

Supplementary data for:

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Environments 127:211–221 (doi:[10.1016/j.jaridenv.2015.12.007](https://doi.org/10.1016/j.jaridenv.2015.12.007)).

Table S1: A list of species used in this study (with the number of records for each species), their classification according to IUCN guidelines and criteria (global and national status), and distribution status worldwide and in Egypt, models' mean (\pm sd) AUC scores of 10 folds cross-validation, and the final weighting used to run prioritization analyses.

| N | Species | # records | Global IUCN | Egypt National IUCN | World status | Egypt Status | Mean AUC \pm SD | Weighting score |
|----|-------------------------------------|-----------|-------------|----------------------|--------------|--------------|-------------------|-----------------|
| 1 | <i>Cyrtopodion scabrum</i> | 37 | LC | LC | Narrow | Widespread | 0.951 \pm 0.097 | 2 |
| 2 | <i>Hemidactylus flaviviridis</i> | 31 | NA | VU (D2) ¹ | Narrow | Narrow | 0.961 \pm 0.105 | 8 |
| 3 | <i>Hemidactylus robustus</i> | 40 | NA | VU (D2) | Narrow | Narrow | 0.899 \pm 0.289 | 8 |
| 4 | <i>Hemidactylus turcicus</i> | 217 | LC | LC | Widespread | Widespread | 0.955 \pm 0.021 | 1 |
| 5 | <i>Pristurus flavipunctatus</i> | 80 | NA | VU (D2) ² | Narrow | Narrow | 0.991 \pm 0.004 | 8 |
| 6 | <i>Ptyodactylus guttatus</i> | 115 | NA | LC | Narrow | Narrow | 0.953 \pm 0.026 | 4 |
| 7 | <i>Ptyodactylus hasselquistii</i> | 225 | NA | LC | Narrow | Widespread | 0.932 \pm 0.031 | 2 |
| 8 | <i>Ptyodactylus siphonorhina</i> | 180 | NA | LC | Restricted | Widespread | 0.781 \pm 0.09 | 3 |
| 9 | <i>Stenodactylus mauritanicus</i> | 35 | NA | VU (D2) | Restricted | localized | 0.989 \pm 0.012 | 18 |
| 10 | <i>Stenodactylus petrii</i> | 60 | NA | LC | Narrow | Widespread | 0.939 \pm 0.034 | 2 |
| 11 | <i>Stenodactylus sthenodactylus</i> | 268 | NA | LC | Narrow | Widespread | 0.85 \pm 0.041 | 2 |
| 12 | <i>Tarentola annularis</i> | 324 | NA | LC | Narrow | Widespread | 0.906 \pm 0.046 | 2 |
| 13 | <i>Tarentola mauritanica</i> | 342 | LC | LC | Widespread | Narrow | 0.978 \pm 0.014 | 2 |
| 14 | <i>Tarentola mindiae</i> | 43 | LC | VU (D2) ³ | Near-Endemic | Narrow | 0.97 \pm 0.019 | 16 |
| 15 | <i>Tropicolotes bisharicus</i> | 20 | NA | VU (D2) | Near-Endemic | Narrow | 0.986 \pm 0.017 | 16 |
| 16 | <i>Tropicolotes nattereri</i> | 34 | NA | LC | Narrow | Narrow | 0.975 \pm 0.015 | 4 |

| N | Species | # records | Global IUCN | Egypt National IUCN | World status | Egypt Status | Mean AUC \pm SD | Weighting score |
|----|------------------------------------|-----------|-----------------------------|-------------------------------|--------------|--------------|-------------------|-----------------|
| 17 | <i>Tropicolotes steudneri</i> | 197 | NA | LC | Narrow | Widespread | 0.879 \pm 0.037 | 2 |
| 18 | <i>Tropicolotes tripolitanus</i> | 24 | LC | LC | Narrow | Narrow | 0.95 \pm 0.036 | 4 |
| 19 | <i>Agama spinosa</i> | 113 | LC | LC | Narrow | Narrow | 0.964 \pm 0.019 | 4 |
| 20 | <i>Laudakia stellio</i> | 458 | NA | LC | Narrow | Narrow | 0.983 \pm 0.008 | 4 |
| 21 | <i>Pseudotrapelus sinaitus</i> | 117 | NA | LC | Narrow | Widespread | 0.881 \pm 0.08 | 2 |
| 22 | <i>Trapelus mutabilis</i> | 299 | NA | LC | Narrow | Widespread | 0.947 \pm 0.026 | 2 |
| 23 | <i>Trapelus pallidus</i> | 173 | NA | LC | Narrow | Widespread | 0.943 \pm 0.036 | 2 |
| 24 | <i>Trapelus savignii</i> | 86 | VU (A2abcd) | VU (D2) ⁴ | Near-Endemic | Narrow | 0.982 \pm 0.007 | 32 |
| 25 | <i>Uromastix aegyptia</i> | 82 | NA | LC | Narrow | Widespread | 0.945 \pm 0.022 | 2 |
| 26 | <i>Uromastix ocellata</i> | 56 | LC | EN (B2 a,b i) | Narrow | Narrow | 0.923 \pm 0.077 | 12 |
| 27 | <i>Uromastix ornata</i> | 16 | NA | VU (D2) ⁵ | Restricted | localized | 0.99 \pm 0.005 | 18 |
| 28 | <i>Chamaeleo africanus</i> | 72 | NA | EN (B2 a,b i,iv) ⁶ | Narrow | Narrow | 0.963 \pm 0.043 | 12 |
| 29 | <i>Chamaeleo chamaeleon</i> | 262 | NA | LC | Widespread | Narrow | 0.976 \pm 0.013 | 2 |
| 30 | <i>Acanthodactylus aegyptius</i> | 167 | NA | LC | Near-Endemic | Widespread | 0.936 \pm 0.05 | 4 |
| 31 | <i>Acanthodactylus boskianus</i> | 1414 | NA | LC | Narrow | Widespread | 0.889 \pm 0.02 | 2 |
| 32 | <i>Acanthodactylus longipes</i> | 50 | NA | VU (D2) | Narrow | Widespread | 0.962 \pm 0.022 | 4 |
| 33 | <i>Acanthodactylus pardalis</i> | 191 | VU - (A2c; B1ab (i,ii,iii)) | VU (D2) ⁷ | Restricted | Narrow | 0.983 \pm 0.017 | 24 |
| 34 | <i>Acanthodactylus scutellatus</i> | 406 | NA | LC | Narrow | Widespread | 0.859 \pm 0.03 | 2 |

| N | Species | # records | Global IUCN | Egypt National IUCN | World status | Egypt Status | Mean AUC \pm SD | Weighting score |
|----|------------------------------------|-----------|-------------|---------------------|--------------|--------------|-------------------|-----------------|
| 35 | <i>Mesalina bahaeldini</i> | 98 | LC | VU (D2) | Endemic | localized | 0.978 \pm 0.023 | 24 |
| 36 | <i>Mesalina guttulata</i> | 216 | NA | LC | Narrow | Widespread | 0.845 \pm 0.055 | 2 |
| 37 | <i>Mesalina olivieri</i> | 172 | NA | LC | Narrow | Widespread | 0.951 \pm 0.042 | 2 |
| 38 | <i>Mesalina pasteuri</i> | 19 | NA | VU (D2) | Narrow | localized | 0.993 \pm 0.007 | 12 |
| 39 | <i>Mesalina rubropunctata</i> | 129 | NA | LC | Narrow | Widespread | 0.839 \pm 0.071 | 2 |
| 40 | <i>Ophisops occidentalis</i> | 28 | LC | VU (D2) | Restricted | localized | 0.992 \pm 0.006 | 18 |
| 41 | <i>Varanus griseus</i> | 141 | NA | LC | Narrow | Widespread | 0.892 \pm 0.04 | 2 |
| 42 | <i>Varanus niloticus</i> | 24 | NA | VU (D2) | narrow | localized | 0.985 \pm 0.021 | 12 |
| 43 | <i>Chalcides cf. humilis</i> | 37 | NA | LC ⁸ | Narrow | Widespread | 0.87 \pm 0.155 | 4 |
| 44 | <i>Chalcides ocellatus</i> | 596 | NA | LC | Widespread | Widespread | 0.952 \pm 0.015 | 1 |
| 45 | <i>Eumeces schneiderii</i> | 188 | NA | LC | Narrow | Narrow | 0.961 \pm 0.043 | 4 |
| 46 | <i>Scincus scincus</i> | 376 | NA | LC | Narrow | Widespread | 0.87 \pm 0.08 | 2 |
| 47 | <i>Sphenops sepsoides</i> | 367 | LC | LC | Restricted | Widespread | 0.92 \pm 0.027 | 3 |
| 48 | <i>Trachylepis quinquetaeniata</i> | 318 | NA | LC | Narrow | Widespread | 0.956 \pm 0.021 | 2 |
| 49 | <i>Trachylepis vittata</i> | 17 | LC | VU (D2) | Narrow | Narrow | 0.988 \pm 0.012 | 8 |
| 50 | <i>Leptotyphlops cairi</i> | 218 | NA | EN (B2 a,b i) | Narrow | Narrow | 0.948 \pm 0.058 | 12 |
| 51 | <i>Leptotyphlops macrorhynchus</i> | 17 | NA | VU (D2) | Narrow | Narrow | 0.926 \pm 0.113 | 8 |
| 52 | <i>Eryx colubrinus</i> | 51 | NA | VU (D2) | Narrow | Narrow | 0.91 \pm 0.113 | 8 |

| N | Species | # records | Global IUCN | Egypt National IUCN | World status | Egypt Status | Mean AUC \pm SD | Weighting score |
|----|---------------------------------|-----------|-------------|---------------------|--------------|--------------|-------------------|-----------------|
| 53 | <i>Eryx jaculus</i> | 44 | NA | LC ⁹ | Widespread | Narrow | 0.982 \pm 0.012 | 2 |
| 54 | <i>Eirenis coronella</i> | 22 | NA | VU (D2) | Narrow | localized | 0.985 \pm 0.018 | 12 |
| 55 | <i>Lytorhynchus diadema</i> | 144 | NA | LC | Narrow | Widespread | 0.894 \pm 0.047 | 2 |
| 56 | <i>Macroprotodon cucullatus</i> | 53 | LC | VU (D2) | Widespread | Narrow | 0.985 \pm 0.023 | 4 |
| 57 | <i>Malpolon moilensis</i> | 51 | NA | LC | Narrow | Widespread | 0.874 \pm 0.076 | 2 |
| 58 | <i>Malpolon monspessulanus</i> | 170 | LC | LC | Widespread | Narrow | 0.98 \pm 0.017 | 2 |
| 59 | <i>Natrix tessellata</i> | 96 | LC | VU (D2) | Widespread | localized | 0.978 \pm 0.012 | 6 |
| 60 | <i>Platyceps florulentus</i> | 127 | LC | LC | Narrow | localized | 0.957 \pm 0.027 | 6 |
| 61 | <i>Platyceps rogersi</i> | 45 | NA | LC | Narrow | Widespread | 0.943 \pm 0.071 | 2 |
| 62 | <i>Platyceps saharicus</i> | 34 | NA | LC | Narrow | Narrow | 0.882 \pm 0.097 | 4 |
| 63 | <i>Psammophis aegyptius</i> | 183 | NA | LC | Narrow | Widespread | 0.84 \pm 0.055 | 2 |
| 64 | <i>Psammophis schokari</i> | 371 | NA | LC | Narrow | Widespread | 0.934 \pm 0.03 | 2 |
| 65 | <i>Psammophis sibilans</i> | 283 | LC | LC | Narrow | Narrow | 0.979 \pm 0.009 | 4 |
| 66 | <i>Spalerosophis diadema</i> | 216 | NA | LC | Widespread | Widespread | 0.935 \pm 0.036 | 1 |
| 67 | <i>Telescopus dhara</i> | 56 | NA | LC | Narrow | Narrow | 0.936 \pm 0.074 | 4 |
| 68 | <i>Naja haje</i> | 60 | NA | LC | Narrow | Narrow | 0.961 \pm 0.026 | 4 |
| 69 | <i>Naja nubiae</i> | 14 | NA | VU (D2) | Restricted | Narrow | 0.897 \pm 0.214 | 12 |
| 70 | <i>Walterinnesia aegyptia</i> | 17 | NA | VU (D2) | Restricted | Narrow | 0.887 \pm 0.075 | 12 |

| N | Species | # records | Global IUCN | Egypt National IUCN | World status | Egypt Status | Mean AUC \pm SD | Weighting score |
|----|---------------------------|-----------|-------------------|-----------------------|--------------|--------------|-------------------|-----------------|
| 71 | <i>Cerastes cerastes</i> | 233 | NA | LC | Narrow | Widespread | 0.838 \pm 0.044 | 2 |
| 72 | <i>Cerastes vipera</i> | 551 | NA | LC | Narrow | Widespread | 0.922 \pm 0.038 | 2 |
| 73 | <i>Echis coloratus</i> | 50 | NA | LC | Narrow | Widespread | 0.878 \pm 0.11 | 2 |
| 74 | <i>Echis pyramidum</i> | 59 | NA | LC | Narrow | Widespread | 0.917 \pm 0.128 | 2 |
| 75 | <i>Testudo kleinmanni</i> | 63 | CE (A2 abcd + 3d) | VU (D2) ¹⁰ | Near-Endemic | Narrow | 0.969 \pm 0.026 | 48 |

1. *Hemidactylus flaviviridis*: a very densely populated species and likely to be associated with man.
2. *Pristurus flavipunctatus*: based on its narrow habitat, strict containment in natural habitats, low densities, and high vulnerability of habitat, it does fit the VU category.
3. *Tarentola mindiae*: based on its current distribution, it has quite a large range but a rather narrow habitat. It may be reasonable to be classified at higher threat level (possibly Near Threatened "NT").
4. *Trapelus savignii*: expected to have higher threat level.
5. *Uromastyx ornata*: suggested to have a lower threat level even though its range in Egypt is very small and its population size is smaller as well.
6. *Chamaeleo africanus*: Could be of lower threat category due to its large range in Egypt (essentially the whole Nile Valley) and quite dense populations which are expanding rapidly. It also has a very large African range; even invaded parts of Greece.
7. *Acanthodactylus pardalis*: should have a greater threat level. It is practically extinct!
8. *Chalcides cf. humilis*: more recent data indicate its very widespread distribution in Egypt, it occupies a range equal or greater than that of *C. ocellatus*.
9. *Eryx jaculus*: should be classified at a higher threat status than *E.colubrinus* or at least equal to it. It is almost extinct from Egypt.
10. *Testudo kleinmanni*: in reality it may be extinct.

Table S2: Species classification according to future species range change (percentage of suitable habitats lost or gained - assuming unlimited dispersal).

Abbreviations used: Critically Endangered "CR": loss>80%; Endangered "EN": loss 50-80%; Vulnerable "VU": loss 30-50%; Least Concern "LC": loss<30 %; Gain 1: gain <30%; Gain 2: gain 30-50%; Gain 3: gain 50-80%; Gain 4: gain 80-100%; Gain 5: gain >100%.

| # | Species | A2 2020 | A2 2050 | A2 2080 | B2 2020 | B2 2050 | B2 2080 |
|----|-------------------------------------|------------|------------|------------|------------|------------|------------|
| 1 | <i>Cyrtopodion scabrum</i> | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 2 | <i>Hemidactylus flaviviridis</i> | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 3 | <i>Hemidactylus robustus</i> | CR | CR | EN | EN | CR | CR |
| 4 | <i>Hemidactylus turcicus</i> | Gain 2 | Gain 3 | Gain 3 | Gain 2 | Gain 3 | Gain 3 |
| 5 | <i>Pristurus flavipunctatus</i> | EN | EN | EN | VU | EN | EN |
| 6 | <i>Ptyodactylus guttatus</i> | VU | EN | CR | EN | EN | EN |
| 7 | <i>Ptyodactylus hasselquistii</i> | Gain 1 | Gain 3 | Gain 5 | Gain 1 | Gain 4 | Gain 5 |
| 8 | <i>Ptyodactylus siphonorhina</i> | LC | VU | EN | LC | VU | EN |
| 9 | <i>Stenodactylus mauritanicus</i> | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 |
| 10 | <i>Stenodactylus petrii</i> | LC | LC | VU | Gain 1 | LC | LC |
| 11 | <i>Stenodactylus sthenodactylus</i> | Gain 4 | Gain 5 | Gain 5 | Gain 4 | Gain 5 | Gain 5 |
| 12 | <i>Tarentola annularis</i> | Gain 4 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 13 | <i>Tarentola mauritanica</i> | Gain 1 | VU | EN | LC | VU | EN |
| 14 | <i>Tarentola mindiae</i> | EN | CR | CR | EN | CR | CR |
| 15 | <i>Tropicolotes bisharicus</i> | LC | Gain 1 | LC | Gain 1 | LC | LC |
| 16 | <i>Tropicolotes nattereri</i> | Gain 3 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 17 | <i>Tropicolotes steudneri</i> | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 |
| 18 | <i>Tropicolotes tripolitanus</i> | LC | LC | VU | LC | VU | VU |
| 19 | <i>Agama spinosa</i> | LC | LC | EN | LC | VU | EN |
| 20 | <i>Laudakia stellio</i> | Gain 1 | LC | EN | Gain 3 | Gain 1 | LC |
| 21 | <i>Pseudotrapelus sinaitus</i> | Gain 1 | Gain 3 | Gain 4 | Gain 1 | Gain 3 | Gain 3 |
| 22 | <i>Trapelus mutabilis</i> | VU | EN | CR | VU | EN | CR |
| 23 | <i>Trapelus pallidus</i> | Gain 2 | Gain 3 | Gain 4 | Gain 1 | Gain 3 | Gain 3 |
| 24 | <i>Trapelus savignii</i> | Gain 1 | Gain 4 | Gain 5 | Gain 1 | Gain 3 | Gain 5 |
| 25 | <i>Uromastix aegyptia</i> | LC | VU | EN | VU | VU | VU |
| 26 | <i>Uromastix ocellata</i> | LC | LC | VU | LC | LC | VU |
| 27 | <i>Uromastix ornata</i> | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 28 | <i>Chamaeleo africanus</i> | Gain 2 | Gain 3 | Gain 5 | Gain 1 | Gain 1 | Gain 3 |
| 29 | <i>Chamaeleo chamaeleon</i> | Gain 4 | Gain 5 | Gain 5 | Gain 4 | Gain 5 | Gain 5 |
| 30 | <i>Acanthodactylus aegyptius</i> | LC | LC | VU | LC | LC | VU |
| 31 | <i>Acanthodactylus boskianus</i> | Gain 1 | Gain 1 | Gain 2 | Gain 1 | Gain 1 | Gain 1 |
| 32 | <i>Acanthodactylus longipes</i> | LC | VU | EN | Gain 1 | VU | EN |
| 33 | <i>Acanthodactylus pardalis</i> | Gain 2 | Gain 3 | Gain 1 | Gain 3 | Gain 3 | Gain 2 |
| 34 | <i>Acanthodactylus scutellatus</i> | Gain 2 | Gain 3 | Gain 3 | Gain 2 | Gain 3 | Gain 3 |
| 35 | <i>Mesalina bahaeldini</i> | Gain 2 | Gain 1 | Gain 1 | Gain 1 | Gain 2 | Gain 1 |
| 36 | <i>Mesalina guttulata</i> | Gain 2 | Gain 3 | Gain 5 | Gain 2 | Gain 3 | Gain 5 |
| 37 | <i>Mesalina olivieri</i> | Gain 4 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |

| # | Species | A2 2020 | A2 2050 | A2 2080 | B2 2020 | B2 2050 | B2 2080 |
|----|------------------------------------|------------|------------|------------|------------|------------|------------|
| 38 | <i>Mesalina pasteuri</i> | LC | Gain 3 | Gain 5 | LC | Gain 3 | Gain 5 |
| 39 | <i>Mesalina rubropunctata</i> | Gain 3 | Gain 5 | Gain 5 | Gain 3 | Gain 5 | Gain 5 |
| 40 | <i>Ophisops occidentalis</i> | Gain 1 | LC | LC | Gain 1 | Gain 1 | LC |
| 41 | <i>Varanus griseus</i> | Gain 1 | Gain 3 | Gain 4 | Gain 1 | Gain 3 | Gain 3 |
| 42 | <i>Varanus niloticus</i> | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 43 | <i>Chalcides cf. humilis</i> | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 | Gain 5 |
| 44 | <i>Chalcides ocellatus</i> | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 | Gain 1 |
| 45 | <i>Eumeces schneiderii</i> | LC | EN | CR | LC | EN | CR |
| 46 | <i>Scincus scincus</i> | LC | LC | VU | Gain 1 | LC | VU |
| 47 | <i>Sphenops sepsoides</i> | Gain 1 | Gain 1 | EN | Gain 1 | Gain 1 | LC |
| 48 | <i>Trachylepis quinquetaeniata</i> | Gain 3 | Gain 5 | Gain 5 | Gain 3 | Gain 5 | Gain 5 |
| 49 | <i>Trachylepis vittata</i> | Gain 3 | Gain 5 | Gain 5 | Gain 3 | Gain 5 | Gain 5 |
| 50 | <i>Leptotyphlops cairi</i> | Gain 1 | Gain 3 | Gain 5 | Gain 1 | Gain 2 | Gain 4 |
| 51 | <i>Leptotyphlops macrorhynchus</i> | LC | VU | EN | LC | VU | EN |
| 52 | <i>Eryx colubrinus</i> | Gain 1 | Gain 1 | Gain 3 | Gain 1 | Gain 1 | Gain 2 |
| 53 | <i>Eryx jaculus</i> | VU | EN | CR | VU | EN | EN |
| 54 | <i>Eirenis coronella</i> | Gain 2 | Gain 1 | LC | Gain 3 | Gain 2 | Gain 1 |
| 55 | <i>Lytorhynchus diadema</i> | Gain 1 | LC | LC | Gain 1 | Gain 1 | LC |
| 56 | <i>Macroprotodon cucullatus</i> | Gain 2 | Gain 3 | Gain 5 | Gain 2 | Gain 3 | Gain 3 |
| 57 | <i>Malpolon moilensis</i> | VU | EN | CR | EN | EN | CR |
| 58 | <i>Malpolon monspessulanus</i> | Gain 1 | LC | VU | Gain 1 | LC | VU |
| 59 | <i>Natrix tessellata</i> | Gain 1 | Gain 1 | Gain 2 | Gain 1 | Gain 1 | Gain 2 |
| 60 | <i>Platyceps florulentus</i> | Gain 1 | Gain 1 | Gain 2 | Gain 1 | Gain 2 | Gain 1 |
| 61 | <i>Platyceps rogersi</i> | Gain 3 | Gain 5 | Gain 5 | Gain 2 | Gain 4 | Gain 5 |
| 62 | <i>Platyceps saharicus</i> | LC | Gain 1 | Gain 2 | LC | Gain 1 | Gain 1 |
| 63 | <i>Psammophis aegyptius</i> | Gain 2 | Gain 1 | Gain 1 | Gain 1 | Gain 2 | Gain 1 |
| 64 | <i>Psammophis schokari</i> | Gain 1 | LC | EN | Gain 1 | Gain 1 | VU |
| 65 | <i>Psammophis sibilans</i> | LC | LC | Gain 1 | LC | LC | LC |
| 66 | <i>Spalerosophis diadema</i> | Gain 1 | Gain 2 | Gain 2 | Gain 1 | Gain 2 | Gain 2 |
| 67 | <i>Telescopus dhara</i> | LC | LC | VU | LC | VU | VU |
| 68 | <i>Naja haje</i> | LC | VU | EN | LC | VU | EN |
| 69 | <i>Naja nubiae</i> | Gain 3 | Gain 5 | Gain 3 | Gain 4 | Gain 3 | Gain 5 |
| 70 | <i>Walterinnesia aegyptia</i> | LC | VU | EN | VU | VU | VU |
| 71 | <i>Cerastes cerastes</i> | Gain 3 | Gain 4 | Gain 5 | Gain 2 | Gain 4 | Gain 4 |
| 72 | <i>Cerastes vipera</i> | Gain 1 | VU | CR | LC | LC | EN |
| 73 | <i>Echis coloratus</i> | Gain 1 | Gain 1 | Gain 1 | LC | LC | Gain 1 |
| 74 | <i>Echis pyramidum</i> | LC | LC | LC | LC | LC | LC |
| 75 | <i>Testudo kleinmanni</i> | Gain 1 | Gain 2 | Gain 2 | Gain 1 | Gain 1 | Gain 1 |

Table: S3: Species classification according to future species range change (percentage of suitable habitats lost - assuming no-dispersal).

Abbreviations used: Critically Endangered "CR": loss>80%; Endangered "EN": loss 50-80%; Vulnerable "VU": loss 30-50%; Least Concern "LC": loss<30 %.

| # | Species | A2 2020 | A2 2050 | A2 2080 | B2 2020 | B2 2050 | B2 2080 |
|----|-------------------------------------|------------|------------|------------|------------|------------|------------|
| 1 | <i>Cyrtopodion scabrum</i> | LC | LC | LC | LC | LC | LC |
| 2 | <i>Hemidactylus flaviviridis</i> | LC | LC | LC | LC | LC | LC |
| 3 | <i>Hemidactylus robustus</i> | CR | CR | EN | EN | CR | CR |
| 4 | <i>Hemidactylus turcicus</i> | LC | LC | LC | LC | LC | LC |
| 5 | <i>Pristurus flavipunctatus</i> | EN | EN | EN | EN | EN | EN |
| 6 | <i>Ptyodactylus guttatus</i> | EN | EN | CR | EN | EN | CR |
| 7 | <i>Ptyodactylus hasselquistii</i> | LC | LC | LC | LC | LC | LC |
| 8 | <i>Ptyodactylus siphonorhina</i> | VU | EN | CR | VU | EN | EN |
| 9 | <i>Stenodactylus mauritanicus</i> | LC | LC | LC | LC | LC | LC |
| 10 | <i>Stenodactylus petrii</i> | LC | LC | VU | LC | LC | LC |
| 11 | <i>Stenodactylus sthenodactylus</i> | LC | LC | LC | LC | LC | LC |
| 12 | <i>Tarentola annularis</i> | LC | LC | LC | LC | LC | LC |
| 13 | <i>Tarentola mauritanica</i> | LC | VU | EN | LC | VU | EN |
| 14 | <i>Tarentola mindiae</i> | EN | CR | CR | EN | CR | CR |
| 15 | <i>Tropicolotes bisharicus</i> | LC | LC | VU | LC | LC | LC |
| 16 | <i>Tropicolotes nattereri</i> | LC | LC | LC | LC | LC | LC |
| 17 | <i>Tropicolotes steudneri</i> | LC | VU | EN | VU | VU | EN |
| 18 | <i>Tropicolotes tripolitanus</i> | LC | VU | VU | LC | VU | VU |
| 19 | <i>Agama spinosa</i> | LC | VU | EN | VU | VU | EN |
| 20 | <i>Laudakia stellio</i> | LC | VU | EN | LC | LC | VU |
| 21 | <i>Pseudotrapelus sinaitus</i> | LC | LC | LC | LC | LC | LC |
| 22 | <i>Trapelus mutabilis</i> | VU | CR | CR | EN | EN | CR |
| 23 | <i>Trapelus pallidus</i> | LC | LC | LC | LC | LC | LC |
| 24 | <i>Trapelus savignii</i> | LC | LC | LC | LC | LC | LC |
| 25 | <i>Uromastix aegyptia</i> | EN | EN | EN | EN | EN | EN |
| 26 | <i>Uromastix ocellata</i> | LC | LC | EN | LC | LC | VU |
| 27 | <i>Uromastix ornata</i> | LC | LC | LC | LC | LC | LC |
| 28 | <i>Chamaeleo africanus</i> | LC | LC | LC | LC | LC | LC |
| 29 | <i>Chamaeleo chamaeleon</i> | LC | LC | LC | LC | LC | LC |
| 30 | <i>Acanthodactylus aegyptius</i> | LC | VU | EN | LC | VU | VU |
| 31 | <i>Acanthodactylus boskianus</i> | LC | LC | LC | LC | LC | LC |
| 32 | <i>Acanthodactylus longipes</i> | VU | EN | CR | VU | EN | EN |
| 33 | <i>Acanthodactylus pardalis</i> | LC | LC | LC | LC | LC | LC |
| 34 | <i>Acanthodactylus scutellatus</i> | LC | LC | LC | LC | LC | LC |
| 35 | <i>Mesalina bahaeldini</i> | LC | LC | VU | LC | LC | LC |
| 36 | <i>Mesalina guttulata</i> | LC | LC | LC | LC | LC | LC |
| 37 | <i>Mesalina olivieri</i> | LC | LC | LC | LC | LC | LC |
| 38 | <i>Mesalina pasteuri</i> | VU | LC | LC | VU | VU | LC |

| # | Species | A2 2020 | A2 2050 | A2 2080 | B2 2020 | B2 2050 | B2 2080 |
|----|------------------------------------|------------|------------|------------|------------|------------|------------|
| 39 | <i>Mesalina rubropunctata</i> | LC | LC | LC | LC | LC | LC |
| 40 | <i>Ophisops occidentalis</i> | LC | LC | VU | LC | LC | LC |
| 41 | <i>Varanus griseus</i> | LC | LC | LC | LC | LC | LC |
| 42 | <i>Varanus niloticus</i> | LC | LC | LC | LC | LC | LC |
| 43 | <i>Chalcides cf. humilis</i> | LC | LC | LC | LC | LC | LC |
| 44 | <i>Chalcides ocellatus</i> | LC | LC | VU | LC | LC | VU |
| 45 | <i>Eumeces schneiderii</i> | LC | EN | CR | LC | EN | CR |
| 46 | <i>Scincus scincus</i> | LC | VU | EN | LC | LC | VU |
| 47 | <i>Sphenops sepsoides</i> | LC | VU | EN | LC | VU | EN |
| 48 | <i>Trachylepis quinquetaeniata</i> | LC | LC | LC | LC | LC | LC |
| 49 | <i>Trachylepis vittata</i> | LC | LC | LC | LC | LC | LC |
| 50 | <i>Leptotyphlops cairi</i> | LC | LC | LC | LC | LC | LC |
| 51 | <i>Leptotyphlops macrorhynchus</i> | VU | VU | EN | VU | VU | EN |
| 52 | <i>Eryx colubrinus</i> | LC | LC | LC | LC | LC | LC |
| 53 | <i>Eryx jaculus</i> | VU | EN | CR | VU | EN | EN |
| 54 | <i>Eirenis coronella</i> | LC | LC | VU | LC | LC | LC |
| 55 | <i>Lytrochynchus diadema</i> | LC | LC | LC | LC | LC | LC |
| 56 | <i>Macroprotodon cucullatus</i> | LC | LC | LC | LC | LC | LC |
| 57 | <i>Malpolon moilensis</i> | EN | EN | CR | EN | EN | CR |
| 58 | <i>Malpolon monspessulanus</i> | LC | LC | VU | LC | LC | VU |
| 59 | <i>Natrix tessellata</i> | LC | LC | LC | LC | LC | LC |
| 60 | <i>Platycephalus florulentus</i> | LC | LC | VU | LC | LC | VU |
| 61 | <i>Platycephalus rogersi</i> | LC | LC | LC | LC | LC | LC |
| 62 | <i>Platycephalus saharicus</i> | VU | VU | VU | VU | VU | EN |
| 63 | <i>Psammophis aegyptius</i> | LC | LC | LC | LC | LC | LC |
| 64 | <i>Psammophis schokari</i> | LC | VU | EN | LC | VU | VU |
| 65 | <i>Psammophis sibilans</i> | VU | VU | VU | VU | VU | EN |
| 66 | <i>Spalerosophis diadema</i> | LC | VU | VU | LC | VU | VU |
| 67 | <i>Telescopus dhara</i> | VU | EN | EN | VU | EN | EN |
| 68 | <i>Naja haje</i> | LC | VU | EN | LC | VU | EN |
| 69 | <i>Naja nubiae</i> | LC | LC | VU | LC | LC | LC |
| 70 | <i>Walterinnesia aegyptia</i> | LC | VU | EN | VU | VU | VU |
| 71 | <i>Cerastes cerastes</i> | LC | LC | LC | LC | LC | LC |
| 72 | <i>Cerastes vipera</i> | LC | EN | CR | LC | VU | EN |
| 73 | <i>Echis coloratus</i> | LC | LC | LC | LC | LC | LC |
| 74 | <i>Echis pyramidum</i> | LC | LC | VU | VU | LC | VU |
| 75 | <i>Testudo kleinmanni</i> | LC | LC | LC | LC | LC | LC |

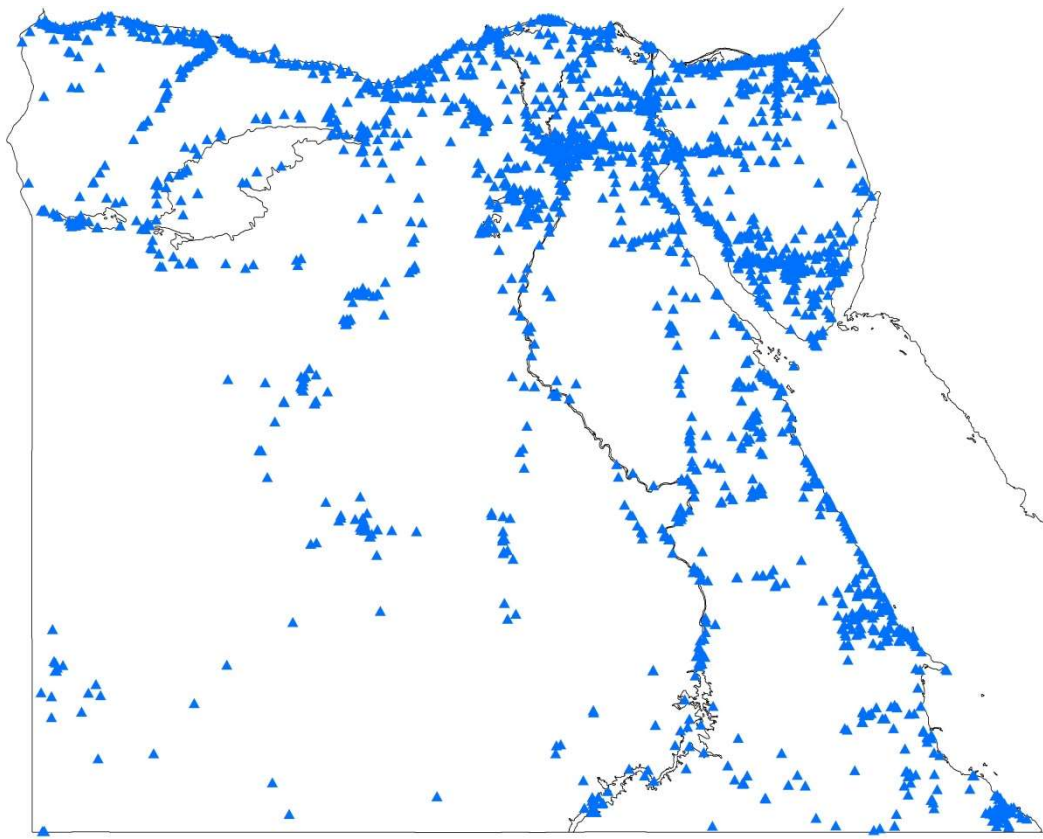
Table S4: Different scores of different parameters used to calculate relative species weight.

| Global IUCN status | score |
|-----------------------|-------|
| Not assessed | 1 |
| Least concern | 1 |
| Vulnerable | 2 |
| Critically Endangered | 3 |

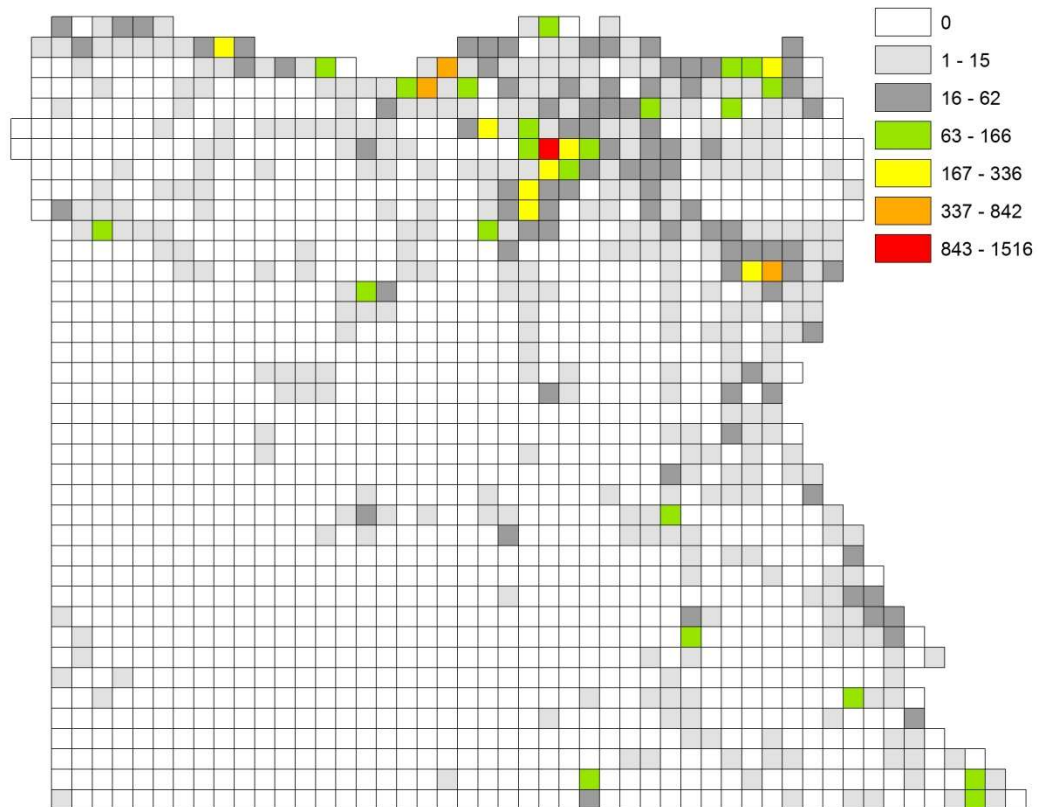
| National IUCN status | score |
|----------------------|-------|
| Least Concern | 1 |
| Vulnerable - D2 | 2 |
| Endangered | 3 |

| Species world distribution | score |
|----------------------------|-------|
| Widespread | 1 |
| Narrow | 2 |
| Restricted | 3 |
| Endemic/Near Endemic | 4 |

| Distribution patterns within Egypt | score |
|------------------------------------|-------|
| Widespread | 1 |
| Narrow | 2 |
| localized | 3 |

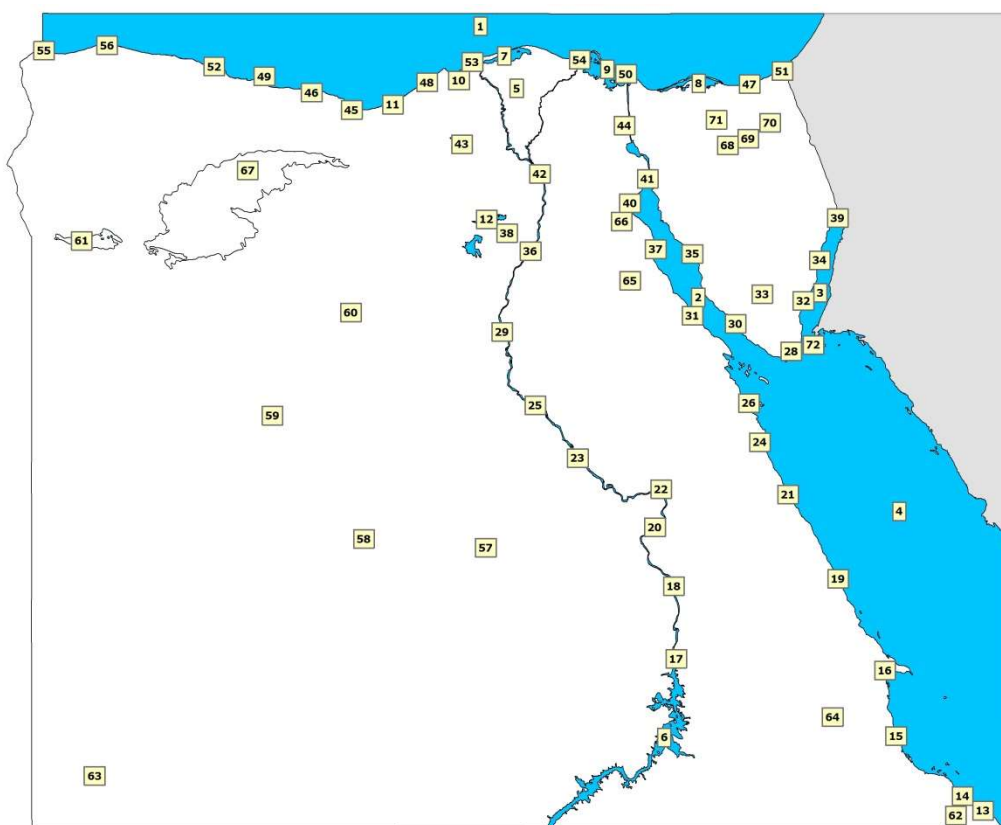


(a)



(b)

Fig. S1: The distribution of (a) all Egyptian reptile records; and (b) the number of records per grid square at a scale of a $\frac{1}{4}$ of a degree.

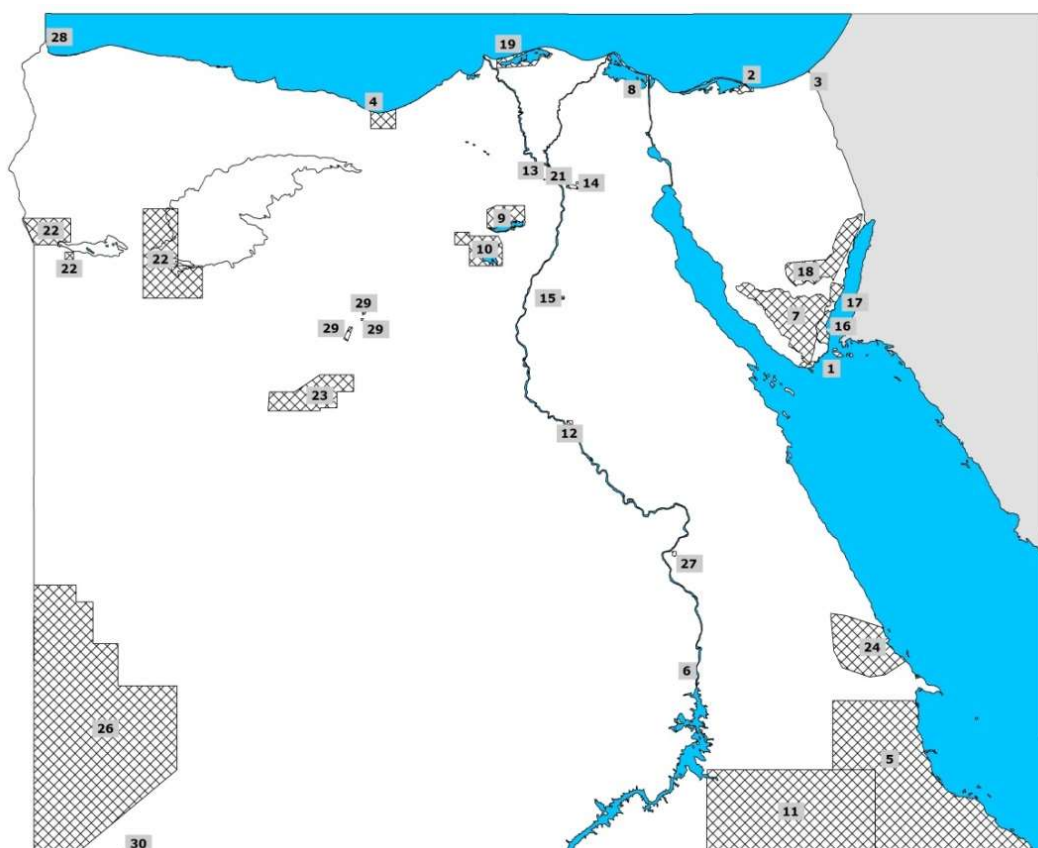


| | |
|----|-----------------------|
| 1 | The Mediterranean Sea |
| 2 | The Suez Gulf |
| 3 | The Aqaba Gulf |
| 4 | The Red Sea |
| 5 | The Nile Delta |
| 6 | Lake Nasser |
| 7 | Lake Brullus |
| 8 | Lake Bardawil |
| 9 | Lake Manzala |
| 10 | Lake Idku |
| 11 | Lake Mariut |
| 12 | Lake Qarun |
| 13 | Halayeb |
| 14 | Abu Ramad |
| 15 | Al-Shalatein |
| 16 | Berenice |
| 17 | Aswan |
| 18 | Edfu |
| 19 | Mersa Alam |
| 20 | Luxor |
| 21 | El-Quseir |
| 22 | Qena |
| 23 | Sohag |
| 24 | Safaga |

| | |
|----|-------------------|
| 25 | Assiut |
| 26 | Hurghada |
| 27 | Ras Mohamed |
| 28 | Sharm El-Sheikh |
| 29 | El-Minia |
| 30 | El-Tur |
| 31 | Ras Gharib |
| 32 | Dahab |
| 33 | Saint-Katherine |
| 34 | Nuweiba |
| 35 | Abu Zneima |
| 36 | Beni Suef |
| 37 | Ras Zaafarana |
| 38 | Fayoum |
| 39 | Taba |
| 40 | Ain Sukhna |
| 41 | Suez |
| 42 | The greater Cairo |
| 43 | Wadi El-Natrun |
| 44 | Ismailia |
| 45 | El-Alamein |
| 46 | El-Dabaa |
| 47 | El-Arish |
| 48 | Alexandria |

| | |
|----|------------------------------|
| 49 | Ras El-Hekma |
| 50 | Port-Said |
| 51 | Rafah |
| 52 | Mersa Matruh |
| 53 | Rosetta |
| 54 | Damietta |
| 55 | Sallum |
| 56 | Sidi Barrani |
| 57 | Kharga oasis |
| 58 | Dakhla oasis |
| 59 | Farafra oasis |
| 60 | Bahariya oasis |
| 61 | Siwa oasis |
| 62 | Gebel Elba area |
| 63 | El-Gilf El-Kebir |
| 64 | Gebel Abraq area |
| 65 | Gebel El-Gallala El-Qibliya |
| 66 | Gebel El-Gallala El-Bahariya |
| 67 | Qattara Depression |
| 68 | Gebel Yillaq |
| 69 | El-Hassana |
| 70 | Gebel El-Hallal |
| 71 | Gebel El-Maghara |
| 72 | Tiran & Sanafir islands |

Fig. S2: A map showing the outline of Egypt's political boundaries overlain with the main cities and geographical locations mentioned in this study.



| No. | Protectorate Name | Declaration Date | Area Km ² | Governorate |
|-----|---------------------------------|------------------|----------------------|------------------------------|
| 1 | Ras Mohamed National Park | 1983 | 850 | South Sinai |
| 2 | Zaranik Protectorate | 1985 | 230 | North Sinai |
| 3 | Ahrash Protectorate | 1985 | 8 | North Sinai |
| 4 | El-Omayed Protectorate | 1986 | 700 | Matrouh |
| 5 | Elba National Park | 1986 | 35600 | Red Sea |
| 6 | Saluga and Ghazal Protectorate | 1986 | 0.5 | Aswan |
| 7 | St. Katherine National Park | 1988 | 4250 | South Sinai |
| 8 | Ashtum El-Gamil Protectorate | 1988 | 180 | Port Said |
| 9 | Lake Qarun Protectorate | 1989 | 250 | El Fayoum |
| 10 | Wadi El-Rayan Protectorate | 1989 | 1225 | El Fayoum |
| 11 | Wadi Allaqi Protectorate | 1989 | 30000 | Aswan |
| 12 | Wadi El-Assuti Protectorate | 1989 | 35 | Assuit |
| 13 | El Hassana Dome Protectorate | 1989 | 1 | Giza |
| 14 | Petrified Forest Protectorate | 1989 | 7 | Cairo |
| 15 | Sannur Cave Protectorate | 1992 | 12 | Beni Suef |
| 16 | Nabq Protectorate | 1992 | 600 | South Sinai |
| 17 | Abu Galum Protectorate | 1992 | 500 | South Sinai |
| 18 | Taba Protectorate | 1998 | 3595 | South Sinai |
| 19 | Lake Burullus Protectorate | 1998 | 460 | Kafr El Sheikh |
| 20 | Nile Islands Protectorates * | 1998 | 160 | All Governorates on the Nile |
| 21 | Wadi Degla Protectorate | 1999 | 60 | Cairo |
| 22 | Siwa | 2002 | 7800 | Matrouh |
| 23 | White Desert | 2002 | 3010 | Matrouh |
| 24 | Wadi El-Gemal/Hamata | 2003 | 7450 | Red Sea |
| 25 | Red Sea Northern Islands * | 2006 | 1991 | Red Sea |
| 26 | El-Gilf El-Kebir | 2007 | 48523 | New Valley |
| 27 | El-Dababya | 2007 | 1 | Qena |
| 28 | El-Salum Gulf | 2010 | 383 | Matrouh |
| 29 | El-Wahat El-Bahreya | 2010 | 109 | 6th October |
| 30 | Mount Kamel Meteor Protectorate | 2012 | 1 | New Valley |

Fig. S3: A map showing the outline of Egypt's political boundaries overlain with the Protected Areas.

Protected Areas with * symbols are not shown in the map.

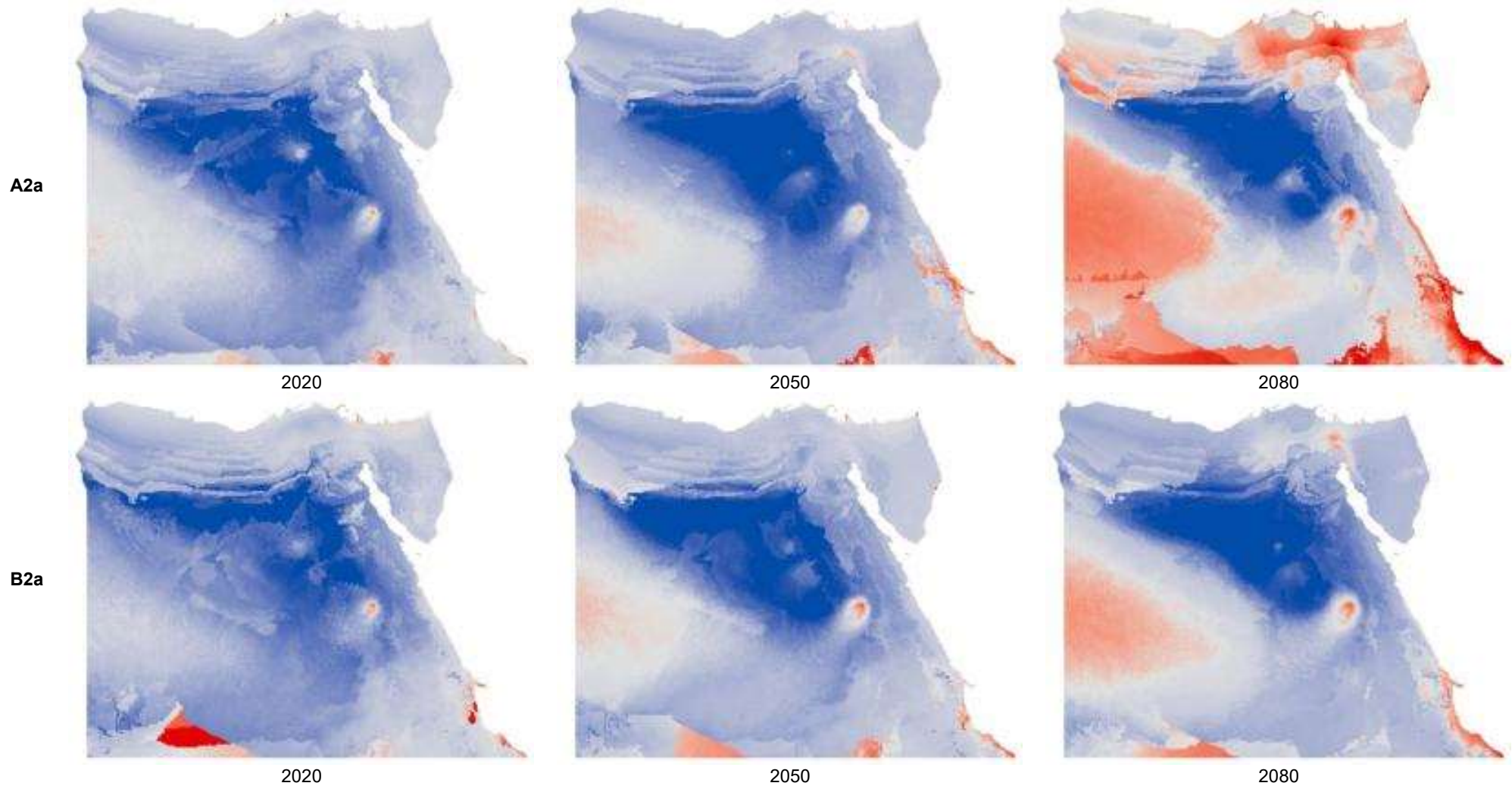
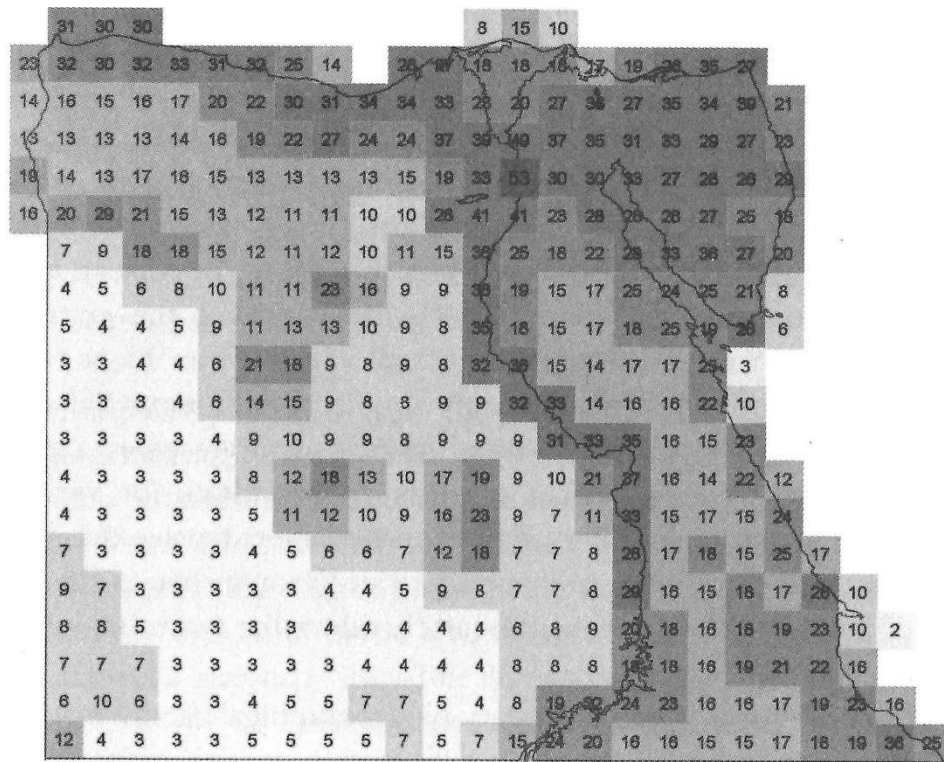
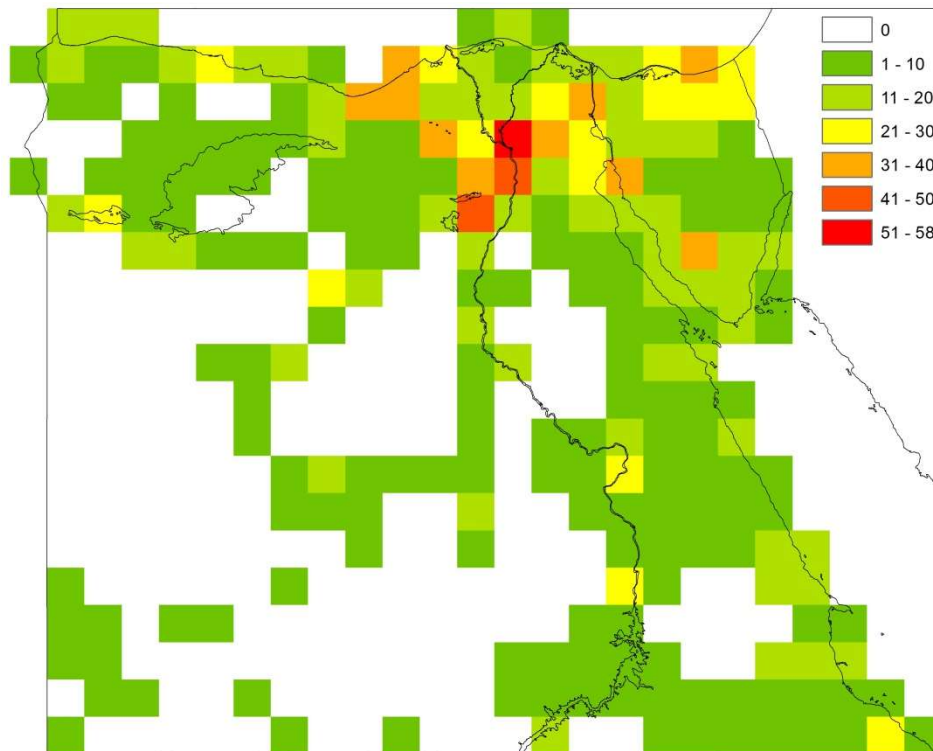


Fig. S4: Average MESS (Multivariate Environmental Similarity Surfaces; Elith *et al.* 2011) maps of different global circulation models showing areas of future novel climates.

Colours ranges from blue (indicating similar future climate conditions compared to the current; the darker the blue, the higher the similarity) to red (indicating dissimilar climates compared to the current; the darker the red colour, the higher the dissimilarity). Results for dark red areas should be interpreted with caution.



(a)



(b)

Fig. S5: (a) The number of recorded/suspected amphibian and non-marine reptile species per 0.5° grid (from Baha El Din, 2006); (b) the predicted number of species under current conditions from this study (from thresholded distributions).

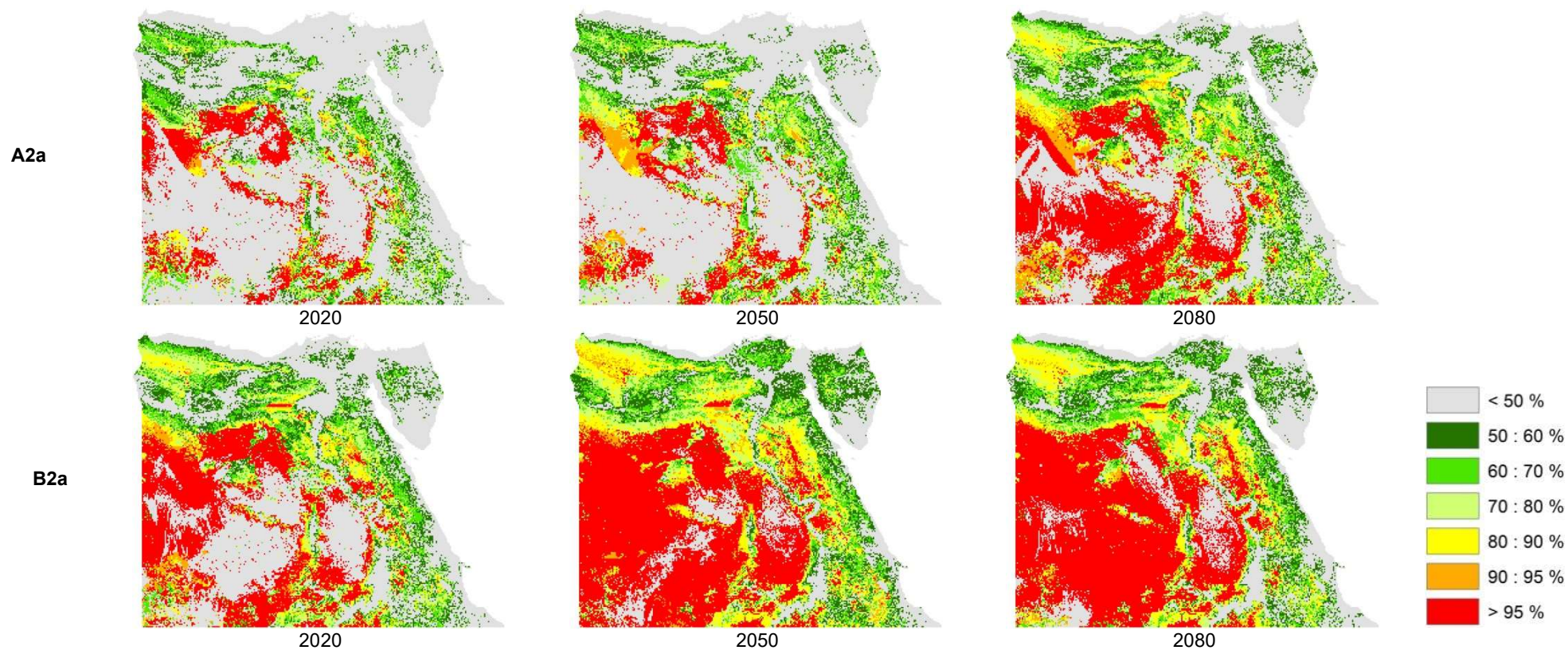


Fig. S6a: Future species turnover (a measure of dissimilarity between current and future species composition) assuming unlimited dispersal. Colour range from grey (low species turnover – small species composition change in the future) to dark red (high species turnover – high species composition change in the future).

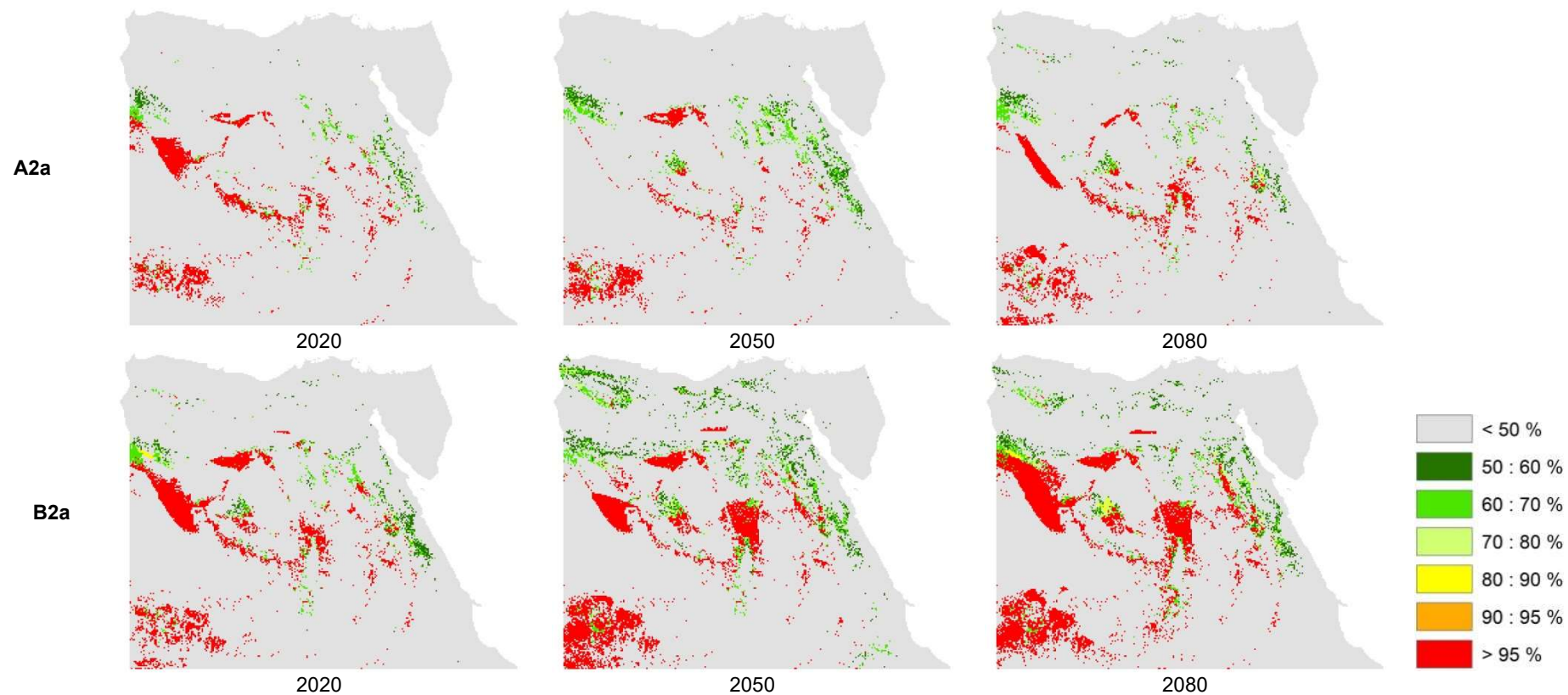


Fig. S6b: Future species turnover (a measure of dissimilarity between current and future species composition) assuming no-dispersal. Colour range from grey (low species turnover – small species composition change in the future) to dark red (high species turnover – high species composition change in the future).