PLOT-SCALE SIMULATIONS WITH MAIN-FRAME

me series [h] nt average	Albedo
nt average	
me series [d] for	Above Ground Net
crown	Primary Production High
	Vegetation
me series [d] for	Above Ground Net
crown	Primary Production Low
	Vegetation
	Dead Leaf Age High
	Vegetation
	Dead Leaf Age Low
	Vegetation
	Leaf Age High
+	Vegetation
	Leaf Age Low Vegetation
+	
	Age of the forest stand
crown	or plantation, High
	Vegetation
	Age of the forest stand
crown	or plantation, Low
	Vegetation
	Net Assimilation High
	Vegetation
	Net Assimilation Low
	Vegetation
me series [a]	Total litter content on
	the surface
I	Stand Basal Area, High
+	Vegetation
	Stand Basal Area, Low
	Vegetation
	Carbon Pool Biomass (Foliage (1), Liv.
1 0001	Sapwood (2), Fine Roots (3), Carbohydrate
	Reserve (4), Fruit and
	Flowers (5),
	Heartwood/Dead
	sapwood (6), Standing
	dead foliage (7), Aux.
	(8)), High Vegetation
me series [d] for	Carbon Pool Biomass
	(Foliage (1), Liv.
	Sapwood (2), Fine Roots
F	(3), Carbohydrate
	Reserve (4), Fruit and
	me series [d] for

			T
			Flowers (5),
			Heartwood/Dead
			sapwood (6), Standing
			dead foliage (7), Aux.
			(8)), LowVegetation
Bfac_dayH	[0-1]	Res. Time series [d] for	Plat stress factor
		each C _{crown}	integrated at the daily
			scale, High Vegetation
Bfac_dayL	[0-1]	Res. Time series [d] for	Plat stress factor
<i>_ ,</i>		each C _{crown}	integrated at the daily
			scale, Low Vegetation
Bfac_weekH	[0-1]	Res. Time series [d] for	Plat stress factor
Brac_weem.	[0 1]	each C _{crown}	integrated at the weekly
		Cach Crown	scale, High Vegetation
Bfac_weekL	[0-1]	Res. Time series [d] for	Plat stress factor
Diac_weekt	[0-1]	each C _{crown}	integrated at the weekly
		edcii C _{crown}	,
D.C., Al	[aN/ma] arrayin d]	Dog Time coming [d]	scale, Low Vegetation
BfixN	[gN/m2 ground]	Res. Time series [d]	Biological Nitrogen
			Fixation
CK1	[mm/h]	Res. Time series [h]	Check on Mass Balance -
		element average	1
CK2 (wrong)	[mm/h]	Res. Time series [h]	Check on Mass Balance -
		element average	2
Ccrown_t (only for VCA)	[-]	Res. Time series [d] for	Time dynamic vegetated
		each C _{crown}	fraction for each C _{crown}
Ci_sunH	[ppm]	Res. Time series [h] for	CO ₂ sunlit leaf internal
		each C _{crown}	concentration High
			Vegetation
Ci_sunL	[ppm]	Res. Time series [h] for	CO ₂ sunlit leaf internal
		each C _{crown}	concentration Low
			Vegetation
Ci_shdH	[ppm]	Res. Time series [h] for	CO ₂ shaded leaf internal
_		each C _{crown}	concentration High
			Vegetation
Ci_shdL	[ppm]	Res. Time series [h] for	CO ₂ shaded leaf internal
	[[[[]]	each C _{crown}	concentration Low
		Cach Chown	Vegetation
Cice	[-]	Res. Time series [h]	Boolean operator for
Cicc	1.1	element average	presence [1] or absence
		ciement average	of ice [0]
Cicew	[-]	Res. Time series [h]	Boolean operator for
CICEVV	1.1	element average	presence [1] or absence
		element average	
Ck	[mm]	Scalar	of frozen water [0]
Ck	[mm]	Scalar	Total Mass Balance
CL C	[Contract	Closure
CkExC	[gC/m2]	Scalar	Difference between
			plant carbon exported
			from the plant and litter
			input to the soil
CkC_ALL	[gC/m2]	Scalar	Total Carbon Balance
			Closure
CkC H	[gC/m2 PFT]	Scalar	High Vegetation Carbon

			Balance Closure
CkC_L	[gC/m2 PFT]	Scalar	Low Vegetation Carbon
_			Balance Closure
CkK_H	[gK/m2 PFT]	Scalar	High Vegetation
_			Potassium Balance
			Closure
CkK_L	[gK/m2 PFT]	Scalar	Low Vegetation
	18.4		Potassium Balance
			Closure
CkN H	[gN/m2 PFT]	Scalar	High Vegetation
• <u>-</u>	[8.4,=]	333.3.	Nitrogen Balance
			Closure
CkN_L	[gN/m2 PFT]	Scalar	Low Vegetation Nitrogen
CKIV_L	[giv/iiiz Fi i]	Scalai	Balance Closure
CkD II	[aD/m2 DET]	Coolor	
CkP_H	[gP/m2 PFT]	Scalar	High Vegetation
			Phosporus Balance
	[2 / 2 2 2 2]		Closure
CkP_L	[gP/m2 PFT]	Scalar	Low Vegetation
			Phosporus Balance
			Closure
Computational_Time	[s]	Scalar	Total Computational
			time
Csno	[-]	Res. Time series [h]	Boolean operator for
		element average	presence [1] or absence
			of snow [0]
Csnow	[-]	Res. Time series [h]	Boolean operator for
		element average	presence [1] or absence
			of snow above frozen
			water [0]
DQ	[W/m ²]	Res. Time series [h]	Residual of the energy
•		element average	budget* This might have
			a different meaning
			according to the land-
			surface composition
			(e.g., snow/ice/ice with
			debris)
DT	[°C]	Res. Time series [h]	Residual temperature
וט	[[]	element average	difference in the energy
		element average	budget* This might have
			a different meaning
			according to the land-
			surface composition
			(e.g., snow/ice/ice with
5 11		0 7 11 1	debris)
Dr_H	[mm]	Res. Time series [h] for	Total Drainage from
		each C _{crown}	intercepted water High
			Vegetation
Dr_L	[mm]	Res. Time series [h] for	Total Drainage from
		each C _{crown}	intercepted water
			LowVegetation
EG	[mm/h]	Res. Time series [h]	Evaporation from Bare
		element average	soil

EICE	[mm/h]	Res. Time series [h]	Evaporation/sublimation
		element average	from Ice
EIn_H	[mm/h]	Res. Time series [h] for	Evaporation from
		each C _{crown}	intercepted water High
			Vegetation
Eln_L	[mm/h]	Res. Time series [h] for	Evaporation from
		each C _{crown}	intercepted water Low
			Vegetation
EIn_rock	[mm/h]	Res. Time series [h]	Evaporation from Rocks
		element average	
Eln_urb	[mm/h]	Res. Time series [h]	Evaporation from
		element average	impervious surface (e.g.,
			roads). In case of Glacier
			Debris, this is
			Evaporation from the
			Debris surface.
EK	[J /mm²]	Res. Time series [h]	Cumulate Kinetic Energy
		element average	of Precipitation
ELitter	[mm/h]	Res. Time series [h]	Evaporation from the
		element average	Litter
ESN	[mm/h]	Res. Time series [h]	Evaporation from the
		element average	snowpack at the ground
ESN_In	[mm/h]	Res. Time series [h]	Evaporation from
		element average	intercepted snow
ET	[mm/h]	Res. Time series [h]	Total Evapotranspiration
EVA/A T	[/l-1	element average	F
EWAT	[mm/h]	Res. Time series [h]	Evaporation from water
FNC II	[0 1]	Res. Time series [d] for	and ponds
FNC_H	[0-1]	each C _{crown}	Nitrogen Stress Factor for High Vegetation
FNC_L	[0-1]	Res. Time series [d] for	Nitrogen Stress Factor
TINC_L	[0-1]	each C _{crown}	for Low Vegetation
FROCK	[mm]	Res. Time series [h]	Water Storage in
TROCK	[]	element average	fractured rocks
G	[W/m²]	Res. Time series [h]	Ground Heat Flux force
	[,]	element average	restore method
Gfin	[W/m²]	Res. Time series [h]	Ground Heat Flux heat
	[,]	element average	diffusion
Н	[W/m ²]	Res. Time series [h]	Sensible Heat Flux
	,,	element average	
HV	[W/m²]	Res. Time series [h]	Sensible Heat Flux from
	' '	element average	vegetation in presence
			of snow, Csnow=1
ICE	[mm]	Res. Time series [h]	Ice water equivalent
		element average	,
ICE_D	[m]	Res. Time series [h]	Ice thickness
_		element average	
IP_wc	[mm]	Res. Time series [h]	Ice pack water content
_		element average	
ISOIL_H	[gX/m2 day]	Res. Time series [18xd]	Plant exports to Litter
		for each C _{crown}	and soil High Vegetation

			Composed of 18
			different components of
			Export Types/Element
ISOIL_L	[gX/m2 day]	Res. Time series [18xd]	Plant exports to Litter
ISOIL_L	[gx/III2 day]	for each C _{crown}	and soil Low Vegetation
		TOT Each Ccrown	Composed of 18
			1
			different components of
1 14	franci	Don Time coming [h]	Export Types/Element
Imelt	[mm]	Res. Time series [h]	Ice melt
1 11	franci	element average	Late respected weeks a
In_H	[mm]	Res. Time series [h] for	Intercepted water
		each C _{crown}	(storage) High
	<u> </u>	<u> </u>	Vegetation
ln_L	[mm]	Res. Time series [h] for	Intercepted water
		each C _{crown}	(storage) Low
			Vegetation
In_Litter	[mm]	Res. Time series [h]	Intercepted water in
		element average	Litter
In_SWE	[mm]	Res. Time series [h]	Intercepted snow water
		element average	equivalent (storage)
			High Vegetation
In_max_H	[mm]	Res. Time series [h] for	Maximum Intercepted
		each C _{crown}	water (storage) High
			Vegetation
In_max_L	[mm]	Res. Time series [h] for	Maximum Intercepted
		each C _{crown}	water (storage) Low
			Vegetation
In_max_SWE	[mm]	Res. Time series [h]	Maximum Intercepted
		element average	snow water equivalent
			(storage) High
			Vegetation
In_rock	[mm]	Res. Time series [h]	Intercepted water
		element average	(storage) Rocks
In_urb	[mm]	Res. Time series [h]	Intercepted water
_		element average	(storage) in impervious
			surface (e.g., roads). In
			case of Glacier Debris,
			this is Intercepted Water
			over the Debris surface.
Jsx_H	[mm/h]	Res. Time series [h] for	Water flux from soil to
_		each C _{crown}	plant stem High
			Vegetation
Jsx_L	[mm/h]	Res. Time series [h] for	Water flux from soil to
_		each C _{crown}	plant stem Low
		3.5	Vegetation
Jxl_H (not active)	[mm/h]	Res. Time series [h] for	Water flux from plant
_ (each C _{crown}	stem to leaf High
		CIOWII	Vegetation
Jxl_L (not active)	[mm/h]	Res. Time series [h] for	Water flux from plant
2 (!!oc doc!ve)	[4]	each C _{crown}	stem to leaf Low
		Cach Ccrown	Vegetation
Kleaf_H (not active)	[mmolH20/ MPa s m^2	Res. Time series [h] for	Leaf Hydraulic
Medi_H (HOL active)	[וווווטורובט/ ועודמ ז וווייב	nes. Time series [ii] 101	Lear Hyuraulic

	DET 1	anala C	Caradorationity of Disab
	PFT]	each C _{crown}	Conductivity High Vegetation
Kleaf_L (not active)	[mmolH20/ MPa s m^2	Res. Time series [h] for	Leaf Hydraulic
Kledi_L (Hot active)	PFT]	each C _{crown}	Conductivity Low
	[[[]	Each Ccrown	Vegetation
Kreserve_H	[gK /m2 PFT]	Res. Time series [d] for	Mobile Reserve of
Kieseive_ii	[gk/iii2111]	each C _{crown}	Potassium in High
		Cueri Cerown	Vegetation
Kreserve_L	[gK /m2 PFT]	Res. Time series [d] for	Mobile Reserve of
IN COCIVE_E	[587/1112111]	each C _{crown}	Potassium in Low
		Cacif Crown	Vegetation
Kuptake_H	[gK /m2 PFT day]	Res. Time series [d] for	Plant uptake of
Naptake_II	[807,112111 334]	each C _{crown}	Potassium in High
		Cach Schowin	Vegetation
Kuptake_L	[gK /m2 PFT day]	Res. Time series [d] for	Plant uptake of
Naptake_1	[807,112111 334]	each C _{crown}	Potassium in Low
		Carri Grown	Vegetation
Kx_H (not active)	[mmolH20 /m^2 PFT s	Res. Time series [h] for	Xylem Hydraulic
(MPa]	each C _{crown}	Conductivity High
		Carata Galewin	Vegetation
Kx_L (not active)	[mmolH20 /m^2 PFT s	Res. Time series [h] for	Xylem Hydraulic
_ (MPa]	each C _{crown}	Conductivity Low
			Vegetation
LAI_H	[m ² LAI/ m ² PFT]	Res. Time series [d] for	Leaf Area Index High
_		each C _{crown}	Vegetation
LAI_L	[m ² LAI/ m ² PFT]	Res. Time series [d] for	Leaf Area Index Low
_		each C _{crown}	Vegetation
LAIdead_H	[m ² LAI/ m ² PFT]	Res. Time series [d] for	Dead Leaf Area Index
		each C _{crown}	High Vegetation
LAIdead_L	[m ² LAI/ m ² PFT]	Res. Time series [d] for	Dead Leaf Area Index
		each C _{crown}	Low Vegetation
LEAK_DOC	[gC/m2 day]	Res. Time series [d]	Leakage of DOC from soil
			bottom
LEAK_DON	[gN/m2 day]	Res. Time series [d]	Leakage of DON from
			soil bottom
LEAK_DOP	[gP/m2 day]	Res. Time series [d]	Leakage of DOP from soil
			Bottom
LEAK_K	[gK/m2 day]	Res. Time series [d]	Leakage of K from soil
			Bottom
LEAK_NH4	[gN/m2 day]	Res. Time series [d]	Leakage of NH4 from soil
			bottom
LEAK_NO3	[gN/m2 day]	Res. Time series [d]	Leakage of NO3 from soil
			bottom
LEAK_P	[gP/m2 day]	Res. Time series [d]	Leakage of P from soil
			bottom
L_day	[h]	Res. Time series [d]	Day-Light Length
LitFirEmi	[gX/m2 day]	Res. Time series [dx2]	Fire Emission from Litter
11.	[mage /h]	Dec Times south (III)	(1) Carbon (2) Nitrogen
Lk	[mm/h]	Res. Time series [h]	Bottom Leakage soil to
Ile rook	[mm/h]	element average	bedrock (recharge)
Lk_rock	[mm/h]	Res. Time series [h]	Leakage rock surface to

		element average	bedrock (recharge)
Lk_wat	[mm]	Res. Time series [h]	Leakage water pond to
		element average	bedrock (recharge)
Lpho	[W/m2]	Res. Time series [h]	Energy consumed in the
			photosynthesis process
ManIH	[-]	Single Value – last time	Management Indicator
		step	(0) Nothing (1) Fire (-1)
			Logging, High Vegetation
ManIL	[-]	Single Value – last time	Management Indicator
		step	(0) Nothing (1) Fire (-1)
			Logging, Low Vegetation
Min_N	[gN/m2 day]	Res. Time series [d]	Nitrogen mineralization
Min_P	[gP/m2 day]	Res. Time series [d]	Phosphorous
			mineralization
N2flx	[gN/m2 day]	Res. Time series [d]	N2 emission from soil
NBLI_H	[gC/m2 day]	Res. Time series [d] for	Integral of New Leaf
		each C _{crown}	Biomass over 30 days -
			High Vegetation
NBLI_L	[gC/m2 day]	Res. Time series [d] for	Integral of New Leaf
		each C _{crown}	Biomass over 30 days -
			Low Vegetation
NBLeaf_H	[gC/m2 day]	Res. Time series [d] for	New Leaf Biomass- High
		each C _{crown}	Vegetation
NBLeaf_L	[gC/m2 day]	Res. Time series [d] for	New Leaf Biomass- Low
		each C _{crown}	Vegetation
NEE	[gC/m2 day]	Res. Time series [d]	Net Ecosystem Exchange
			at the element scale
NDVI	[-]	Res. Time series [h]	Normalized Difference
		element average	Vegetation Index
NIce	[mm]	Res. Time series [h]	New formed Ice
		element average	
NIn_SWE	[mm]	Res. Time series [h]	New Intercepted Snow
		element average	Water Equivalent
NPP_H	[gC / m² PFT day]	Res. Time series [d] for	Net Primary Production
		each C _{crown}	High Vegetation
NPP_L	[gC / m² PFT day]	Res. Time series [d] for	Net Primary Production
		each C _{crown}	Low Vegetation
NPPI_H	[gC / m² PFT day]	Res. Time series [d] for	Integral of Net Primary
		each C _{crown}	Production over 7 days
			High Vegetation
NPPI_L	[gC / m ² PFT day]	Res. Time series [d] for	Integral of Net Primary
		each C _{crown}	Production over 7 days
			Low Vegetation
NavlI	[gX/m ²]	Res. Time series [dx3]	Mineral Nutrient
			available in the soil
			mean of last 365 days
			for (1) Nitrogen (2)
			Phosphorous (3)
			Potassium;
Nreserve_H	[gN /m2 PFT]	Res. Time series [d] for	Mobile Reserve of
		each C _{crown}	Nitrogen in High

			Vegetation
Nreserve_L	[gN/m2 PFT]	Res. Time series [d] for	Mobile Reserve of
_		each C _{crown}	Nitrogen in Low
			Vegetation
Nupl_H	[gX/m2 PFT day]	Res. Time series [dx3]	Integrated nutrient
		for each C _{crown}	uptake over 365 days
			(1) Nitrogen (2)
			Phosphorous (3)
			Potassium; High
			Vegetation
Nupl_L	[gX/m2 PFT day]	Res. Time series [dx3]	Integrated nutrient
	, ,	for each C _{crown}	uptake over 365 days
			(1) Nitrogen (2)
			Phosphorous (3)
			Potassium; Low
			Vegetation
Nuptake_H	[gN/m2 PFT day]	Res. Time series [d] for	Plant uptake of Nitrogen
rtaptane_r	[8.4,2	each C _{crown}	in High Vegetation
Nuptake_L	[gN /m2 PFT day]	Res. Time series [d] for	Plant uptake of Nitrogen
raptake_L	[git/iiiz i i day]	each C _{crown}	in Low Vegetation
NuLit_H	[gX /m2 PFT]	Res. Time series [dx3]	Nutrient Content in the
Natit_II	[6///11/2 1 1 1]	for each C _{crown}	Litter for (1) Nitrogen (2)
		Tor Each Ccrown	Phosphorous (3)
			Potassium; High
Ni.il it I	[aV /m2 DET]	Dos Timo sorios (dv2)	Vegetation Nutrient Content in the
NuLit_L	[gX /m2 PFT]	Res. Time series [dx3] for each C _{crown}	
		TOT Each Ccrown	Litter for (1) Nitrogen (2)
			Phosphorous (3) Potassium; Low
			·
	r 1	Dog Time coming [h] for	Vegetation Liquid
0	[-]	Res. Time series [h] for	Soil Moisture – Liquid
		each Soil Layer	volumetric Soil Water
0'	F.3	Don Time with this fee	Content
Oice	[-]	Res. Time series [h] for	Frozen volumetric Water
0.5		each Soil Layer	content
OF	[-]	Res. Time series [h]	Soil Moisture First Soil
			Layer
ОН	[-]	Res. Time series [h]	Soil Moisture available
			to roots High Vegetation
OL	[-]	Res. Time series [h]	Soil Moisture available
			to roots Low Vegetation
OS	[-]	Res. Time series [h]	Soil Moisture for Bare
			Evaporation Layers
Р	[gX /m^2 d]	Res. Time series [d] for	55 Pools in the Soil
		each Pool	biogeochemistry model
			(details to follow)
PARI_H	[W/m²]	Res. Time series [dx3]	Smoothed average of
		for each C _{crown}	PAR radiation over (1) 30
			days (2) 45 days (3) 10
			days average of the
			difference of (2) and (1);
			High Vegetation

DADLI	[\A//\21	Doc Time cories [4:2]	Smoothed average of
PARI_L	[W/m ²]	Res. Time series [dx3]	Smoothed average of
		for each C _{crown}	PAR radiation over (1) 30
			days (2) 45 days (3) 10
			days average of the
			difference of (2) and (1);
			Low Vegetation
PHE_S_H	[#]	Res. Time series [d] for	Phenology State High
		each C _{crown}	Vegetation
PHE_S_L	[#]	Res. Time series [d] for	Phenology State Low
		each C _{crown}	Vegetation
POT	[mm]	Res. Time series [h] for	Soil Water Potential
		each Soil Layer	
Pr_liq	[mm/h]	Res. Time series [h]	Liquid Precipitation
Pr_sno	[mm/h]	Res. Time series [h]	Solid (snow)
			Precipitation
Preserve_H	[gP /m2 PFT]	Res. Time series [d] for	Mobile Reserve of
_		each C _{crown}	Phosporus in High
			Vegetation
Preserve_L	[gP/m2 PFT]	Res. Time series [d] for	Mobile Reserve of
	18.7	each C _{crown}	Phosporus in Low
		Cach Crown	Vegetation
Prod_B	[gC / m² day]	Res. Time series [d]	Bacteria Gross
1100_5	[ge / III day]	ites. Time series [a]	Production
Prod_F	[gC / m² day]	Res. Time series [d]	Saprotrophic Fungi Gross
110u_1	[gc/iii day]	ites. Time series [u]	Production
Dei I II	[MPa]	Res. Time series [h] for	Leaf water potential in
Psi_l_H	[IVIPa]	each C _{crown}	-
		each C _{crown}	the leaves, High
Dei I I	[NAD-1	Don Time coming [la] for	Vegetation
Psi_l_L	[MPa]	Res. Time series [h] for	Leaf water potential in
		each C _{crown}	the leaves, Low
D. L. II	[0.40 -]	Des Times des IIII for	Vegetation
Psi_s_H	[MPa]	Res. Time series [h] for	Soil water potential felt
		each C _{crown}	by the roots, High
	5		Vegetation
Psi_s_L	[MPa]	Res. Time series [h] for	Soil water potential felt
		each C _{crown}	by the roots, Low
			Vegetation
Psi_x_H	[MPa]	Res. Time series [h] for	Soil water potential in
		each C _{crown}	the stem xylem, High
			Vegetation
Psi_x_L	[MPa]	Res. Time series [h] for	Soil water potential in
		each C _{crown}	the stem xylem, Low
			Vegetation
Puptake_H	[gP/m2 PFT day]	Res. Time series [d] for	Plant uptake of
		each C _{crown}	Phosporus in High
			Vegetation
Puptake_L	[gP /m2 PFT day]	Res. Time series [d] for	Plant uptake of
· <u>-</u>		each C _{crown}	Phosporus in Low
			Vegetation
QE	[W/m ²]	Res. Time series [h]	Latent Heat
	, 1	element average	2.5
QEV	[W/m ²]	Res. Time series [h]	Latent Heat from
QL V	[[vv/III]	ives. Tillie series [II]	Latent Heat Holli

		element average	vegetation in presence
		cicinent average	of snow, Csnow =1
Qfm	[W/m ²]	Res. Time series [h]	Heat for freezing or
QIIII	[[[]	element average	melting
Qi_in	[mm/h]	Res. Time series [h] for	Incoming Lateral
Qi_iii	[each Soil Layer	subsurface flow
Qi_out	[mm/h]	Res. Time series [h] for	Outgoing Lateral
Qi_out	[,]	each Soil Layer	subsurface flow
Qv	[W/m ²]	Res. Time series [h]	Heat advected by
Qv	[**/]	element average	Precipitation
RA_H	[gC / m ² PFT day]	Res. Time series [d] for	Autotrophic Respiration
	[807	each C _{crown}	High Vegetation
RA_L	[gC / m ² PFT day]	Res. Time series [d] for	Autotrophic Respiration
	[507 111 day]	each C _{crown}	Low Vegetation
RB_H	[gC / m ² PFT day]	Res. Time series [d]	Removed or Harvested
ND_II	[gc/iii iii day]	three pools for each	Biomass (Foliage (1), Liv.
		C _{crown}	Sapwood (2), Fine Roots
		Ccrown	(3), Carbohydrate
			Reserve (4), Fruit and
			Flowers (5),
			Heartwood/Dead
			sapwood (6), Standing
			dead foliage (7))High
			Vegetation
RB_L	[gC / m ² PFT day]	Res. Time series [d]	Removed or Harvested
ND_L	[gc/III FIT day]	three pools for each	Biomass (Foliage (1), Liv.
		C _{crown}	Sapwood (2), Fine Roots
		Ccrown	
			(3), Carbohydrate
			Reserve (4), Fruit and
			Flowers (5),
			Heartwood/Dead
			sapwood (6), Standing
			dead foliage (7)) Low
	5.24.2		vegetation
R_bacteria	[gC / m² day]	Res. Time series [d]	Bacteria Respiration
R_ew	[gC / m² day]	Res. Time series [d]	Macrofaunal Respiration
R_litter	[gC / m² day]	Res. Time series [d]	Litter Respiration
R_litter_sur	[gC / m ² day]	Res. Time series [d]	Surface Litter
	5.04.21.1		Respiration
R_microbe	[gC / m² day]	Res. Time series [d]	Microbial Respiration
Rd	[mm]	Res. Time series [h]	Saturation excess runoff
Rdark_H	[µmol CO ₂ / m ² PFT s]	Res. Time series [h] for	Leaf Dark Respiration
		each C _{crown}	High Vegetation
Rdark_L	[µmol CO ₂ / m ² PFT s]	Res. Time series [h] for	Leaf Dark Respiration
		each C _{crown}	Low Vegetation
Rexmyl	[gC / m ² ground day]	Res. Time series [dx3]	Integral over 365 days
			and element scale of
			Root exudates (1),
			export of carbon toward
			mycorrhiza (2) and
			export to root-noduli (3),
			High vegetation

			1
Rexmy_H	[gC / m ² PFT day]	Res. Time series [dx3] for each C _{crown}	Root exudates (1), export of carbon toward mycorrhiza (2) and export to root-noduli (3), High vegetation
Rexmy_L	[gC / m² PFT day]	Res. Time series [dx3] for each C _{crown}	Root exudates (1) and export of carbon toward mycorrhiza (2) and export to root-noduli (3), Low vegetation
Rg_H	[gC / m ² PFT day]	Res. Time series [d] for each C _{crown}	Growth Respiration High Vegetation
Rg_L	[gC / m² PFT day]	Res. Time series [d] for each C _{crown}	Growth Respiration Low Vegetation
Rh	[mm]	Res. Time series [h]	Infiltration excess runoff
Rmc_H	[gC / m ² PFT day]	Res. Time series [d] for	Maintenance
Kilic_II	[gc/m iii day]	each C _{crown}	Respiration
		each C _{crown}	Carbohydrate reserve
			·
Dana I	[-C / 2 DET - 1	Don Time coming [4] for	High Vegetation
Rmc_L	[gC / m ² PFT day]	Res. Time series [d] for	Maintenance
		each C _{crown}	Respiration
			Carbohydrate reserve
	2		Low Vegetation
Rmr_H	[gC / m² PFT day]	Res. Time series [d] for	Maintenance
		each C _{crown}	Respiration roots High
			Vegetation
Rmr_L	[gC / m ² PFT day]	Res. Time series [d] for	Maintenance
		each C _{crown}	Respiration roots Low
			Vegetation
Rms_H	[gC / m ² PFT day]	Res. Time series [d] for	Maintenance
		each C _{crown}	Respiration sapwood
			High Vegetation
Rms_L	[gC / m ² PFT day]	Res. Time series [d] for	Maintenance
		each C _{crown}	Respiration sapwood
			Low Vegetation
RmycAM	[gC / m² day]	Res. Time series [d]	Respiration AM
			mycorrhizal
RmycEM	[gC / m² day]	Res. Time series [d]	Respiration EM
,	10 7 72		mycorrhizal
Rn	[W/m ²]	Res. Time series [h]	Net radiation
	' '	element average	
Rrootl_H	[m root / m^2 PFT]	Res. Time series [d] for	Root length index, High
_		each C _{crown}	Vegetation
Rrootl_L	[m root / m^2 PFT]	Res. Time series [d] for	Root length index, Low
<u>-</u>	[550, 2111]	each C _{crown}	Vegetation
SAI_H	[m ² SAI/ m ² PFT]	Res. Time series [d] for	Stem Area Index High
S, 11_11	[3,,	each C _{crown}	Vegetation
SAI_L	[m² SAI/ m² PFT]	Res. Time series [d] for	Stem Area Index Low
JAI_L	[III 3AI/ III PFI]		
CE rock	[mm]	each C _{crown}	Vegetation
SE_rock	[mm]	Res. Time series [h]	Runoff on rocks
SE_urb	[mm]	Res. Time series [h]	Runoff on in impervious
			surface (e.g., roads). In

			case of Glacier Debris,
			this is Runoff from the
			Debris surface
SIF_H	[W m-2 sr-1 um-1]	Res. Time series [h] for	Solar induced
311_11	[[VV 111-2 31-1 4111-1]	each C _{crown}	chlorophyll fluorescence
		Cucii Cerown	SIF, High Vegetation
SIF_L	[W m-2 sr-1 um-1]	Res. Time series [h] for	Solar induced
311_2	[** 2 3. 1 3 1]	each C _{crown}	chlorophyll fluorescence
		Caon Grown	SIF, Low Vegetation
SND	[m]	Res. Time series [h]	Snow Depth
SP_wc	[mm]	Res. Time series [h]	Snowpack water content
SWE	[mm]	Res. Time series [h]	Ground snowpack Snow
3412	[]	Nes. Time series [11]	Water Equivalent
Smelt	[mm]	Res. Time series [h]	Snow melt
Sfr_H	[gC / m ² PFT day]	Res. Time series [d] for	Fruit maturation rate,
	[807 111 day]	each C _{crown}	High Vegetation
Sfr_L	[gC / m ² PFT day]	Res. Time series [d] for	Fruit maturation rate,
	[807 111 day]	each C _{crown}	Low Vegetation
SIf_H	[gC / m ² PFT day]	Res. Time series [d] for	Leaf fall rate , High
· · · · · · · · · · · · · · · · · · ·	[80,	each C _{crown}	Vegetation
Slf_L	[gC / m ² PFT day]	Res. Time series [d] for	Leaf fall rate , Low
	[80,	each C _{crown}	Vegetation
SII_H	[gC / m ² PFT day]	Res. Time series [d] for	Leaf mortality rate ,
_	10-7	each C _{crown}	High Vegetation
SII_L	[gC / m ² PFT day]	Res. Time series [d] for	Leaf mortality rate , Low
_	,,,	each C _{crown}	Vegetation
Sr_H	[gC / m ² PFT day]	Res. Time series [d] for	Fine root turnover rate,
_		each C _{crown}	High Vegetation
Sr_L	[gC / m ² PFT day]	Res. Time series [d] for	Fine root turnover rate,
_		each C _{crown}	Low Vegetation
SupN_H	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Nitrogen uptake, High
			Vegetation
SupN_L	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Nitrogen uptake, Low
			Vegetation
SupP_H	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Phosphorus uptake,
			High Vegetation
SupP_L	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Phosphorus uptake, Low
			Vegetation
SupK_H	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Potassium uptake, High
			Vegetation
SupK_L	[0-1]	Res. Time series [d] for	Index of suppression of
		each C _{crown}	Potassium uptake, Low
			Vegetation
Swm_H	[gC / m ² PFT day]	Res. Time series [d] for	Heartwood conversion
	1.04.205	each C _{crown}	rate, High Vegetation
Swm_L	[gC / m² PFT day]	Res. Time series [d] for	Heartwood conversion

		each C _{crown}	rate, Low Vegetation
TNIT_H	[gN / m ² PFT]	Res. Time series [d] for	Total Structural Nitrogen
	[8.7,]	each C _{crown}	Plant, High Vegetation
			, 5
TNIT_L	[gN / m ² PFT]	Res. Time series [d] for	Total Structural Nitrogen
_		each C _{crown}	Plant, Low Vegetation
TPHO_H	[gP / m ² PFT]	Res. Time series [d] for	Total Structural
		each C _{crown}	Phosphorus Plant, High
			Vegetation
TPHO_L	[gP / m ² PFT]	Res. Time series [d] for	Total Structural
		each C _{crown}	Phosphorus Plant, Low
			Vegetation
TPOT_H	[gK / m ² PFT]	Res. Time series [d] for	Total Structural
		each C _{crown}	Potassium, Plant, High
			Vegetation
TPOT_L	[gK / m ² PFT]	Res. Time series [d] for	Total Structural
		each C _{crown}	Potassium Plant, Low
			Vegetation
T_H	[mm/h]	Res. Time series [h] for	Transpiration High
		each C _{crown}	Vegetation
T_L	[mm/h]	Res. Time series [h] for	Transpiration Low
		each C _{crown}	Vegetation
TBio_Ht (only for VCA)	[ton DM / ha]	Res. Time series [d] for	Total standing biomass
		each C _{crown}	temporally variable, High
TD's 11 (s.d. fs.d.(CA)	[1 DNA / 1 - 1	Des Transactor (d) for	vegetation
TBio_Lt (only for VCA)	[ton DM / ha]	Res. Time series [d] for	Total standing biomass
		each C _{crown}	temporally variable, Low
Tden_H (only for VCA)	[n° ind/ ha]	Res. Time series [d] for	vegetation Tree density, High
Tueli_H (only for VCA)	[II IIIU/ IIII]	each C _{crown}	vegetation
Tden_L (only for VCA)	[n° ind/ ha]	Res. Time series [d] for	Tree density, Low
ruen_L (only for VCA)	[II IIIu/ IIa]	each C _{crown}	vegetation
Tdamp	[°C]	Res. Time series [h]	Soil/snow Temperature
Taump	ر حا	ics. Time series [ii]	at Dampening depth
Tdeb	[°C]	Res. Time series [h] for	Temperature of the
. 300	, ~J	each debris layer	Debris layer
Tdp	[°C]	Res. Time series [h] for	Soil Temperature of the
- r	,	each soil layer	layer
Tdpl_H	[°C]	Res. Time series [d] for	Soil Temperature of the
' -		each C _{crown}	root zone integrated in
		-5.5	30 days, High vegetation
Tdpl_L	[°C]	Res. Time series [d] for	Soil Temperature of the
· -		each C _{crown}	root zone integrated in
			30 days, Low vegetation
Tdp_H	[°C]	Res. Time series [h] for	Soil Temperature of the
-		each C _{crown}	root zone, High
			vegetation
Tdp_L	[°C]	Res. Time series [h] for	Soil Temperature of the
		each C _{crown}	root zone, Low

			vegetation
TexC_H	[gC / m ² PFT day]	Res. Time series [d] for	Plant Carbon export to
_		each C _{crown}	Litter, High vegetation
TexC_L	[gC / m ² PFT day]	Res. Time series [d] for	Plant Carbon export to
		each C _{crown}	Litter, Low vegetation
TexK_H	[gK / m ² PFT day]	Res. Time series [d] for	Plant Potassium export
		each C _{crown}	to Litter, High vegetation
TexK_L	[gK / m ² PFT day]	Res. Time series [d] for	Plant Potassium export
		each C _{crown}	to Litter, Low vegetation
TexN_H	[gN / m ² PFT day]	Res. Time series [d] for	Plant Nitrogen export to
		each C _{crown}	Litter, High vegetation
TexN_L	[gN / m ² PFT day]	Res. Time series [d] for	Plant Nitrogen export to
		each C _{crown}	Litter, Low vegetation
TexP_H	[gP / m ² PFT day]	Res. Time series [d] for	Plant Phosphorus export
		each C _{crown}	to Litter, High vegetation
TexP_L	[gP / m ² PFT day]	Res. Time series [d] for	Plant Phosphorus export
		each C _{crown}	to Litter, Low vegetation
Tice	[°C]	Res. Time series [h]	Ice Temperature in
			presence of an icepack
			(Upper temperature)
Ts	[°C]	Res. Time series [h]	Soil/snow Prognostic
			Temperature for the
			energy balance
TsV	[°C]	Res. Time series [h]	Vegetation Temperature
			for the energy balance in
			presence of snow
			(Csno==1).
U_SWE	[mm]	Res. Time series [h]	Unloaded snow water
			equivalent from
			intercepted snow
V	[mm]	Res. Time series [h] for	Volume of liquid water
		each Soil Layer	stored in the soil layer
Vice	[mm]	Res. Time series [h] for	Volume of frozen water
		each Soil Layer	stored in the soil layer
VOL	[gN / m ² day]	Res. Time series [d]	Ammonium
			Volatilization Flux
VI_H (not active)	[mm m ² ground/ m ² PFT	Res. Time series [h] for	Water Volume in the
		each C _{crown}	leaves, High vegetation
VI_L (not active)	[mm m ² ground/ m ² PFT	Res. Time series [h] for	Water Volume in the
		each C _{crown}	leaves, Low vegetation
Vx_H (not active)	[mm m ² ground/ m ² PFT	Res. Time series [h] for	Water Volume in the
]	each C _{crown}	xylem, High vegetation
Vx_L (not active)	[mm m ² ground/ m ² PFT	Res. Time series [h] for	Water Volume in the
NA/AT	J	each C _{crown}	xylem, Low vegetation
WAT	[mm]	Res. Time series [h]	Volume of water in the
NA/IC	formal .	Day Time and D.1	lakes/ponds
WIS	[mm]	Res. Time series [h]	Water flux incoming to
WD ID	formal .	Dan Time and the first	the soil
WR_IP	[mm]	Res. Time series [h]	Water released from the
M/D CD	[mm]	Dan Time and the first	ice pack
WR_SP	[mm]	Res. Time series [h]	Water released from the

			snow pack
WTR	[mm]	Res. Time series [h] for	Water flow due to water
	' '	each Soil Layer	table rising
Ws_under	[m/s]	Res. Time series [h]	Wind speed in the
_			under-canopy (used for
			soil resistance)
ZWT	[mm]	Res. Time series [h]	Water table depth
alp_soil	[-]	Res. Time series [h]	Soil relative humidity
b_soil	[-]	Res. Time series [h]	Soil resistance beta
			factor
dQ	[W m ⁻²]	Res. Time series [h]	Residual from energy
			budget. This might have
			a different meaning
			according to the land-
			surface composition
			(e.g., snow/ice/ice with
			debris)
dQVEG	[W m ⁻²]	Res. Time series [h]	Residual from energy
			budget of snow free
10	F.1. 1	0 7 11 1	vegetation
dflo_H	[day]	Res. Time series [d] for	Days from leaf onset
الماء ا	[dec.]	each C _{crown}	High Vegetation
dflo_L	[day]	Res. Time series [d] for	Days from leaf onset
du CNO		each C _{crown}	Low Vegetation
dw_SNO	[-]	Res. Time series [h]	Fraction of leaf covered
e_relN_H	[]	Res. Time series [d] for	by snow Relative Efficiency of the
e_rein_n	[-]	each C _{crown}	photosynthesis
		each C _{crown}	apparatus due to N
			Limitations
e_relN_L	[-]	Res. Time series [d] for	Relative Efficiency of the
6_16.114_1	1	each C _{crown}	photosynthesis
			apparatus due to N
			Limitations
e_rel_H	[-]	Res. Time series [d] for	Relative Efficiency of the
		each C _{crown}	photosynthesis
			apparatus due to
			Age/Day-length
e_rel_L	[-]	Res. Time series [d] for	Relative Efficiency of the
		each C _{crown}	photosynthesis
			apparatus due to
			Age/Day-length
e_sno	[-]	Res. Time series [h]	Emissivity of the snow
er	[kg/h m ²]	Res. Time series [h]	Splash erosion
		element average	
f	[mm/h]	Res. Time series [h]	Infiltration
		element average	
fapar_H	[-]	Res. Time series [h] for	Fraction of absorbed
		each C _{crown}	PAR, High Vegetation
fapar_L	[-]	Res. Time series [h] for	Fraction of absorbed
		each C _{crown}	PAR, Low Vegetation

gsr_H	[mmol H20 / m^2	Res. Time series [h] for	Soil to Root Hydraulic
0 _	ground s MPa]	each C _{crown}	Conductance, High
			Vegetation
gsr_L	[mmol H20 / m^2	Res. Time series [h] for	Soil to Root Hydraulic
0 _	ground s MPa]	each C _{crown}	Conductance, Low
			Vegetation
hc_H	[m]	Res. Time series [d] for	Vegetation Height High
_		each C _{crown}	Vegetation
hc_L	[m]	Res. Time series [d] for	Vegetation Height Low
		each C _{crown}	Vegetation
jDay	[#]	Res. Time series [d]	Day of the year
q_runon	[mm/h]	Res. Time series [h]	Runon
r_litter	[s/m]	Res. Time series [h]	Litter resistance
r_soil	[s/m]	Res. Time series [h]	Soil resistance
ra	[s/m]	Res. Time series [h]	Aerodynamic resistance
rap_H	[s/m]	Res. Time series [h] for	Undercanopy resistance
		each C _{crown}	High Vegetation
rap_L	[s/m]	Res. Time series [h] for	Undercanopy resistance
		each C _{crown}	Low Vegetation
rb_H	[s/m]	Res. Time series [h] for	Leaf boundary resistance
		each C _{crown}	High Vegetation
rb_L	[s/m]	Res. Time series [h] for	Leaf boundary resistance
		each C _{crown}	Low Vegetation
rKc_H	[-]	Res. Time series [d] for	Relative potassium
		each C _{crown}	concentration in the
			plant relative to default,
			High vegetation
rKc_L	[-]	Res. Time series [d] for	Relative potassium
		each C _{crown}	concentration in the
			plant relative to default,
			Low vegetation
rNc_H	[-]	Res. Time series [d] for	Relative nitrogen
		each C _{crown}	concentration in the
			plant relative to default,
N			High vegetation
rNc_L	[-]	Res. Time series [d] for	Relative nitrogen
		each C _{crown}	concentration in the
			plant relative to default,
rDc U		Pos Timo sorios (d) for	Low vegetation
rPc_H	[-]	Res. Time series [d] for each C _{crown}	Relative phosphorous concentration in the
		Each C _{crown}	plant relative to default,
			High vegetation
rPc_L	[-]	Res. Time series [d] for	Relative phosphorous
11 C_L	I-1	each C _{crown}	concentration in the
		Cacii Ccrown	plant relative to default,
			Low vegetation
ros	[kg / m ³]	Res. Time series [h]	Snow density
rs_sunH	[s/m]	Res. Time series [h] for	Stomatal Resistance
13_341111	[3/111]	each C _{crown}	sunlit leaves, High
		Cacii Ccrown	Vegetation
			* CBCtation

rs_sunL	[s/m]	Res. Time series [h] for	Stomatal Resistance,
		each C _{crown}	sunlit leaves, Low
			Vegetation
rs_shdH	[s/m]	Res. Time series [h] for	Stomatal Resistance,
		each C _{crown}	shaded leaves, High
			Vegetation
rs_shdL	[s/m]	Res. Time series [h] for	Stomatal Resistance,
		each C _{crown}	shaded leaves, Low
			Vegetation
t_sls	[s]	Res. Time series [h]	Time since last snowfall
tau_sno (not active)	[-]	Res. Time series [h]	??

VARIABLE	UNITS	TYPE	DESCRIPTION
Ca	[ppm]	Input Time series [h]	CO2 atmospheric
			concentration
Datam	[Year Month Day Hour]	Input Time series [h]	Explicit Date
		four columns	
Date	[Matlab Format]	Input Time series [h]	Date
Ds	[Pa]	Input Time series [h]	Vapor Pressure Deficit
N	[-] or [W /m ²]	Input Time series [h]	Cloud Cover or
			Longwave Incoming
			Radiation
PARB	[W /m ²]	Input Time series [h]	PAR radiation Direct
PARD	$[W/m^2]$	Input Time series [h]	PAR radiation Diffuse
Pr	[mm/h]	Input Time series [h]	Precipitation
Pre	[mbar]	Input Time series [h]	Atmospheric Pressure
SAB1	[W /m ²]	Input Time series [h]	First band Direct
			radiation
SAB2	[W /m ²]	Input Time series [h]	Second band Direct
			radiation
SAD1	[W /m ²]	Input Time series [h]	First band Diffuse
			radiation
SAD2	[W /m ²]	Input Time series [h]	Second band Diffuse
			radiation
Ta	[°C]	Input Time series [h]	Air Temperature
Tdew	[°C]	Input Time series [h]	Dew Point Temperature
U	[-]	Input Time series [h]	Relative Humidity
Ws	[m/s]	Input Time series [h]	Wind speed
ea	[Pa]	Input Time series [h]	Vapor Pressure
esat	[Pa]	Input Time series [h]	Vapor Pressure at
			saturation
DeltaGMT	[h]	Input scalar	Difference with
			Greenwich Meridian
			Time
Lat	[°]	Input scalar	Latitude
Lon	[°]	Input scalar	Longitude
Zbas	[m a.s.l.]	Input scalar	Elevation

Lmax_day	[h]	Input Internally	Maximum length of day
		Computed	in a given place
Oa	[µmolO ₂ /mol]	Input scalar	Intercellular partial
			pressure oxygen
t_aft	[h]	Input scalar	Integration interval for
			solar variables – Hours
			or fraction before
t_bef	[h]	Input scalar	Integration interval for
			solar variables – Hours
			or fraction after
IrD (optional)	[mm/h]	Input Time series [h]	Dripping Irrigation
B_IO	[-]	Internal Elaboration	Nutrient Input
			Fertilization and
			Deposition structure
B_IO.DepN	[gN / m ² day]	Input scalar	Nitrogen Deposition
			Total
B_IO.DepP	[gP / m ² day]	Input scalar	Phosphorous Deposition
			Total
B_IO.DepK	[gK / m ² day]	Input scalar	Potassium Deposition
			Total
B_IO.FertN	[gN / m ² day]	Input time series for	Nitrogen Fertilization
		each day of the year	Total
B_IO.FertP	[gP / m² day]	Input time series for	Phosphorous
		each day of the year	Fertilization Total
B_IO.FertK	[gK/ m² day]	Input time series for	Potassium Fertilization
		each day of the year	Total
HIST	[0/1]	Input option	Switcher for nutrient
			deposition (0) Current
			deposition (1) Pre-
			industrial deposition
Upl	[mm / year]	Input scalar	Tectonic Uplift
PHs	[-]	Input scalar	Soil pH
x1	[-]	Input scalar	First time step of input
			time series used for
			simulation
x2	[-]	Input scalar	Last time step of input
			time series used for
			simulation
zatm	[m]	Input scalar	Reference height of
			measurements

Parameter	UNITS	TYPE	DESCRIPTION
Deb_Par (optional)	-	Internal or Assigned	.alb (albedo [-])
		Parameter, a structure	.e_sur (emissivity [-])
			.lan (Thermal
			conductivity [W / m K])
			.rho (density [kg/m3])
			.cs (thermal capacity
			[J/kg K]

			.zom (roughness [m])
Interc_Param	-	Internal Parameter, a	It is grouping
_		structure	interception parameters
Snowlce_Param	-	Internal Parameter, a	It is grouping snow and
_		structure	ice parameters
Soil_Param	-	Internal Parameter, a	It is grouping soil and ice
_		structure	parameters
VegH_Param	-	Internal Parameter, a	It is grouping vegetation
0 =		structure for each C _{crown}	physiological
			parameters, High
			Vegetation
VegH_Param_Dyn	-	Internal Parameter, a	It is grouping vegetation
		structure for each C _{crown}	dynamic parameters,
		0.0111	High Vegetation
VegL_Param	-	Internal Parameter, a	It is grouping vegetation
		structure for each C _{crown}	physiological
		0.0111	parameters, Low
			Vegetation
VegL_Param_Dyn	-	Internal Parameter, a	It is grouping vegetation
0 =		structure for each C _{crown}	dynamic parameters,
			Low Vegetation
Mpar_H	-	Internal or Assigned	Management Parameter
		Parameter, a structure	for High Vegetation
		for each C _{crown}	jDay_cut
			LAI_cut
			jDay_harv
			B_harv
			 Date_log
			fract_log
			Date_fire
			fire_eff
			funb nit
			Date_girdling
			fract_girdling
			fract_resprout
			fract_left
			fract_left_fr
			fract_left_AB
			fract_left_BG
Mpar_L	-	Internal Parameter, a	Management Parameter
		structure for each C _{crown}	for Low Vegetation
ParEx_H	-	Internal Parameter, a	Exudation Parameter for
		structure for each C _{crown}	High Vegetation
ParEx_L	-	Internal Parameter, a	Exudation Parameter for
		structure for each C _{crown}	Low Vegetation

Parameter	UNITS	TYPE	DESCRIPTION
Aice	[-]	Assigned Parameter	Ice albedo
Ared	[-]	Assigned Parameter	Reduction factor for stone content in soil (1-content)
Asur	[m²/m²]	Internal Parameter	Ration between actualarea and projected area
Axyl_H (not active)	[cm^2 xylem /m^2 PFT]	Assigned Parameter for each Ccrown	Xylem area over PFT area
Axyl_L (not active)	[cm^2 xylem /m^2 PFT]	Assigned Parameter for each Ccrown	Xylem area over PFT area
Bfac_lo_H	[-]	Assigned Parameter for each C _{crown}	Phenology water stress threshold for β parameter, High Vegetation
Bfac_lo_L	[-]	Assigned Parameter for each C _{crown}	Phenology water stress threshold for β parameter, Low Vegetation
Bfac_ls_H	[-]	Assigned Parameter for each C _{crown}	Multiple meanings: (1) If NaN is inactive, (2) if > 0, it is the soil moisture β threshold to re-start to growth and accelerate the phenology recover of soil moisture stress, from 1 week to 1 day, (3) If it is <-2 represents the days of maximum growth after a grass-cut, High Vegetation
Bfac_ls_L	[-]	Assigned Parameter for each C _{crown}	Multiple meanings: (1) If NaN is inactive, (2) if > 0, it is the soil moisture β threshold to re-start to growth and accelerate the phenology recover of soil moisture stress, from 1 week to 1 day, (3) If it is <-2 represents the days of maximum growth after a grass-cut, Low Vegetation
Bio_Zs	[-]	Internal Parameter for each Soil Layer	Fraction of biogeochemical activity in a specific soil layer
CT_H	[3/4]	Assigned Parameter for each C _{crown}	Photosynthetic pathway C3 or C4, High Vegetation
CT_L	[3/4]	Assigned Parameter for each C _{crown}	Photosynthetic pathway C3 or C4, , Low Vegetation

Cbare	[-]	Assigned Parameter	Bare soil area fraction
Ccrown	[-]	Assigned Parameter for	Vegetated fraction for
		each C _{crown}	each C _{crown}
CcrownFIX (only for VCA)	[-]	Internal Parameter for	Reference Maximum
		each C _{crown}	Vegetated fraction for
			each C _{crown}
Cl_H (not active)	[mmolH20 / m² leaf	Assigned Parameter for	Parameters of Leaf
_ ` '	MPa]	each C _{crown}	capacitance, if length ==
	or [MPa] – [gDM /		1, leaf capacitance, if
	gFresh Leaf]		length == 2, Leaf Elastic
			Module and LDMC, High
			Vegetation
Cl_L (not active)	[mmolH20 / m² leaf	Assigned Parameter for	Parameters of Leaf
_ ,	MPa]	each C _{crown}	capacitance, if length ==
	or [MPa] – [gDM /		1, leaf capacitance, if
	gFresh Leaf]		length == 2, Leaf Elastic
			Module and LDMC, Low
			Vegetation
Cx H (not active)	[kg / m³ sapwood MPa]	Assigned Parameter for	Parameters of Stem
_ ` ,	or [MPa], [MPa]	each C _{crown}	capacitance, if length ==
			1, stem capacitance, if
			length == 2, stem water
			potential at 88% and
			50% or Relative Water
			Content, High
			Vegetation
Cx_L (not active)	[kg / m³ sapwood MPa]	Assigned Parameter for	Parameters of Stem
_ (or [MPa], [MPa]	each C _{crown}	capacitance, if length ==
		a a crown	1, stem capacitance, if
			length == 2, stem water
			potential at 88% and
			50% or Relative Water
			Content, Low
			Vegetation
Color_Class	[0-20]	Assigned Parameter	Soil Class Parameters
			from Oleson et al., 2010
			(updated color class)
Crock	[-]	Assigned Parameter	Rock area fraction
Curb	[-]	Assigned Parameter	Impervious (e.g., roads)
		, isolginear an americ	area fraction
Cwat	[-]	Assigned Parameter	Water Surface area
· - 		23.023.13.13.13.13.13.13.13.13.13.13.13.13.13	fraction
DSE_H	[kJ/mol]	Assigned Parameter for	Activation Energy in
,	,	each Ccrown	Photosynthesis for
		2.5 33.3	Rubisco Capacity, High
			Vegetation
DSE_L	[kJ/mol]	Assigned Parameter for	Activation Energy in
552_2	[1.3/11101]	each C _{crown}	Photosynthesis for
		Caci Culowii	Rubisco Capacity, Low
			Vegetation
Do_H	[Pa]	Assigned Parameter for	Empirical coefficient for
DO_11	ן ני טן	each C _{crown}	the role of vapor
		Cacii C _{crown}	the role of vapol

			pressure in the biochemical model of photosynthesis, High Vegetation
Do_L	[Pa]	Assigned Parameter for each C _{crown}	Empirical coefficient for the role of vapor pressure in the biochemical model of photosynthesis, Low Vegetation
Dz	[mm]	Internal Parameter for each Soil Layer	Differential depth between the middle point of soil layers
EvL_Zs	[-]	Internal Parameter for each Soil Layer	Fraction of evaporation depth in a specific soil layer
ExEM	[-]	Assigned Parameter	Fraction of EM mycorrhizal on the total mycorrhizal
FI_H	[μmolCO ₂ μmolPhotons ⁻¹]	Assigned Parameter for each C _{crown}	Intrinsic quantum efficiency, High Vegetation
FI_L	[μmolCO ₂ μmolPhotons ⁻¹]	Assigned Parameter for each C _{crown}	Intrinsic quantum efficiency, Low Vegetation
Ha_H	[kJ mol ⁻¹ K ⁻¹]	Assigned Parameter for each C _{crown}	Activation energy, High Vegetation
Ha_L	[kJ mol ⁻¹ K ⁻¹]	Assigned Parameter for each C _{crown}	Activation energy, Low Vegetation
Ice_wc_sp	[-]	Assigned Parameter	Ice pack maximum specific water content
In_max_rock	[mm]	Assigned Parameter	Maximum interception capacity in rocks
In_max_urb	[mm]	Assigned Parameter	Maximum interception capacity in impervious surface (e.g., roads). In case of Glacier Debris, this is Maximum interception above the Debris.
Inf_Zs	[-]	Internal Parameter for each Soil Layer	Fraction of infiltration depth in a specific soil layer
K_usle	[kg h /J mm]	Internal Parameter	Erosivity Factor
Kbot	[mm/h]	Assigned Parameter	Conductivity of the bedrock
Kcl	[mm/h]	Assigned Parameter	Interception drainage rate coefficient
Kct	[-]	Assigned Parameter	Foliage cover decay factor for throughfall
Kfc	[mm/h]	Assigned Parameter	Conductivity at field

	I		
Vlaaf may 11/nat	[mmall120 / m² loaf s	Assigned Darameter for	capacity
Kleaf_max_H (not	[mmolH20 / m² leaf s	Assigned Parameter for	Leaf maximum hydraulic
active)	MPa]	each C _{crown}	conductivity, High
			vegetation
Kleaf_max_L (not active)	[mmolH20 / m ² leaf s	Assigned Parameter for	Leaf maximum hydraulic
	MPa]	each C _{crown}	conductivity, Low
			vegetation
Klf_H	[1/day]	Assigned Parameter	Dead leaf fall turnover,
			High vegetation
Klf_L	[1/day]	Assigned Parameter	Dead leaf fall turnover,
_			Low vegetation
KnitH	[-]	Assigned Parameter for	Canopy nitrogen decay
		all C _{crown}	coefficient, High
		an scrown	vegetation
KnitL	[-]	Assigned Parameter for	Canopy nitrogen decay
KIIILL	[-]		coefficient, Low
		all C _{crown}	•
		<u> </u>	vegetation
Krock	[mm/h]	Assigned Parameter	Hydraulic conductivity
			fractured rock
Ks (overridden by Ks_Zs)	[mm/h]	Internal Parameter	Hydraulic conductivity at
			saturation – Reference
			Value
Ks_mac (optional)	[mm/h]	Assigned Parameter for	Hydraulic conductivity at
		each Soil Layer	saturation for each Soil
		,	Layer - Structural
			Component
Ks_Zs	[mm/h]	Internal Parameter or	Hydraulic conductivity at
13_23	[[[[[[[[[[[[[[[[[[[[Optionally assigned for	saturation for each Soil
		each Soil Layer	
Ky many II (mat active)	[managht 20 /mag NADa]		Layer
Kx_max_H (not active)	[mmolH20 /m s MPa]	Assigned Parameter for	Xylem maximum
		each C _{crown}	hydraulic conductivity,
			High vegetation
<pre>Kx_max_L (not active)</pre>	[mmolH20 /m s MPa]	Assigned Parameter for	Xylem maximum
		each C _{crown}	hydraulic conductivity,
			Low vegetation
L	[-]	Internal Parameter or	Slope of logarithmic
		Optionally assigned for	tension-moisture curve
		each Soil Layer	
LAI_min_H	[m² LAI/ m² PFT]	Assigned Parameter for	Minimum Leaf Area
	[=,	all C _{crown}	Index for complete
		an ecrown	defoliation, High
IAI min I	[m² LAI/ m² PFT]	Assigned Darameter for	Vegetation Minimum Leaf Area
LAI_min_L	[III LAI/ III PFI]	Assigned Parameter for	
		all C _{crown}	Index for complete
			defoliation, Low
			Vegetation
LDay_cr_H	[h]	Assigned Parameter for	Threshold for
		each C _{crown}	senescence: hours of
			light, High Vegetation
LDay_cr_L	[h]	Assigned Parameter for	Threshold for
·	, - -	_	
		each C _{crown}	senescence: hours of

LDay_min_H	[h]	Assigned Parameter for	Threshold for leaf onset:
	[17]	each C _{crown}	hours of light, High
		Section Scientific	Vegetation
LDay_min_L	[h]	Assigned Parameter for	Threshold for leaf onset:
25072	[each C _{crown}	hours of light , Low
		Cash Crown	Vegetation
LtR_H	[-]	Assigned Parameter for	Leaf to root biomass
26	' '	each C _{crown}	maximum ratio, High
		Cach Crown	Vegetation
LtR_L	[-]	Assigned Parameter for	Leaf to root biomass
	' '	each C _{crown}	maximum ratio, Low
		Cach Crown	Vegetation
Mf_H	[1/day]	Assigned Parameter for	Fruit maturation
1411_11	[1/ddy]	each C _{crown}	turnover, High
		Cach Ccrown	Vegetation
Mf_L	[1/day]	Assigned Parameter for	Fruit maturation
IVII_L	[1/uay]	each C _{crown}	turnover, Low
		each C _{crown}	Vegetation
NCP	Γμ1	Internal Parameter	Number of carbon pools
	[#]		•
NN	[#]	Assigned Parameter	Hourly Time step number
NINI J	[u]	Assistant Bases and a	
NNd	[#]	Assigned Parameter	Daily Time step number
NI_H	[gC gN ⁻¹]	Assigned Parameter for	Leaf carbon nitrogen
		each C _{crown}	ratio, High Vegetation
NI_L	[gC gN ⁻¹]	Assigned Parameter for	Leaf carbon nitrogen
		each C _{crown}	ratio, Low Vegetation
033	[-]	Internal Parameter for	Soil water content at -33
		each Soil Layer	[kPa] of water potential
OM_H	[-]	Assigned Parameter for	Within canopy clumping
		each C _{crown}	factor
OM_L	[-]	Assigned Parameter for	Within canopy clumping
		each C _{crown}	factor
Ofc	[-]	Internal Parameter for	Water content at field
		each Soil Layer	capacity
Ohy		Internal Parameter or	Residual/Hygroscopic
		Optionally assigned for	water content
		each Soil Layer	
Omac (optional)	[-]	Assigned Parameter for	Additional Porosity due
		each Soil Layer	to Macroporosity
Osat	[-]	Internal Parameter or	Water content at
		Optionally assigned for	saturation
		each Soil Layer	
PAR_th_H	[W/m2]	Assigned Parameter for	Tropical phenology ΔPAR
		each C _{crown}	threshold, High
			Vegetation
PAR_th_L	[W/m2]	Assigned Parameter for	Tropical phenology ΔPAR
		each C _{crown}	threshold, Low
			Vegetation
PFT_opt_H	-	Internal Parameter, a	Vegetation optical
— · —		structure for each C _{crown}	parameter set given a
			PFT

PFT_opt_L	-	Internal Parameter, a	Vegetation optical
		structure for each C _{crown}	parameter set given a PFT
Pcla	[-]	Assigned Parameter	Fraction of clay in the soil
Pe	[kPa]	Internal Parameter or Optionally assigned for each Soil Layer	Suction in the soil at air entry
Phy	[kPa]	Assigned Parameter	Suction at the residual/hygroscopic water content
Porg	[-]	Assigned Parameter	Fraction of organic material in the soil
Psan	[-]	Assigned Parameter	Fraction of sand in the soil
PsiG50_H	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 50% impairment of growth and allocation control, High Vegetation
PsiG50_L	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 50% impairment of growth and allocation control, Low Vegetation
PsiG99_H	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 99% impairment of growth and allocation control, High Vegetation
PsiG99_L	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 99% impairment of growth and allocation control, Low Vegetation
PsiL00_H	[MPa]	Assigned Parameter for each C _{crown}	Water potential at the beginning of leaf hydraulic conductivity decrease, High Vegetation
PsiL00_L	[MPa]	Assigned Parameter for each C _{crown}	Water potential at the beginning of leaf hydraulic conductivity decrease, Low Vegetation
PsiL50_H	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 50% of leaf hydraulic conductivity, High Vegetation
PsiL50_L	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 50% of leaf hydraulic conductivity, Low Vegetation
PsiX50_H	[MPa]	Assigned Parameter for each C _{crown}	Water potential at 50% of xylem hydraulic conductivity and limit for

			T
			water extraction from
	50.00		soil, High Vegetation
PsiX50_L	[MPa]	Assigned Parameter for	Water potential at 50%
		each C _{crown}	of xylem hydraulic
			conductivity and limit for
			water extraction from
5.1	50.00 3		soil, Low Vegetation
Psi_sto_00_H	[MPa]	Assigned Parameter for	Water potential at the
		each C _{crown}	beginning of stomatal
5.1	50.00		closure, High Vegetation
Psi_sto_00_L	[MPa]	Assigned Parameter for	Water potential at the
		each C _{crown}	beginning of stomatal
	50.00		closure, Low Vegetation
Psi_sto_50_H	[MPa]	Assigned Parameter for	Water potential at 50%
		each C _{crown}	of stomatal closure, High
	50.00		Vegetation
Psi_sto_50_L	[MPa]	Assigned Parameter for	Water potential at 50%
		each C _{crown}	of stomatal closure, Low
		1	Vegetation
RfH_Zs	[-]	Internal Parameter or	Fraction of fine roots in
		Optionally assigned for	the soil layers, High
		each Soil Layer and for	Vegetation
		each C _{crown}	5.00
RfL_Zs	[-]	Internal Parameter or	Fraction of fine roots in
		Optionally assigned for	the soil layers, Low
		each Soil Layer and for	Vegetation
CNI	[]	each C _{crown}	Danian anamatan [0/4]
SN	[-]	Assigned Parameter	Boolean operator [0/1]
CDAD	[]	Assistant Barrana atau	for stream identification
SPAR	[-]	Assigned Parameter	Soil-Hydraulic
			parameterization (1-Van Genuchten with
			correction approaching residual water content,
			2-Saxton-Rawls, 3- Van
			Genuchten + Soil
			Structural Effects, 4 -Van
			Genuchten without
			correction)
SI_H	[m ² gC ⁻¹]	Assigned Parameter for	Specific leaf area, High
31_11	[III gc]	each C _{crown}	Vegetation
SI_L	[m² gC ⁻¹]	Assigned Parameter for	Specific leaf area, Low
JI_L	[III gc]	each C _{crown}	Vegetation Vegetation
Sllit	[m² Litter / kg DM]	Assigned Parameter	Specific leaf area of
Sinc	[III LILLEI / Ng DIVI]	7 SSIGNED I DIDINETEL	Litter
Slo_pot	[-]	Internal Parameter for	Slope of the hydraulic
5.0_pot	1	each Soil Layer	head for each soil layer
Slo_top	[-]	Assigned Parameter	Topographic slope
Sp_LAI_H_In	[mm LAI ⁻¹]	Assigned Parameter for	Specific Interception of
oh_r⊎i⊓⊔⊓iii	[IIIII LAI]	each C _{crown}	rainfall for unit leaf area,
		Eduli C _{crown}	High Vegetation
Sn IAI I In	[mm Al-1]	Assigned Parameter for	
Sp_LAI_L_In	[mm LAI ⁻¹]	Assigned Parameter for	Specific Interception of

		aach C	rainfall for unit loaf area
		each C _{crown}	rainfall for unit leaf area,
6 61 1	F + 4 1-17	 	Low Vegetation
Sp_SN_In	[mm LAI ⁻¹]	Assigned Parameter	Specific Interception of
			snow for unit leaf area,
			Average of High
			Vegetation
Stoich_H	-	Internal or Assigned	Vegetation
		Parameter, a structure	stoichiometric
		for each C _{crown}	parameters, High
			Vegetation
			NI:
			Ns:
			Nr:
			Nf:
			Nh:
			Phol:
			Phos:
			Phor:
			Phof:
			Phoh:
			Kpotl:
			Kpots:
			Kpotr:
			Kpotf:
			Kpoth:
			ftransR:
			ftransL:
			FiS:
			Lig_fr_l:
			Lig_fr_fr:
			Lig_fr_h:
			Lig_fr_r:
Stoich L	_	Internal or Assigned	Vegetation
0.0.0.1		Parameter, a structure	stoichiometric
		for each C _{crown}	parameters, Low
		101 Cacil Corown	Vegetation
SvF	[-]	Assigned Parameter	Sky View Factor
Tcold_H	[°C]	Assigned Parameter for	Air temperature
10014_11	[]	each C _{crown}	threshold for shedding
		each C _{crown}	of leaves, High
			_
Tcold_L	[°C]	Assigned Parameter for	Vegetation
TCOIU_L	ا د حا	each C _{crown}	Air temperature
		Eduli C _{crown}	threshold for shedding
			of leaves, Low
TI. D.	f / .l	A	Vegetation
Th_Pr_sno	[mm/day]	Assigned Parameter	Threshold on intensity of
			snow to consider a new
			snowfall and refresh
			albedo
Tlo_H	[°C]	Assigned Parameter for	Threshold temperature
		each C _{crown}	for leaf onset, High
			Vegetation

Tlo_L	[°C]	Assigned Parameter for	Threshold temperature
110_L	[5]	each C _{crown}	for leaf onset, Low
		Cash Scrown	Vegetation
Tls_H (not active)	[°C]	Assigned Parameter for	Threshold temperature
113_11 (1100 detive)	[6]	each C _{crown}	for leaf shedding, High
		Cach Ccrown	Vegetation
Tls_L (not active)	[°C]	Assigned Parameter for	Threshold temperature
113_2 (1100 detive)	[6]	each C _{crown}	for leaf shedding, Low
		Cach Ccrown	Vegetation
TmaxS	[°C]	Assigned Parameter	Threshold temperature
THIANS	[6]	Assigned Farameter	for precipitation to be
			fully in liquid form
TminS	[°C]	Assigned Parameter	Threshold temperature
1111113	[[6]	Assigned Farameter	for precipitation to be
			fully in solid form
Trr_H	[gC / m ² PFT day]	Assigned Parameter for	Translocation rate from
""_"	[gc/III Filluay]	each C _{crown}	carbohydrate reserve,
		each C _{crown}	High Vegetation
Trr I	[gC / m ² PFT day]	Assigned Parameter for	Translocation rate from
Trr_L	[gC/III PFI day]	each C _{crown}	carbohydrate reserve,
		each C _{crown}	Low Vegetation
Vmay H	[µmol CO ₂ / m ² s]	Assigned Parameter for	Maximum Rubisco
Vmax_H	[μποι εθές πι δ]	each C _{crown}	capacity at 25°C leaf
		eacii C _{crown}	level, High Vegetation
Vmay	[µmol CO ₂ / m ² s]	Assigned Parameter for	Maximum Rubisco
Vmax_L	[μποι εθ ₂ / πι- s]		
		each C _{crown}	capacity at 25°C leaf
Matraga Th	[00]	Assigned Darameter	level, Low Vegetation
WatFreez_Th	[°C]	Assigned Parameter	Threshold for freezing lake water
\\/na	[1/dov]	Assigned Darameter for	
Wm_H	[1/day]	Assigned Parameter for	Heartwood turnover
		each C _{crown}	coefficient, High
\M/m I	[1/dov]	Assigned Darameter for	Vegetation
Wm_L	[1/day]	Assigned Parameter for each C _{crown}	Heartwood turnover coefficient,
		each C _{crown}	LowVegetation
7DEO 11	[mm]	Assigned Parameter for	Root depth 50
ZR50_H	[mm]		percentile, High
		each C _{crown}	Vegetation
7DE0 1	[mm]	Assigned Parameter for	Root depth 50
ZR50_L	[[[[]]]]	each C _{crown}	· ·
		each C _{crown}	percentile, Low
7D05 ⊔	[mm]	Assigned Parameter for	Vegetation Root depth 95
ZR95_H	[mm]	_	'
		each C _{crown}	percentile, High
7D0E I	[mm]	Assigned Parameter for	Vegetation Root depth 95
ZR95_L	[mm]	Assigned Parameter for each C _{crown}	· ·
		EdCII Ccrown	percentile, Low
7Dmay II	[mm]	Assigned Parameter for	Vegetation
ZRmax_H	[mm]	Assigned Parameter for	Maximum Root depth,
7Dmay I	[mm]	each C _{crown}	High Vegetation
ZRmax_L	[mm]	Assigned Parameter for	Maximum Root depth,
7h:-	[m.m.]	each C _{crown}	Low Vegetation
Zbio	[mm]	Assigned Parameter	Depth of the active

			Biogeochemistry zone
Zdes	[mm]	Assigned Parameter	Depth of evaporation
	[]	7.55.8.55. 4.4.4	layer (=first layer)
Zinf	[mm]	Assigned Parameter	Depth of infiltration
2	[]	7.551gired i didiricter	layer (=first layer)
Zs	[mm]	Assigned Parameter for	Depth of top of the soil
23	[[[[]]]]	each Soil Layer +1	layer
Zs_deb (only in case of	[mm]	Assigned Parameter for	Depth of top of the
debris)	[[[[]]]]	each Debris Layer +1	debris layer
a1_H	[-]	Assigned Parameter for	Empirical parameter
a1_11	[-]	each C _{crown}	connecting stomatal
		each C _{crown}	aperture and net
			assimilation, High
			Vegetation
a1_L	[-]	Assigned Parameter for	Empirical parameter
aı_r	[-]	each C _{crown}	connecting stomatal
		each C _{crown}	aperture and net
			assimilation, Low
			1
aD.	[1	Assigned Darameter	Vegetation
aR	[-]	Assigned Parameter	Anisotropy ratio
aSE_H	[0-3]	Assigned Parameter for	Plant type broad
		each C _{crown}	category: 0 Evergreen,
			1 Deciduous, 2 Grass, 3
05.1	[0.0]	1	Tropical Evergreen
aSE_L	[0-3]	Assigned Parameter for	Plant type broad
		each C _{crown}	category: 0 Evergreen, 1
			Deciduous, 2 Grass, 3
_			Tropical Evergreen
аТор	[mm]	Assigned Parameter	Ratio between Area and
			Contour Length for
	1		lateral transfer
a_dis	[-]	Assigned Parameter	Rainfall disaggregation
	1		parameter
age_cr_H	[day]	Assigned Parameter for	Critical Leaf Age, High
		each C _{crown}	Vegetation
age_cr_L	[day]	Assigned Parameter for	Critical Leaf Age, Low
		each C _{crown}	Vegetation
alpVG	[mm ⁻¹]	Assigned Parameter for	Alpha parameter Van-
		each Soil Layer	Genuchten soil water
			retention curve
alpVGM (optional)	[mm ⁻¹]	Assigned Parameter for	Alpha parameter Van-
		each Soil Layer	Genuchten soil water
			retention curve –
			Structural Component
bVG	[-]	Internal Parameter	Correction parameter of
			Van-Genuchten soil
			water retention curve
			approaching residual
			water content
СС	[-]	Assigned Parameter	Crown Area Number
cellsize	[m]	Assigned Parameter	Size of the cell
cv_s	[J m ⁻³ K ⁻¹]	Assigned Parameter for	Volumetric heat capacity
		<u> </u>	

		each Soil Layer	soil solid
d_leaf_H	[cm]	Assigned Parameter for	Leaf characteristic
	[5]	each C _{crown}	dimension, High
		Coon	Vegetation
d_leaf_L	[cm]	Assigned Parameter for	Leaf characteristic
		each C _{crown}	dimension, Low
			Vegetation
dbThick (only in case of	[mm]	Assigned Parameter	Debris thickness
debris)			
dc_C_H	[day ⁻¹ °C ⁻¹]	Assigned Parameter for	Factor for increasing
		each C _{crown}	mortality with cold,
			High Vegetation
dc_C_L	[day ⁻¹ °C ⁻¹]	Assigned Parameter for	Factor for increasing
		each C _{crown}	mortality with cold, Low
			Vegetation
dd_max_H	[day ⁻¹]	Assigned Parameter for	Maximum leaf mortality
		each C _{crown}	factor for drought, High
			Vegetation
dd_max_L	[day ⁻¹]	Assigned Parameter for	Maximum leaf mortality
		each C _{crown}	factor for drought, Low
			Vegetation
dmg_H	[day]	Assigned Parameter for	Days of maximum
		each C _{crown}	growth, High Vegetation
dmg_L	[day]	Assigned Parameter for	Days of maximum
		each C _{crown}	growth, Low Vegetation
drn_H	[day ⁻¹]	Assigned Parameter for	Fine root turnover rate,
		each C _{crown}	High Vegetation
drn_L	[day ⁻¹]	Assigned Parameter for	Fine root turnover rate,
		each C _{crown}	Low Vegetation
dsn_H	[day ⁻¹]	Assigned Parameter for	Living sapwood
		each C _{crown}	turnover rate, High
			Vegetation
dsn_L	[day ⁻¹]	Assigned Parameter for	Living sapwood
		each C _{crown}	turnover rate, Low
	, ,		Vegetation
dz	[mm]	Internal Parameter for	Soil layer thickness
1 .	r // 3	each Soil Layer	
dz_ice	[mm/h]	Assigned Parameter	Lake Water Freezing
			Velocity without snow
ons as II	[0 1]	Assigned Donamater for	cover Parameter for allocation
eps_ac_H	[0-1]	Assigned Parameter for each C _{crown}	to carbon reserves, High
		edCII C _{crown}	
ens ac l	[0-1]	Assigned Parameter for	Vegetation Parameter for allocation
eps_ac_L	[0-1]	each C _{crown}	to carbon reserves, Low
		Each Ccrown	Vegetation
fab_H	[-]	Assigned Parameter	Fraction of above-
140_11	1,1	Assigned Faranteter	ground sapwood and
			reserve, High
			Vegetation
fab_L	[-]	Assigned Parameter	Fraction of above-
		, isolgined i didirecti	ground sapwood and
L	1		1 0.0 a.i.a saptrood dila

			reserve, Low Vegetation
fbe_H	[-]	Internal Parameter	Fraction of below-
			ground sapwood and
			reserve, High
			Vegetation
fbe_L	[-]	Internal Parameter	Fraction of below-
		internal rarameter	ground sapwood and
			reserve, Low Vegetation
ff_r_H	[-]	Assigned Parameter for	Reference allocation to
''-'-''	[1]	each C _{crown}	Fruit and reproduction,
		Cacif Ccrown	High Vegetation
ff_r_L	[-]	Assigned Parameter for	Reference allocation to
''_'_	[1]	each C _{crown}	Fruit and reproduction,
		Cacrown	Low Vegetation
fpr (not used)	[1	Assigned Parameter	???
	[-]	Assigned Parameter	
gR_H	[-]	Assigned Parameter for	Growth respiration
		each C _{crown}	coefficient, High
		A	Vegetation
gR_L	[-]	Assigned Parameter for	Growth respiration
		each C _{crown}	coefficient, Low
	12		Vegetation
gcl	[mm ⁻¹]	Internal Parameter	Interception parameter
gcoef_H (not used)	[gC/m ² day]	Assigned Parameter for	Parameter for maximum
		each C _{crown}	growth in perfect
			conditions, related to
			Env. Controls of growth,
			High Vegetation
gcoef_L (not used)	[gC/m² day]	Assigned Parameter for	Parameter for maximum
		each C _{crown}	growth in perfect
			conditions, related to
			Env. Controls of growth,
			Low Vegetation
gmes_H (not used)	[mol CO ₂ s ⁻¹ m ⁻²]	Assigned Parameter for	Mesophyll conductance,
		each C _{crown}	High Vegetation
gmes_L (not used)	[mol CO ₂ s ⁻¹ m ⁻²]	Assigned Parameter for	Mesophyll conductance,
		each C _{crown}	Low Vegetation
go_H	[mol CO ₂ s ⁻¹ m ⁻²]	Assigned Parameter for	Minimum stomatal
0 _		each C _{crown}	conductance, High
			Vegetation
go_L	[mol CO ₂ s ⁻¹ m ⁻²]	Assigned Parameter for	Minimum stomatal
U	[each C _{crown}	conductance, Low
			Vegetation
lan_dry	[W m ⁻¹ K ⁻¹]	Internal Parameter for	Thermal conductivity dry
·····	[each Soil Layer	soil
lan_s	[W m ⁻¹ K ⁻¹]	Internal Parameter for	Thermal conductivity soil
1011_3	[[[[[[[[[[[[[[[[[[[[each Soil Layer	solid
IVG	[-]	Assigned Parameter for	Tortuosity parameter in
170	[-]		van Genucthen soil
		each Soil Layer	
			hydraulic conductivity
D/CNA /		Assissant Basis and C	function
IVGM (optional)	[-]	Assigned Parameter for	Tortuosity parameter in
		each Soil Layer	van Genucthen soil

			hudraulia aandustivitu
			hydraulic conductivity
			function- Structural
	<u> </u>		Component
mSI_H (not to be used)	[m2 LAI/gC * m2 PFT /	Assigned Parameters for	Linear coefficient of
	m2 LAI]	each C _{crown}	increasing specific leaf
			area with LAI, High
			Vegetation
mSI_L (not to be used)	[m2 LAI/gC * m2 PFT /	Assigned Parameters for	Linear coefficient of
	m2 LAI]	each C _{crown}	increasing specific leaf
			area with LAI, High
			Vegetation
mjDay_H	[1-365]	Assigned Parameters for	Maximum day of the
, ,_		each C _{crown}	year for leaf onset (if
			negative minimum day),
			High Vegetation
mjDay_L	[1-365]	Assigned Parameters for	Maximum day of the
IIIJDay_E	[1 303]	each C _{crown}	year for leaf onset (if
		each C _{crown}	negative minimum day),
			_
	[]	Assistanced Developments	Low Vegetation
ms	[-]	Assigned Parameter	Number of soil layers
nVG	[-]	Assigned Parameter for	n parameter Van-
		each Soil Layer	Genuchten soil water
			retention curve
nVGM (optional)	[-]	Assigned Parameter for	n parameter Van-
		each Soil Layer	Genuchten soil water
			retention curve -
			Structural Component
pow_dis	[-]	Assigned Parameter	Rainfall disaggregation
			parameter
r_H	[gC gN ⁻¹ day ⁻¹]	Assigned Parameters for	Maintenance respiration
_		each C _{crown}	rate at 10°C, High
			Vegetation
r_L	[gC gN ⁻¹ day ⁻¹]	Assigned Parameters for	Maintenance respiration
_		each C _{crown}	rate at 10°C, Low
		Cash Sciowii	Vegetation
rjv_H	[μmol Eq/ μmol CO ₂]	Assigned Parameters for	Scaling factor between
','_''	[μποι εφ, μποι εσ2]	each C _{crown}	Jmax and Vmax, High
		each C _{crown}	Vegetation
wise I	[umal Fa/ umal CO]	Assigned Darameters for	-
rjv_L	[μmol Eq/ μmol CO ₂]	Assigned Parameters for	Scaling factor between
		each C _{crown}	Jmax and Vmax, Low
	51 22		Vegetation
ros_lce_thr	[kg m ⁻³]	Assigned Parameter	Density threshold to
			transform snow into ice
ros_max1	[kg m ⁻³]	Assigned Parameter	Maximum snow density
			parameter melting
			conditions
ros_max2		A	Maximum snow density
103_111012	[kg m ⁻³]	Assigned Parameter	Maximum show density
103_1110.2	[kg m ⁻³]	Assigned Parameter	parameter freezing
103_1118.2	[kg m ⁻³]	Assigned Parameter	· ·
rsd	[kg m ⁻³]	Internal Parameter	parameter freezing

	Van-Genuchten soil
	water retention curve
	approaching residual
	water content

Numerical	UNITS	ТҮРЕ	DESCRIPTION
dt	[s]	Assigned Value	Time step
dtd	[day]	Internal Value	Time step
dth	[hours]	Internal Value	Time step
CASE_ROOT	[1/2/3/4]	Assigned Option	Type of root profile (1) Exponential Profile (2) Linear Dose Response (3) Constant Profile (4) Linear dose with tap roots
OPT_ALLOME (only for VCA)	[1/2/3/4]	Assigned Option	Choice of Allometric Equation to describe Biomass, DBH, Crown Area, BA, Height, SAI relations. (1) Oil Palm; (2) Generic Forest; (3) Empty; (4) Eucalyptos Regnans
Opt_CR	[ppm]	Assigned Option	Numerical tolerance for solution of coupled photosynthesis, Ci, gs
OPT_EnvLimitGrowth	[0/1]	Assigned Option	Option for introducing Environmental Limitation of Growth
OPT_FR_SOIL	[0/1]	Assigned Option	Option for introducing computation of ice content in the soil / frozen soil
OPT_PH	[mmolH20 /m^2 PFT]	Assigned Option	Numerical tolerance for internal Plant Hydraulic Volumes
OPT_PlantHydr	[0/1]	Assigned Option	Option for introducing Plant Hydraulic or not
OPT_SM	[-]	Assigned Option	Numerical tolerance for soil moisture differential equations (solution of Richards)
Opt_ST	[°C]	Assigned Option	Numerical tolerance for energy budget (temperature) solution
OPT_STh (not used)	[°C]	Assigned Option	Numerical tolerance for heat transfer differential equations- Alternative to CN- numerical scheme

OPT_SoilBiogeochemistry	[0/1]	Assigned Option	Option for introducing computation of Soil-Biogeochemistry
OPT_SoilTemp	[0/1]	Assigned Option	Option for computing soil temperature profile or not
OPT_VCA	[0/1]	Assigned Option	Option for computing forest structural attributes including a variable Crown Area
OPT_VD	[gC /m2 day]	Assigned Option	Numerical tolerance for carbon budget differential equations
OPT_VegSnow	[0/1]	Assigned Option	Option for computing energy budget of vegetation when there is snow at the ground
i	[-]	Internal	Hourly step of calculation
j	[-]	Internal	Daily step of calculation