

Table S1. Environmental variables and Global Climate Models were used in this study. Fourteen variables for predicting the current breeding range were bolded.

---

<b>Environmental variables</b>	
<b>WorldClim_BIO1</b>	Annual Mean Temperature
<b>WorldClim_BIO2</b>	Mean Diurnal Range (Mean of monthly (max temp - min temp))
WorldClim_BIO3	Isothermally (BIO2/BIO7) ( $\times 100$ )
<b>WorldClim_BIO4</b>	Temperature Seasonality (standard deviation $\times 100$ )
WorldClim_BIO5	Max Temperature of Warmest Month
WorldClim_BIO6	Min Temperature of Coldest Month
WorldClim_BIO7	Temperature Annual Range (BIO5-BIO6)
<b>WorldClim_BIO8</b>	Mean Temperature of Wettest Quarter
<b>WorldClim_BIO9</b>	Mean Temperature of Driest Quarter
WorldClim_BIO10	Mean Temperature of Warmest Quarter
<b>WorldClim_BIO11</b>	Mean Temperature of Coldest Quarter
<b>WorldClim_BIO12</b>	Annual Precipitation
WorldClim_BIO13	Precipitation of Wettest Month
WorldClim_BIO14	Precipitation of Driest Month
<b>WorldClim_BIO15</b>	Precipitation Seasonality (Coefficient of Variation)
WorldClim_BIO16	Precipitation of Wettest Quarter
<b>WorldClim_BIO17</b>	Precipitation of Driest Quarter
WorldClim_BIO18	Precipitation of Warmest Quarter
WorldClim_BIO19	Precipitation of Coldest Quarter
<b>WorldClim_ELEV</b>	Elevation
<b>LAND_COVER5</b>	Shrubs
<b>LAND_COVER6</b>	Herbaceous Vegetation
LAND_COVER8	Regularly Flooded Vegetation
LAND_COVER10	Snow/Ice
LAND_COVER11	Barren

LAND\_COVER12 Open Water

**HFP** Global Human Footprint (1995-2004) v2

HII Global Human Influence Index (1995-2004) v2

**NDVI** May-July, 2014-2018

---

**Global Climate Models and Modelling Centre**

---

GFDL-CM3 NOAA Geophysical Fluid Dynamics Laboratory

MIROC-ESM Japan Agency for Marine-Earth Science and Technology, Atmosphere and Ocean  
Research Institute (The University of Tokyo), and National Institute for Environmental  
Studies

---