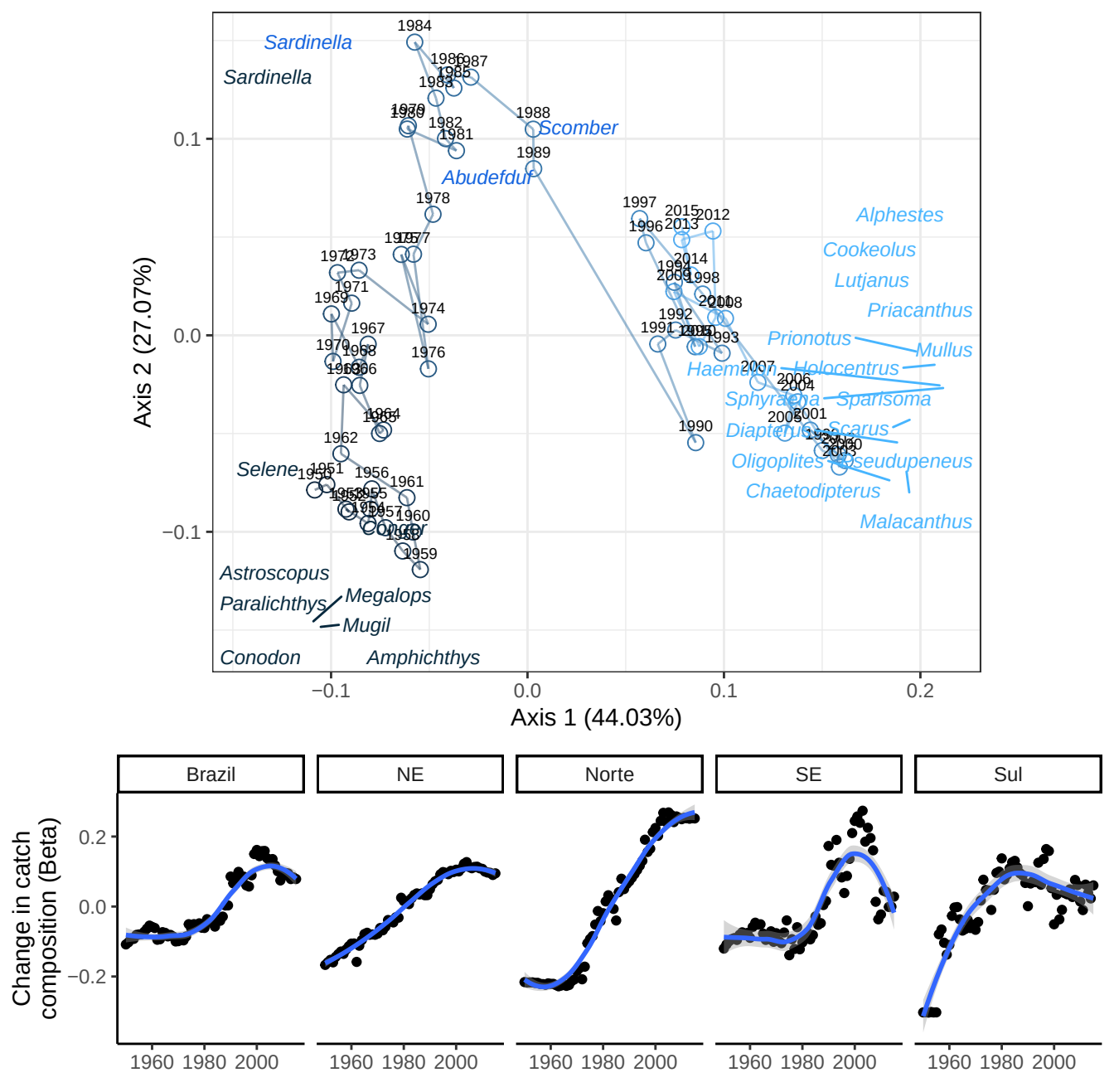
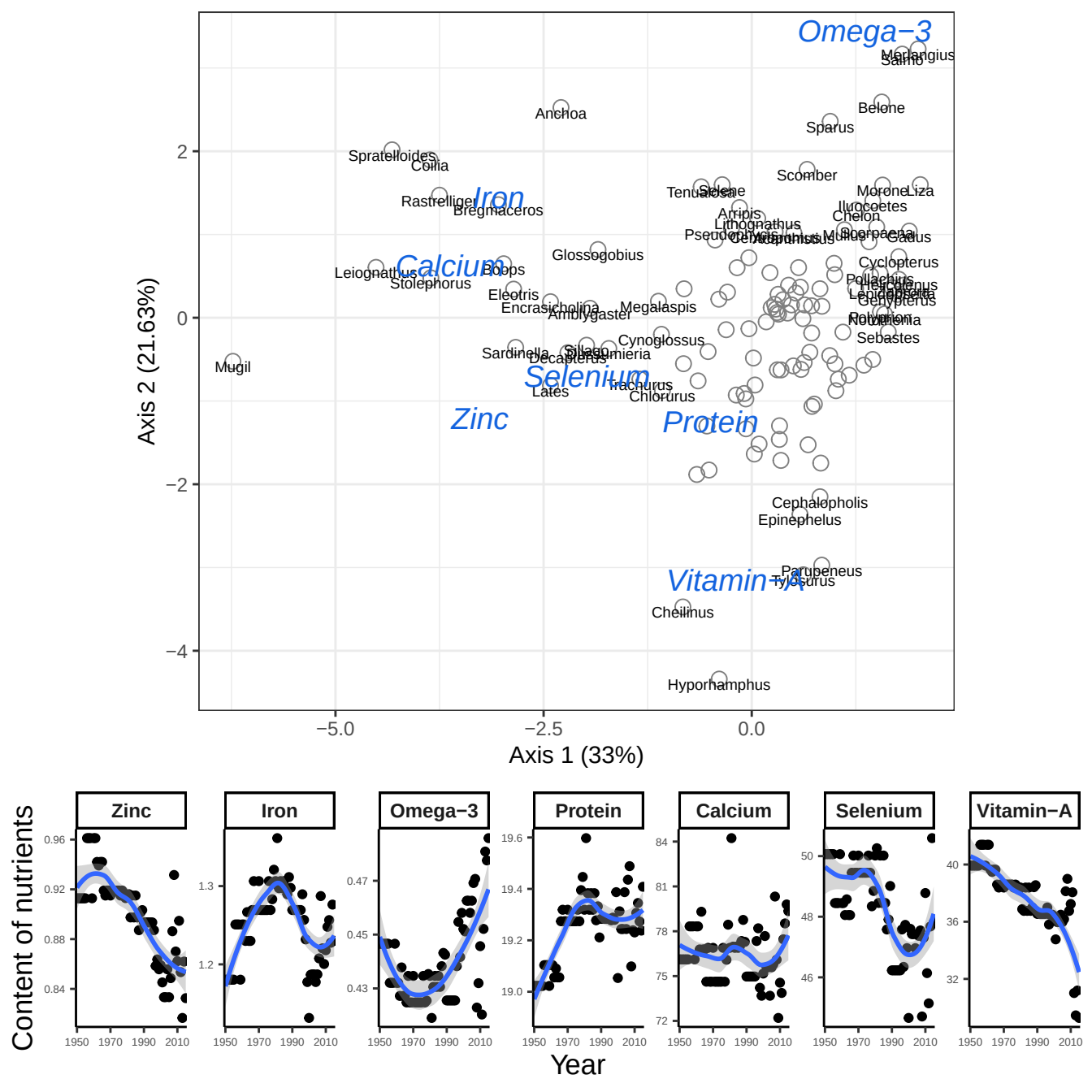

Sardinella
Sardinella
Scomber
Abudefduf
Alphestes
Cookeolus
Lutjanus
Priacanthus
Prionotus
Mullus
Holocentrus
Sparisoma
Scarus
Oligoplites
Chaetodipterus
Malacanthus
Selene
Astroscopus
Paralichthys
Megalops
Mugil
Conodon
Amphichthys
Axis 2 (27.07%)
Axis 1 (44.03%)
Brazil
NE
Norte
SE
Sul
Change in catch composition (Beta)


Omega−3
Melanogrammus
Salmo
Anchoa
Belone
Sparus
Spratelloides
Coilia
Scomber
Rastrelliger
Iron
Bregmaceros
Tenualosa
Sprattus
Morone
Liza
Ilyocoetes
Chelon
Arripis
Lithognathus
Pseudomyxus
Gadus
Glossogobius
Cyclopterus
Leiognathus
Calcium
Bobps
Stolephorus
Pollachius
Eleotris
Encrasicholina
Megalaspis
Amblygaster
Gymnocephalus
Sebastes
Cynoglossus
Sardinella
Sillago
Decapterus
Ammodytes
Mugil
Selenium
Lates
Trachurus
Chlorurus
Zinc
Protein
Cephalopholis
Epinephelus
Parupeneus
Vitamin−A
Tylosurus
Cheilinus
Hyporhamphus
Axis 2 (21.63%)
Axis 1 (33%)
2
0
−2
−4
−5.0
−2.5
0.0
Zinc
Iron
Omega−3
Protein
Calcium
Selenium
Vitamin−A
Content of nutrients
Year
1950
1970
1990
2010