

INTERNAL analyses, evaluations and possible publications based on LI-Biodiversity ICP Forests data (incl. production of aggregate-descriptive datasets)													
EP	short Name	Responsible persons	Title	STATUS	participation (name & potential contribution)	datasets NEEDS	Hypothesis being tested	Scientific/research questions	regional or European	End date	web discussion Group <a href="http://icp-forests.net/">http://icp-forests.net/</a>	journal/ subject area ?	
BioGV	Δ-Drivers BIOPART	Roberto Canullo	Driving factors of beta-diversity	manuscript in prep. for IT dataset; EU level under processing	A. Chiarucci & D. Giorgini (UNISI), C. Wellstein UNIBZ spatial scaling, G. Campetella, S. Chelli UNICAM diversity estimates, (U. Klinck ?), U. Grandin	GPL, GVG, (Soil), (DBH), climatic, terrain...	Weight and assessing interactive effects of ecology and biogeography in determining the total diversity of European forests using a spatially representative sample. The general hypothesis to be tested is that the effects of present day ecological factors are less important than biogeographical factors in determining the total diversity of forests.	The diversity component accounted by the biogeographical region > than the diversity accounted by the lower scale components (plot, site, forest type). Distance decay rate across biogeographical regions > than distance decay rate within biogeographical regions (after correction for extent). Beta nestedness > within than across biogeographical regions (after correction for extent); on the other hand beta complementarity is lower within than across biogeographical regions (after correction for extent).	regional/euro pean	2014-15	nnn	Ecography, J. Biogeography, ?	
BioGV	Phylogenetic pattern at biogeographical scale PHYLOPAT		Phylogenetic limiting similarity and competitive exclusion on plant diversity of European forests	scheduling (taxonomic vs phylogenetic trees)	L. Mucina (UWA) phylogenetics; G. Campetella (UNICAM); C. Wellstein (UniBz)	GPL, GVG, (Soil), (DBH), climatic, terrain...	Competitive exclusion principle emphasizes the limited coexistence of similar species. There is a limit to the similarity in the niches of competing species (MacArthur & Levins 1967); species niches are constrained by their evolutionary histories. Hypothesis of limiting similarity at the phylogenetic level.	Are there evidence of European forest species assembly explained by phylogenetic limiting similarity mechanism? Ecological covariates (forest types, physical templates, forest management distance to structures and infrastructures, disturbances) influencing such mechanisms. Some of them can explain possible phylogenetic under-dispersion (coexistence). Is there a relationship between high species richness and phylogenetic overdispersion?	european	2015-16		Journal of Biogeography	
BioGV	Plant Functional Groups and species diversity patterns FORGUILD		Can guild composition and evenness explain plant diversity patterns in European forest?	scheduling	G. Campetella (UNICAM), C. Wellstein (UniBz); A. Chiarucci & D. Giorgini (UNISI), S. Bartha (HAS), U. Grandin	GPL, GVG ...	Is evenness in Plant Functional groups (guild) distribution, associated with a higher species richness?	Variation in plant species and guild composition are expected to determine the overall functional traits in the ecosystem, therefore affecting ecosystem processes. According to niche dissimilarity hypothesis, we would expect high species richness in assemblage with many different/distant guilds. However, studies do not always show a simple relationship between plant species and functional diversity in nature.	european	2015		J. Functional Ecology	
BioGV	Functional Traits Pattern FUTPA		Plant functional trait patterns for key EU forest types	trait database for trees under completion	C. Wellstein (UNIBZ), F. Spada (UNIR1), S. Chelli (UNICM) functional traits/groups, G. Campetella (UNICAM) diversity estimates.	GPL, GVG, (Soil), (DBH), climatic, terrain...	The plant functional composition of forest phytocoenosis can be explained by soil parameters, present day climate and legacy of past climate.	Recent evidence suggest the existence of at least four trait-defined axes of plant strategies (leaf–height–seed–stem) (Héroult et al. 2011). Clonality and life strategies. Mixed forest types will be tested: EFTC4 (Acidophilous oak and oak-birch forest), 5 (Mesophytic deciduous forest), 8 (Thermophilous deciduous forest), 9 (Broadleaved evergreen forest)	regional/types	2016		Diversity and Distributions, J. Biogeography	
BioGV	NICHES	Walter Seidling	Main drivers of ground vegetation at local and continental scale	ForestBIOTA evaluations available	Richard Fischer (?)	GPL DBH CAN THT DWD	drivers acting at different spatial scales are influencing floristic composition of ground vegetation	Stand and deadwood structures, stand history, management, etc. can be jointly investigated	hypo for European scale??	2014			
BioGV		Majja Salemaa	Niche definition prediction		R Mäkipää, Jöksanen, H vanDobben, U Klinck (NW-FVA), J-L Dupouey (INRA), L Walthert soil WSL (Swiss LI LI data)		species with narrow niche as bioindicators	investigated through species-specific response curves along climatic and resource gradients thank to LI datasets and upscaled at LI	european				
BioGV		J-L Dupouey	Does soil/climate constraints explain species presence?	idea									
BioGV		Han van Dobben	calibration of niche models on EU scale (incl. non-forest vegetation)		Karl.Mellert@lwf.bayern.de Jörg Ewald	GVG + Soil L1 + general climate and depo at EU level	species occurrence can be predicted from abiotic model (VSD+) combined with niche model	Expand VSD+ approach to include validated vegetation module; run deposition scenario analyses	European, incl. non-forest	2015			
BioGV		Karl Mellert	Ecological characterisation of marginal (seric limits) sites for tree species using BioDiv data	MARGIN Ongoing	Jörg Ewald	GPL, DBH, THT, GVG, CAN, Soil, Crown	1) Current SDMs based on coarse resolution climate data require refinement 2) local topography and soil conditions modulate tree species response to climate 3) Ground vegetation provides proxies for site properties 4) Refined site variables allow to identify false absences	A. Identification of warm and dry climatic limits of tree species by niche models based on (1) refined climate, soil and relief predictors and (2) effect-oriented proxies based on understorey composition and PFTs B. Correlation of probability of occurrence with species performance, vitality, and mortality	European	2015		JVS, FORECO or EJFOR	
BioGV		Han van Dobben	Indicator values (soil, nutrients C/N), functional traits/groups)		UNICAM (Canullo Wellstein Chelli) J-L Dupouey								
BioGV Growth	DWpools	Janusz Czerepko	Deadwood estimation through forest ecosystems in Europe	L1 (and some insights from L2, NFI, etc.)	Radosław Gawryś, Karol Sokolowski, Adam Cieśła (Polish Forest Institute), Stefan Herrmann (WSL), Marcus Neumann	DWD, GPL, DBH	What drives dw pools and C stocks? Reference patterns - classes - relations to climate gradient (plant richness; productivity)?	DW should be evaluated separately, such data are unique and harmonized at large scale	regional and European				
		Henning Meesenburg	Altered productivity and carbon sequestration of German forests in the fate of climate change	running project Forest Climate Fund		GPL DBH CAN THT		Development of site-productivity models; effects of precipitation (growing season) and available field capacity on site index; Identification of sensitive site variables; Validation of site-productivity models;					
FutMon VCOST	UPSPEX	Gherardo Chirici	Upscaling & Spatially explicit estimation of biophysical variables with remote sensing	scheduling	D. Travaglini (UNIFI), F. Attorre (UNIR1), R. Canullo, G. Campetella (UNICAM)		Application of nearest neighbors techniques for predicting forest variables from satellite imagery and ground data acquired in LI. Population unit predictions are calculated as combinations of observations for the population units in a sample that are most similar, or nearest, in a space of ancillary variables to the unit requiring a prediction.	Maps depicting the spatial distribution of vegetation characteristics with estimation of the uncertainty of predictions at different spatial level (pixel, small area estimation, large area estimation).	european				
BioGV	SmallScale	Walter Seidling, Majja Salemaa	Small-scale variation of Floristic Diversity of Ground Vegetation in Forests under different Environmental Conditions	evaluations: Finnish + ForestBIOTA Poster Workshop Belgrade	Anne Thimonier (CH), Roberto Canullo	LI national datasets selection	Null-hypotheses: z-values and intercepts may not depend on forest type, climatic or edaphic climatic conditions, or anthropogeneous influences	Species-area relationships may vary according to different ecologically relevant drivers	European "transect"	2014			
		OPEN	naturalness (multi-indicator), changes, linkage to Nature2000, special cases from LI network		transversal item along evaluation process		possible synthesis in evaluation						
		OPEN	improving (comparing) LI performance respect to LI (biodiv, and other...), accuracy, representativeness		transversal item								
			climate changes		transversal item			Climate change projections incl. elevation gradient and climatic drivers					
		Jean-Luc Dupouey ?	"Country effect"	Han van Dobben (in prep., LI data)	Han van Dobben, Roberto Canullo, Walter Seidling		Methods or Socio-economic models at territorial scale LI?	bias in (i) n sp increase, (ii) long-term plot data (observer & methodological), find better methods for interpretation of long term large extent data	european				
		OPEN	Vegetation response to nitrification	LI by Van Dobben, in prep., ICP-IM paper, De Vries et al. paper	Uwe Klinck (NW-FVA LI data should fit?), ICP-IM, Canullo			Vegetation as response variable respect to N (a weak but statistically proved effect)					
		Janusz Czerepko?	The influence of DW diversity on bryophytes and vascular plants	?	Radosław Gawryś, Karol Sokolowski, Adam Cieśła (Polish Forest Institute), R. Canullo (UNICAM)	GPL, GVG, Soil, DBH, DWD		DW diversity by volume\ type\ decomposition influences bryophytes and vascular plants presence and composition	European				
		Roberto Canullo	Habitat types in/out Nature 2000 network, species of the annex, aliens, etc.	?	Han van Dobben, Stefano Chelli (UNICAM)								

