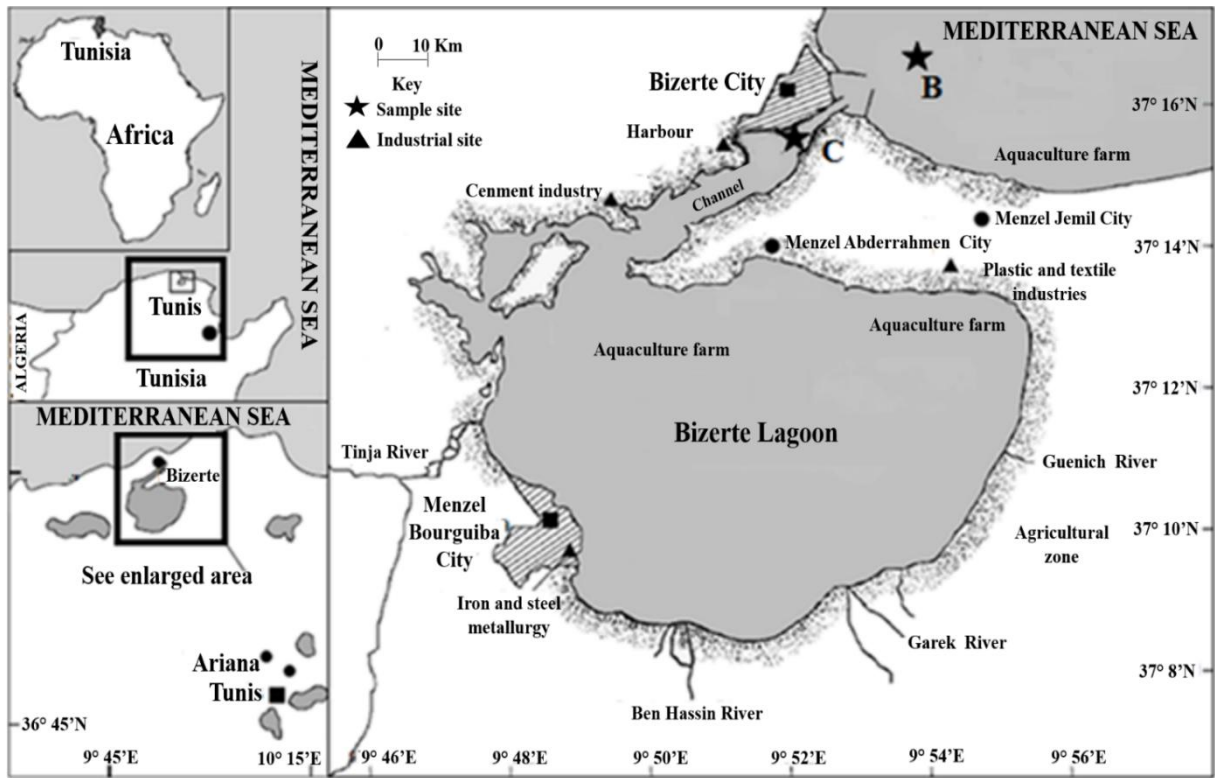


Figure Captions

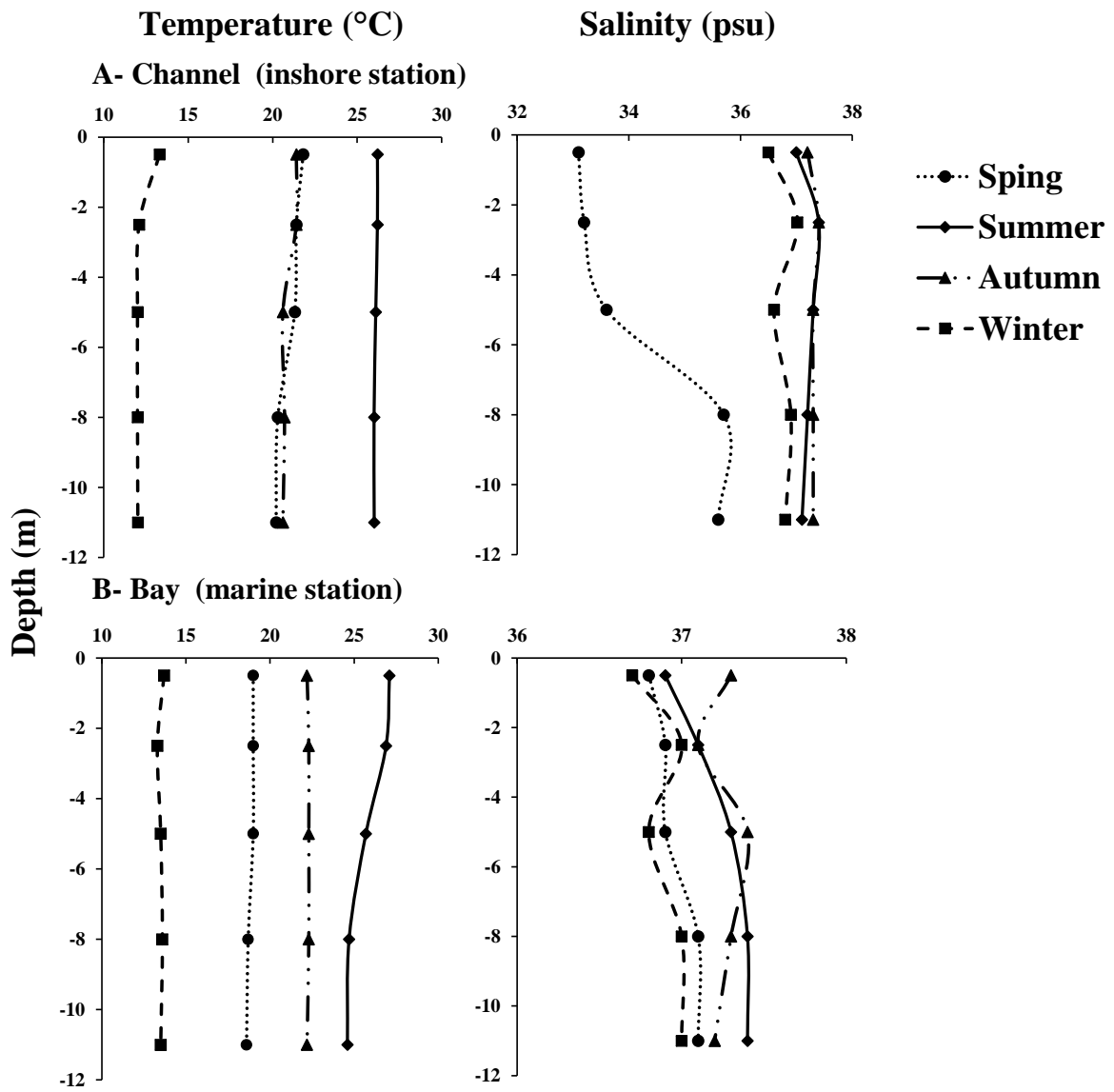
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- 3 **Figure 1.** Location of the two study stations in the Channel (inshore station; C) and the Bay of
4 Bizerte (marine station; B).
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- 6 **Figure 2.** Temperature and salinity profiles of the water column in the Channel (inshore
7 station) and the Bay (marine station) over the seasons.
- 8 **Figure 3.** *A priori* model used to build the eight planktonic food web systems. Heterotrophic
9 bacteria = bac, picophytoplankton $<2 \mu\text{m}$ = pic, nanophytoplankton $2\text{-}10 \mu\text{m}$ = nan,
10 microphytoplankton $20\text{-}200 \mu\text{m}$ = mic, protozooplankton $<200 \mu\text{m}$ = pro, metazooplankton
11 $200\text{-}700 \mu\text{m}$ = met1, metazooplankton $>700 \mu\text{m}$ = met2, dissolved organic carbon = doc and
12 detritus = det.
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- 14 **Figure 4.** Average concentrations of nutrients (μM) in the Channel (inshore station) and the
15 Bay (marine station) over the seasons (average \pm SD, $n=3$).
- 16 **Figure 5.** Production ($\text{mg C m}^{-2} \text{d}^{-1}$) of the three phytoplankton size-classes (mic, nan and pic)
17 and the heterotrophic bacteria (bac) in the inshore and marine stations over the seasons. The
18 two bars refer to autotrophic vs heterotrophic production.
- 19
- 20 **Figure 6.** Three pathways of carbon output from the planktonic food web system (as % of
21 gross primary production) in the inshore and marine stations over the seasons.
- 22
- 23 **Figure 7.** Composition of diets for the protozooplankton (A) and the metazooplankton (B) in
24 the inshore and marine stations over the seasons.
- 25
- 26 **Figure 8.** Synthetic diagram illustrating the seasonal variation of ecological indicators related
27 to the dynamics of food web typology.
- 28 **Figure 9.** Synthetic diagram illustrating the seasonal dynamics of food web typology related to
29 the hydrological condition and planktonic features.
- 30 **Figure 10.** Schematic representation of trophic pathways identified by Legendre and
31 Rassoulzadegan, 1995, Sakka Hlaili et al., 2014 and in the present study. Box and arrows
32 represent compartments with high carbon production. The thickness of arrows is proportional
33 to the flux.
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- 35 **Figure 11.** Seasonal variation of trophic food webs typology in parallel with some ecological
36 network analysis indices.
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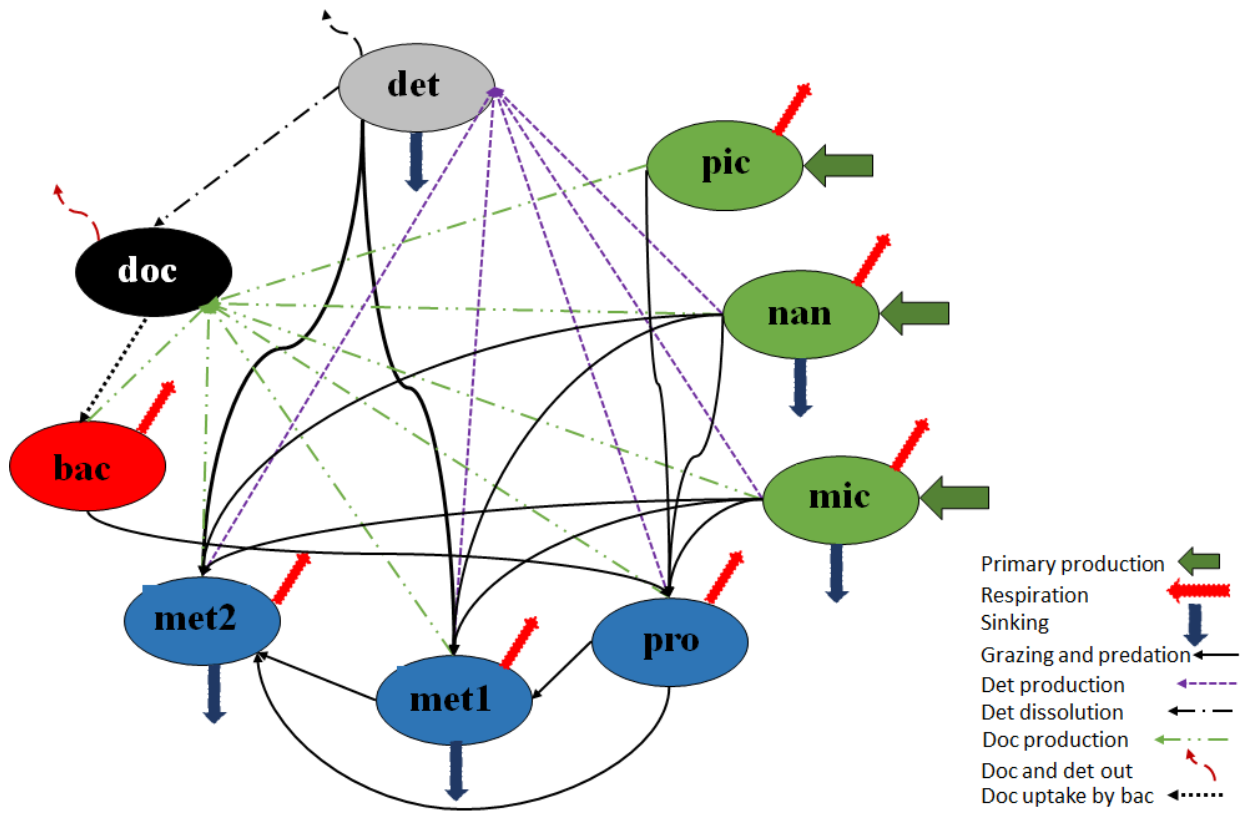
Figure 1



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Figure 2

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Figure 3

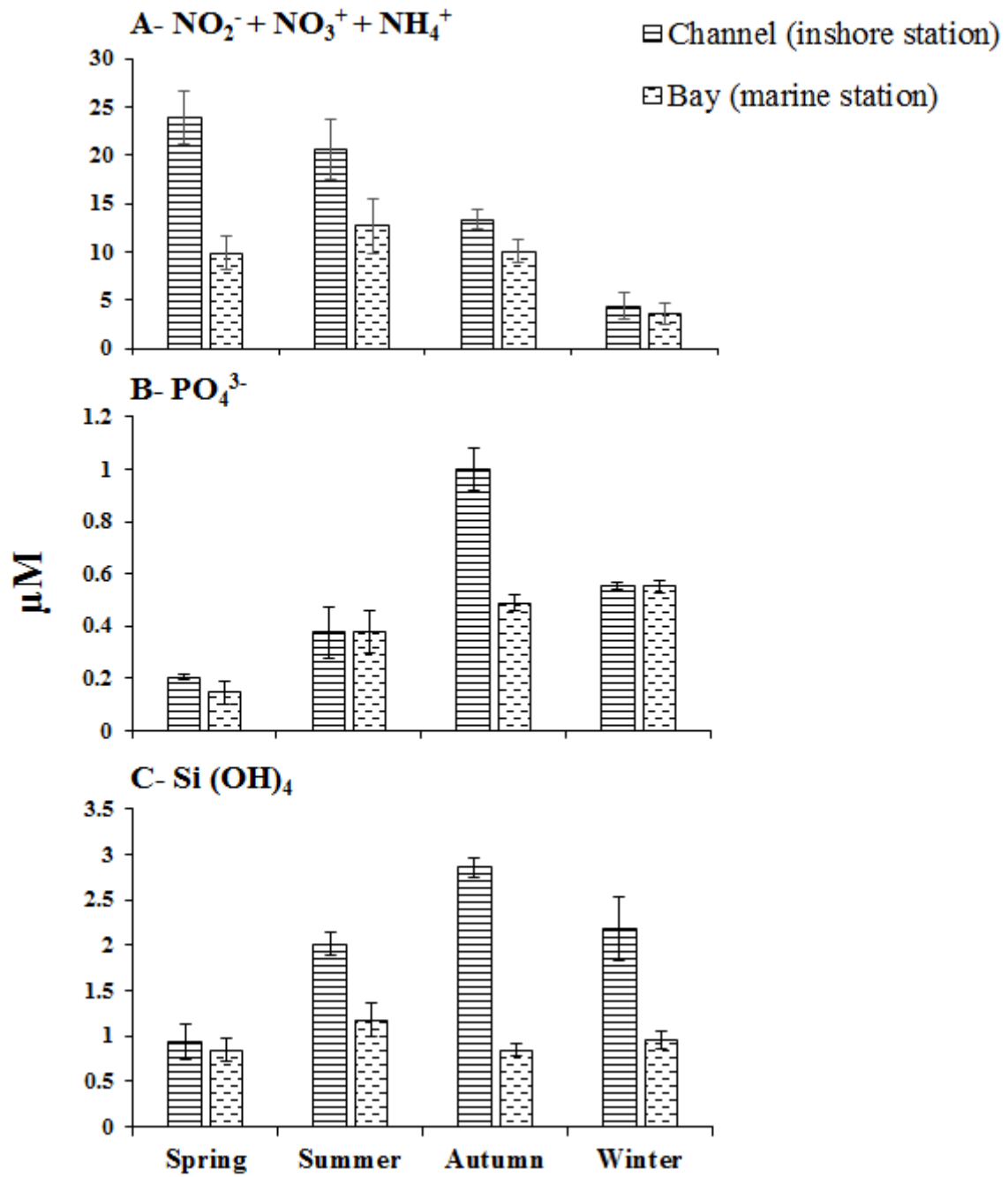


Figure 4

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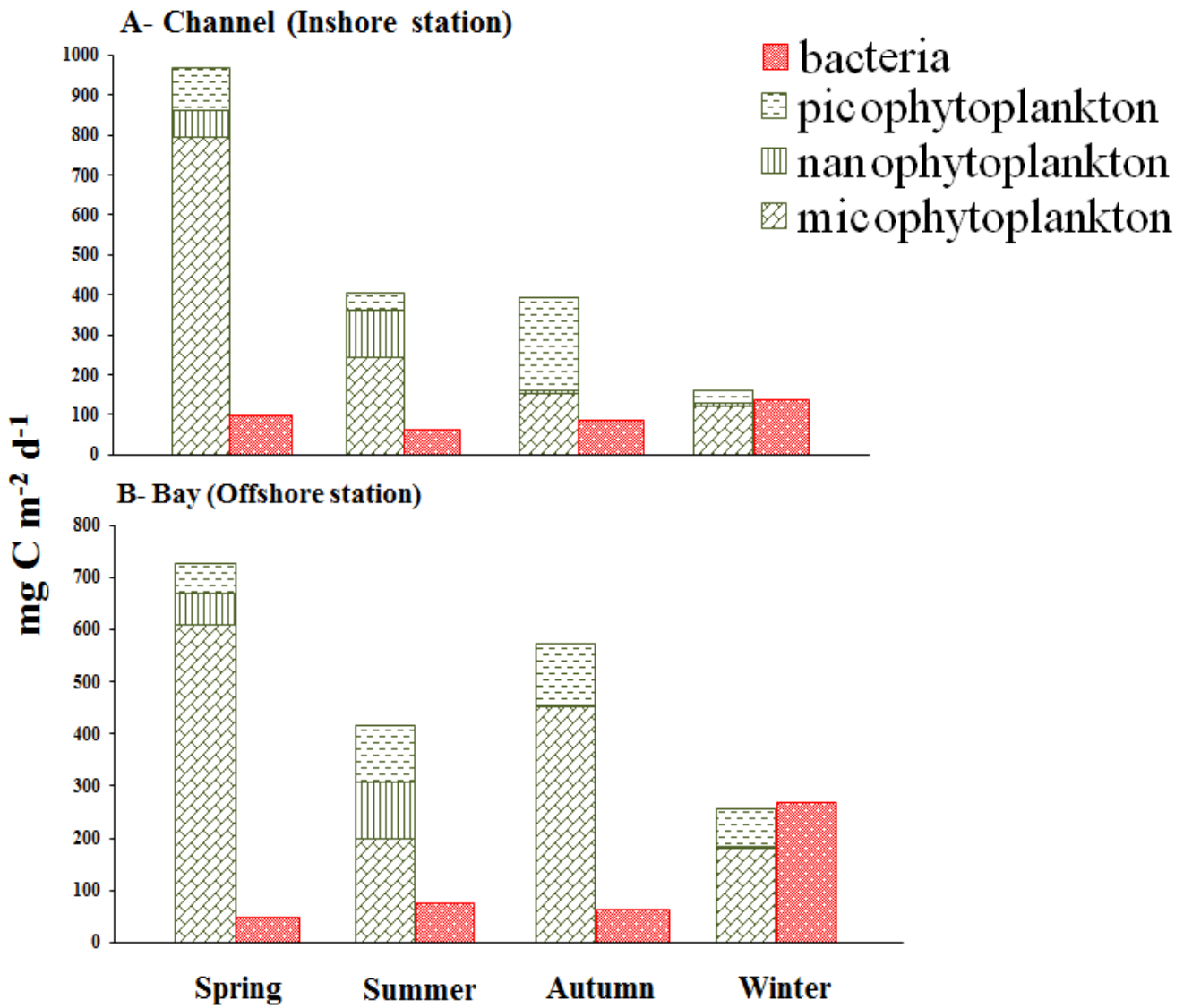
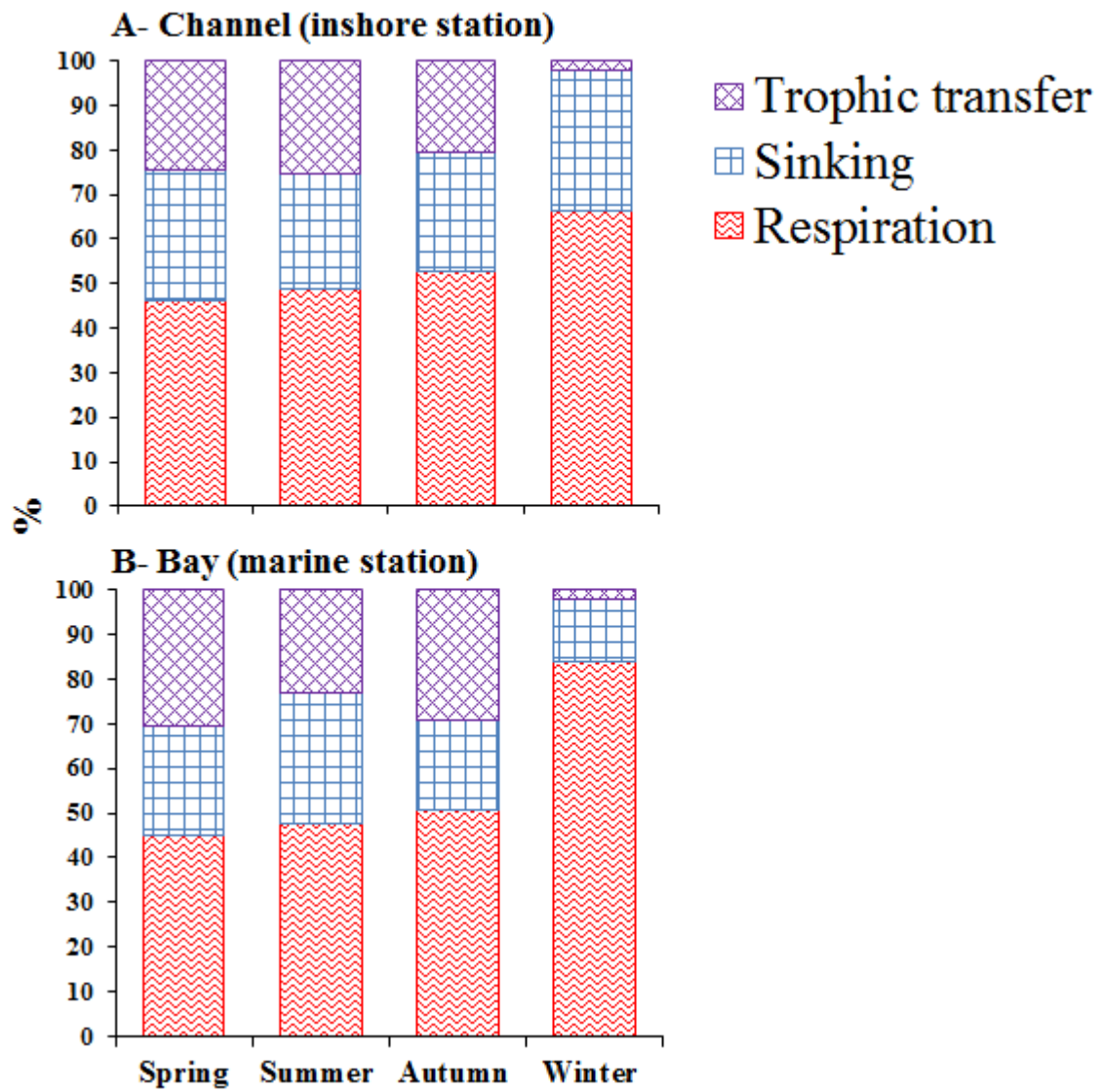


Figure 5

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Figure 6

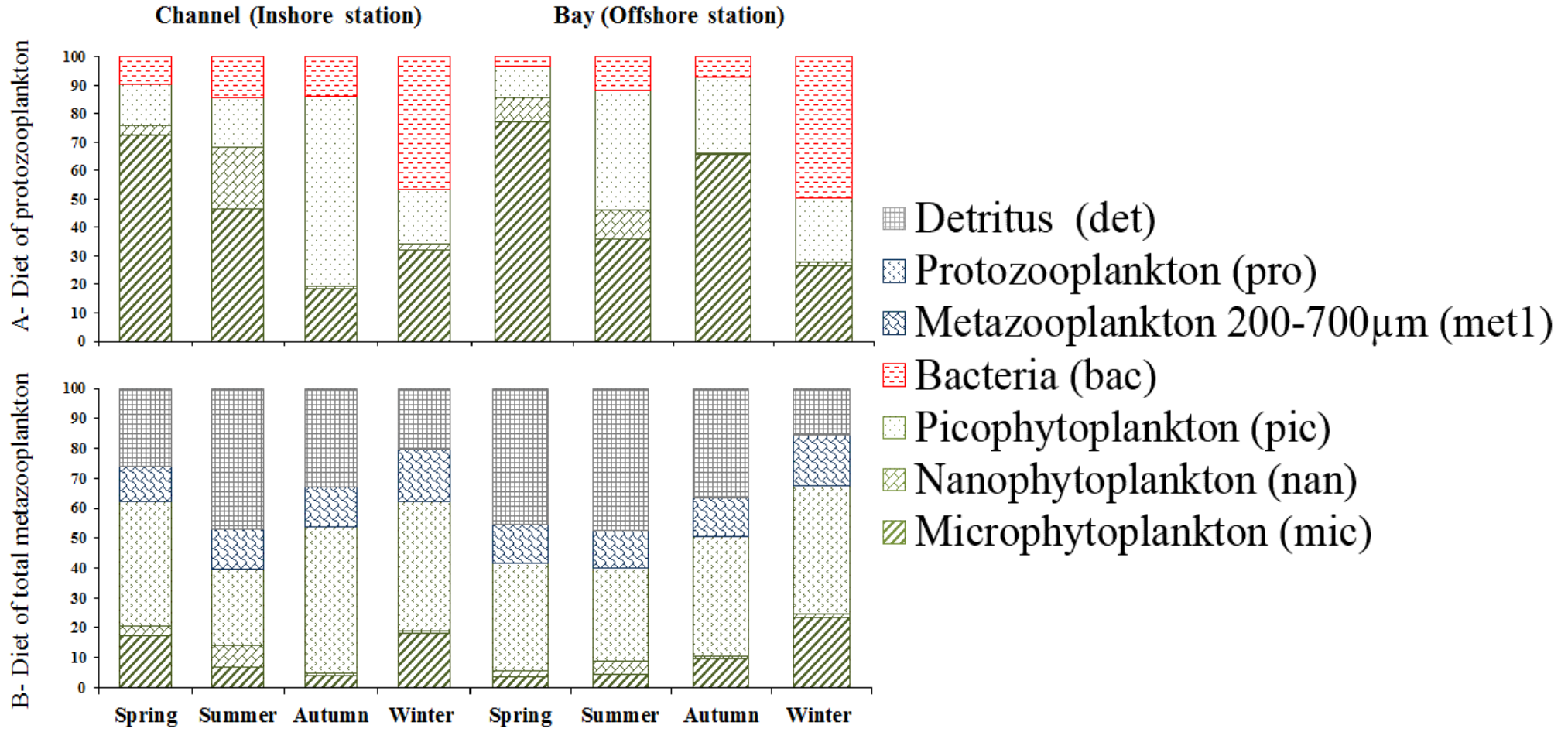


Figure 7

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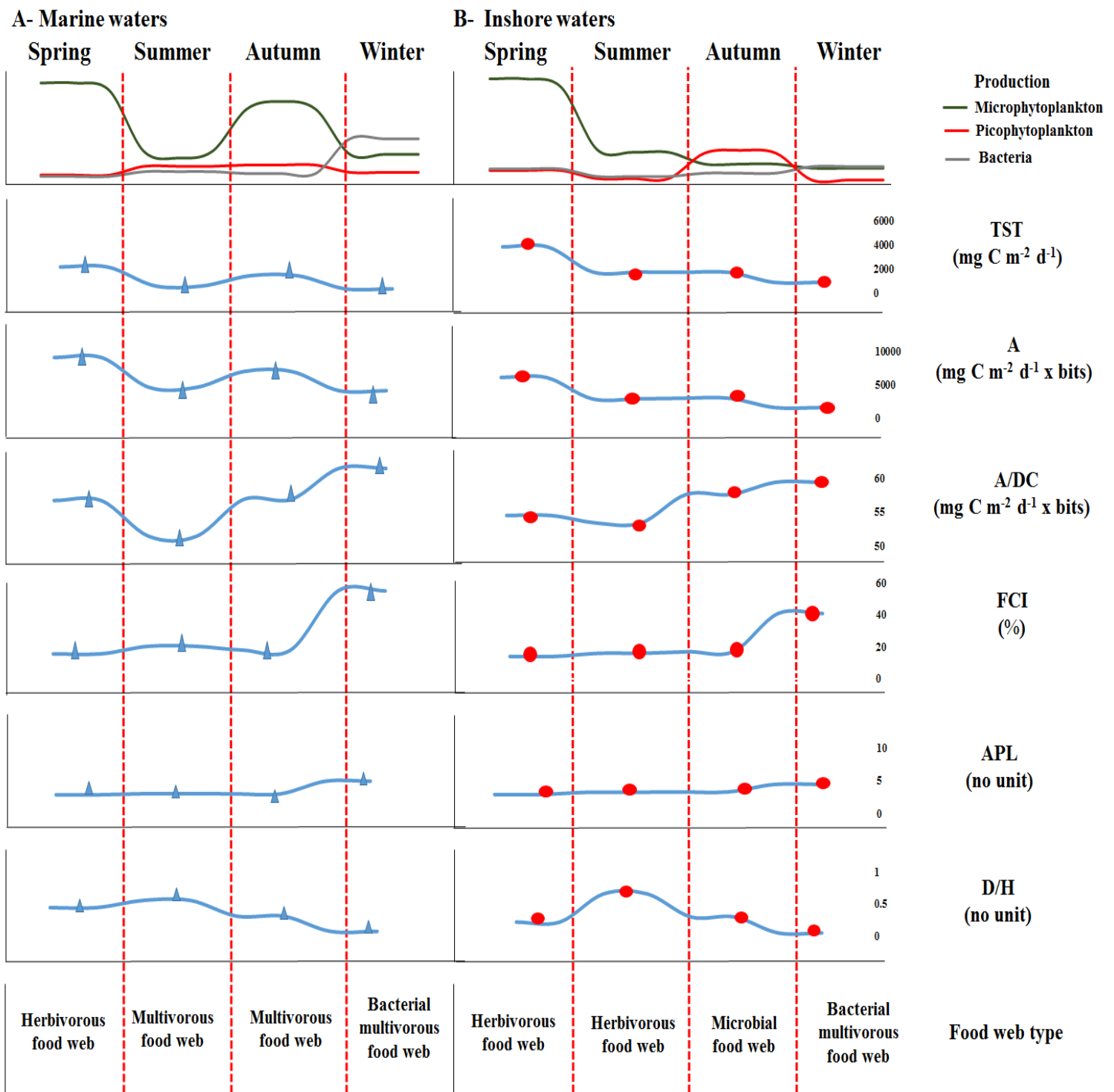


Figure 8

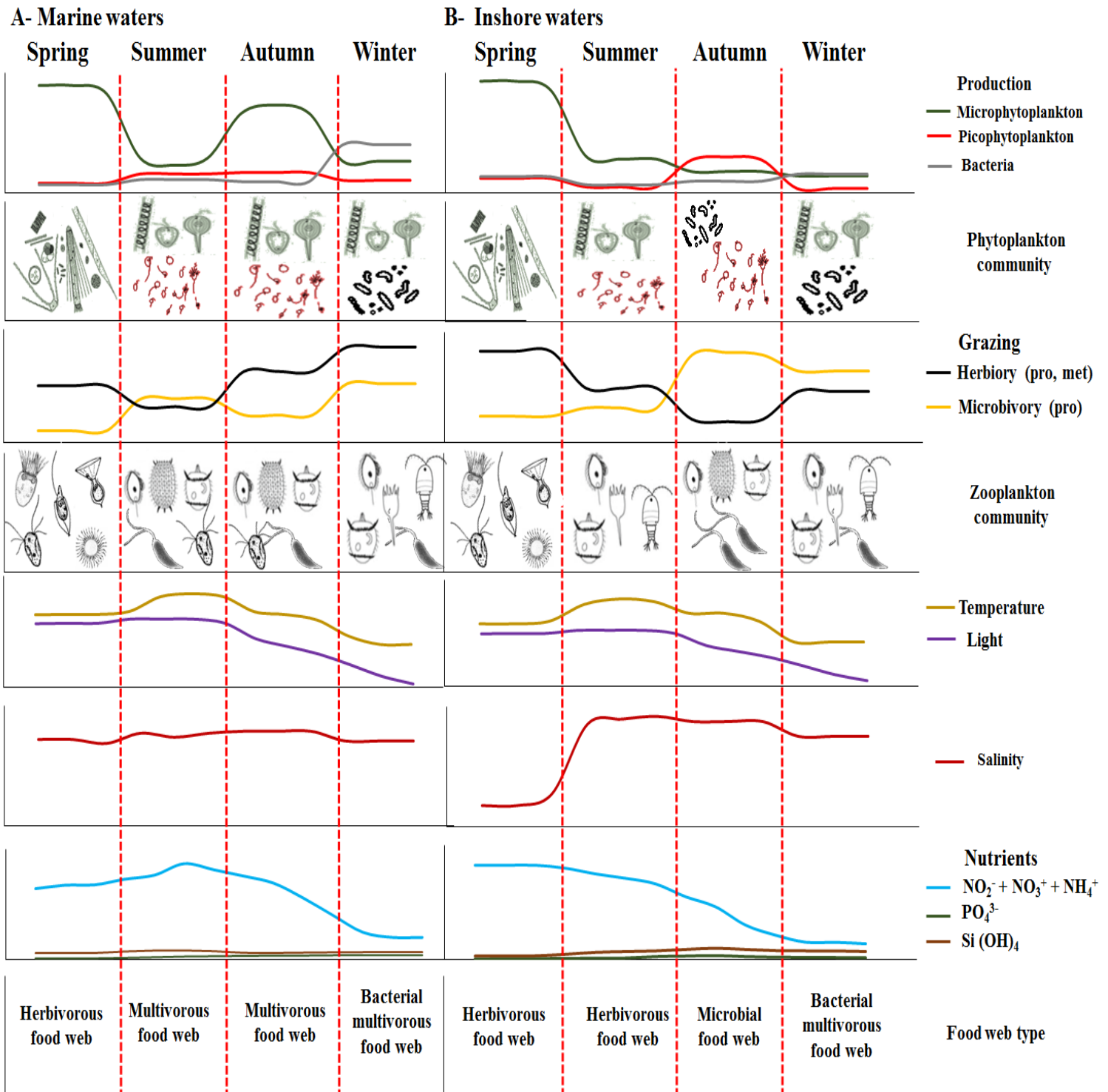


Figure 9

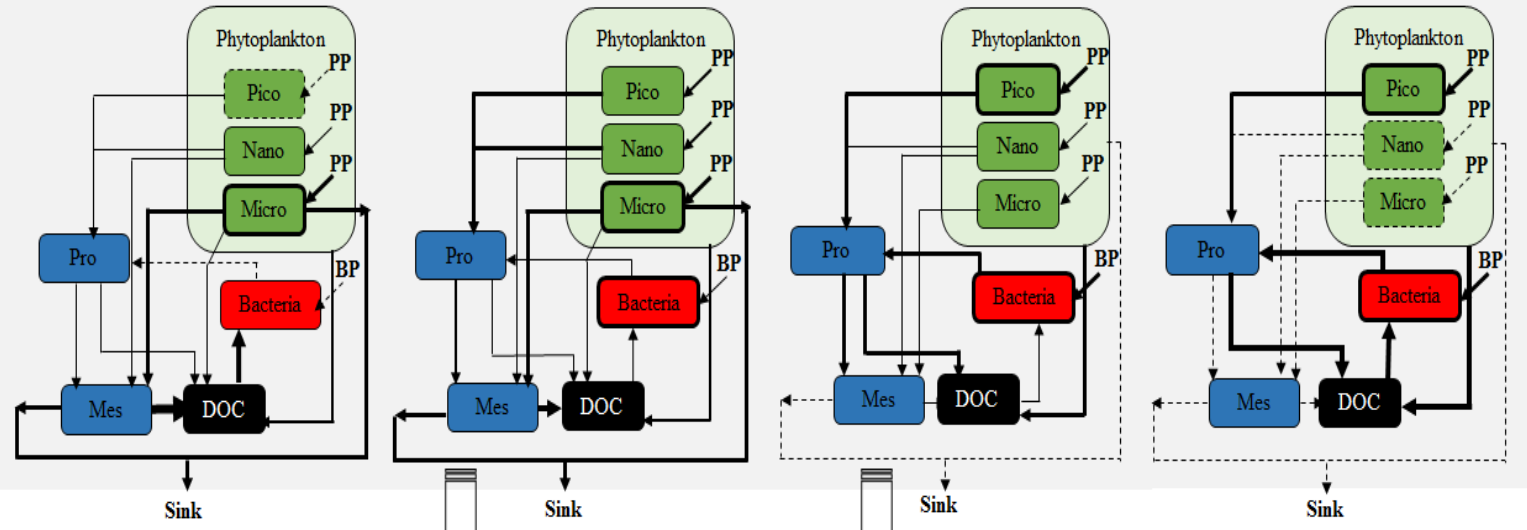
The marine planktonic food web continuum by Legendre and Rassoulzadegan (1995)

A- HERBIVOROUS FOOD WEB

B- MULTIVOROUS FOOD WEB

C- MICROBIAL FOOD WEB

D- MICROBIAL LOOP

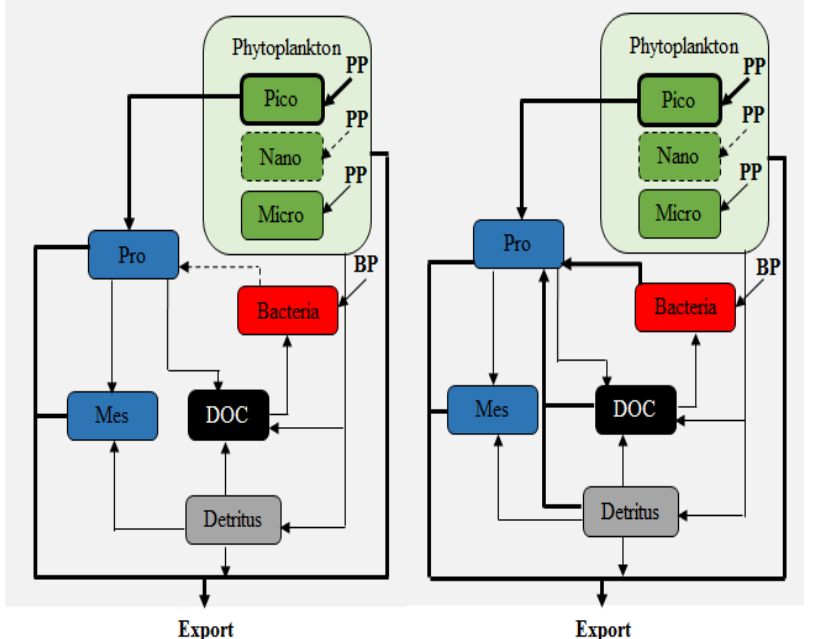
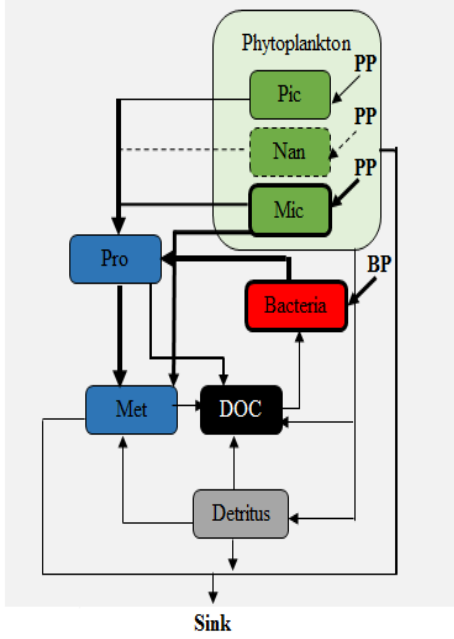


Present study

Sakka Hlaili et al. (2014)

G- BACTERIAL MULTIVOROUS FOOD WEB

E- PHYTO-MICROBIAL FOOD WEB F- POLY-MICROBIAL FOOD WEB



Pic = Picophytoplankton
 Nan = Nanophytoplankton
 Mic = Microphytoplankton

Pro = Protozooplankton
 Mes (Met) = Mesooplankton (metazooplankton)
 DOC = Dissolved organic carbon

PP = Gross primary production
 BP = Bacterial production

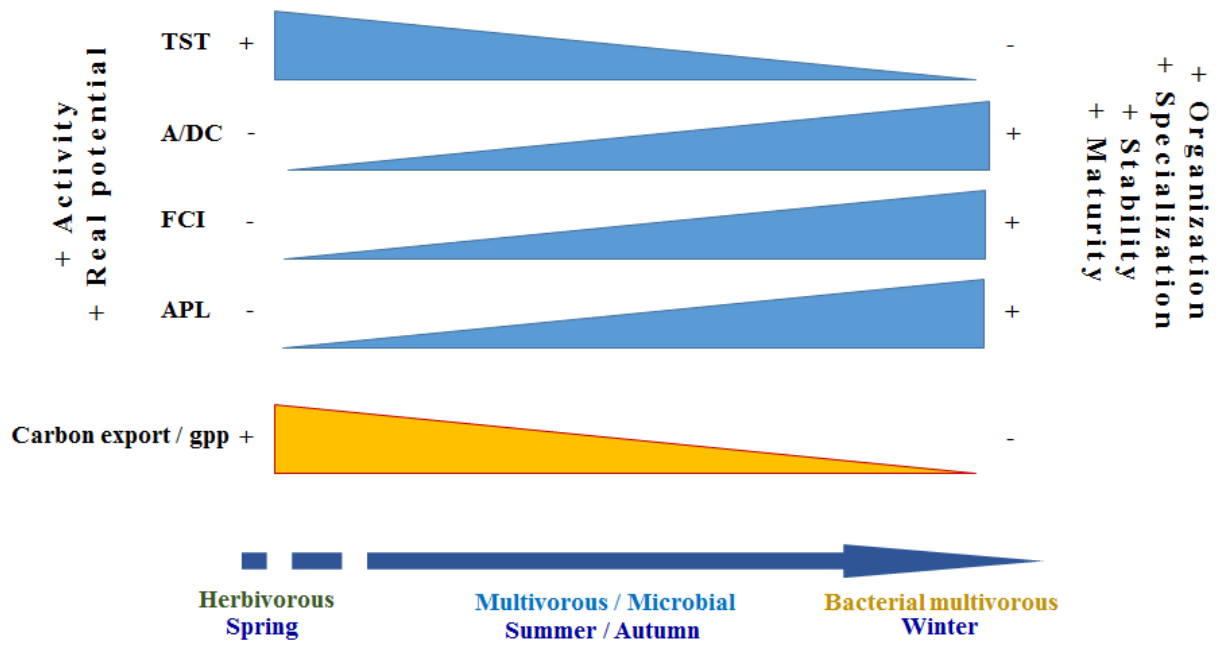
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Figure 10

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Figure 11