



Figures and figure supplements

Updates to the zoonotic niche map of Ebola virus disease in Africa

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Figure 1. Updated Ebola virus disease occurrence database. Human index cases are represented by red circles, animal occurrences in blue. New occurrence information is indicated by the black circle. The coordinates of polygon centroids are displayed for occurrences defined by an area greater than 5 km x 5 km.

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Figure 2. Combined suitability surfaces for each of the potential reservoir bat groupings. For each layer the species specific suitability maps were combined to produce a surface approximating the probability that any bat species in that group may be present. Regions in blue (1) are most environmentally similar to locations reporting bat records. Areas in yellow (0) are the least environmentally similar. The top left panel depicts Group 1, top right Group 2 and bottom left Group 3 bats. DOI: 10.7554/eLife.16412.003



Figure 2—figure supplement 1. Group 1 bat distributions. The environmental suitability for each of the three bat species in Group 1 are displayed. Regions in dark blue (1) are most environmentally similar to locations reporting bat records. Areas in white (0) are the least environmentally similar. The black outline depicts the expert opinion range maps as determined by the International Union for the Conservation of Nature (*Schipper et al., 2008*) and the black dots represent occurrence records reported by the Global Biodiversity Information Facility (www.gbif.org/) and from published peerreviewed articles. From top left, clockwise: *Epomops franqueti, Hypsignathus monstrosus*, summary Group 1 layer combining all three maps, and *Myonycteris torquata*.

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Figure 2—figure supplement 2. Group 2 bat distributions. The environmental suitability for each of the five bat species in Group 2 are displayed. Regions in dark blue (1) are most environmentally similar to locations reporting bat records. Areas in white (0) are the least environmentally similar. The black outline depicts the expert opinion range maps as determined by the International Union for the Conservation of Nature (*Schipper et al., 2008*) and the black dots represent occurrence records reported by the Global Biodiversity Information Facility (www.gbif. org/). From top left, clockwise: *Tadarida condylura, Rousettus aegyptiacus, Miniopterus pusillus,* summary Group 2 layer combining all five maps, *Eidolon helvum,* and *Epomophorus gambianus.*



Figure 2—figure supplement 3. Group 3 bat distributions. The environmental suitability for each of the seven bat species in Group 3 are displayed. Regions in dark blue (1) are most environmentally similar to locations reporting bat records. Areas in white (0) are the least environmentally similar. The black outline depicts the expert opinion range maps as determined by the International Union for the Conservation of Nature (*Schipper et al., 2008*) and the black dots represent occurrence records reported by the Global Biodiversity Information Facility (www.gbif. org/). From top left, clockwise: *Epomops buettikoferi, Miniopterus schreibersii, Epomophorus labiatus, Miniopterus inflatus,* summary Group 3 layer combining all seven maps, *Otomops martiensseni, Hipposideros gigas,* and *Rhinolophus eloquens.*

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Figure 3. Updated map showing areas most environmentally suitable for the zoonotic transmission of Ebola virus. Areas closer to dark red (1) are most environmentally similar to locations reporting Ebola virus occurrences; areas in light yellow (0) are least similar. Countries with borders outlined are those which are predicted to contain at-risk areas for zoonotic transmission based on a thresholding approach. Output displayed generated from model using the three consolidated bat covariates. DOI: 10.7554/eLife.16412.007



Figure 3—figure supplement 1. Absolute differences between previous and revised maps. Generated by subtracting the original eLife publication pixel probabilities from the newly generated values and restricted to those areas determined to be at-risk. Areas in yellow are essentially consistent. Areas in purple have probability values greater than the previous output; areas in green have probability values lower than previous outputs. DOI: 10.7554/eLife.16412.008



Figure 3—figure supplement 2. Zoonotic niche map based upon inclusion of individual bat covariate layers. Areas closer to dark red (1) are most environmentally similar to locations reporting Ebola virus occurrences; areas in light yellow (0) are least similar. Countries with borders outlined are those which are predicted to contain at-risk areas for zoonotic transmission based on a thresholding approach. Output displayed generated from model using individual bat covariate layers.

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