

Folder	File	Called in	Functions defined	Functions used	Input	Output
data_preparation	tidy_areas.R	do_tidy_match.R	tidy_areas	multiple functions in areas_functions.R	data/land_use_area/areas_base/*/Import_forest_area_Mha.csv data/land_use_area/areas_base/*/Import_pellets_plantation_area_Mha.csv data/land_use_area/areas_base/*/Internal_EU28_perennial_energy_crops_area_1000ha.csv data/land_use_area/areas_base/*/Export_forest_area_Mha.csv data/land_use_area/areas_base/*/Internal_EU28_managed_forest_area_1000ha_timber.csv data/land_use_area/areas_base/*/Export_forest_area_Mha.csv data/land_use_area/areas_base/*/Land_use_area_ref_Mha.csv data/land_use_area/areas_base/*/Land_use_area_rcp_Mha.csv data/land_use_area/areas_base/*/Forest_Intensity_ref_Mha.csv data/land_use_area/areas_base/*/Forest_Intensity_rcp_Mha.csv data/land_use_area/areas_base/*/GLOBIOM_Ecoregion.csv data/land_use_area/areas_base/*/Chaudhary_2015_Areas.csv data/land_use_area/areas_base/Baseline/Export_timber_Mha.csv * = Baseline or SharedEffort or LowerIntensity, according to the selected scenario.	data/land_used_dat/areas_processed/areas-to-match_*.RData * = Baseline, SharedEffort, LowerIntensity or Baseline_timber, according to the selected scenario
data_preparation	match_areas.R	do_tidy_match.R	match_areas	multiple functions in areas_functions.R	data/land_used_dat/areas_processed/areas-to-match_*.RData * = Baseline, SharedEffort, LowerIntensity or Baseline_timber, according to the selected scenario	data/land_used_dat/areas_processed/timber or notimber/*/aggregated/areas_aggr_*.csv data/land_used_dat/areas_processed/timber or notimber/*/disaggregated/areas_disaggr_*.csv data/land_used_dat/areas_processed/timber or notimber/*/fraction/fr_areas_*.csv * = Baseline_year, SharedEffort_year, LowerIntensity_year or Baseline_year_timber, according to the selected scenario
data_preparation	do_tidy_match.R	main.R	-	tidy_areas match_areas	See tidy_areas.R and match_areas.R	See tidy_areas.R and match_areas.R
data_preparation	areas_functions.R	tidy_areas.R match_areas.R convert_to_GLOBIOMres.R	share_GIreg join_regions sum_over_regions separate_region Neg_allocation For_allocation areas_allocation Subset_allocation	-	Variables defined in tidy_areas.R, match_areas.R, convert_to_GLOBIOMres.R	Variables used in tidy_areas.R, match_areas.R, convert_to_GLOBIOMres.R
data_preparation	z_values.R	run independently to process the z values needed for the model	-	-	data/model_parameters/ecoregions_data/z_analysis/z_SAR_data_full-table.csv <b>IMPORTANT:</b> this file was not uploaded to the github repo as it is not owned by the authors for the manuscript but by the authors of the reference listed in the readme.md in data/model_parameters/ecoregions_data/z_analysis.	data/model_parameters/ecoregions_data/z_analysis/plots/boxplots_habitat_group.png data/model_parameters/ecoregions_data/z_analysis/plots/boxplots_habitat.png data/model_parameters/ecoregions_data/z_analysis/plots/boxplots_habitat_method_group.png data/model_parameters/ecoregions_data/z_analysis/plots/boxplots_habitat_an_pl.png data/model_parameters/ecoregions_data/z_analysis/plots/histograms_habitats.png data/model_parameters/ecoregions_data/z_analysis/plots/histograms_habitat_group.png data/model_parameters/ecoregions_data/z_analysis/z_input-values.csv
data_preparation	VS_plants.R	run independently to process the z values needed for the model	-	-	data/model_parameters/ecoregions_data/VS/VS_plants_LU.csv	data/model_parameters/ecoregions_data/VS/VS_plants.csv
model	model_functions.R	parameters_calculation.R calculate_slost.R	affinity_CF afffinity specieslost allocation a_suit_fraction affinity_sim h_A_product suitablearea specieslost_sim allocation_sim CFcalc CFcalc_group CFcalc_for WARNING: not all these functions have been used in the analysis	-	Variables defined in parameters_calculation.R and calculate_slost.R	Variable used in parameters_calculation.R and calculate_slost.R

model	distributions.R	parameters_calculation.R	lnorm_parametrized lnorm_parametrized_68 chi2test_lnorm lnorm_test lnorm_test_sep norm_parametrized_68 chi2test_norm norm_test_sep fit_ratio gen_lnorm_distr WARNING: not all these functions have been used in the analysis	-	Variables defined in parameters_calculation.R	Variables used in parameters_calculation.R
model	parameters_calculation.R	bootstrapping.R and independently run to process the raw data and produce the parameters file used as input in calculate_slost.R	load.data prepare.zvalues prepare.Sorg.VS.weighting prepare.RR calculate.RR	CFcalc CFcalc_group lnorm_parametrized	data/model_parameters/ecoregions_data/Ecoregions_description.csv data/model_parameters/ecoregions_data/CF_local.csv data/model_parameters/ecoregions_data/CF_local_forest-use.csv data/model_parameters/ecoregions_data/z_input-values.csv Variables defined in the scripts where the functions are called <b>IMPORTANT</b> : the .csv files in data/model_parameters/ecoregions_data/ were used as input files but are not owned by the authors for the manuscript but by the authors of the references listed in the readme.md in data/model_parameters/ecoregions_data.	data/model_parameters/ecoregions_data/rr_z/rr_ecoregion_static.Rdata data/model_parameters/ecoregions_data/rr_z/zvalues_static.Rdata data/model_parameters/ecoregions_data/rr_z/rr_ecoregion_mc.Rdata data/mode_parameters/ecoregions_data/rr_z/zvalues_mc.Rdata
model	bootstrapping.R	Independently run to process the raw data and produce the parameters file used as input in calculate_slost.R	foo foo_mean calculate.RR.bs prepare.zvalues.bs	load.data prepare.RR	data/model_parameters/ecoregions_data/Ecoregions_description.csv data/model_parameters/ecoregions_data/CF_local.csv data/model_parameters/ecoregions_data/CF_local_forest-use.csv data/model_parameters/ecoregions_data/z_input-values.csv Variables defined in the scripts where the functions are called.	data/model_parameters/ecoregions_data/rr_z/rr_ecoregion_bs.Rdata data/model_parameters/ecoregions_data/rr_z/rr_forest_mng_bs.Rdata data/model_parameters/ecoregions_data/rr_z/rr_land_use_bs.Rdata data/model_parameters/ecoregions_data/rr_z/z_bs.Rdata data/model_parameters/ecoregions_data/rr_z/zvalues_ecoregion_bs.Rdata <b>IMPORTANT</b> : rr_ecoregion_bs.Rdata and zvalues_ecoregion_bs.Rdata (used in scripts/model/calculate_impacts.R when the option to calculate the confidence intervals is on) were too big to be uploaded on github. Therefore, these files have been uploaded to zenodo ( <a href="https://zenodo.org/record/7543683#.Y9Vh-LXMJaQ">https://zenodo.org/record/7543683#.Y9Vh-LXMJaQ</a> ). When the confidence intervals are not calculated, these files are not needed.
model	calculate_slost.R	calculate_impacts.R	calculate.slost	specieslost_sim allocation_sim	Variables defined in calculate_impacts.R	Variables used in calculate_impacts.R
model	allocate_impacts.R	calculate_impacts.R	name.landuse allocate.impacts	-	Variables defined in calculate_impacts.R	Variables used in calculate_impacts.R
model	calculate_impacts.R	main.R	-	prepare.Sorg.VS.weighting calculate.slost name.landuse allocate.impacts	data/model_parameters/ecoregions_data/Ecoregions_description.csv data/model_parameters/ecoregions_data/rr_z/rr_ecoregion_*.Rdata data/mode_parameters/ecoregions_data/rr_z/zvalues_ecoregion_*.Rdata data/land_used_dat/areas_processed/timber or notimber/**/aggregated/areas_aggr_**.csv data/land_used_dat/areas_processed/timber or notimber/**/disaggregated/areas_disaggr_**.csv data/land_used_dat/areas_processed/timber or notimber/**/fraction/fr_areas_**.csv * bs or static according to the setting selected (with confidence intervals or not). ** Baseline_year, SharedEffort_year, Baseline_year_timber or LowerIntensity_year, according to the scenario selected. <b>IMPORTANT</b> : rr_ecoregion_bs.Rdata and zvalues_ecoregion_bs.Rdata (used in scripts/model/calculate_impacts.R when the option to calculate the confidence intervals is on) were too big to be uploaded on github. Therefore, these files have been uploaded to zenodo ( <a href="https://zenodo.org/record/7543683#.Y9Vh-LXMJaQ">https://zenodo.org/record/7543683#.Y9Vh-LXMJaQ</a> ). When the confidence intervals are not calculated, these files are not needed.	results/species-lost_*/Slost_year_*.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the scenario selected.
aggregation	aggregate_areas.R	main.R	aggregate_areas	-	data/land_used_dat/areas_processed/timber or notimber/**/disaggregated/areas_disaggr_*.csv * Baseline_year, SharedEffort_year, Baseline_year_timber or LowerIntensity_year, according to the scenario selected.	aggregation_plotting/areas/timber or notimber/*/areas.Rdata *Baseline or SharedEffort, according to the scenario selected.
aggregation	areas_Rdata-to-csv.R	main.R	create.csv.EU.areas create.csv.global.areas	-	aggregation_plotting/areas/timber or notimber/*/areas.Rdata *Baseline or SharedEffort, according to the scenario selected.	aggregation_plotting/areas/timber or notimber/*/areas_EUFootprint_year_**.csv aggregation_plotting/areas/timber or notimber/*/areas_EUFootprint_year_**_disaggr.csv aggregation_plotting/areas/timber or notimber/*/areas_EUFootprint_year_**_top_EP.csv aggregation_plotting/areas/timber or notimber/*/areas_EUForest_year_**.csv aggregation_plotting/areas/timber or notimber/*/areas_EUForest_year_**_disaggr.csv aggregation_plotting/areas/timber or notimber/*/areas_EUForest_year_**_points.csv aggregation_plotting/areas/timber or notimber/*/areas_EUForest_year_**_top_EP.csv aggregation_plotting/areas/timber or notimber/*/areas_EUForest_int-export_year_**_top_EP.csv aggregation_plotting/areas/timber or notimber/*/areas_EUlanduse_year_**.csv *Baseline or SharedEffort, according to the scenario selected. ** timber or notimber, according to the scenario selected.
aggregation	aggregate_results.R	main.R	aggregate.results	-	results/species-lost_*/Slost_year_*.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the selected scenario.	aggregation_plotting/*/sums_*.Rdata *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.

aggregation	EU_Rdata-to-csv.R	main.R	create.csv.EU.Epnoex	-	aggregation_plotting/*/sums_*.Rdata *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.	aggregation_plotting/*/csv/EU_year_*.csv aggregation_plotting/*/csv/EU_year_*.top.csv aggregation_plotting/*/csv/EUFootprint_year_*.EP.csv aggregation_plotting/*/csv/EUFootprint_year_*.EP_disaggr.csv aggregation_plotting/*/csv/EUFootprint_year_*.EP_im-for-disaggr.csv aggregation_plotting/*/csv/EUFootprint_year_*.top_EP.csv aggregation_plotting/*/csv/EUFootprint_time-series_*.EP.csv aggregation_plotting/*/csv/EUForest_year_*.EPnoex.csv aggregation_plotting/*/csv/EUForest_year_*.top_EPnoex.csv aggregation_plotting/*/csv/EUForest_time-series_*.EPnoex.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.
aggregation	volume_per_category_oneyear.R	main.R	calculate.volume.EP.dis.oneyear	-	data/land_use_data/areas_base/*/Split_volumes.csv *Baseline or SharedEffort, according to the selected scenario.	aggregation_plotting/*/csv/EUdemand_volumes_year_*.disaggr.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.
aggregation	convert_to_GLOBIOMres.R	main.R	convert.to.GLOBIOMres	join_regions	results/species-lost_*/Slost_year_*.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the selected scenario. data/land_use_data/areas_base/**/GLOBIOM_Ecoregion.csv **Baseline or SharedEffort, according to the selected scenario.	aggregation_plotting/*/csv/slost-globiom_*.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.
aggregation	impacts_per_volume_oneyear.R	main.R	calculate.impacts.pervolume.oneyear	-	aggregation_plotting/*/csv/EUdemand_volumes_year_*.disaggr.csv aggregation_plotting/*/csv/EUFootprint_year_*.EP_disaggr.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.	aggregation_plotting/*/csv/PDF_Mm3_year_*.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.
aggregation	impacts_per_volume.R WARNING: only applicable to the Baseline notimber scenario.	main.R	calculate.impacts.pervolume	-	data/land_use_data/areas_base/Baseline/EUWood_forest.csv data/land_use_data/areas_base/Baseline/EUWood_energy crops.csv data/land_use_data/areas_base/Baseline/ImportWood_forest.csv data/land_use_data/areas_base/Baseline/ImportWood_energy plantations.csv data/land_use_data/areas_base/Baseline/ExportWood_forest.csv data/land_use_data/areas_base/Baseline/ImportWood_byproducts.csv aggregation_plotting/cutoff_static_Baseline/csv/slost-globiom_cutoff_static_Baseline.csv	aggregation_plotting/cutoff_static_Baseline/csv/PDF_Mm3_cutoff_static_Baseline.csv aggregation_plotting/cutoff_static_Baseline/csv/PDF_Mm3_globiomregions_cutoff_static_Baseline.csv
aggregation	volume_per_category.R WARNING: only applicable to the Baseline notimber scenario.	main.R	calculate.volume.per.category	-	data/land_use_data/areas_base/Baseline/EUWood_forest.csv data/land_use_data/areas_base/Baseline/EUWood_energy crops.csv data/land_use_data/areas_base/Baseline/ImportWood_forest.csv data/land_use_data/areas_base/Baseline/ImportWood_energy plantations.csv data/land_use_data/areas_base/Baseline/ExportWood_forest.csv data/land_use_data/areas_base/Baseline/ImportWood_byproducts.csv aggregation_plotting/cutoff_static_Baseline/csv/slost-globiom_cutoff_static_Baseline.csv	aggregation_plotting/cutoff_static_Baseline/csv/Mm3_category_cutoff_static_Baseline.csv
aggregation	convert_to_PDFha.R WARNING: only applicable to the Baseline notimber scenario.	main.R	convert.to.PDFha	-	results/species-lost_*/Slost_year_*.csv data/land_used_dat/areas_processed/timber or notimber/*/disaggregated/areas_disaggr_***.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the selected scenario. **Baseline, SharedEffort or LowerIntensity, according to the selected scenario. *** Baseline_year, SharedEffort_year, Baseline_year_timber or LowerIntensity_year, according to the scenario selected.	aggregation_plotting/cutoff_static_Baseline/csv/PDF_ha.csv aggregation_plotting/cutoff_static_Baseline/csv/PDF_ha_tot.csv
plotting	EU_barplots.R	main.R	plot.EU.barplot EUinternal.barplot.EPnoex EU.barplot.EP.all.dis EU.areas.barplot.EP.dis EU.volume.barplot.EP.dis	-	aggregation_plotting/*/csv/EUFootprint_year_*.EP_disaggr.csv aggregation_plotting/*/csv/EUFootprint_year_*.top_EP.csv aggregation_plotting/*/csv/EUForest_year_*.EPnoex.csv aggregation_plotting/*/csv/EUForest_year_*.top_EPnoex.csv aggregation_plotting/areas/timber or notimber/**/areas_EUFootprint_year_***_disaggr.csv aggregation_plotting/*/csv/EUdemand_volumes_year_*.disaggr.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario. **Baseline or SharedEffort, according to the scenario selected. *** timber or notimber, according to the scenario selected.	aggregation_plotting/*/plots/EUFootprint&Forest_year_BuPu_*.EP_im-for-all-disaggr.pdf aggregation_plotting/*/plots/EUForest_year_BuPu_*.EPnoex.pdf aggregation_plotting/*/plots/EUFootprint&Forest_areas_2100_BuPu_*.EPnoex_all-dis.png aggregation_plotting/*/plots/EUFootprint&Forest_volume_Mm3_year_BuPu_*.EPnoex.png *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.
plotting	plot_EU_time-series.R	main.R	plot.EU.timeseries	-	aggregation_plotting/*/csv/EUFootprint_time-series_*.EP.csv aggregation_plotting/*/csv/EUForest_time-series_*.EPnoex.csv *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.	aggregation_plotting/*/plots/EUForest_time-series_*.pdf aggregation_plotting/*/plots/EUFootprint_time-series_*.pdf *cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_bs_Baseline or cutoff_bs_SharedEffort, according to the selected scenario.

plotting	plot_map.R	plot_all_maps.R	plot.map	-	scripts/plotting/maps_shapefiles/WWF_Ecoregions/ results/species-lost_*/Slost_year_*.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the selected scenario. <b>IMPORTANT:</b> the folder WWF_Ecoregions and the relative shapefiles were not uploaded to github as they are not owned by the authors for the manuscript but by the authors of the reference listed in the readme.md in scripts/readme.md. In the readme.md file there is also a link to the page from where the shp of the ecoregions was downloaded.	See plot_all_maps.R
plotting	plot_all_maps.R	run independently to obtain the plots	-	plot.map	scripts/plotting/maps_shapefiles/WWF_Ecoregions/ results/species-lost_*/Slost_year_*.csv * cutoff_static_Baseline, cutoff_static_SharedEffort, cutoff_static_LowerIntensity, cutoff_bs_Baseline, cutoff_bs_SharedEffort, cutoff_timber_static_Baseline, according to the selected scenario. <b>IMPORTANT:</b> the folder WWF_Ecoregions and the relative shapefiles were not uploaded to github as they are not owned by the authors for the manuscript but by the authors of the reference listed in the readme.md in scripts/readme.md. In the readme.md file there is also a link to the page from where the shp of the ecoregions was downloaded.	aggregation_plotting/*/plots/PDF-EUForest_RCP6.5-RCP2.6_year_EU_*_EPnoex.png aggregation_plotting/*/plots/PDF-EUFootprint_RCP6.5-RCP2.6_year_global_*_EPnoex.png aggregation_plotting/*/plots/PDF-EUForest_RCP6.5-RCP2.6_year_EU_*_EPnoex_diff.png aggregation_plotting/*/plots/PDF-EUFootprint_RCP6.5-RCP2.6_year_global_*_EPnoex_diff.png aggregation_plotting/*/plots/PDF-EUForest_RCP6.5-RCP2.6_year_EU_*_EPnoex_ratio.png aggregation_plotting/*/plots/PDF-EUFootprint_RCP6.5-RCP2.6_year_global_*_EPnoex_ratio.png
plotting	impacts_per_volume_ranges .R WARNING: only applicable to the Baseline notimber scenario.	run independently to obtain the plots	-	-	aggregation_plotting/cutoff_static_Baseline/csv/PDF_Mm3_globiomregions_cutoff_static_Baseline.csv	aggregation_plotting/cutoff_static_Baseline/plots/PDF-Mm3_2100_Globiom- reg_cutoff_static_Baseline_EP_EP_errbars_EU.png aggregation_plotting/cutoff_static_Baseline/plots/PDF-Mm3_2100_Globiom- reg_cutoff_static_Baseline_EP_forest_errbars_EU.png