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2 **Supplementary Information for**

3 50 years of capacity-building in the search for new marine natural
4 products

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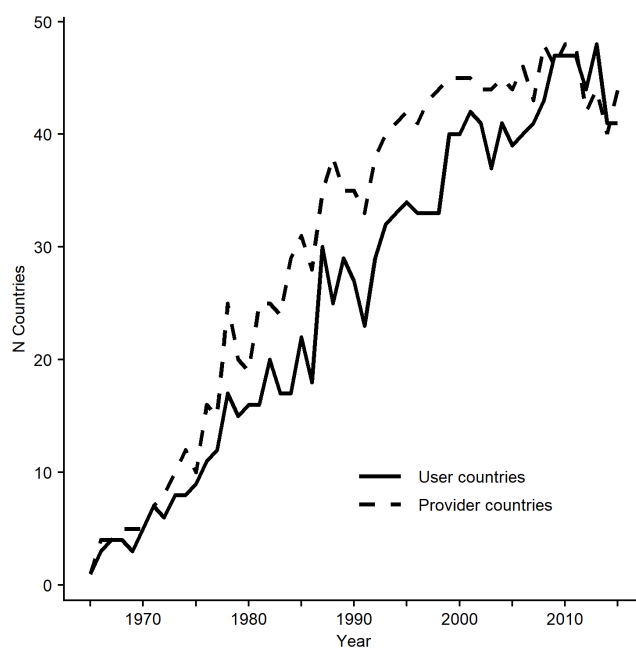
19 **This PDF file includes:**

20 Figures S1 to S6

21 Table S1

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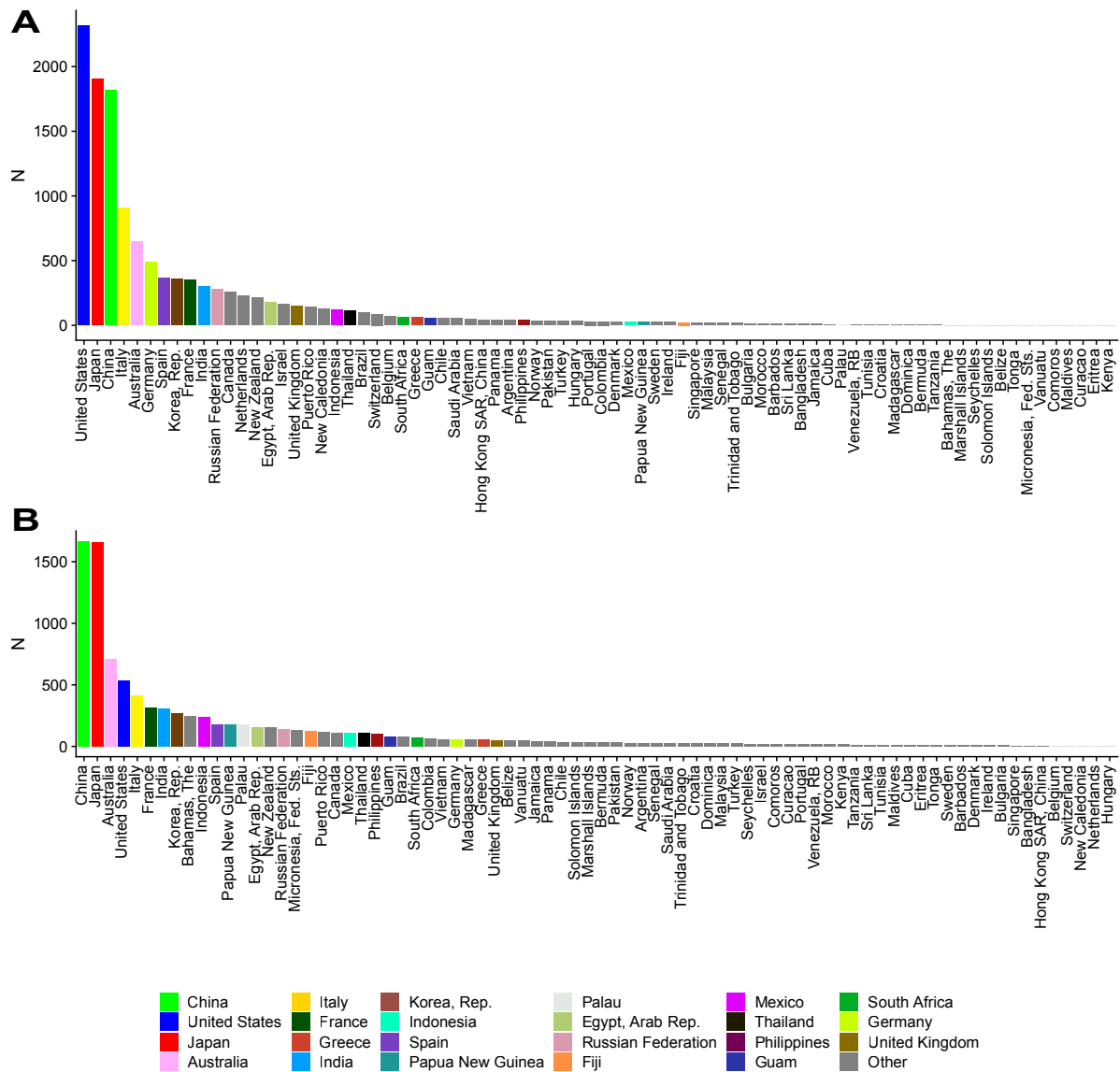
1 Figures



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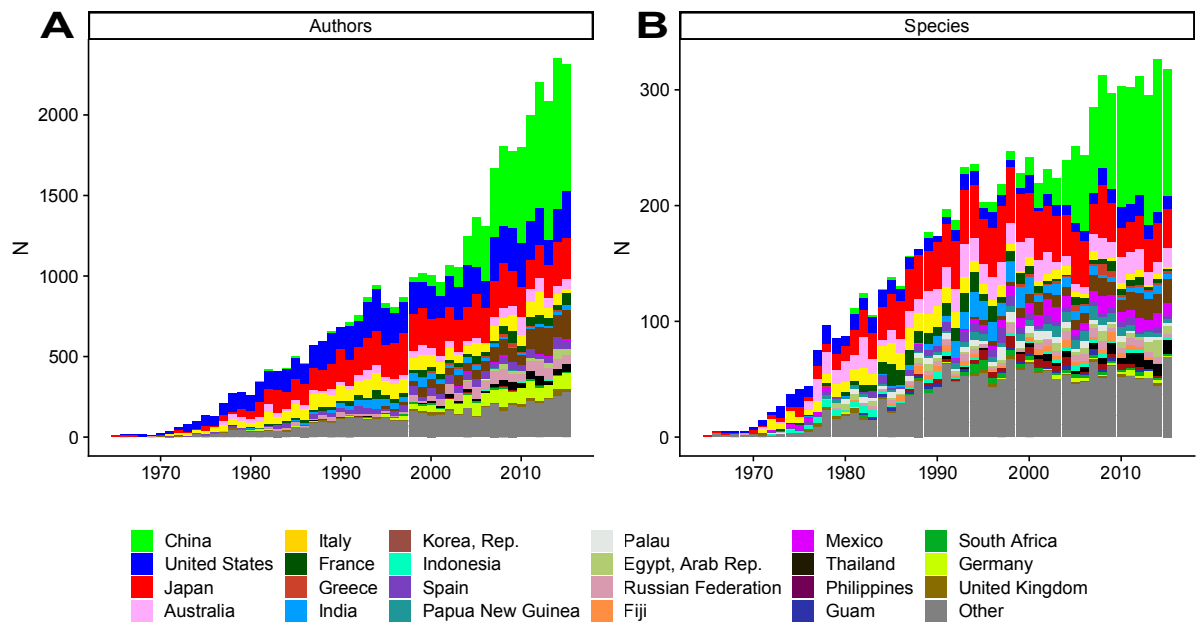
3 Figure S1. The number of countries in our dataset that participate in marine bioprospecting every year
4 between 1965 and 2015 as Users (country involved in the publication of a marine compound) or as
5 Providers (origin of the compound).

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Figure S2. User (A) and Provider (B) countries ranked by their total number (N) of publications. Based on these rankings we selected countries for consistent color coding throughout the study. The remaining 55 countries grouped as “Other” show only a very small number of publications or have a fragmented publication record, and are described in Fig. S4.

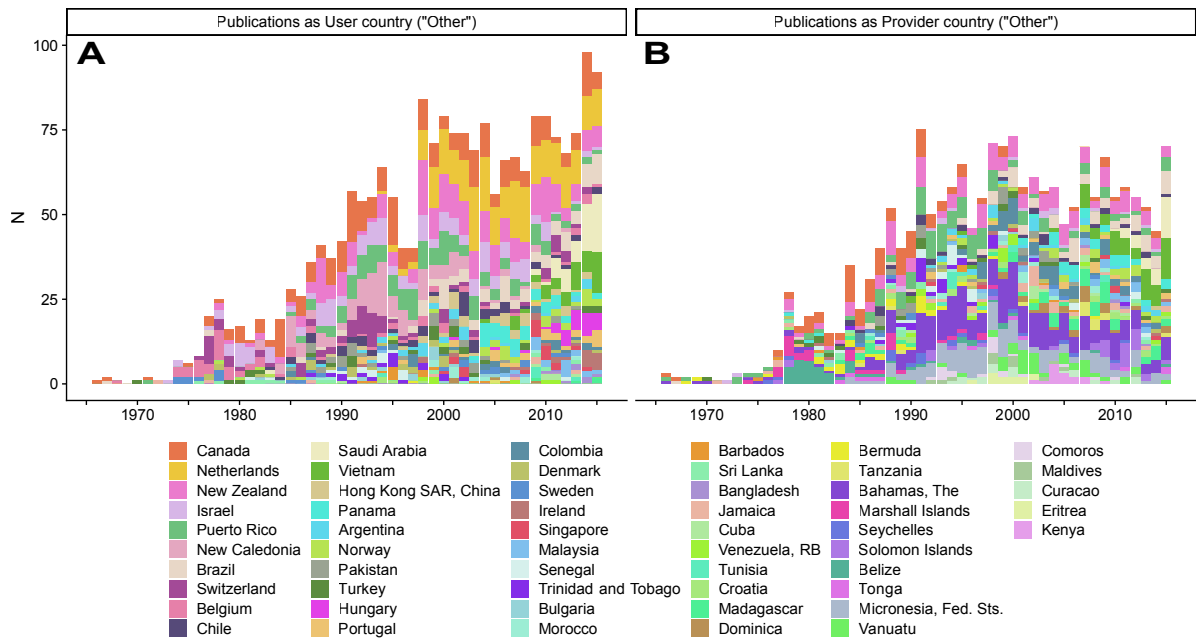


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2 Figure S3. Trends in the number of unique authors from User countries (A) and number of species

3 producing new marine natural products in the Provider countries (B).

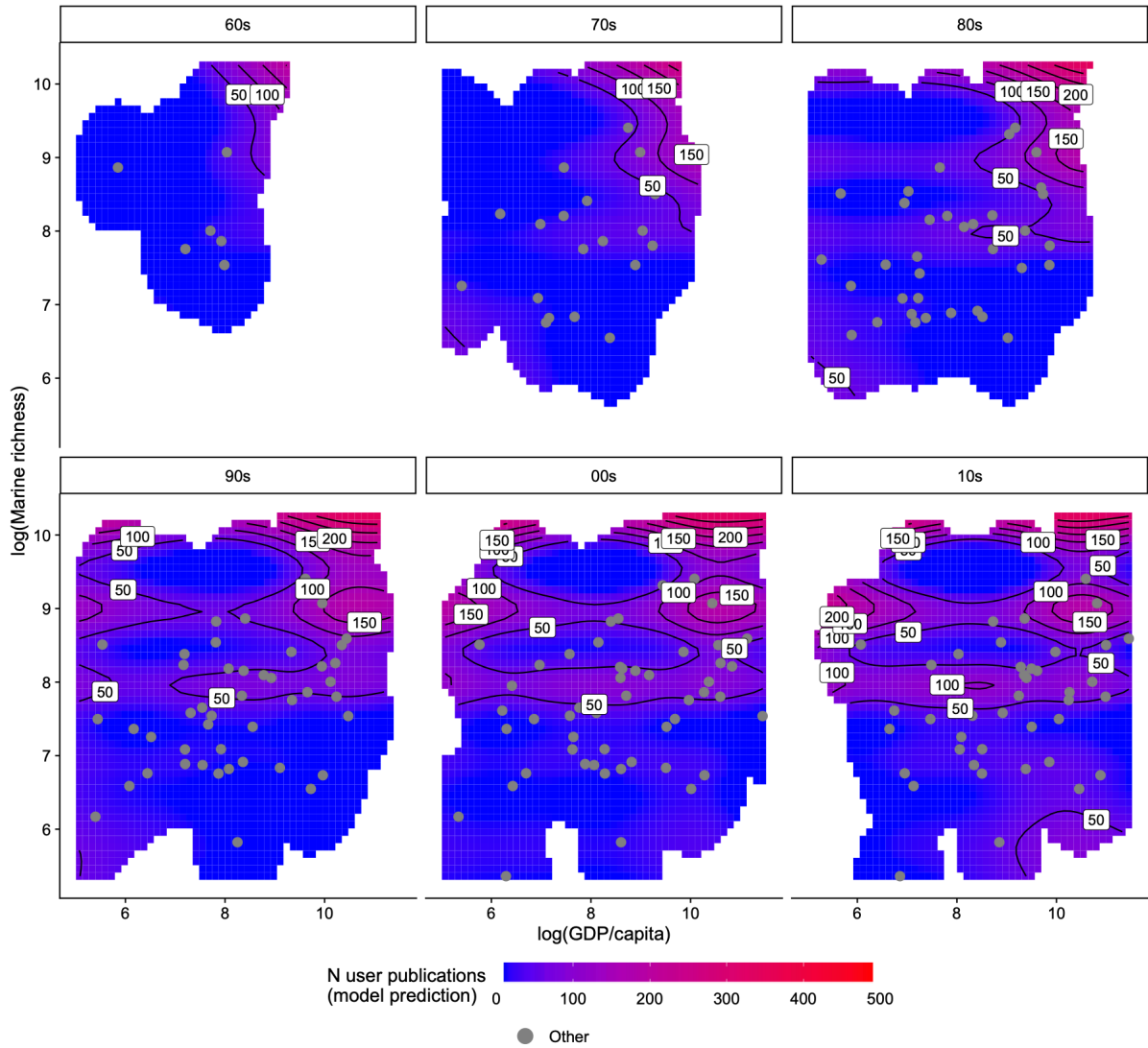
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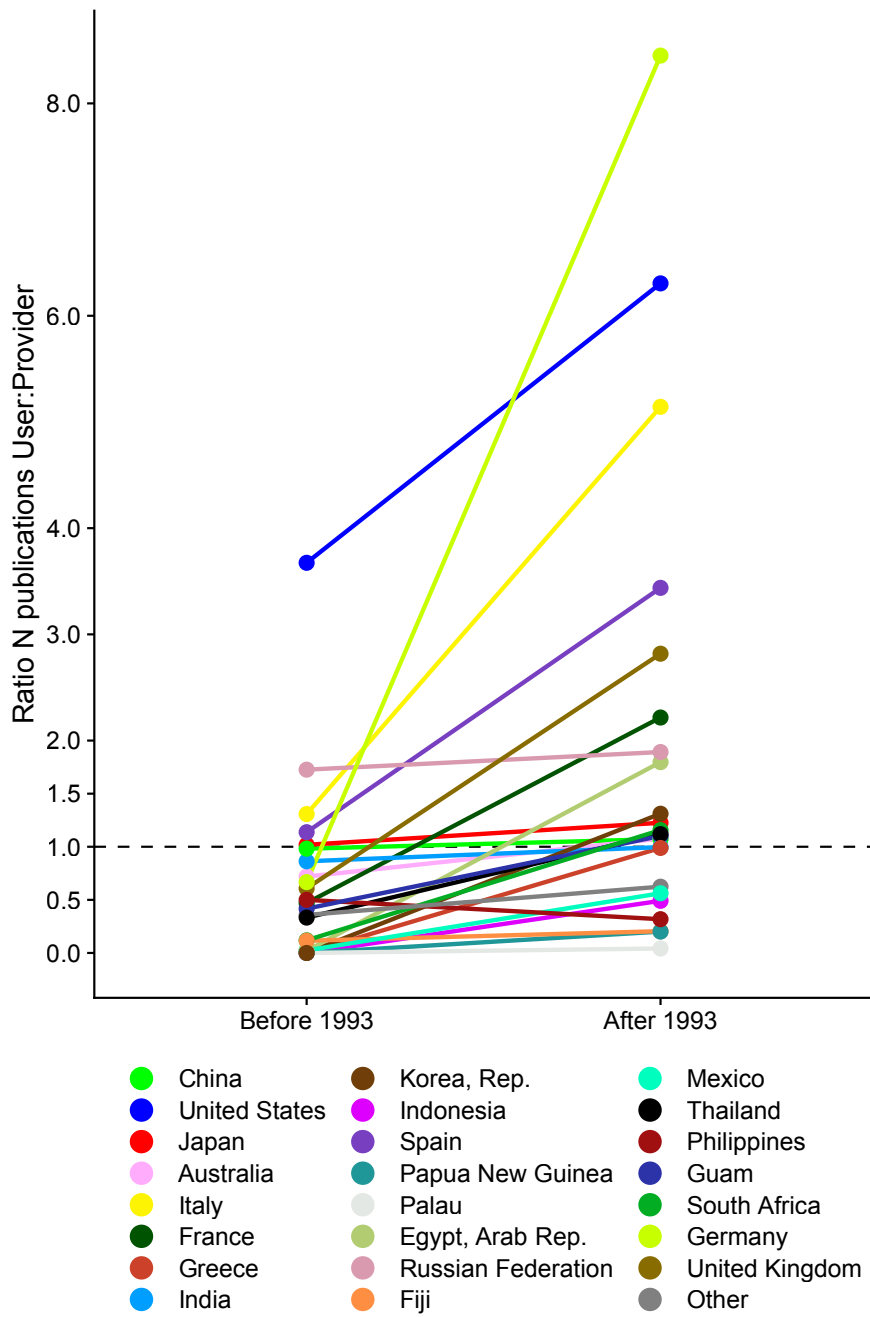
2 Figure S4. Publications by User (A) and Provider (B) countries grouped as "Other" in Figure 1. The
 3 color coding goes from top to bottom (and from left to right in the legend) in the same order for both
 4 panels. These countries show only a small number of publications (as little as one or zero per year) or
 5 have a fragmented publication record (several years without publications).

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Figure S5. The relationship between per capita GDP and marine biodiversity of Provider countries grouped as “Other” across the six decades. Points denote averages for log-transformed mean GDP per capita per decade (x-axis) and log-transformed marine richness data (y-axis), The colored surface are estimated values for the number of publications as function of GDP and richness and stem from a generalized linear additive model (GAM). The model shows a significant non-linear interactive effect of GDP and richness, which indicates that in the first half of the observed period Provider countries with high marine biodiversity exploited those resources only if the economic resources were given (i.e. along a GDP gradient). After the 1990s, this pattern is somewhat ameliorated so that emerging threshold countries are able to increase their scientific output and exploit their often high biodiversity (e.g. China, India, Indonesia, Mexico). The model has an adjusted R^2 of 0.421, so a high degree of uncertainty remains with this interpretation. For model details see Table S1.



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2 Figure S6. The ratio of publications as User and Provider countries before and after 1993 when the
 3 Convention on Biological Diversity was put into force. The dashed line shows the 1:1 ratio.

1 **Tables**

2 Table S1: Statistical results of a generalized additive model testing for main and interactive effects of
 3 economic capacity (GDP, per capita, logarithmized) and marine richness as Provider country (S,
 4 logarithmized) on the number of publications per decade. Results are reported for the linear (*Fixed*
 5 *effect*) and nonlinear (*Smooth term*) parts of the model that was run with thin plate regression spline
 6 and Generalized Cross-validation for knot selection. Significant (<0.05) results are marked in bold.

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Response variable	Fixed effect	Degrees of freedom		F	p value	
N publication as User	Log (GDP)	1		5.499	0.02	
	Log (S)	1		5.805	0.017	
	Decade	1		12.449	<0.001	
	Log (GDP) x Log (S)	1		6.735	0.010	
	Log (GDP) x Decade	1		1.657	0.199	
	Log (S) x Decade	1		6.27	0.013	
	Log (GDP) x Log (S) x Decade	1		4.363	0.038	
Response variable	Smooth term	Knots	Effective degrees of freedom	Reference degrees of freedom	F	p value
N publication as User	Log (GDP) (by Decade)	10	1.613	1.9	2.978	0.036
	Log (S) (by Decade)	10	8.463	8.739	2.397	0.007
	Log (GDP) x Log (S) (by Decade)	27	7.486	27	0.507	0.005

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