

## Supplementary material

### Historical dynamics of the demersal fish community in the East and South China Seas

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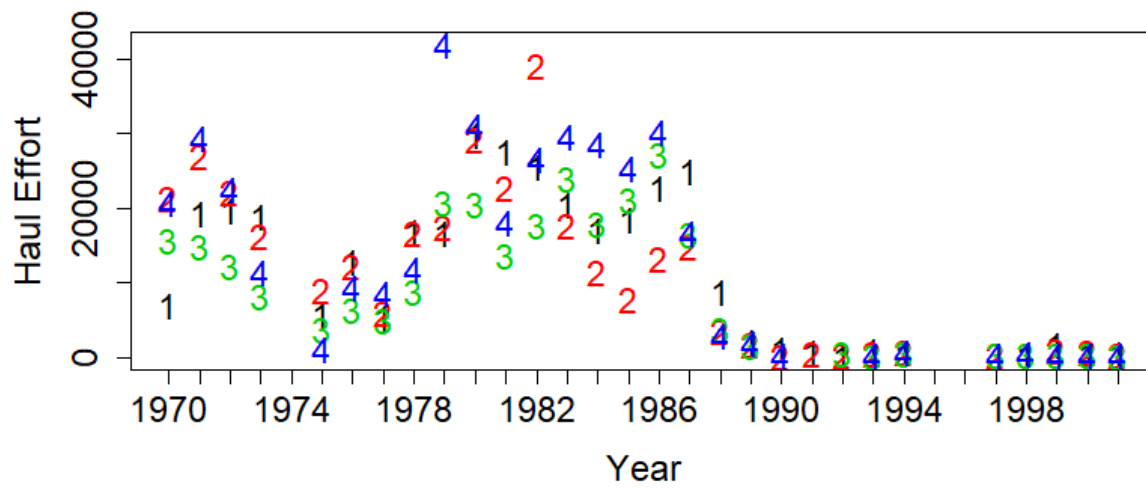
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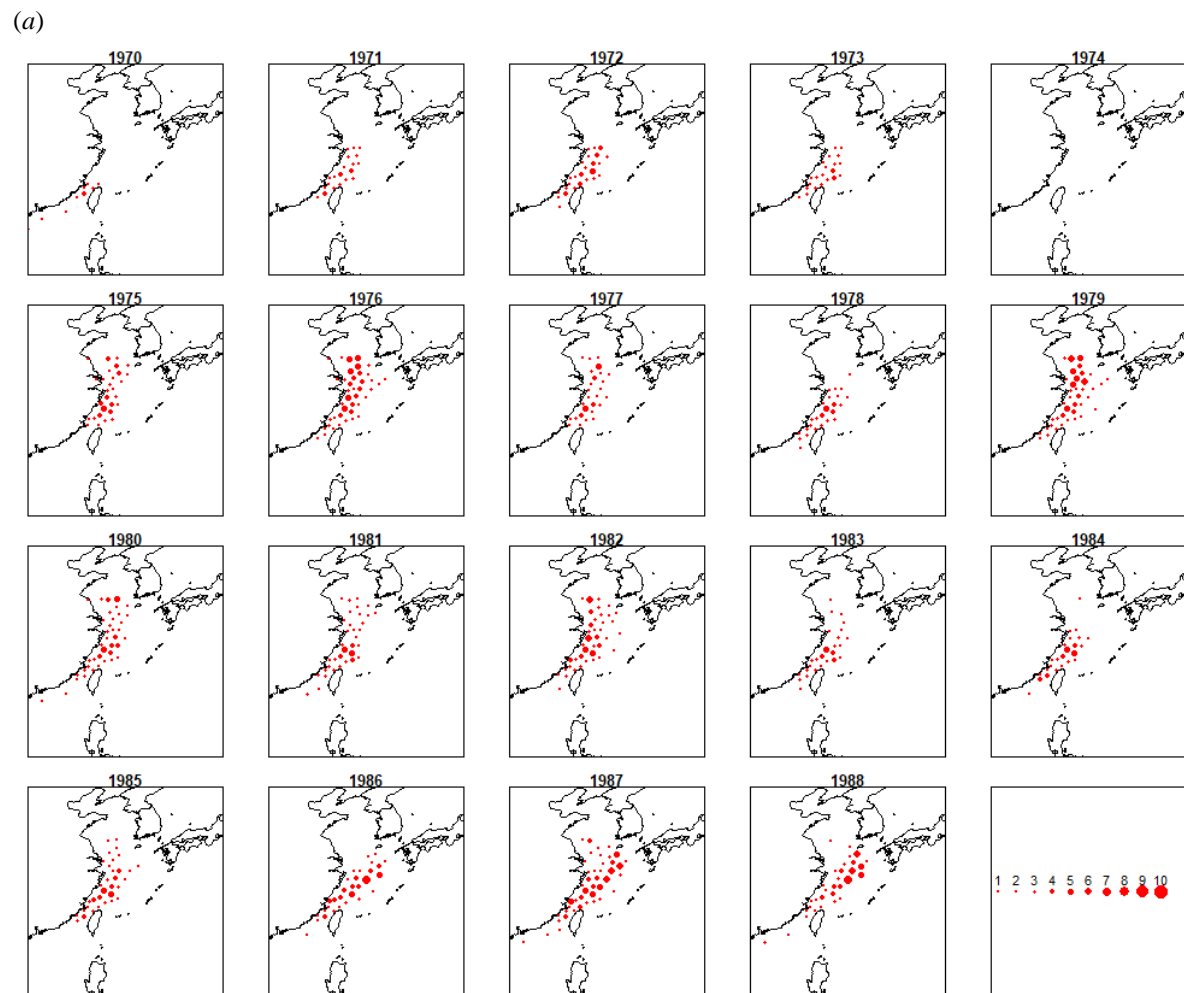
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**Fig. S1.** Changes in total effort from returned logbooks in each year across four seasons (1, winter; 2, spring; 3, summer; 4, autumn) from year 1970 to 2001.



**Fig. S2.** Number of hauls per grid per season (*a–d*) and per year (1970–1988). The circle size is proportional to the sample sizes associated with each grid. Note that no data in 1974 were included due to the lack of trawl location.

(b)

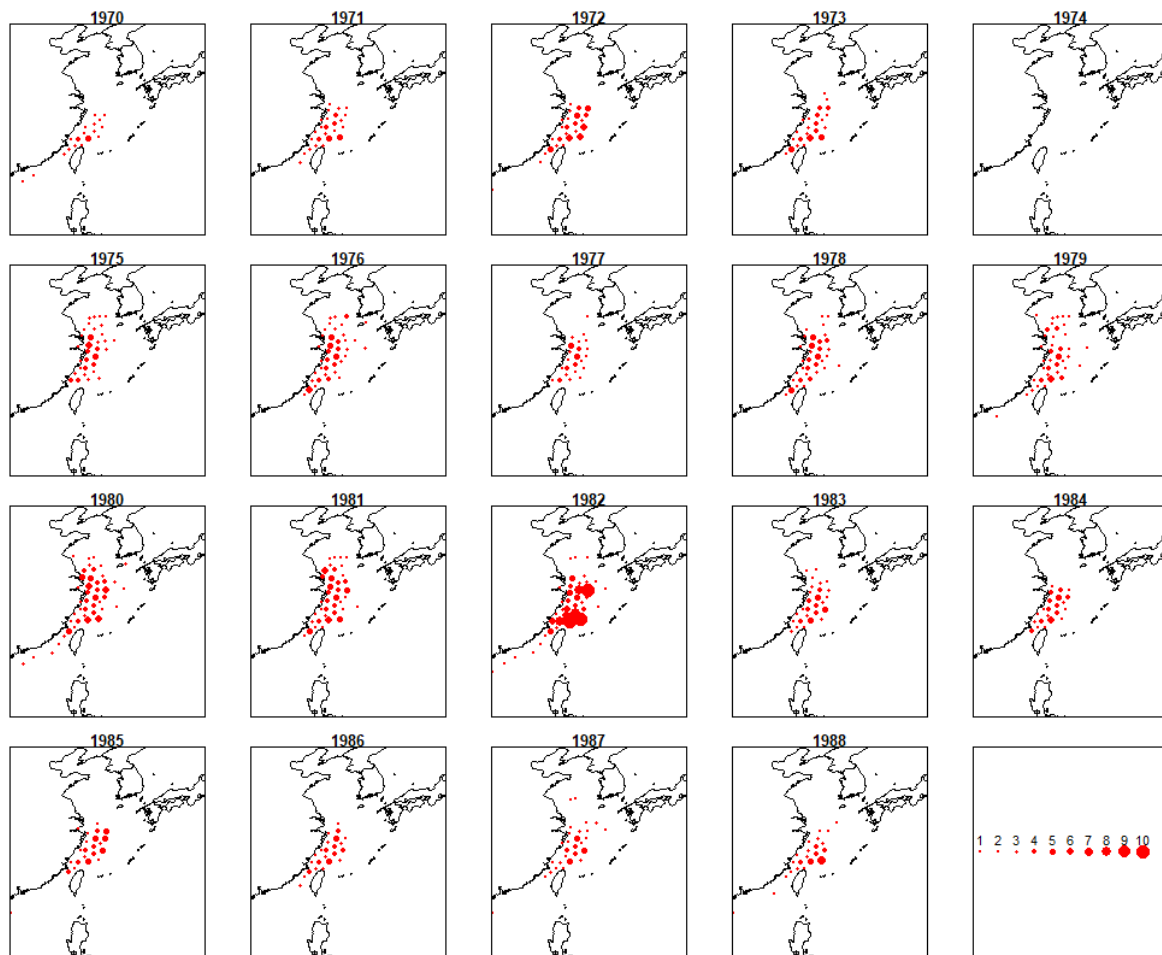


Fig. S2. (Cont.)

(c)

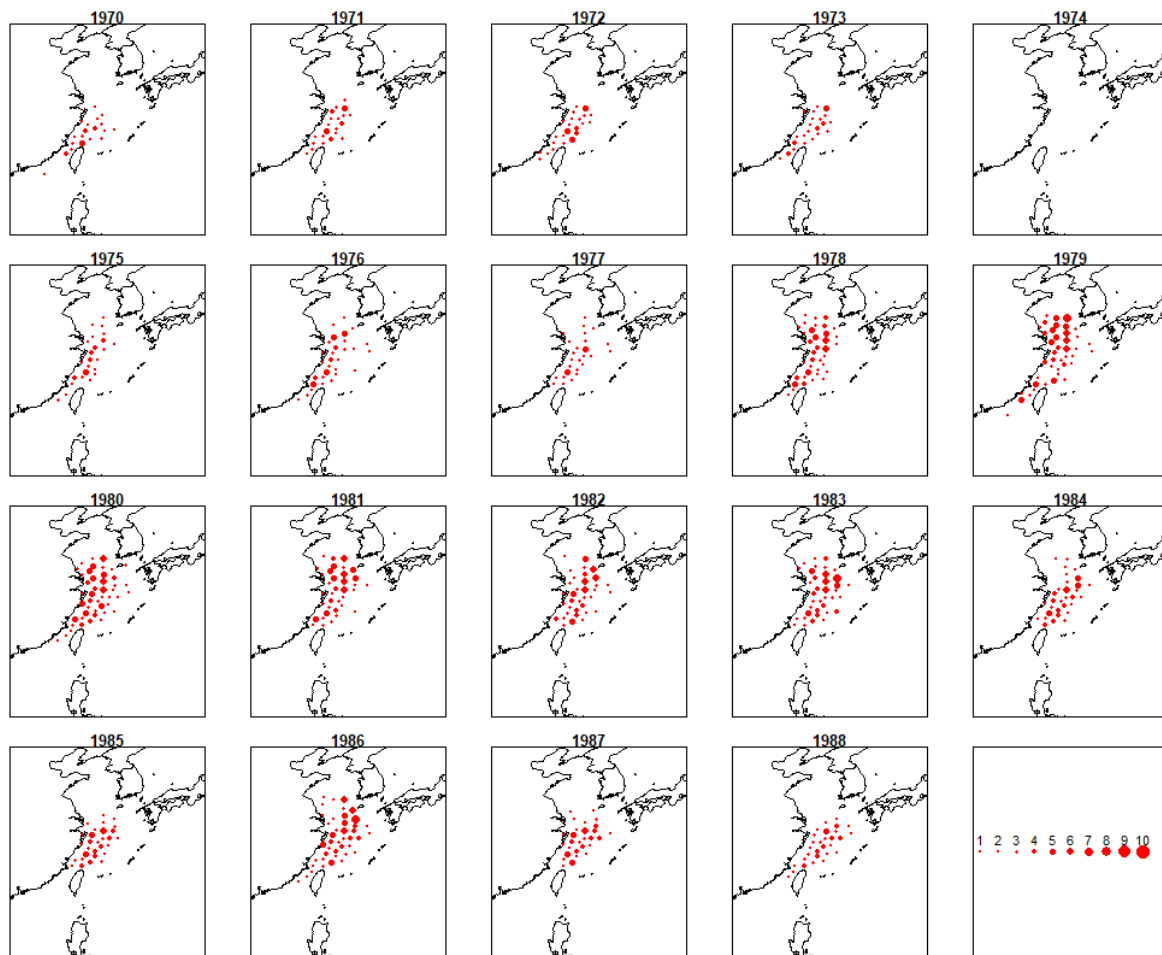


Fig. S2. (Cont.)

(d)

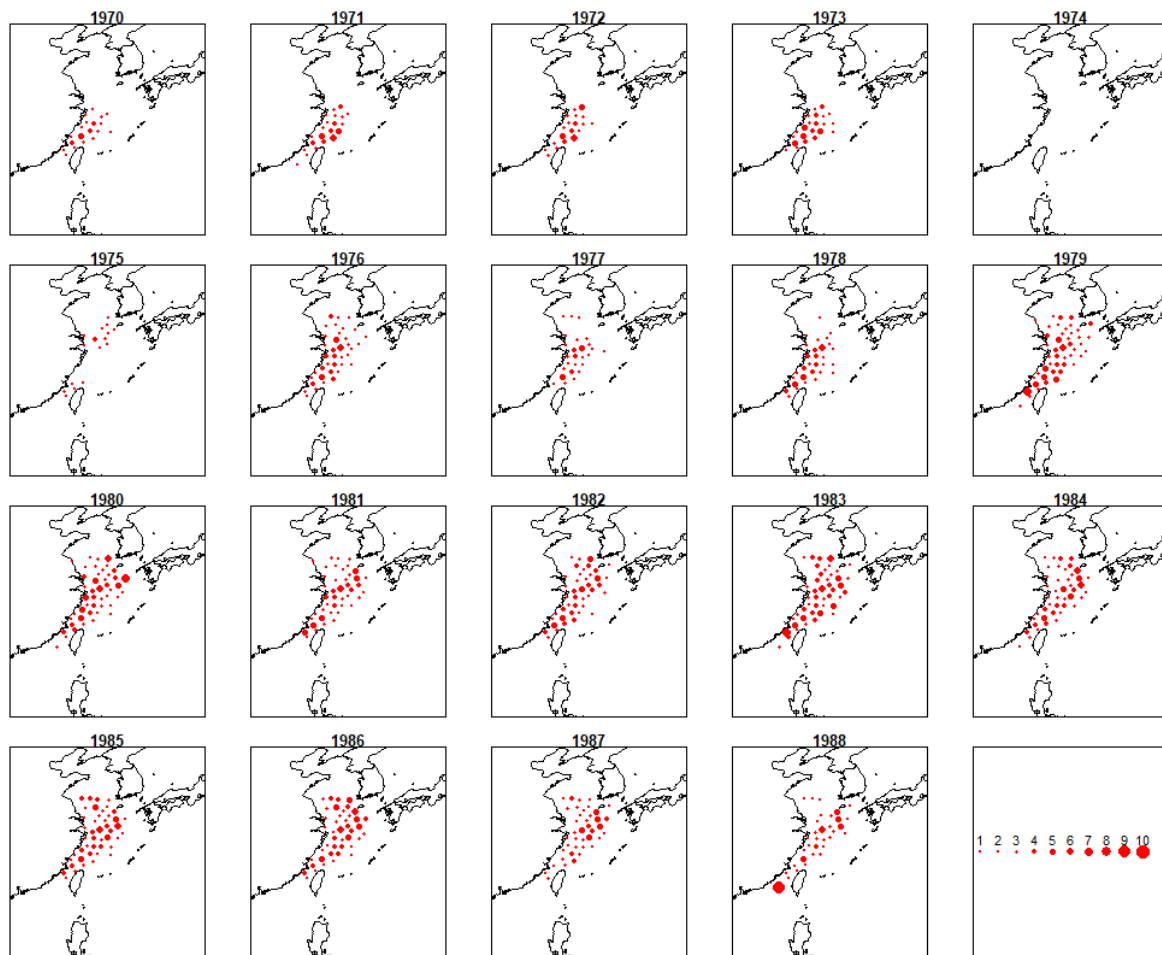
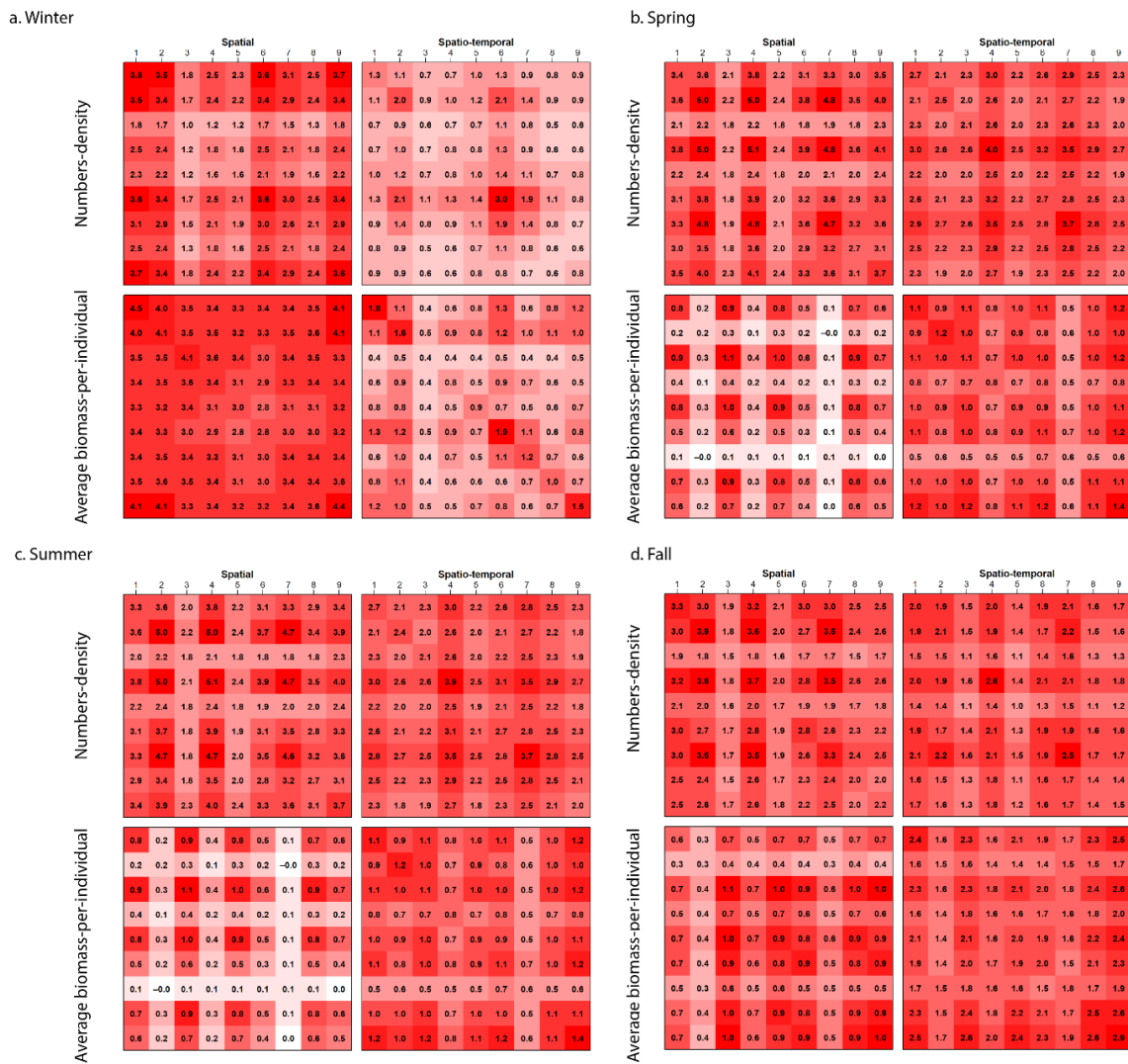


Fig. S2. (Cont.)



**Fig. S3.** Estimated covariation among species for each season for numbers-density (1st and 3rd rows) and average biomass-per-individual-per-individual (2nd and 4th rows) and either spatial variation (1st and 3rd columns) or spatiotemporal variation (2nd and 4th columns), in winter (*a*), spring (*b*), summer (*c*) or autumn (*d*).

**Table S1. The total variation accounted by the dominant factor for spatial and spatio-temporal components in numbers-density and average biomass-per-individual**

|                                | Spatial variation explained | Spatio-temporal variation explained |
|--------------------------------|-----------------------------|-------------------------------------|
| Numbers-density                | 90.7 to 97.2%               | 82.6 to 94.1%                       |
| Average biomass-per-individual | 88.1 to 93.6%               | 65.7 to 92.1%                       |