Canton Botanica Helvetica - An International Journal Dealing with all Aspects of Plant Biology 143:609-620.
[14] Bajocco, S., G B. Pezzatti, S. Mazzoleni, and C. Ricotta. 2010. Wildfire seasonality and land use: When do wil Monitoring and Assessment 164:443-452.
[15] Reed, B. C., J. F. Brown, D. VanderZoo, T. R. Loveland, J. W. Merchant, and D. O. Ohlen. 1994. Measuring phenol Journal of Vegetation Science 5:703-714.
[16] Georgopoulou D. and Koutsias N. 2015 Monitoring vegetation recovery in fire-affected areas using temporal profiles of spectral signal from time series MODIS and LANDSAT satellite images. EGU General Assembly 2015, 12 April - 17 April, 2015 Vienna, Austria


[17] Holm, S. 1979. A simple sequentially rejective multiple test procedure. Scandinavian Journal of Statistics 6:65-70.
[18] Hollander, M., D. A. Wolfe, and E. Chicken. 2013. Nonparametric Statistical Methods. John Wiley & Sons.
[19] Mielke, P. W., K. J. Berry, and E. S. Johnson. 1976. Multi-response permutation procedures for a priori classifications. Communications in Statistics - Theory and Methods 5:1409-1424.

1. Excellence (5 σελ)

1.2 Clarity and quality of transfer of knowledge/training for the development of the researcher in light of the research objectives

Explain how the Experienced Researcher will gain new knowledge during the fellowship at the hosting organisation(s)

Outline the previously acquired knowledge and skills that the resear

1.3 Quality of the supervision and the hosting arrangements

1.3.1 Qualifications and experience of the supervisor(s)

1.3.2 Hosting **arrangements**

1.4 Capacity of the researcher to reach and re-enforce a position

Ήμουν πολύ συγκεκριμένος με:

- τη γνώση που θα αποκομίσω

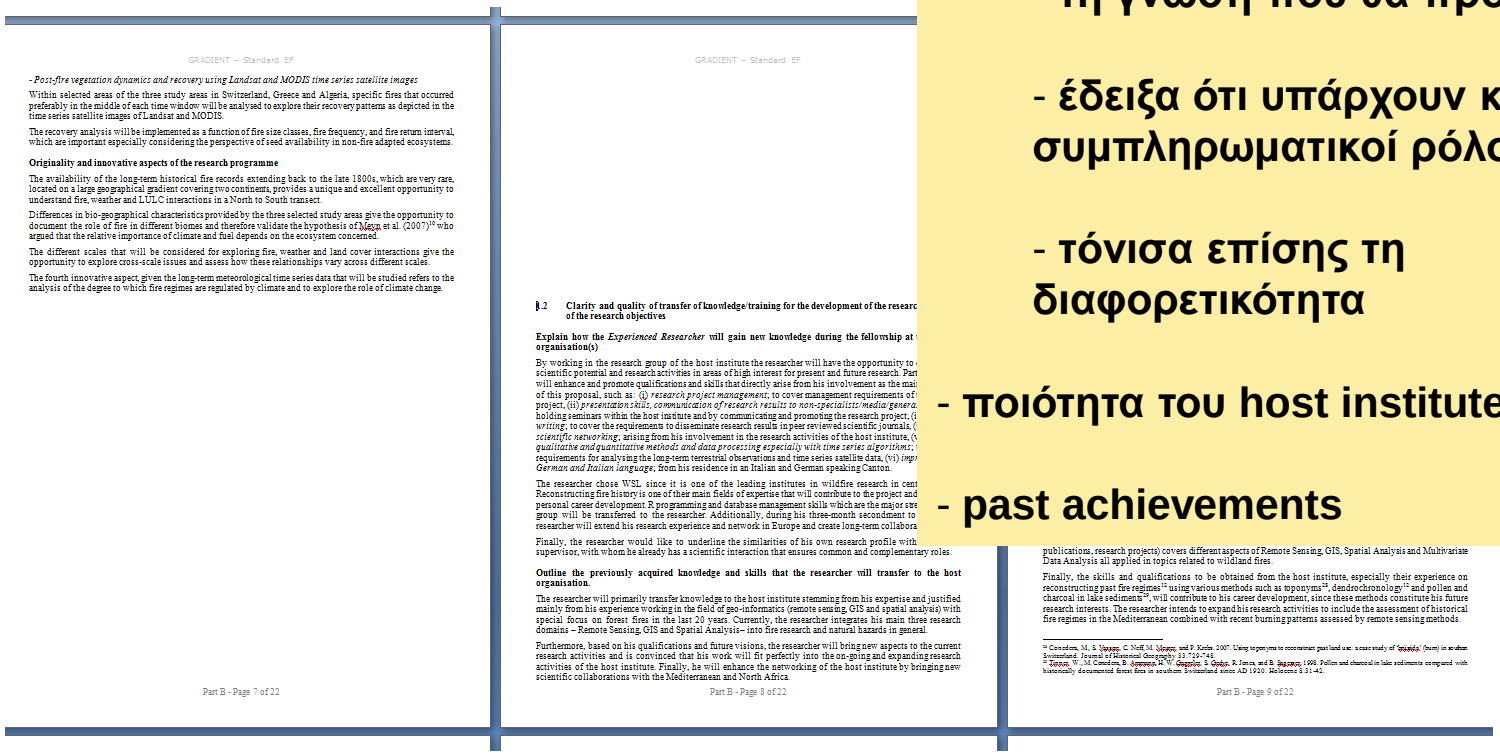
- τη γνώση που θα προσφέρω

- έδειξα ότι υπάρχουν κοινοί και συμπληρωματικοί ρόλοι

- τόνισα επίσης τη διαφορετικότητα

- ποιότητα του host institute

- past achievements



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- Post-fire vegetation dynamics and recovery using Landsat and MODIS time series satellite images

Within selected areas of the three study areas in Switzerland, Greece and Algeria, specific fires that occurred preferably in the middle of each time window will be analysed to explore their recovery patterns as depicted in the time series satellite images of Landsat and MODIS.

The recovery analysis will be implemented as a function of fire size classes, fire frequency, and fire return interval, which are important especially considering the perspective of seed availability in non-fire adapted ecosystems.

Originality and innovative aspects of the research programme

The availability of the long-term historical fire records extending back to the late 1800s, which are very rare, located on a large geographical gradient covering two continents, provides a unique and excellent opportunity to understand fire, weather and LULC interactions in a North to South transect.

Differences in bio-geographical characteristics provided by the three selected study areas give the opportunity to document the role of fire in different biomes and therefore validate the hypothesis of Meyn et al. (2007)[9] who argued that the relative importance of climate and fuel depends on the ecosystem concerned.

The different scales that will be considered for exploring fire, weather and land cover interactions give the opportunity to explore cross-scale issues and assess how these relationships vary across different scales.

The fourth innovative aspect, given the long-term meteorological time series data that will be studied refers to the analysis of the degree to which fire regimes are regulated by climate and to explore the role of climate change.

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GRADIENT – Standard EF

1.2 Clarity and quality of transfer of knowledge/training for the development of the researc of the research objectives

Explain how the *Experienced Researcher* will gain new knowledge during the fellowship at t organisation(s)

By working in the research group of the host institute the researcher will have the opportunity to scientific potential and research activities in areas of high interest for present and future research. Part will enhance and promote qualifications and skills that directly arise from his involvement as the mai of this proposal, such as: (i) *research project management*, to cover management requirements of project, (ii) *presentation skills, communication of research results to non-specialists/media/genera* holding seminars within the host institute and by communicating and promoting the research project, (i *writing*, to cover the requirements to disseminate research results in peer reviewed scientific journals, (*scientific networking*; arising from his involvement in the research activities of the host institute, (*qualitative and quantitative methods and data processing especially with time series algorithms*; requirements for analysing the long-term terrestrial observations and time series satellite data, (vi) *impr German and Italian language*, from his residence in an Italian and German speaking Canton.

The researcher chose WSL since it is one of the leading institutes in wildfire research in cent Reconstructing fire history is one of their main fields of expertise that will contribute to the project and personal career development R programming and database management skills which are the major stre group will be transferred to the researcher. Additionally, during his three-month secondment to researcher will extend his research experience and network in Europe and create long-term collabora

Finally, the researcher would like to underline the similarities of his own research profile with supervisor, with whom he already has a scientific interaction that ensures common and complementary roles.

Outline the previously acquired knowledge and skills that the researcher will transfer to the host organisation.

The researcher will primarily transfer knowledge to the host institute stemming from his expertise and justified mainly from his experience working in the field of geo-informatics (remote sensing, GIS and spatial analysis) with special focus on forest fires in the last 20 years. Currently, the researcher integrates his main three research domains – Remote Sensing, GIS and Spatial Analysis– into fire research and natural hazards in general.

Furthermore, based on his qualifications and future visions, the researcher will bring new aspects to the current research activities and is convinced that his work will fit perfectly into the on-going and expanding research activities of the host institute. Finally, he will enhance the networking of the host institute by bringing new scientific collaborations with the Mediterranean and North Africa.

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publications, research projects) covers different aspects of Remote Sensing, GIS, Spatial Analysis and Multivariate Data Analysis all applied in topics related to wildland fires.

Finally, the skills and qualifications to be obtained from the host institute, especially their experience on reconstructing past fire regimes[12] using various methods such as tree rings[13], dendrochronology[14] and pollen and charcoal in lake sediments[15], will contribute to his career development, since these methods constitute his future research interests. The researcher intends to expand his research activities to include the assessment of historical fire regimes in the Mediterranean combined with recent burning patterns assessed by remote sensing methods.

[12] Conedera, M., S. Vanoni, C. Neff, M. Meyer, and P. Krebs. 2007. Using toponyms to reconstruct past land use: a case study of 'ronchi' (terrace) in southern Switzerland. Journal of Historical Geography 33:723–748.
[13] Tinner, W., M. Conedera, B. Ammann, H. W. Gaggeler, S. Gedye, R. Jones, and B. Sagesser. 1998. Pollen and charcoal in lake sediments compared with historically documented forest fires in southern Switzerland since AD 1920. Holocene 8:31-42.

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Αξιολόγηση (Score: 4.60 (Threshold: 0/5.00 , Weight: 50.00%))

Strengths

+ The proposed research and objectives are adequately addressed against the state-of-the-art.

+ The methodology properly describes data basis and statistical method to be used.

+ Training in statistics and transfer of knowledge are valuable for the respective parts.

+ Supervision and hosting arrangements are of high quality.

+ The past achievements demonstrate the potential to re-enforce the position of professional maturity.

Weakness

- Innovation is insufficiently addressed with respect to former projects carried out by the researcher and the host.

2. Impact (2 σελ)

2.1 ***Enhancing research- and innovation-related skills and working conditions to realise the potential of individuals and to provide new career perspectives***

2.2 ***Effectiveness of the proposed measures for communication and results dissemination***

Communication and public engagement strategy of the action

Dissemination of the research results

Exploitation of results and intellectual property rights

- Exploitation of results and knowledge transfer
- Intellectual property rights

2. Impact (2 σελ)

2.1 *Enhancing research- and innovation-related skills and working conditions to realise the potential of individuals and to provide new career perspectives*

2.2 *Effectiveness of the proposed measures for communication and results dissemination*

Communication and public engagement strategy of the action

Dissemination of the research results

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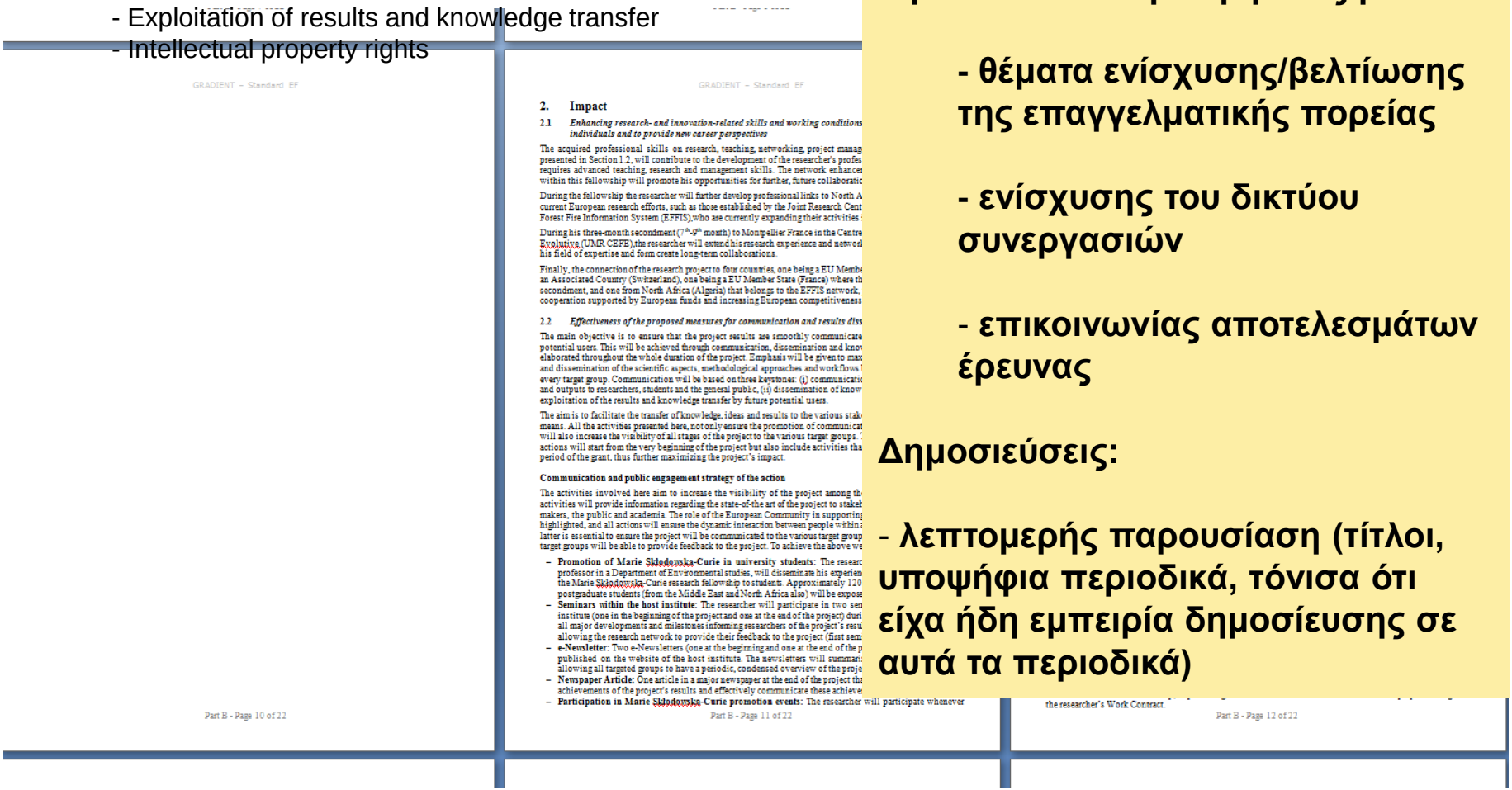

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GRADIENT – Standard EF

2. Impact

2.1 ***Enhancing research- and innovation-related skills and working conditions***
individuals and to provide new career perspectives

The acquired professional skills on research, teaching, networking, project manag
presented in Section 1.2, will contribute to the development of the researcher's profes
requires advanced teaching, research and management skills. The network enhance
within this fellowship will promote his opportunities for further, future collaboratio

During the fellowship the researcher will further develop professional links to North A
current European research efforts, such as those established by the Joint Research Cent
Forest Fire Information System (EFFIS),who are currently expanding their activities

During his three-month secondment (7th-9th month) to Montpellier France in the Centre
Evolutive (UMR CEFE),the researcher will extend his research experience and networ
his field of expertise and form create long-term collaborations.

Finally, the connection of the research project to four countries, one being a EU Membe
an Associated Country (Switzerland), one being a EU Member State (France) where th
secondment, and one from North Africa (Algeria) that belongs to the EFFIS network,
cooperation supported by European funds and increasing European competitiveness

2.2 ***Effectiveness of the proposed measures for communication and results diss***

The main objective is to ensure that the project results are smoothly communicate
potential users. This will be achieved through communication, dissemination and kno
elaborated throughout the whole duration of the project. Emphasis will be given to max
and dissemination of the scientific aspects, methodological approaches and workflows
every target group. Communication will be based on three keystones: (i) communicati
and outputs to researchers, students and the general public, (ii) dissemination of know
exploitation of the results and knowledge transfer by future potential users.

The aim is to facilitate the transfer of knowledge, ideas and results to the various stak
means. All the activities presented here, not only ensure the promotion of communicat
will also increase the visibility of all stages of the project to the various target groups.
actions will start from the very beginning of the project but also include activities tha
period of the grant, thus further maximizing the project's impact.

Communication and public engagement strategy of the action

The activities involved here aim to increase the visibility of the project among th
activities will provide information regarding the state-of-the art of the project to stakeh
makers, the public and academia. The role of the European Community in supporting
highlighted, and all actions will ensure the dynamic interaction between people within
latter is essential to ensure the project will be communicated to the various target group
target groups will be able to provide feedback to the project. To achieve the above we

- **Promotion of Marie Skłodowska-Curie in university students:** The researc
professor in a Department of Environmental studies, will disseminate his experien
the Marie Skłodowska-Curie research fellowship to students. Approximately 120
postgraduate students (from the Middle East and North Africa also) will be expose
- **Seminars within the host institute:** The researcher will participate in two sem
institute (one in the beginning of the project and one at the end of the project) duri
all major developments and milestones informing researchers of the project's resu
allowing the research network to provide their feedback to the project (first sem
- **e-Newsletter:** Two e-Newsletters (one at the beginning and one at the end of the p
published on the website of the host institute. The newsletters will summari
allowing all targeted groups to have a periodic, condensed overview of the proje
- **Newspaper Article:** One article in a major newspaper at the end of the project tha
achievements of the project's results and effectively communicate these achieve
- **Participation in Marie Skłodowska-Curie promotion events:** The researcher will participate whenever

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the researcher's Work Contract.

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Ήμουν πολύ συγκεκριμένος με:

- θέματα ενίσχυσης/βελτίωσης της επαγγελματικής πορείας

- ενίσχυσης του δικτύου συνεργασιών

- επικοινωνίας αποτελεσμάτων έρευνας

Δημοσιεύσεις:

- λεπτομερής παρουσίαση (τίτλοι, υποψήφια περιοδικά, τόνισα ότι είχα ήδη εμπειρία δημοσίευσης σε αυτά τα περιοδικά)

Αξιολόγηση (Score: 4.60 (Threshold: 0/5.00 , Weight: 30.00%))

Strengths

+ A personal career development plan will be discussed with the supervisors.

+ The project will be very beneficial for the researcher in terms of international mobility and expansion of collaborators network.

+ Foreseen publications are discussed with detail in a credible manner.

Weakness

- Dissemination to stakeholders and to the general public is discussed in very general terms.

3. Implementation (3 σελ)

3.1 Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

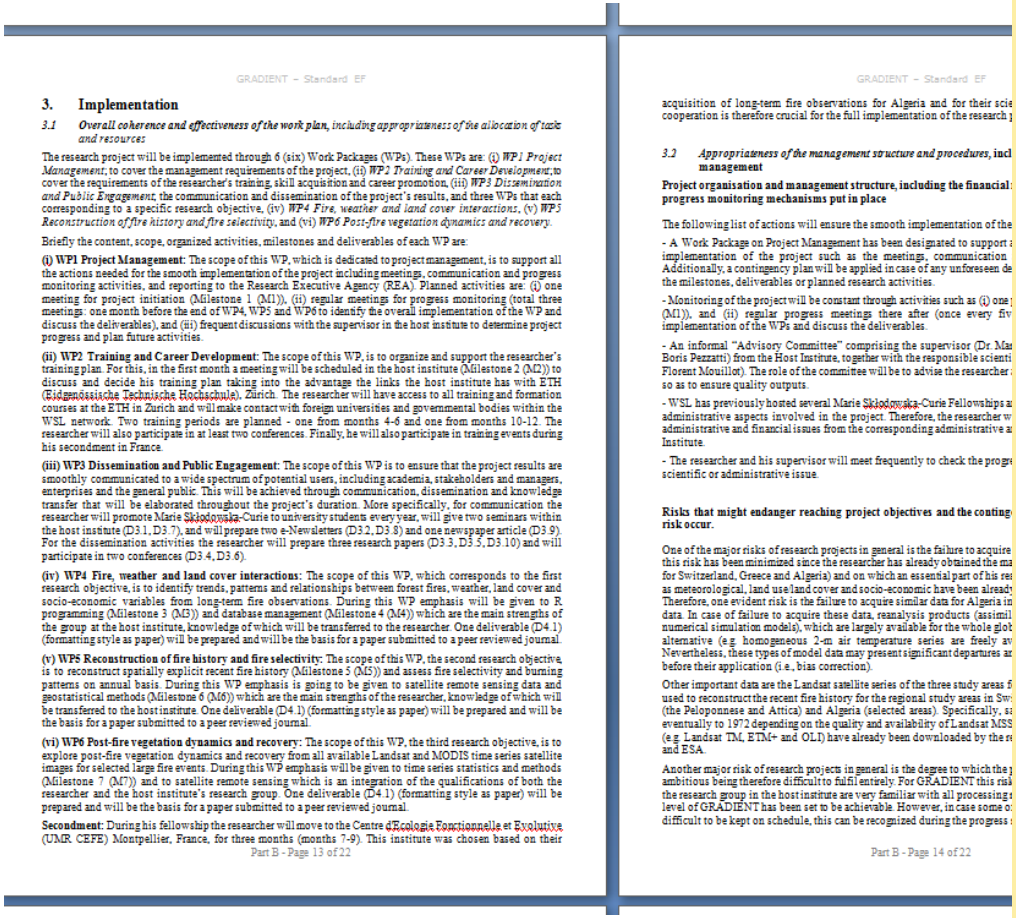
***3.2 Appropriateness of the management structure and procedures,* including quality management and risk management**

- Project organisation and management structure, including the financial management strategy, as well as the progress monitoring mechanisms put in place
- Risks that might endanger reaching project objectives and the contingency plans to be put in place should risk occur.
- Gantt Chart: *Reflecting work packages, secondments, training events and dissemination / public engagement activities*

3.3 Appropriateness of the institutional environment (infrastructure)

3.4 Competences, experience and complementarity of the participating organisations* and *institutional commitment

3. Implementation (3 σελ)



GRADIENT – Standard EF

3. Implementation

3.1 Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

The research project will be implemented through 6 (six) Work Packages (WPs). These WPs are: (i) *WP1 Project Management*; to cover the management requirements of the project, (ii) *WP2 Training and Career Development*; to cover the requirements of the researcher's training, skill acquisition and career promotion, (iii) *WP3 Dissemination and Public Engagement*; the communication and dissemination of the project's results, and three WPs that each corresponding to a specific research objective, (iv) *WP4 Fire, weather and land cover interactions*; (v) *WP5 Reconstruction of fire history and fire selectivity*, and (vi) *WP6 Post-fire vegetation dynamics and recovery*.

Briefly the content, scope, organized activities, milestones and deliverables of each WP are:

(i) WP1 Project Management: The scope of this WP, which is dedicated to project management, is to support all the actions needed for the smooth implementation of the project including meetings, communication and progress monitoring activities, and reporting to the Research Executive Agency (REA). Planned activities are: (i) one meeting for project initiation (Milestone 1 (M1)), (ii) regular meetings for progress monitoring (total three meetings: one month before the end of WP4, WP5 and WP6 to identify the overall implementation of the WP and discuss the deliverables), and (iii) frequent discussions with the supervisor in the host institute to determine project progress and plan future activities.

(ii) WP2 Training and Career Development: The scope of this WP, is to organize and support the researcher's training plan. For this, in the first month a meeting will be scheduled in the host institute (Milestone 2 (M2)) to discuss and decide his training plan taking into the advantage the links the host institute has with ETH (Eidgenössische Technische Hochschule), Zürich. The researcher will have access to all training and formation courses at the ETH in Zürich and will make contact with foreign universities and governmental bodies within the WSL network. Two training periods are planned - one from months 4-6 and one from months 10-12. The researcher will also participate in at least two conferences. Finally, he will also participate in training events during his secondment in France.

(iii) WP3 Dissemination and Public Engagement: The scope of this WP is to ensure that the project results are smoothly communicated to a wide spectrum of potential users, including academia, stakeholders and managers, enterprises and the general public. This will be achieved through communication, dissemination and knowledge transfer that will be elaborated throughout the project's duration. More specifically, for communication the researcher will promote Marie Skłodowska-Curie to university students every year, will give two seminars within the host institute (D3.1, D3.7), and will prepare two e-Newsletters (D3.2, D3.8) and one newspaper article (D3.9). For the dissemination activities the researcher will prepare three research papers (D3.3, D3.5, D3.10) and will participate in two conferences (D3.4, D3.6).

(iv) WP4 Fire, weather and land cover interactions: The scope of this WP, which corresponds to the first research objective, is to identify trends, patterns and relationships between forest fires, weather, land cover and socio-economic variables from long-term fire observations. During this WP emphasis will be given to R programming (Milestone 3 (M3)) and database management (Milestone 4 (M4)) which are the main strengths of the group at the host institute, knowledge of which will be transferred to the researcher. One deliverable (D4.1) (formatting style as paper) will be prepared and will be the basis for a paper submitted to a peer reviewed journal.

(v) WP5 Reconstruction of fire history and fire selectivity: The scope of this WP, the second research objective, is to reconstruct spatially explicit recent fire history (Milestone 5 (M5)) and assess fire selectivity and burning patterns on annual basis. During this WP emphasis is going to be given to satellite remote sensing data and geostatistical methods (Milestone 6 (M6)) which are the main strengths of the researcher, knowledge of which will be transferred to the host institute. One deliverable (D4.1) (formatting style as paper) will be prepared and will be the basis for a paper submitted to a peer reviewed journal.

(vi) WP6 Post-fire vegetation dynamics and recovery: The scope of this WP, the third research objective, is to explore post-fire vegetation dynamics and recovery from all available Landsat and MODIS time series satellite images for selected large fire events. During this WP emphasis will be given to time series statistics and methods (Milestone 7 (M7)) and to satellite remote sensing which is an integration of the qualifications of both the researcher and the host institute's research group. One deliverable (D4.1) (formatting style as paper) will be prepared and will be the basis for a paper submitted to a peer reviewed journal.

Secondment: During his fellowship the researcher will move to the Centre d'Ecologie Fonctionnelle et Evolutive (UMR CEFE) Montpellier, France, for three months (months 7-9). This institute was chosen based on their

GRADIENT – Standard EF

acquisition of long-term fire observations for Algeria and for their scie
cooperation is therefore crucial for the full implementation of the research

3.2 Appropriateness of the management structure and procedures, incl
management

Project organisation and management structure, including the financial
progress monitoring mechanisms put in place

The following list of actions will ensure the smooth implementation of the

- A Work Package on Project Management has been designated to support
implementation of the project such as the meetings, communication
Additionally, a contingency plan will be applied in case of any unforeseen de
the milestones, deliverables or planned research activities.

- Monitoring of the project will be constant through activities such as (i) one
(M1)), and (ii) regular progress meetings there after (once every fiv
implementation of the WPs and discuss the deliverables.

- An informal "Advisory Committee" comprising the supervisor (Dr. Mas
Boris Pezzatti) from the Host Institute, together with the responsible scienti
Florent Mouillot). The role of the committee will be to advise the researcher
so as to ensure quality outputs.

- WSL has previously hosted several Marie Skłodowska-Curie Fellowships a
administrative aspects involved in the project. Therefore, the researcher w
administrative and financial issues from the corresponding administrative a
Institute.

- The researcher and his supervisor will meet frequently to check the progr
scientific or administrative issue.

Risks that might endanger reaching project objectives and the contin
risk occur.

One of the major risks of research projects in general is the failure to acquire
this risk has been minimized since the researcher has already obtained the ma
for Switzerland, Greece and Algeria) and on which an essential part of his re
as meteorological, land use/land cover and socio-economic have been already
Therefore, one evident risk is the failure to acquire similar data for Algeria in
data. In case of failure to acquire these data, reanalysis products (assimil
numerical simulation models), which are largely available for the whole glob
alternative (e.g. homogeneous 2-m air temperature series are freely av
Nevertheless, these types of model data may present significant departures a
before their application (i.e., bias correction).

Other important data are the Landsat satellite series of the three study areas f
used to reconstruct the recent fire history for the regional study areas in Sw
(the Peloponnese and Attica) and Algeria (selected areas). Specifically, a
eventually to 1972 depending on the quality and availability of Landsat MSS
(e.g. Landsat TM, ETM+ and OLI) have already been downloaded by the re
and ESA.

Another major risk of research projects in general is the degree to which the
ambitious being therefore difficult to fulfil entirely. For GRADIENT this risk
the research group in the host institute are very familiar with all processing
level of GRADIENT has been set to be achievable. However, in case some o
difficult to be kept on schedule, this can be recognized during the progress

Ήμουν πολύ συγκεκριμένος με:

- work packages (για κάθε ένα θέμα της πρότασης υπήρχε και το αντίστοιχο work package (6))

- το secondment (3 μήνες) ήταν άμεσα σχετικό με την υλοποίηση της έρευνας

- quality and risk management (meetings, advisory committee)

- συμπληρωματικοί ρόλοι και διαφορετικότητα

Υπήρχε συγκεκριμένο πλάνο διαχείρισης κινδύνων:

- δεδομένα (εναλλακτικά σενάρια)
- μη εφικτοί στόχοι

Αξιολόγηση (Score: 4.70 (Threshold: 0/5.00 , Weight: 20.00%))

Strengths

+ The workplan is coherent and effective, allocation of tasks and resources are appropriate.

+ The infrastructure is adequate. Data are already available.

+ Appropriate consideration of potential risks is included, providing alternative work strategies.

+ Competences and complementarities are demonstrated along the proposal. The secondment is relevant for the career development of the researcher.

Weakness

- The interdependency of WPs might impair the achievement of final objectives.

Τελικό Review της πρότασης (2-3)

Ερευνητής (όχι απαραίτητα του ιδίου αντικειμένου)
Εθνικό Κέντρο Τεκμηρίωσης (ΕΚΤ) – Μαρία Σαμαρά
Επιμέλεια των Αγγλικών

Συνέργεια (2)


Γνώση
Υποστήριξη
Δημιουργικότητα
Καινοτομία
Αξιοκρατία
Επιμονή
Κίνητρο
Μέθοδος
Μεθοδικότητα
φαντασία
προσπάθεια
Συνεργασία
Συνεργασία
Δουλειά

Ευχαριστώ για το ενδιαφέρον σας