

Supplementary materials

Table S1. List of the amphibians of Vietnam, based on the Amphibia Web

(<https://amphibiaweb.org/>) database (accessed on 19.01.2023)

Scientific Name	IUCN Red List Status	Family	Order	Biogeographic status
<i>Amolops chunganensis</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Amolops compotrix</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Amolops cremnobatus</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Amolops cucae</i>	Endangered (EN)	Ranidae	Anura	Endemic
<i>Amolops daorum</i>		Ranidae	Anura	Not endemic
<i>Amolops iriodes</i>	Data Deficient (DD)	Ranidae	Anura	Endemic
<i>Amolops minutus</i>	Endangered (EN)	Ranidae	Anura	Endemic
<i>Amolops ottorum</i>		Ranidae	Anura	Endemic
<i>Amolops ricketti</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Amolops shihaitaoi</i>		Ranidae	Anura	Not endemic
<i>Amolops spinapectoralis</i>	Least Concern (LC)	Ranidae	Anura	Endemic
<i>Amolops splendissimus</i>	Vulnerable (VU)	Ranidae	Anura	Not endemic
<i>Amolops viridimaculatus</i>	Near Threatened (NT)	Ranidae	Anura	Not endemic
<i>Amolops wenshanensis</i>	Data Deficient (DD)	Ranidae	Anura	Not endemic
<i>Bombina microdeladigitora</i>		Bombinatoridae	Anura	Not endemic
<i>Boulenophrys caobangensis</i>		Megophryidae	Anura	Endemic
<i>Boulenophrys fansipanensis</i>		Megophryidae	Anura	Endemic
<i>Boulenophrys frigida</i>	Endangered (EN) - Provisional	Megophryidae	Anura	Endemic
<i>Boulenophrys hoanglienensis</i>		Megophryidae	Anura	Endemic
<i>Boulenophrys jingdongensis</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Boulenophrys minor</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Boulenophrys omeimontis</i>	Near Threatened (NT)	Megophryidae	Anura	Not endemic
<i>Boulenophrys palpebralespinosa</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Boulenophrys rubrimeria</i>		Megophryidae	Anura	Not endemic
<i>Brachytarsophrys intermedia</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Bufo cryptotympanicus</i>	Near Threatened (NT)	Bufo	Anura	Not endemic

<i>Bufo luchunnicus</i>	Critically Endangered (CR)	Bufo	Anura	Not endemic
<i>Bufo pageoti</i>	Near Threatened (NT)	Bufo	Anura	Not endemic
<i>Chiromantis doriae</i>	Least Concern (LC)	Rhacophora	Anura	Not endemic
<i>Chiromantis nongkhorensis</i>	Least Concern (LC)	Rhacophora	Anura	Not endemic
<i>Duttaphrynus melanostictus</i>	Least Concern (LC)	Bufo	Anura	Not endemic
<i>Feihyla palpebralis</i>	Near Threatened (NT)	Rhacophora	Anura	Not endemic
<i>Feihyla vittata</i>	Least Concern (LC)	Rhacophora	Anura	Not endemic
<i>Fejervarya cancrivora</i>	Least Concern (LC)	Dicroglossa	Anura	Not endemic
<i>Fejervarya limnocharis</i>	Least Concern (LC)	Dicroglossa	Anura	Not endemic
<i>Glyphoglossus guttulatus</i>	Least Concern (LC)	Microhylis	Anura	Not endemic
<i>Glyphoglossus molossus</i>	Near Threatened (NT)	Microhylis	Anura	Not endemic
<i>Gracixalus gracilipes</i>	Least Concern (LC)	Rhacophora	Anura	Not endemic
<i>Gracixalus jinxiuensis</i>	Vulnerable (VU)	Rhacophora	Anura	Not endemic
<i>Gracixalus lumarius</i>	Endangered (EN)	Rhacophora	Anura	Endemic
<i>Gracixalus quangii</i>	Vulnerable (VU)	Rhacophora	Anura	Not endemic
<i>Gracixalus quyeti</i>	Endangered (EN)	Rhacophora	Anura	Endemic
<i>Gracixalus sapaensis</i>		Rhacophora	Anura	Endemic
<i>Gracixalus supercornutus</i>	Near Threatened (NT)	Rhacophora	Anura	Not endemic
<i>Gracixalus trieng</i>		Rhacophora	Anura	Endemic
<i>Gracixalus waza</i>		Rhacophora	Anura	Endemic
<i>Gracixalus yunnanensis</i>		Rhacophora	Anura	Not endemic
<i>Gracixalus ziegleri</i>		Rhacophora	Anura	Endemic
<i>Hoplobatrachus rugulosus</i>	Least Concern (LC)	Dicroglossa	Anura	Not endemic
<i>Humerana miopus</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Hydrophylax leptoglossa</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Hyla annectans</i>	Least Concern (LC)	Hyla	Anura	Not endemic
<i>Hyla chinensis</i>	Least Concern (LC)	Hyla	Anura	Not endemic
<i>Hyla simplex</i>	Least Concern (LC)	Hyla	Anura	Not endemic
<i>Hylarana attigua</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Hylarana erythraea</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Hylarana macrodactyla</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Hylarana montivaga</i>	Endangered (EN)	Rana	Anura	Not endemic
<i>Hylarana taipehensis</i>	Least Concern (LC)	Rana	Anura	Not endemic
<i>Ichthyophis catlocensis</i>		Ichthyophis	Gymnophiona	Endemic
<i>Ichthyophis chaloensis</i>		Ichthyophis	Gymnophiona	Endemic
<i>Ichthyophis nguyenorum</i>	Least Concern (LC)	Ichthyophis	Gymnophiona	Endemic
<i>Ingerophrynus galeatus</i>	Least Concern (LC)	Bufo	Anura	Not endemic

<i>Ingerophrynus macrotis</i>	Least Concern (LC)	Bufonidae	Anura	Not endemic
<i>Kalophrynus cryptophonus</i>	Endangered (EN)	Microhylidae	Anura	Endemic
<i>Kalophrynus honbaensis</i>	Vulnerable (VU)	Microhylidae	Anura	Endemic
<i>Kalophrynus interlineatus</i>	Least Concern (LC)	Microhylidae	Anura	Not endemic
<i>Kaloula indochinensis</i>		Microhylidae	Anura	Not endemic
<i>Kaloula macrocephala</i>	Data Deficient (DD)	Microhylidae	Anura	Endemic
<i>Kaloula pulchra</i>	Least Concern (LC)	Microhylidae	Anura	Not endemic
<i>Kurixalus ananjevae</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Kurixalus appendiculatus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Kurixalus baliogaster</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Kurixalus banaensis</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Kurixalus bisacculus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Kurixalus gracilloides</i>		Rhacophoridae	Anura	Endemic
<i>Kurixalus motokawai</i>		Rhacophoridae	Anura	Endemic
<i>Kurixalus odontotarsus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Kurixalus verrucosus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Kurixalus viridescens</i>		Rhacophoridae	Anura	Endemic
<i>Leptobrachella aerea</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Leptobrachella applebyi</i>	Endangered (EN)	Megophryidae	Anura	Endemic
<i>Leptobrachella ardens</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella bidoupensis</i>	Endangered (EN)	Megophryidae	Anura	Endemic
<i>Leptobrachella botsfordi</i>	Critically Endangered (CR)	Megophryidae	Anura	Endemic
<i>Leptobrachella bourreti</i>	Data Deficient (DD)	Megophryidae	Anura	Endemic
<i>Leptobrachella crocea</i>	Data Deficient (DD)	Megophryidae	Anura	Endemic
<i>Leptobrachella eos</i>		Megophryidae	Anura	Not endemic
<i>Leptobrachella firthi</i>	Endangered (EN)	Megophryidae	Anura	Endemic
<i>Leptobrachella graminicola</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella kalonensis</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella macrops</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella maculosa</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella nahangensis</i>	Data Deficient (DD)	Megophryidae	Anura	Endemic
<i>Leptobrachella namdongensis</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella nyx</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella pallida</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella petrops</i>	Vulnerable (VU) - Provisional	Megophryidae	Anura	Endemic
<i>Leptobrachella pluvialis</i>	Endangered (EN)	Megophryidae	Anura	Endemic
<i>Leptobrachella pyrrhops</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella rowleyae</i>		Megophryidae	Anura	Endemic
<i>Leptobrachella sungi</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic

Leptobrachella tadungensis		Megophryidae	Anura	Endemic
Leptobrachella tuberosa	Least Concern (LC)	Megophryidae	Anura	Endemic
Leptobrachella ventripunctata	Data Deficient (DD)	Megophryidae	Anura	Not endemic
Leptobrachium banae	Least Concern (LC)	Megophryidae	Anura	Not endemic
Leptobrachium chapaense	Least Concern (LC)	Megophryidae	Anura	Not endemic
Leptobrachium guangxiense		Megophryidae	Anura	Not endemic
Leptobrachium leucops	Vulnerable (VU)	Megophryidae	Anura	Endemic
Leptobrachium lunatum		Megophryidae	Anura	Not endemic
Leptobrachium mouhoti	Least Concern (LC)	Megophryidae	Anura	Not endemic
Leptobrachium ngoclinense	Endangered (EN)	Megophryidae	Anura	Endemic
Leptobrachium pullum	Least Concern (LC)	Megophryidae	Anura	Not endemic
Leptobrachium xanthospilum	Data Deficient (DD)	Megophryidae	Anura	Endemic
Limnonectes bannaensis		Dicroglossidae	Anura	Not endemic
Limnonectes blythii	Near Threatened (NT)	Dicroglossidae	Anura	Not endemic
Limnonectes dabanus	Least Concern (LC)	Dicroglossidae	Anura	Endemic
Limnonectes hascheanus	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
Limnonectes khammonensis	Data Deficient (DD)	Dicroglossidae	Anura	Not endemic
Limnonectes kiziriani		Dicroglossidae	Anura	Endemic
Limnonectes kohchangae	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
Limnonectes nguyenorum		Dicroglossidae	Anura	Endemic
Limnonectes phuyenensis		Dicroglossidae	Anura	Endemic
Limnonectes poilani	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
Limnonectes quangninhensis		Dicroglossidae	Anura	Endemic
Liuixalus calcarius		Rhacophoridae	Anura	Endemic
Liuixalus catbaensis		Rhacophoridae	Anura	Endemic
Microhyla annamensis	Vulnerable (VU)	Microhylidae	Anura	Not endemic
Microhyla arboricola	Vulnerable (VU)	Microhylidae	Anura	Endemic
Microhyla aurantiventris		Microhylidae	Anura	Endemic
Microhyla berdmorei	Least Concern (LC)	Microhylidae	Anura	Not endemic
Microhyla butleri	Least Concern (LC)	Microhylidae	Anura	Not endemic
Microhyla daklakensis		Microhylidae	Anura	Endemic
Microhyla darevskii		Microhylidae	Anura	Endemic
Microhyla fissipes	Least Concern (LC)	Microhylidae	Anura	Not endemic
Microhyla heymonsi	Least Concern (LC)	Microhylidae	Anura	Not endemic
Microhyla hmongorum		Microhylidae	Anura	Not endemic
Microhyla hongiaoensis		Microhylidae	Anura	Endemic
Microhyla marmorata	Least Concern (LC)	Microhylidae	Anura	Not endemic
Microhyla minuta		Microhylidae	Anura	Endemic
Microhyla nanapollexa	Data Deficient (DD)	Microhylidae	Anura	Endemic

<i>Microhyla neglecta</i>		Microhylidae	Anura	Endemic
<i>Microhyla ninhthuanensis</i>		Microhylidae	Anura	Endemic
<i>Microhyla picta</i>	Data Deficient (DD)	Microhylidae	Anura	Endemic
<i>Microhyla pineticola</i>	Vulnerable (VU)	Microhylidae	Anura	Endemic
<i>Microhyla pulchella</i>	Endangered (EN)	Microhylidae	Anura	Endemic
<i>Microhyla pulchra</i>	Least Concern (LC)	Microhylidae	Anura	Not endemic
<i>Microhyla xodangorum</i>		Microhylidae	Anura	Endemic
<i>Micryletta erythropoda</i>	Data Deficient (DD)	Microhylidae	Anura	Endemic
<i>Micryletta inornata</i>	Least Concern (LC)	Microhylidae	Anura	Not endemic
<i>Micryletta melanops</i>		Microhylidae	Anura	Endemic
<i>Micryletta nigromaculata</i>		Microhylidae	Anura	Endemic
<i>Nanorana aenea</i>	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
<i>Nanorana yunnanensis</i>	Endangered (EN)	Dicroglossidae	Anura	Not endemic
<i>Nidirana chapaensis</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Nidirana lini</i>	Data Deficient (DD)	Ranidae	Anura	Not endemic
<i>Nyctixalus pictus</i>	Near Threatened (NT)	Rhacophoridae	Anura	Not endemic
<i>Occidozyga lima</i>	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
<i>Odorrana absita</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana andersonii</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana bacboensis</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana banaorum</i>	Least Concern (LC)	Ranidae	Anura	Endemic
<i>Odorrana chapaensis</i>	Near Threatened (NT)	Ranidae	Anura	Not endemic
<i>Odorrana chloronota</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana geminata</i>	Vulnerable (VU)	Ranidae	Anura	Not endemic
<i>Odorrana gigatympa</i>	Data Deficient (DD)	Ranidae	Anura	Endemic
<i>Odorrana grahami</i>	Near Threatened (NT)	Ranidae	Anura	Not endemic
<i>Odorrana hmongorum</i>		Ranidae	Anura	Endemic
<i>Odorrana khalam</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana lipuensis</i>		Ranidae	Anura	Not endemic
<i>Odorrana morafkai</i>	Least Concern (LC)	Ranidae	Anura	Endemic
<i>Odorrana mutschmanni</i>		Ranidae	Anura	Endemic
<i>Odorrana nasica</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana orba</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Odorrana trankieni</i>	Data Deficient (DD)	Ranidae	Anura	Endemic
<i>Odorrana yentuensis</i>	Endangered (EN)	Ranidae	Anura	Endemic
<i>Ophryophryne elfina</i>		Megophryidae	Anura	Endemic
<i>Ophryophryne gerti</i>	Data Deficient (DD)	Megophryidae	Anura	Not endemic
<i>Ophryophryne hansii</i>	Data Deficient (DD)	Megophryidae	Anura	Not endemic
<i>Ophryophryne kouii</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Ophryophryne microstoma</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Oreolalax sterlingae</i>	Critically Endangered (CR)	Megophryidae	Anura	Endemic

<i>Papurana milleti</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Paramesotriton deloustali</i>	Least Concern (LC)	Salamandridae	Caudata	Endemic
<i>Paramesotriton guangxiensis</i>	Endangered (EN)	Salamandridae	Caudata	Not endemic
<i>Pelophylax lateralis</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Philautus abditus</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Philautus catbaensis</i>		Rhacophoridae	Anura	Endemic
<i>Philautus maosonensis</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Phrynoglossus martensii</i>	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
<i>Phrynoidis asper</i>	Least Concern (LC)	Bufoidea	Anura	Not endemic
<i>Polypedates colletti</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Polypedates leucomystax</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Polypedates megacephalus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Polypedates mutus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Quasipaa acanthophora</i>	Vulnerable (VU)	Dicroglossidae	Anura	Endemic
<i>Quasipaa delacouri</i>	Least Concern (LC)	Dicroglossidae	Anura	Not endemic
<i>Quasipaa spinosa</i>	Vulnerable (VU)	Dicroglossidae	Anura	Not endemic
<i>Quasipaa taoi</i>		Dicroglossidae	Anura	Not endemic
<i>Quasipaa verrucospinosa</i>	Near Threatened (NT)	Dicroglossidae	Anura	Not endemic
<i>Rana johnsi</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Raorchestes gryllus</i>	Vulnerable (VU)	Rhacophoridae	Anura	Endemic
<i>Raorchestes parvulus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus annamensis</i>	Least Concern (LC)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus bipunctatus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus calcaneus</i>	Endangered (EN)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus exechopygus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus helenae</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus hoabinhensis</i>		Rhacophoridae	Anura	Endemic
<i>Rhacophorus hoanglienensis</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus kio</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus larissae</i>		Rhacophoridae	Anura	Endemic
<i>Rhacophorus marmoridorsum</i>	Vulnerable (VU)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus orlovi</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus rhodopus</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Rhacophorus robertingeri</i>	Least Concern (LC)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus vampyrus</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Rhacophorus vanbanicus</i>		Rhacophoridae	Anura	Endemic
<i>Rhacophorus viridimaculatus</i>		Rhacophoridae	Anura	Endemic
<i>Sylvirana annamitica</i>		Ranidae	Anura	Not endemic
<i>Sylvirana guentheri</i>	Least Concern (LC)	Ranidae	Anura	Not endemic

<i>Sylvirana maosonensis</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Sylvirana montosa</i>		Ranidae	Anura	Not endemic
<i>Sylvirana nigrovittata</i>	Least Concern (LC)	Ranidae	Anura	Not endemic
<i>Theloderma annae</i>		Rhacophoridae	Anura	Endemic
<i>Theloderma asperum</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Theloderma auratum</i>		Rhacophoridae	Anura	Endemic
<i>Theloderma bicolor</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Theloderma corticale</i>	Least Concern (LC)	Rhacophoridae	Anura	Endemic
<i>Theloderma gordonii</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Theloderma hekouense</i>		Rhacophoridae	Anura	Not endemic
<i>Theloderma khoii</i>		Rhacophoridae	Anura	Endemic
<i>Theloderma kwangsiense</i>	Data Deficient (DD)	Rhacophoridae	Anura	Not endemic
<i>Theloderma laeve</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Theloderma lateriticum</i>	Least Concern (LC)	Rhacophoridae	Anura	Endemic
<i>Theloderma licin</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Theloderma nebulosum</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Theloderma palliatum</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Theloderma petilum</i>	Vulnerable (VU)	Rhacophoridae	Anura	Not endemic
<i>Theloderma rhododiscus</i>	Near Threatened (NT)	Rhacophoridae	Anura	Not endemic
<i>Theloderma ryabovi</i>	Endangered (EN)	Rhacophoridae	Anura	Endemic
<i>Theloderma stellatum</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Theloderma truongsongense</i>	Data Deficient (DD)	Rhacophoridae	Anura	Endemic
<i>Theloderma vietnamense</i>	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
<i>Tylototriton anguliceps</i>	Least Concern (LC)	Salamandridae	Caudata	Not endemic
<i>Tylototriton asperrimus</i>	Near Threatened (NT)	Salamandridae	Caudata	Not endemic
<i>Tylototriton pasmansi</i>		Salamandridae	Caudata	Endemic
<i>Tylototriton sparreboomi</i>		Salamandridae	Caudata	Endemic
<i>Tylototriton thaiorum</i>		Salamandridae	Caudata	Endemic
<i>Tylototriton verrucosus</i>	Least Concern (LC)	Salamandridae	Caudata	Not endemic
<i>Tylototriton vietnamensis</i>	Endangered (EN)	Salamandridae	Caudata	Endemic
<i>Tylototriton zieglerei</i>	Vulnerable (VU)	Salamandridae	Caudata	Endemic
<i>Vietnamophryne cuongi</i>	Endangered (EN) - Provisional	Microhylidae	Anura	Endemic
<i>Vietnamophryne inexpectata</i>		Microhylidae	Anura	Endemic
<i>Vietnamophryne occidentalis</i>	Data Deficient (DD) - Provisional	Microhylidae	Anura	Endemic
<i>Vietnamophryne orlovi</i>		Microhylidae	Anura	Endemic
<i>Vietnamophryne vuquangensis</i>		Microhylidae	Anura	Endemic
<i>Xenophrys longipes</i>	Near Threatened (NT)	Megophryidae	Anura	Not endemic
<i>Xenophrys major</i>	Least Concern (LC)	Megophryidae	Anura	Not endemic
<i>Xenophrys pachyproctus</i>	Data Deficient (DD)	Megophryidae	Anura	Not endemic

Xenophrys parva	Least Concern (LC)	Megophryidae	Anura	Not endemic
Xenophrys truongsonensis		Megophryidae	Anura	Endemic
Zhangixalus dennysi	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
Zhangixalus dorsovireidis	Data Deficient (DD)	Rhacophoridae	Anura	Not endemic
Zhangixalus duboisi	Data Deficient (DD)	Rhacophoridae	Anura	Not endemic
Zhangixalus dugritei	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
Zhangixalus feae	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
Zhangixalus franki		Rhacophoridae	Anura	Endemic
Zhangixalus hungfuensis	Data Deficient (DD)	Rhacophoridae	Anura	Not endemic
Zhangixalus jodiae		Rhacophoridae	Anura	Endemic
Zhangixalus nigropunctatus	Near Threatened (NT)	Rhacophoridae	Anura	Not endemic
Zhangixalus omeimontis	Least Concern (LC)	Rhacophoridae	Anura	Not endemic
Zhangixalus puerensis	Data Deficient (DD)	Rhacophoridae	Anura	Not endemic
Zhangixalus smaragdinus	Near Threatened (NT)	Rhacophoridae	Anura	Not endemic

Table S2. Endemic species of amphibians of Vietnam and comparison with two other countries from South-East Asia, Laos, and Cambodia. For each species, the IUCN (2018) redlist status is indicated. The species shared by the three countries are in bold. Data from the IUCN Red List database of threatened species (<https://www.iucnredlist.org/>; accessed on 22 January 2023).

IUCN	Vietnam	Laos	Cambodia
CR	<i>Bufo luchunnicus</i>		
	<i>Leptobranchella botsfordi</i>		
	<i>Leptobranchella rowleyae</i>		
			<i>Megophrys damrei</i>
EN	<i>Amolops cucae</i>		
	<i>Amolops minutus</i>		
	<i>Amolops ottorum</i>		
	<i>Gracixalus lumarius</i>		
	<i>Gracixalus nonggangensis</i>		
	<i>Gracixalus sapaensis</i>		
	<i>Hylarana montioaga</i>		
	<i>Kalophrynus cryptophonus</i>		
	<i>Kurixalus viridescens</i>		
		<i>Laotriton laoensis</i>	
	<i>Leptobranchella applebyi</i>		
	<i>Leptobranchella ardens</i>		
	<i>Leptobranchella bidoupensis</i>		
	<i>Leptobranchella firthi</i>	<i>Leptobranchella firthi</i>	
	<i>Leptobranchella kalonensis</i>		
	<i>Leptobranchella macrops</i>		
	<i>Leptobranchella maculosa</i>		
	<i>Leptobranchella melica</i>	<i>Leptobranchella melica</i>	<i>Leptobranchella melica</i>
	<i>Leptobranchella namdongensis</i>		
	<i>Leptobranchella pallida</i>		
	<i>Leptobranchella pluvialis</i>		
	<i>Leptobranchella puhoatensis</i>	<i>Leptobranchella puhoatensis</i>	
<i>Leptobranchella pyrrhops</i>			
<i>Leptobranchella tadungensis</i>			
	<i>Leptobranchium buchardi</i>		

	<i>Leptobrachium ngoclinense</i>		
	<i>Leptobrachium promustache</i>		
	<i>Leptobrachium xanthops</i>	<i>Leptobrachium xanthops</i>	
	<i>Leptobrachium xanthospilum</i>		
	<i>Liuixalus calcarius</i>		
	<i>Megophrys fansipanensis</i>		
	<i>Megophrys gerti</i>		
	<i>Megophrys hoanglienensis</i>		
	<i>Megophrys rubrimera</i>		
	<i>Micryletta nigromaculata</i>		
	<i>Nanohyla pulchella</i>		
	<i>Nanorana yunnanensis</i>	<i>Nanorana yunnanensis</i>	
		<i>Odorrana bolavensis</i>	
	<i>Odorrana yentuensis</i>		
	<i>Oreolalax sterlingae</i>		
			<i>Philautus cardamonus</i>
	<i>Philautus catbaensis</i>		
	<i>Rhacophorus calcaneus</i>		
	<i>Rhacophorus helenae</i>		
	<i>Rhacophorus vampyrus</i>		
	<i>Theلودerma nebulosum</i>		
	<i>Theلودerma palliatum</i>		
	<i>Theلودerma ryabovi</i>		
	<i>Tylototriton hainanensis</i>		
	<i>Tylototriton yangi</i>		
VU	<i>Amolops splendissimus</i>		
	<i>Amolops vitreus</i>	<i>Amolops vitreus</i>	
	<i>Bombina microdeladigitora</i>		
			<i>Feihyla samkosensis</i>
	<i>Gracixalus quyeti</i>	<i>Gracixalus quyeti</i>	
	<i>Kalophrynus honbaensis</i>		
	<i>Kurixalus motokawai</i>	<i>Kurixalus motokawai</i>	
	<i>Leptobrachella bourreti</i>		
	<i>Leptobrachella isos</i>	<i>Leptobrachella isos</i>	<i>Leptobrachella isos</i>
	<i>Leptobrachium guangxiense</i>		
	<i>Leptobrachium leucops</i>		
		<i>Limnonectes isanensis</i>	
		<i>Limnonectes lauhachindai</i>	<i>Limnonectes lauhachindai</i>
			<i>Limnonectes megastomias</i>
	<i>Limnonectes quangninhensis</i>		
			<i>Megophrys auralensis</i>

<i>Megophrys synoria</i>		<i>Megophrys synoria</i>
<i>Microhyla pineticola</i>		
<i>Nanohyla annamensis</i>		
<i>Nanohyla arboricola</i>		
<i>Nanorana unculuanus</i>	<i>Nanorana unculuanus</i>	
<i>Odorrana geminata</i>		
<i>Odorrana grahami</i>		
<i>Odorrana jingdongensis</i>	<i>Odorrana jingdongensis</i>	
<i>Odorrana lipuensis</i>		
<i>Paramesotriton guangxiensis</i>		
<i>Quasipaa acanthophora</i>		
<i>Quasipaa spinosa</i>	<i>Quasipaa spinosa</i>	
<i>Raorchestes gryllus</i>		
<i>Rhacophorus marmoridorsum</i>		
	<i>Rhacophorus spelaeus</i>	
<i>Rhacophorus vanbanicus</i>		
		<i>Sylvirana faber</i>
<i>Theloderma auratum</i>	<i>Theloderma auratum</i>	
<i>Theloderma petilum</i>	<i>Theloderma petilum</i>	
<i>Tylototriton notialis</i>	<i>Tylototriton notialis</i>	
	<i>Tylototriton panhai</i>	
<i>Tylototriton vietnamensis</i>		
<i>Tylototriton zieglerei</i>		
<i>Zhangixalus dorsovirens</i>	<i>Zhangixalus dorsovirens</i>	
<i>Zhangixalus duboisi</i>		

Table S3. List of the amphibian species of Vietnam with their IUCN red list status

(https://www.iucnredlist.org/; accessed on 22 January 2023).

Scientific Name	IUCN Red List Status	Family	Order
<i>Amolops cucae</i>	Endangered (EN)	Ranidae	Anura
<i>Amolops iriodes</i>	Data Deficient (DD)	Ranidae	Anura
<i>Amolops minutus</i>	Endangered (EN)	Ranidae	Anura
<i>Amolops ottorum</i>	Endangered (EN)	Ranidae	Anura
<i>Amolops spinaepectoralis</i>	Least Concern (LC)	Ranidae	Anura
<i>Amolops splendissimus</i>	Vulnerable (VU)	Ranidae	Anura
<i>Gracixalus ananjevae</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Gracixalus lumarius</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Gracixalus nonggangensis</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Gracixalus quyeti</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Gracixalus sapaensis</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Gracixalus trieng</i>	Not assessed (NA)	Rhacophoridae	Anura
<i>Gracixalus zieglerei</i>	Not assessed (NA)	Rhacophoridae	Anura
<i>Hylarana montivaga</i>	Endangered (EN)	Ranidae	Anura
<i>Ichthyophis catlocensis</i>	Data Deficient (DD)	Ichthyophiidae	Gymnophiona
<i>Ichthyophis chaloensis</i>	Data Deficient (DD)	Ichthyophiidae	Gymnophiona
<i>Ichthyophis nguyenorum</i>	Least Concern (LC)	Ichthyophiidae	Gymnophiona
<i>Kalophrynus cryptophonus</i>	Endangered (EN)	Microhylidae	Anura
<i>Kalophrynus honbaensis</i>	Vulnerable (VU)	Microhylidae	Anura
<i>Kurixalus banaensis</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Kurixalus gracilloides</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Kurixalus motokawai</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Kurixalus viridescens</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Leptobranchella applebyi</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella ardens</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella bidoupensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella botsfordi</i>	Critically Endangered (CR)	Megophryidae	Anura
<i>Leptobranchella bourreti</i>	Vulnerable (VU)	Megophryidae	Anura
<i>Leptobranchella crocea</i>	Data Deficient (DD)	Megophryidae	Anura
<i>Leptobranchella firthi</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella graminicola</i>	Not assessed (NA)	Megophryidae	Anura
<i>Leptobranchella kalonensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella macrops</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella maculosa</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella nahangensis</i>	Data Deficient (DD)	Megophryidae	Anura
<i>Leptobranchella namdongensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella nyx</i>	Data Deficient (DD)	Megophryidae	Anura

<i>Leptobranchella pallida</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella petrops</i>	Near Threatened (NT)	Megophryidae	Anura
<i>Leptobranchella pluvialis</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella pyrrhops</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella rowleyae</i>	Critically Endangered (CR)	Megophryidae	Anura
<i>Leptobranchella tadungensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchella tuberosa</i>	Least Concern (LC)	Megophryidae	Anura
<i>Leptobranchium ailaonicum</i>	Least Concern (LC)	Megophryidae	Anura
<i>Leptobranchium leucops</i>	Vulnerable (VU)	Megophryidae	Anura
<i>Leptobranchium ngoclinhense</i>	Endangered (EN)	Megophryidae	Anura
<i>Leptobranchium pullum</i>	Least Concern (LC)	Megophryidae	Anura
<i>Leptobranchium xanthospilum</i>	Endangered (EN)	Megophryidae	Anura
<i>Limnonectes kiziriani</i>	Least Concern (LC)	Dicroglossidae	Anura
<i>Limnonectes nguyenorum</i>	Near Threatened (NT)	Dicroglossidae	Anura
<i>Limnonectes phuyenensis</i>	Not assessed (NA)	Dicroglossidae	Anura
<i>Limnonectes quangninhensis</i>	Vulnerable (VU)	Dicroglossidae	Anura
<i>Liuixalus calcarius</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Liuixalus catbaensis</i>	Not assessed (NA)	Rhacophoridae	Anura
<i>Megophrys caobangensis</i>	Data Deficient (DD)	Megophryidae	Anura
<i>Megophrys fansipanensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Megophrys frigida</i>	Not assessed (NA)	Megophryidae	Anura
<i>Megophrys gerti</i>	Endangered (EN)	Megophryidae	Anura
<i>Megophrys hoanglienensis</i>	Endangered (EN)	Megophryidae	Anura
<i>Microhyla aurantiventris</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Microhyla darevskii</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Microhyla hongiaoensis</i>	Not assessed (NA)	Microhylidae	Anura
<i>Microhyla minuta</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Microhyla neglecta</i>	Not assessed (NA)	Microhylidae	Anura
<i>Microhyla ninhthuanensis</i>	Not assessed (NA)	Microhylidae	Anura
<i>Microhyla picta</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Microhyla pineticola</i>	Vulnerable (VU)	Microhylidae	Anura
<i>Microhyla pulverata</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Microhyla xodangorum</i>	Not assessed (NA)	Microhylidae	Anura
<i>Micryletta erythropoda</i>	Least Concern (LC)	Microhylidae	Anura
<i>Micryletta melanops</i>	Not assessed (NA)	Microhylidae	Anura
<i>Micryletta nigromaculata</i>	Endangered (EN)	Microhylidae	Anura
<i>Nanohyla annamensis</i>	Vulnerable (VU)	Microhylidae	Anura
<i>Nanohyla arboricola</i>	Vulnerable (VU)	Microhylidae	Anura
<i>Nanohyla nanapollexa</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Nanohyla pulchella</i>	Endangered (EN)	Microhylidae	Anura
<i>Odorrana banaorum</i>	Least Concern (LC)	Ranidae	Anura
<i>Odorrana gigatympa</i>	Least Concern (LC)	Ranidae	Anura
<i>Odorrana morafkai</i>	Least Concern (LC)	Ranidae	Anura

<i>Odorrana mutschmanni</i>	Data Deficient (DD)	Ranidae	Anura
<i>Odorrana trankieni</i>	Near Threatened (NT)	Ranidae	Anura
<i>Odorrana yentuensis</i>	Endangered (EN)	Ranidae	Anura
<i>Ophryophryne elfina</i>	Least Concern (LC)	Ranidae	Anura
<i>Oreolalax sterlingae</i>	Endangered (EN)	Megophryidae	Anura
<i>Paramesotriton deloustali</i>	Least Concern (LC)	Megophryidae	Anura
<i>Philautus abditus</i>	Least Concern (LC)	Salamandridae	Caudata
<i>Philautus catbaensis</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Philautus maosonensis</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Quasipaa acanthophora</i>	Vulnerable (VU)	Dicroglossidae	Anura
<i>Quasipaa delacouri</i>	Least Concern (LC)	Dicroglossidae	Anura
<i>Quasipaa verrucospinosa</i>	Least Concern (LC)	Dicroglossidae	Anura
<i>Raorchestes gryllus</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Rhacophorus annamensis</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Rhacophorus calcaneus</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Rhacophorus helenae</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Rhacophorus hoabinhensis</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Rhacophorus hoanglienensis</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Rhacophorus larissae</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Rhacophorus marmoridorsum</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Rhacophorus robertingeri</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Rhacophorus vampyrus</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Rhacophorus vanbanicus</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Rhacophorus viridimaculatus</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Theloderma annae</i>	Data Deficient (DD)	Rhacophoridae	Anura
<i>Theloderma auratum</i>	Vulnerable (VU)	Rhacophoridae	Anura
<i>Theloderma laeve</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Theloderma lateriticum</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Theloderma nebulosum</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Theloderma palliatum</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Theloderma ryabovi</i>	Endangered (EN)	Rhacophoridae	Anura
<i>Theloderma truongsongense</i>	Least Concern (LC)	Rhacophoridae	Anura
<i>Theloderma khoii</i>	Not assessed (NA)	Rhacophoridae	Anura
<i>Tylototriton pasmansii</i>	Data Deficient (DD)	Salamandridae	Caudata
<i>Tylototriton sparreboomi</i>	Data Deficient (DD)	Salamandridae	Caudata
<i>Tylototriton thaiorum</i>	Not assessed (NA)	Salamandridae	Caudata
<i>Tylototriton vietnamensis</i>	Vulnerable (VU)	Salamandridae	Caudata
<i>Tylototriton zieglerei</i>	Vulnerable (VU)	Salamandridae	Caudata
<i>Vietnamophryne cuongi</i>	Not assessed (NA)	Microhylidae	Anura
<i>Vietnamophryne inexpectata</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Vietnamophryne orlovi</i>	Data Deficient (DD)	Microhylidae	Anura
<i>Vietnamophryne vuquangensis</i>	Not assessed (NA)	Microhylidae	Anura
<i>Xenophrys truongsongensis</i>	Not assessed (NA)	Megophryidae	Anura
<i>Zhangixalus franki</i>	Not assessed (NA)	Rhacophoridae	Anura

Zhangixalus jodiae

Not assessed (NA)

Rhacophoridae

Anura

Table S4. Proportion of Data Deficient (DD) and Not Assessed (NA) species on the total endemic species in different world areas. Each world area is presented as follow:

Neotropics (Brazil, Perù, Ecuador, Bolivia, Chile, Colombia, Venezuela, Argentina);

Central America (Mexico, Guatemala, Honduras, Panama, Costa Rica, Cuba); East Africa

(Kenya, Tanzania); Asia (China, India, Japan); Southeast Asia (Cambodia, Indonesia, Laos,

Malaysia, Myanmar, Thailand, Vietnam).

World area	DD/ASS	DD+NA/TOT	NA/TOT
Neotropics	0.121	0.206	0.097
Central America	0.080	0.140	0.067
East Africa	0.198	0.243	0.058
Madagascar	0.014	0.111	0.099
Southeast Asia	0.306	0.535	0.342
Australia	0.049	0.148	0.105
Usa	0.071	0.245	0.187
Asia	0.102	0.423	0.356

Table S5. Data Deficient (DD) and not assessed (NA) species endemic and subendemic to Vietnam. For each species, the status (endemic or subendemic), the number of known locations, the range extension (i.e., the type and the extension of the locations), and the range description are reported (IUCN 2022). The range extension is classified as “small” if the locations are smaller than 1000 km², whereas it is classified as “medium” if the polygon representing the species’ range is smaller than 5000 km², and it is classified as “large” if the polygon is larger than 5000 km².

Species	Risk Category	Status	N locations	Range extension	Range description
<i>Amolops iriodes</i>	DD	Subendemic (China)	1	small	This species is currently known only from Mount Tay Con Linh, Cao Bo Commune, Vi Xuyen District, Ha Giang Province, northeastern Viet Nam between 1,400 and 1,700 m asl (Bain and Nguyen 2004a). This is unlikely to represent the actual limits of the species’ range; similar habitat and elevations to those in its known localities occur in several adjacent areas including southern Yunnan Province, China. Further surveys in these areas may uncover the species’ presence, and they have been included in the range map associated with this assessment.
<i>Ichthyophis catlocensis</i>	DD	Subendemic (Cambodia)	1	small	This species is known only from a single locality at 135 m asl in Cat Tien National Park, Lam Dong Province, southern-central Viet Nam (Geissler et al. 2014). This is unlikely to represent the actual limits of the species' range; similar habitat to that in its known locality occurs in adjacent lowland parts of Dak Nong, Binh Phuoc, Dong Nai, Binh Thuan and Ba Ria - Vung Tau Provinces, Viet Nam, as well as Mondolkiri and Kratie Provinces, Cambodia. Further surveys in these areas may uncover its presence there.
<i>Ichthyophis chaloensis</i>	DD	Subendemic (Laos)	1	medium	This species is known only from a single locality at approximately 621 m asl in an extension of Phong Nha - Ke Bang National Park, Quang Binh Province, central Viet Nam (Geissler et al. 2014). This is unlikely to represent the actual limits of the species' range; similar habitat and elevations to those in its known locality occur in adjacent parts of Ha Tinh, Quang Tri, Thua Thien-Hue and Quang Nam Provinces, Viet Nam, as well as

					Khammouan, Savannakhet, Salavan and Xekong Provinces, Lao People's Democratic Republic. Further surveys in these areas may uncover its presence there, and they have been included in the range map associated with this assessment.
<i>Kurixalus gracilloides</i>	DD	Endemic	1	small	This species is known from 145 m asl at a single locality in Pu Mat National Park, Nghe An Province, northern Viet Nam (Nguyen et al. 2020c). This is unlikely to represent the actual limits of this species' range; habitat and elevations similar to those at its known locality occur in adjacent areas. Further surveys may reveal the species' presence in these areas and they have been included in the range map associated with this assessment as potential range.
<i>Leptobranchella crocea</i>	DD	Endemic	1	small	This species is currently known only from a single site at 1,316 m asl in Ngoc Linh Nature Reserve, Dak Glei District, Kon Tum Province, Viet Nam (Rowley et al. 2010). This is unlikely to represent the true limits of its range as adjacent forested areas are contiguous with the species' known locality and its presence is expected northward in southern Song Thanh Nature Reserve as well as westward near the Lao border, outside of either protected area. Therefore, further surveys are needed to confirm this and may possibly detect the species even further afield. However, as most congeners do not occupy very expansive ranges, the true range of this species is not expected to occupy all the available suitable habitat. Pending confirmation of its true range, it has been mapped to the forested area between 1,000–1,600 m asl that immediately surrounds the type locality. As such, its estimated extent of occurrence (EOO) is 135 km ² and represents only one threat-defined location.
<i>Leptobranchella nahangensis</i>	DD	Endemic	1	small	This species is currently known only from a single locality at 314 m asl in Ha Nang Nature Reserve, Tuyen Quang Province, northern Viet Nam (Lathrop et al. 1998). Similar habitat and elevations to those in its known locality extend into adjacent parts of Ha Giang, Cao Bang and Bac Kan Provinces. Further surveys may uncover its presence in these areas, therefore its range has been projected beyond known sites to include these areas of suitable habitat.
<i>Leptobranchella nyx</i>	DD	Subendemic	3	medium	This species is known only from 800–1,700 m asl in Cao Bo Commune, Vi Xuyen District, Ha Giang Province, Viet Nam (Ohler et al. 2011). Similar habitat and elevations to those in its known locality occur in adjacent parts of northeastern Ha Giang. Further surveys in these areas may

					uncover its presence there. Although a small part of southeastern Yunnan Province, China contains connected and similar habitat, the species' presence there is unclear as there are no records of it from China. The species' estimated extent of occurrence (EOO) is 2,096 km ² , which consists of five or fewer threat-defined location.
<i>Megophrys caobangensis</i>	DD	Subendemic	1	small	This species is only known from Phia Oac-Phia Den National Park, Nguyen Binh District in Cao Bang Province, northeastern Viet Nam, at 1,252 to 1,518 m asl (Nguyen et al. 2020a). It is expected to occur more widely in northeastern Viet Nam, and possibly could be found in the neighbouring Guangxi Province in China (Nguyen et al. 2020). Its current estimated extent of occurrence (EOO) is 41 km ² .
<i>Microhyla aurantiventris</i>	DD	Endemic	1	small	This species is only known from Tram Lap Forest in Gia Lai Province, Viet Nam, on part of the Kon Tum Plateau, at elevations between 1,190-1,210 m asl (Nguyen et al. 2019). This may not represent the actual limits of this species' range; contiguous and similar habitat and elevations occur in adjacent parts of the plateau, to which the species is thought to be endemic, and further surveys will likely reveal its presence there (Nguyen et al. 2019). These areas have been included in the range map associated with this assessment as potential range. The species' estimated extent of occurrence (EOO) is 142 km ² .
<i>Microhyla darevskii</i>	DD	Subendemic	1	medium	This species is known only from the central Annamite Mountains in Kon Tum Province, Viet Nam, at 1,500 m asl (Poyarkov et al. 2014). Similar habitat and elevations to those in its known locality occur in adjacent parts of southern Quang Nam and northeastern Gia Lai Province, further surveys in these areas may uncover its presence there (Poyarkov et al. 2014). For the same reason, the species may occur in south-eastern Xekong and north-eastern Attapu Provinces, Lao People's Democratic Republic (Poyarkov et al. 2014). These areas have been mapped as potential range. The species' extent of occurrence (EOO) is 1,156 km ² , and its range consists of two threat-defined locations.
<i>Microhyla minuta</i>	DD	Endemic	1	small	This species is known with certainty only from 157 m asl in Cat Tien National Park, Dong Nai Province, southern Viet Nam (Poyarkov et al. 2014). Similar habitat to that in its known locality occurs in adjacent lowland parts of Lam Dong, Binh Phuoc, Dak Nong, and Binh Thuan Provinces; further surveys in these areas may uncover its presence there (Poyarkov et al. 2014).

					For the same reason, the species' range potentially extends into eastern Binh Duong Province (Poyarkov et al. 2014). A record of <i>Microhyla</i> from Vinh Cuu Nature Reserve, Dong Nai Province (Tarkhnishvili 1994) is expected to also be assignable to <i>Microhyla minuta</i> (Poyarkov et al. 2014).
<i>Microhyla picta</i>	DD	Endemic	2	small	Nothing is known about this species' distribution except that it was described from somewhere in southern Viet Nam (Schenkel 1901). Bourret (1942) reported the species from both Vung Tau Province and somewhere in Central Viet Nam, but there is only one recorded specimen of this species and it is unclear how accurate these localities are.
<i>Microhyla pulverata</i>	DD	Endemic	1	small	This species is known only from the type locality at 700-750m asl on the Tay Nguyen Plateau, from near Buon Luoi village, 20km north-west of Kannack, in An Khe District, Gia Lai Province, Viet Nam. The limits of its distribution remain unknown.
<i>Nanohyla nanapollexa</i>	DD	Subendemic	2	medium	This species is known only from Ngoc Linh Mountain, Quang Nam Province, and Kon Plong District, Kon Tum Province in central Viet Nam, at 1,480 m asl (Bain and Nguyen 2004b, Gorin et al. 2020). Similar habitat and elevations to those in its known locality occur in adjacent areas in southeastern Lao People's Democratic Republic (Laos PDR); further surveys in these areas may uncover its presence there, and they have been mapped as potential range. A record exists at 350-400 m asl further south in Phu Yen Province (Do et al. 2017), however, there is a morphological difference between this and the topotypic population (Do et al. 2017, L. Nguyen unpubl. data), and molecular confirmation of the identity of the Phu Yen population is recommended (L. Nguyen pers. comm. October 2020).
<i>Odorrana mutschmanni</i>	DD	Subendemic	1	small	This species is currently known only from Ha Lang District, Cao Bang Province in northeastern Viet Nam, at elevations around 447 m asl (Pham et al. 2016). This is unlikely to represent the actual limits of the species' range; similar habitat and elevations to those in its known locality occur in adjacent parts of Ha Giang Province, Viet Nam, and Guangxi and Yunnan provinces, China. Further surveys in these areas are likely to uncover its presence there.
<i>Philautus maosonensis</i>	DD	Subendemic	1	large	This species is currently known from 900–1,700 m asl in Lang Son, Vinh Phu and Ha Giang provinces, northern Viet Nam (Bourret 1937, Inger et al. 1999, Bossuyt and Dubois 2001, Bain

					and Nguyen 2004a). These are unlikely to represent the actual limits of the species' range. Similar habitat and elevations to those in known localities occur in adjacent areas including small parts of Guangxi and Yunnan Provinces, southern China. Further surveys in these areas may uncover the species' presence, and they have been included in the range map associated with this assessment.
<i>Rhacophorus hoabinhensis</i>	DD	Endemic	1	small	This species is only known from Hang Kia-Pa Co Nature Reserve in Hoa Binh Province, northern Viet Nam, and its currently known elevation range is 1,230-1,350 m asl (Nguyen et al. 2017). This is unlikely to represent the actual limits of this species' range; habitat and elevations similar to those at its known locality occur in adjacent and intervening areas. Further surveys may reveal the species' presence in these areas and they have been included in the range map associated with this assessment as potential range. The species' estimated extent of occurrence (EOO) is 136 km ² .
<i>Rhacophorus larissae</i>	DD	Subendemic	1	small	This species is known only from 1,400 m asl within Nguyen Binh District, Cao Bang Province, Viet Nam (Ostroshabov et al. 2013), including part of Pia Oac - Phia Den Nature Reserve (Truong Nguyen pers. comm. August 2016). This is unlikely to represent the actual limits of the species' range; similar habitat to that in its known locality occurs in adjacent high-elevation areas including a small section of extreme south-western Guangxi Province, China. Further surveys in these areas may uncover its presence there, and they have been included in the species' projected range.
<i>Rhacophorus viridimaculatus</i>	DD	Subendemic	1	small	This species is known only from 600–1,300 m asl on Muong Cha Mountain, Ha Giang Province and in Na Hang Nature Reserve, Tuyen Quang Province, Viet Nam (Ostroshabov et al. 2013). These are unlikely to represent the actual limits of the species' range; similar habitat to that in its known localities occurs in adjacent high-elevation parts of Bac Can and Cao Bang provinces, as well as a small part of southeastern Yunnan Province, China. Further surveys in these areas may uncover its presence there, and its range has been projected to include these areas.
<i>Theلودerma annae</i>	DD	Endemic	1	medium	This species is known from Ngoc Son-Ngo Luong Nature Reserve, Hoa Binh Province, as well as Trang An Landscape Complex and Cuc Phuong National Park, Ninh Binh Province, Viet Nam, at elevations between 67-650 m asl (Nguyen et al.

					2016, Nguyen and Luu 2018). This may not represent the limits of the species' range; similar habitat and elevations to those in its known localities occur in adjacent areas in these two provinces, and they have been included as potential range in the map associated with this assessment. Further surveys in these areas may uncover its presence there, although recent efforts have so far not yielded more discoveries, suggesting this species may possibly be endemic to the limestone karst forest region wherein its range lies (T. Ziegler pers. comm. August 2020).
<i>Tylototriton pasmansi</i>	DD	Endemic	1	large	This species is known from northern Viet Nam at elevations between 720 - 1,090 m asl (Bernardes et al. 2020). Based on preliminary genetic analyses two subspecies are tentatively assigned - <i>Tylototriton pasmansi</i> and <i>Tylototriton pasmansi obsti</i> , with the former occurring on the eastern side of Da River in Hoa Binh and Phu Tho provinces and the latter west of the river in Son La and Thanh Hoa provinces (Bernardes et al. 2020). This may not represent the limits of this species' range; habitat and elevations similar to those at its known localities occur in adjacent and intervening areas. Further surveys may reveal the species' presence in these areas and they have been included in the range map associated with this assessment as potential range. However, it is also possible that the species is endemic to currently known localities (Bernardes et al. 2020). The species was recently split from the <i>T. asperrimus</i> complex resulting now in <i>T. asperrimus sensu stricto</i> being limited to a more restricted geographic range that is not contiguous to that of <i>T. pasmansi</i> (Bernardes et al. 2020). The species' estimated extent of occurrence (EOO) is 31,636 km ² .
<i>Tylototriton sparreboomi</i>	DD	Endemic	1	small	This species is known from a single locality in Sin Ho District, Lai Chau Province, Viet Nam, at approximately 1,670 m asl (Bernardes et al. 2020). This may not represent the actual limits of this species' range; habitat and elevations similar to those at its known locality occur in adjacent areas, and further surveys may reveal the species' presence in these areas.
<i>Vietnamophryne inexpectata</i>	DD	Endemic	1	small	This species is only known from a single locality in Kon Chu Rang Nature Reserve in Gia Lai Province, central Viet Nam, at 1,000 m asl (Poyarkov et al. 2018). This is unlikely to represent the actual limits of this species' range; habitat and elevations similar to those at its

					known locality occur in adjacent and intervening areas. Further surveys may reveal the species' presence in these areas and they have been included in the range map associated with this assessment as potential range.
<i>Vietnamophryne orlovi</i>	DD	Endemic	1	small	This species is only known from a single locality on Phia Oac Mountain, Phia Oac-Phia Den National Park in Cao Bang Province, northern Viet Nam, at 1,200 m asl (Poyarkov et al. 2018). This is unlikely to represent the actual limits of this species' range; habitat and elevations similar to those at its known locality occur in adjacent and intervening areas. Further surveys may reveal the species' presence in these areas and they have been included in the range map associated with this assessment as potential range.
<i>Gracixalus trieng</i>	NA	Endemic	1	small	The new species is known only from between 1716–2055 m asl within Ngoc Linh Nature Reserve, Kon Tum Province, Vietnam. Mount Ngoc Linh and adjacent high-elevation peaks form an isolated area of high elevation and many faunal elements at this location are thought to be endemic (Abramov et al. 2006, Jenkins et al. 2007). Thus, we assume that the new species is restricted geographically, likely having an extent of occurrence (EOO) of <1000 km ² . <i>Gracixalus trieng</i> sp. nov. therefore likely qualifies as Endangered in accordance with the IUCN Red List of Threatened Species categories and criteria (IUCN 2012) B1ab(iii) (Rowley et al., 2020).
<i>Gracixalus zieglerei</i>	NA	Endemic	1	small	Currently, the new species is known only from the evergreen montane tropical forest of Yen Bai Province at an elevation of ca. 2200 m a.s.l. (Le et al., 2021)
<i>Leptobranchella graminicola</i>	NA	Endemic	1	small	This species is only known from the recently designated Bat Xat Nature Reserve on Mount Pu Ta Leng at elevations between 2383 and 2437 m asl. Most species of <i>Leptobranchella</i> are associated with forests and it is likely that they are forest dependent. <i>Leptobranchella graminicola</i> sp. Nov. likely qualifies for being assessed as Data Deficient in accordance with the IUCN Red List of Threatened Species categories and criteria (see IUCN 2012; Nguyen et al., 2021b).
<i>Limnionectes phuyenensis</i>	NA	Endemic	1	small	<i>Limnionectes phuyenensis</i> sp. nov. is currently known only from Phu Yen Province, South-central Vietnam (Pham et al., 2020).
<i>Liuixalus catbaensis</i>	NA	Endemic	1	small	Known from the type locality, Ao Ech (Frog Pond) within the Cat Ba National Park, Cat Ba Island, the largest island of the Cat Ba

					Archipelago in Ha Long Bay, northern Vietnam (Nguyen et al., 2014)
<i>Megophrys frigida</i>	NA	Endemic	2	small	This species is currently only known from the recently designated Bat Xat Nature Reserve on Mount Ky Quan San at elevations between 2118 m asl and 2668 m. The species' EOO is currently predicted to be 832 km ² . We recommend that <i>Megophrys frigida</i> sp. nov. is listed as Endangered in accordance with the IUCN Red List of Threatened Species categories and criteria B1ab (iii) (see IUCN 2012; Tapley et al., 2021).
<i>Microhyla hongiaensis</i>	NA	Endemic	1	small	The new species currently known only from the type locality in Bi Doup-Nui Ba National Park, Lac Duong District, Lam Dong Province, Vietnam (Hoang et al., 2020).
<i>Microhyla neglecta</i>	NA	Endemic	3	small	To date, the new species is known exclusively from three localities within the eastern portion of the Bidoup–Nui Ba National Park in Lam Dong Province, southern Vietnam. <i>Microhyla neglecta</i> was observed at elevations from 1,450 m a.s.l. (in the environs of the Giang Ly ranger station) to 1,800 m a.s.l. (on the northern slope of Mt. Bidoup). All three known localities are located within a narrow area (approximately 20 km ²) within the Da Nhim River Valley (Poyarkov et al., 2020).
<i>Microhyla ninhthuanensis</i>	NA	Endemic	1	small	<i>Microhyla ninhthuanensis</i> sp. nov. is currently only known from the type locality in Phuoc Binh National Park, Ninh Thuan Province, Vietnam. The species was recorded at an elevation of ca. 300 m a.s.l. (Hoang et al., 2021b)
<i>Microhyla xodangorum</i>	NA	Endemic	1	small	<i>Microhyla xodangorum</i> sp. nov. is currently only known from the type locality in Kon Tum Plateau, Kon Tum Province, Vietnam. The species was found at an elevation of ca 1250 m a.s.l. Based on its habitat and altitudinal range, the new species is likely endemic to the Central Highlands of Vietnam. However, the extent of its actual distribution range requires further studies (Hoang et al., 2022).
<i>Micryletta melanops</i>	NA	Endemic	1	small	The new species is currently only recorded from the mid-elevation montane evergreen pine forest in its type locality (Poyarkov et al., 2021b).
<i>Theلودerma khoii</i>	NA	Endemic	2	small	The distribution of the new species is unknown but probably extends into adjacent high elevation forested areas in Ha Giang Province, Vietnam and in Yunnan Province, China with an extent of occurrence of only < 1000 km ² and continuing decline in the quality of its habitat due to deforestation. Thus, we suggest the species

					should be considered Endangered following IUCN's Red List categories (Ninh et al., 2022).
<i>Tylototriton thaiorum</i>	NA	Endemic	1	small	To date, <i>Tylototriton thaiorum</i> sp. nov. is known only from a restricted area in montane forests of Pu Hoat Nature Reserve, Nghe An Province, northern part of Central Vietnam at elevations from 700 to 1000 m a.s.l. This area is located ca. 220 km air distance northwards from the type locality of <i>T. notialis</i> in Khammouan Province of Laos. The Pu Hoat Mountain Range is located on the northeastern edge of Xiangkhouang Plateau; it separates the Nghe An Province of Vietnam from the Houaphan Province of Laos. The locality of the new species is ca. 4 km from the national border of Vietnam and Laos, thus the occurrence of <i>Tylototriton thaiorum</i> sp. nov. is also anticipated on the north-western slopes of Pu Hoat Mountain Range in the adjacent parts of Houaphan Province of Laos (Poyarkov et al., 2021a).
<i>Vietnamophryne cuongi</i>	NA	Endemic	1	small	<i>Vietnamophryne cuongi</i> sp. nov. is currently known only from Ba Vi NP, Hanoi, Vietnam. Specimens of the new species were found near a small pond with rotten leaves in evergreen tropical forests of Ba Vi NP on elevations between 975 – 1106 m a.s.l. (Nguyen et al., 2021a).
<i>Vietnamophryne vuquangensis</i>	NA	Endemic	1	small	<i>Vietnamophryne vuquangensis</i> sp. nov. is currently known only from the type locality, Vu Quang NP, Vu Quang District, Ha Tinh Province. Specimens of the new species were found on the soil or under large tree-trunks and under leaf litter in evergreen tropical forests of Vu Quang NP at an elevation of 966 m a.s.l. (Hoang et al., 2021a).
<i>Xenophrys truongsoneensis</i>	NA	Endemic	1	small	Currently known only from Thua Thien Hue Province southwards to Lam Dong Province, central Vietnam; expected tin the evergreen forests on western side of Truong Son Range in Laos and Cambodia as well. (Luong et al., 2022).
<i>Zhangixalus franki</i>	NA	Endemic	1	small	<i>Zhangixalus franki</i> sp. nov. is currently known only from the type locality in Ha Giang Province, northern Vietnam. The species was recorded at elevations between 1320 and 1360 m a.s.l. (Ninh et al., 2020).
<i>Zhangixalus jodiae</i>	NA	Endemic	1	small	<i>Zhangixalus jodiae</i> sp. nov. is currently known only from the type locality in Ha Giang Province, northeastern Vietnam (Nguyen et al., 2020b).

Table S6. Log-Linear analysis. Simultaneous test of all k-factor interactions. The improvement in fit when including all 2-way interactions in the model (K-Factor = 2) is highly significant (i.e., the model provides a very poor fit). The improvement in fit when adding all 3-way interactions to the model (K-Factor = 3) is not significant (i.e., the model provides an adequate fit). The least complex model that will fit the observed data should not contain any three-way associations but contains one or more two-way associations. N-Factors numbers represent no interaction (1), 2-way interactions (2), and 3-way interactions (3) among the considered factors (THREAT, AREA, and RISK CAT).

N-Factors	df	Max.Lik. χ^2	<i>p</i>	Pearson χ^2	<i>p</i>
1	8	16320.16	<0.001	20865.96	<0.001
2	19	336.45	<0.001	302.76	<0.001
3	12	14.3	0.282	15.16	0.233

Table S7. Log-Linear analysis. Tests of all marginal and partial associations.

EFFECT	DoF	Prt.Ass. χ^2 .	p	Mrg.Ass. χ^2 .	p
THREAT	4	4194.11	<0.001	4194.11	<0.001
AREA	1	10732.48	<0.001	10732.48	<0.001
RISK CATEGORY	3	1393.58	<0.001	1393.58	<0.001
THREAT*AREA	4	79	<0.001	85.3	<0.001
THREAT*RISK CATEGORY	12	171.88	<0.001	178.17	<0.001
AREA*RISK CATEGORY	3	72.99	<0.001	79.28	<0.001

Table S8. Log-Linear analysis. Marginal tables of two-way associations. Threats are numbered as follows: (1) Urbanization (Residential & commercial development + Pollution), (2) Natural resource use (Agriculture & aquaculture + Biological resource use), (3) Industrial development (Energy production & mining + Transportation & service corridors), (4) Alien species and disease, and (5) Climate change. Data are showed as species frequencies.

Marginal Table: THREAT by AREA						
	THREAT - 1	THREAT - 2	THREAT - 3	THREAT - 4	THREAT - 5	Tota l
WORLD	1993	4221	846	1373	701	9134
VIETNA						
M	33	164	32	3	13	245
Total	2026	4385	878	1376	714	9379

Marginal Table: THREAT by RISK						
	THREAT - 1	THREAT - 2	THREAT - 3	THREAT - 4	THREAT - 5	Tota l
CR	435	983	172	414	250	2254
EN	812	1762	383	460	249	3666
VU	562	1037	235	295	183	2312
DD	217	603	88	207	32	1147
Total	2026	4385	878	1376	714	9379

Marginal Table: AREA by RISK			
	WORLD	VIETNAM	Total
CR	2244	9	2254
EN	3552	113	3666
VU	2234	77	2312
DD	1102	44	1147
Total	9134	245	9379

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