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Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our <u>Editorial Policies</u> and the <u>Editorial Policy Checklist</u>.

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For	all st	atistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.
n/a	Cor	nfirmed
	\boxtimes	The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement
\boxtimes		A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
\boxtimes		The statistical test(s) used AND whether they are one- or two-sided Only common tests should be described solely by name; describe more complex techniques in the Methods section.
	\boxtimes	A description of all covariates tested
	\boxtimes	A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
	\boxtimes	A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
\boxtimes		For null hypothesis testing, the test statistic (e.g. F , t , r) with confidence intervals, effect sizes, degrees of freedom and P value noted Give P values as exact values whenever suitable.
	\boxtimes	For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
	\boxtimes	For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
\boxtimes		Estimates of effect sizes (e.g. Cohen's d , Pearson's r), indicating how they were calculated
		Our web collection on <u>statistics for biologists</u> contains articles on many of the points above.

Software and code

Policy information about availability of computer code

Data collection

Data was directly downloaded from publicly accessible sites that are clearly linked to in the manuscript methods.

All analysis was completed using R version 4.3.1

tidyverse 2.0.0 rredlist 0.7.1 brms 2.20.4 tidybayes 3.0.6 ggpubr 0.6.0

viridis 0.6.4

Key packages used were:

All code is publically available from github with the link clearly given in the manuscript.

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio guidelines for submitting code & software for further information.

Data

Policy information about availability of data

All manuscripts must include a <u>data availability statement</u>. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our policy

All data used in this study is publicly accessible and referenced in the main manuscript, the processed data used in the final analyses is available from https://github.com/OMorton/CITES Quotas.

Research involving human participants, their data, or biological material

Policy information about studies with <u>human participants or human da</u>	ta. See also policy information about sex, gender (identity/presentation)
and sexual orientation and race, ethnicity and racism.	

Reporting on sex and gender	NA
Reporting on race, ethnicity, or other socially relevant groupings	NA
Population characteristics	NA
Recruitment	NA
Ethics oversight	NA

Note that full information on the approval of the study protocol must also be provided in the manuscript.

Field-specific reporting

Please select the one below that is the best fit for yo	ur research. If you are not sure	e, read the appropriate sections	before making your selection.

For a reference copy of the document with all sections, see <u>nature.com/documents/nr-reporting-summary-flat.pdf</u>

Behavioural & social sciences

Ecological, evolutionary & environmental sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description

Life sciences

This study analyzed the diversity of taxa and trade types covered by current international trade quotas. We then further assessed national compliance with trade quotas using reported trade data. We analyzed national trade volumes pre- and post-quota implementation to assess how the setting of a quota affected trade volumes.

Ecological, evolutionary & environmental sciences

Research sample

Records of all specified quotas for internationally traded CITES-listed species, access from https://speciesplus.net/. This was augmented with the international trade data taken from https://trade.cites.org/. The combined data set represents all international trade in listed species and their compliance with internationally set quotas between 1997 and 2021. The data is representative of all legal international trade in CITES listed species to or from Parties, not of all trade.

Sampling strategy

No sample size calculations were used. All available quota data was used.

Data collection

Data was not collected by the authors data was collected by the UNEP-WCMC and the Parties themselves. OM downloaded and processed the data in R.

Timing and spatial scale

The data was "collected" from the online repositories in Autumn 2023. We used the 2023 version of the trade data, which will be the most recent and up to data until at least summer 2024. We used the maximum data range that can be appropriately used, starting in 1997 which was when the first international trade quotas were established and ending in 2021 which is the most recent year traded data should be used due to delayed reporting by some Parties.

Data exclusions

In the methods we clearly detail the limited circumstances where analyses focused on a subset of quotas. Namely these include the analysis limited to only live quotas (e.g. not skins, leather products etc.) other quota types were excluded as they cannot be objectively quantified.

Reproducibility

This was not an experiment. However we did do an additional robustness analysis using the importer reported data (main text used

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Reproducibility	the exporter reported trade data). Due to differing reporter obligations these data sets are not expected to be identical, yet our results using either dataset lead to the same conclusions.
Randomization	NA
Blinding	NA
Did the study involve fiel	d work? Yes No
· · · · · · · · · · · · · · · · · · ·	or specific materials, systems and methods
	authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, evant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.
Materials & experime	ental systems Methods
n/a Involved in the study	
Antibodies	ChIP-seq
Eukaryotic cell lines	
Palaeontology and	
Animals and other	1
Clinical data	
Dual use research of	of concern
Plants	
Plants	
Seed stocks	NA
Novel plant genotypes	NA
Authentication	NA