

Sturbois A., Cucherousset J., De Cáceres M., Desroy N., Riera P., Carpentier A., Quillien N., Grall J., Espinasse B., Cherel Y., Schaal G., 2021, Stable Isotope Trajectory Analysis (SITA): A new approach to quantify and visualize dynamics in stable isotope studies. *Ecological Monographs*.

Data S1

R codes and data used to calculate SITA metrics and compute trajectory charts

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Description

`furseals.Rdata:`

Data frame: 1410 variables *8 variables

ID_SITA: ID number

ID: ID number of original data set

Species: fur seal species

Sexe: fur seal gender

Time: whisker section

Place: breeding place

d13C: $\delta^{13}\text{C}$ values

d15N: $\delta^{15}\text{N}$ values

`Pike.Rdata:`

Data frame: 58 variables *11 variables

Trophic_status: Trophic status

Trophic_status_initial: Trophic status at release

ID: ID number

Time: Time of the measure at release (1) or recapture (2)

TimeL: Release or recapture

Date: Date of the measure

Size_mm: Size in mm

d13C: $\delta^{13}\text{C}$ values

d15N: $\delta^{15}\text{N}$ values

Residence_time: duration of residence

Trophic_status_final: Trophic status at recapture

`Lizard.Rdata:`

Data frame: 40 variables *9 variables

Age: Age of lizards

Gender: Gender of lizards

Climate: Climate treatment

Block: Block of mesocosms

d13C_cor: $\delta^{13}\text{C}$ corrected values

d15N_cor: $\delta^{15}\text{N}$ corrected values

SITA_IDtype: ID number

Age_Gender: Age*Gender combinaisons

SITA_IDfactor: code for Climate treatment

`GT1.Rdata:`

Data frame: 8 variables *5 variables

MDC: Mean distance to nearest centroid

MNN: Mean distance to nearest neighbour

IFRic: Isotopic functional richness

IFEve: Evenness

IFDiv: Divergence

GT2.Rdata:

Data frame: 28 observations *19 variables
Sample: ID
Species_Source: Type of source
Code: Type of source
Feeding_strategy: Type of source
Phylum: Type of source
Type: Type of source
Select: Code to select data in the initial data frame
May: Code to select data in the initial data frame
July: Code to select data in the initial data frame
September: Code to select data in the initial data frame
November: Code to select data in the initial data frame
Total_Month: Total number of measures corresponding to each ID number
Num_Month: Number corresponding to the four month
Month: Month name
Beach: Pristine or impacted beach
d13C: $\delta^{13}\text{C}$ values
d15N: $\delta^{15}\text{N}$ values
CTA: Code CTA
text: first letter of each month

Lakes.Rdata:

Data frame: 24 observations *13 variables
Rownames :ID
min_d13C: minimal $\delta^{13}\text{C}$ values
min_d15N: minima $\delta^{15}\text{N}$ values
max_d13C: maximal $\delta^{13}\text{C}$ values
max_d15N: maximal $\delta^{15}\text{N}$ values
range_d13C: range of $\delta^{13}\text{C}$ values
range_d15N: range of $\delta^{15}\text{N}$ values
IPos_d13C: centroid $\delta^{13}\text{C}$ values
IPos_d15N: centroid $\delta^{15}\text{N}$ values
IRic: Richness
IDiv: Divergence
IDis: Dispersion
IEve: Isotopic evenness
IUni: Uniqueness

Isoscape_Pacific2013_15.Rdata:

Data frame: 978 observations *6 variables
Latitude: Latitude
Longitude: Longitude
d13C: $\delta^{13}\text{C}$ values
d15N: $\delta^{15}\text{N}$ values
station: ID

Year: Year

Isoscape_Pacific2015_17.Rdata:

Data frame: 976 observations *6 variables

Latitude: Latitude

Longitude: Longitude

d13C: $\delta^{13}\text{C}$ values

d15N: $\delta^{15}\text{N}$ values

station: ID

Year: Year

datasuperheatmap.rdata:

Data frame: 9206 observations *9 variables

Latitude: Latitude

Longitude: Longitude

d13C: $\delta^{13}\text{C}$ values

d15N: $\delta^{15}\text{N}$ values

Stations: ID

Years: Periods

Angles: Angles value

Lengths: Segment length

Angles2: Transformed angles value for chart computation

Gar_Ari_7lacs.dbf

Gar_Ari_7lacs.prj

Gar_Ari_7lacs.sbn

Gar_Ari_7lacs.shp

Gar_Ari_7lacs.shx

Gar_Ari_7lacs.sbx:

shape files to draw de Garonne river

SITA_R_Codes.R :

R codes and data used to calculate SITA metrics and compute trajectory charts
