
Veronica F. Frans

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OBJECTIVE: *To use my international experience, cultural sensitivity and scientific background to develop tools and frameworks for conservation and management.*

QUALIFICATIONS:

- Professional experience in ecological and biological research (domestic and abroad)
- Extensive training in ecological modeling, e.g. species distribution (SDMs), population, system dynamics, time series, meta-analysis and expert opinion-based methods
- Worldwide training in identification and handling of fish, birds and marine mammals
- Worked in various conditions, including international, marine and harsh climates, and remote, isolated communities
- Excellent interpersonal skills, gained through relations with key stakeholders and decision-makers, international collaborations and interviews to elicit knowledge

COMPUTER SKILLS: **Geographic Information Systems** (ArcGIS, Python, R, QGIS, SAGA GIS); **Data Management** (R, Excel, ATLAS); **Statistical Analysis** (R, Python, C++, STATISTICA); **Ecological/Social System Modeling** (R, Maxent, NetLogo, RAMAS Metapop, HexSim, STELLA, Python, Mathematica); **Agent-Based Modeling** (Python, NetLogo)

EDUCATION:

Dual PhD: Fisheries & Wildlife/Ecology, Evolutionary Biology & Behavior
Michigan State University, expected May 2023, East Lansing, MI; GPA 3.98/4.0

Dual Master of Science: International Nature Conservation
Georg-August-Universität-Göttingen, January 2015, Göttingen, Germany; GPA 4.0/4.0
Lincoln University, January 2015, Christchurch, New Zealand; GPA 4.0/4.0

Bachelor of Science: Environmental Science (Spanish minor); Bachelor of Arts: French
Messiah College, May 2007, Mechanicsburg, PA; GPA 3.64/4.0

Environmental Analyst Certificate
Au Sable Institute of Environmental Studies, Aug. 2008, Mancelona, MI; GPA 3.60/4.0

STUDY ABROAD:

NILS Japanese Language School, Fukuoka, Japan, Jan. - Mar. 2011; Feb. - Mar. 2012

Bishop Heber Au Sable Institute, Tiruchirappalli, India, Dec. - Jan. 2006; GPA 4.0/4.0

Universidad San Francisco de Quito, Quito, Ecuador, Aug. - Dec. 2005; GPA 3.80/4.0

Université Marc Bloch - Institut International d'Études Françaises, Strasbourg, France, Jan. - May 2005; GPA 3.94/4.0

LANGUAGES: Proficient in **English** (native), **Spanish** (DELE-B2) and **French** (DELF-B2)
Intermediate in **Japanese** (JLPT-N4), **Brazilian Portuguese** and **German**

RELATED WORK EXPERIENCE:

CONSERVATION CONSULTANT

NEW ZEALAND DEPARTMENT OF CONSERVATION
Wellington, New Zealand (remote) Feb. 2019 - Jun. 2019

- Initiated and completed a project creating an integrated species distribution modeling database for decision-making and management of the New Zealand sea lion (*Phocarctos hookeri*).

NATIONAL MARINE FISHERIES SERVICE (NMFS) OBSERVER
SALTWATER, INC.
Anchorage, AK, USA Apr. 2009 - Nov. 2013; Apr. - Jun. 2015; Aug. 2016 - Dec. 2017

- Certified for sampling in the U.S. North Pacific Groundfish Fisheries Program

- Sampled for species composition on commercial longline, trawl, pot and factory vessels throughout the Gulf of Alaska and Bering Sea (> 800 sea days)
- Constructed sound sampling designs to sort, weigh and collect specimens for species of interest and estimate total catch, sending data via ATLAS for analysis

MARINE SPATIAL PLANNING (MSP) RESEARCH ASSISTANT

SOUTH ATLANTIC ENVIRONMENTAL RESEARCH INSTITUTE

Stanley, Falkland Islands

Aug. 2015 - Jun. 2016

- Collated, mapped and compared historical and contemporary occurrence data on baleen whales in the Falkland Islands' waters
- Interviewed locals and marine users for anecdotal evidence on whale presence
- Modeled baleen whale distribution for MSP and government decision-making
- Wrote grant proposals and successfully received a grant for MSP research
- Assisted in GPS-tagging and tracking of black-browed albatross, whale stranding data collection (necropsies), and writing and editing of scientific manuscripts

RESEARCH INTERN

HONG KONG DOLPHIN CONSERVATION SOCIETY

Hong Kong, SAR China

Nov. 2012 - Feb. 2013

- Conducted line-transect vessel surveys for distribution/abundance of the Indo-Pacific Humpback Dolphin (*Sousa chinensis*) and Finless Porpoise (*Neophocaena phocaenoides*), as well as acoustic surveys and land-based theodolite tracking
- Recorded effort data and took photos for individual photo-identification
- Submitted a weekly report of activities and maintained the internship blog website

PROGRAM ASSOCIATE

SUN MOUNTAIN INTERNATIONAL (SMIC)

Quito, Ecuador

Aug. 2005 - Jan. 2006; Oct. 2006; Jun. 2007

- Prepared proposals, workshops on environmental impact assessments, meeting minutes and final reports for non-profit organizations (e.g., CARE, USAID/LAC, Save the Children, World Vision), and translated documents (Spanish-English)

MANAGER'S ASSISTANT

VERTE VALLÉE: LA GRIVELIÈRE

Vieux-Habitants, Guadeloupe

Jan. 2007

- Assisted in ecotourism management and restaurant service on a coffee plantation
- Translated for tours (French-English)

RESEARCH ASSISTANT

MESSIAH COLLEGE BIOLOGY DEPARTMENT

Mechanicsburg, PA, USA

Sep. - Dec. 2004

- Participated in a study on the effects of *Bt* corn pollen on lacewing (*Chrysoperla plorabunda*) reproduction rates

MESSIAH COLLEGE BIOLOGY DEPARTMENT

Mechanicsburg, PA, USA

Jan. - May; Sep. - Dec. 2004

- Studied Panama golden frog (*Atelopus zeteki*) morphology and photo identification

UNIVERSITY OF BELIZE INSTITUTE OF MARINE STUDIES

Calabash Caye and Belize City, Belize

Jun. - Aug. 2004

- Collected, separated and dried leaf litter of 3 mangrove species on 4 islands in Ambergris Caye, Belize for CARICOMP calculations

GRANTS AND AWARDS:	National Science Foundation (NSF) Graduate Research Fellowship	Aug. 2018 - 2023
	National Science Foundation Graduate Research Fellowship Program	\$138,000 USD
	Michigan State University (MSU) Enrichment Fellowship	May 2018 - 2023
	Michigan State University Graduate School	\$73,600 USD
	Modelling Complex Ecological Dynamics (MCED) Award	Dec. 2017
1st Prize (Master's/Bachelor's category)		
2017 Ecology Across Borders Conference - Ecological Society of Germany, Austria & Switzerland (http://www.mced-ecology.org/?page_id=1151)	€250 EUR	
NASA-MSU Professional Enhancement Award	Feb. 2016	
2016 US International Association of Landscape Ecology Conference	\$800 USD	
Falkland Islands Government Environmental Studies Budget	Oct. 2015	
Predicting baleen whale distributions for management using species distribution modelling	£3,860 FKP	

PUBLICATIONS:

JOURNAL ARTICLES

- Wang Z., Li X., Li Y., **Frans V.F.**, Yan J., Zhang L. (*in review*). A network perspective for mapping freshwater service flows at the watershed scale. **Ecosystem Services**.
- **Frans V.F.**, Augé A.A. (*in review*). Local ecological knowledge in species distribution modelling improves predictions for management. **Ecology and Evolution**.
- Wang J., Chen X., Liu Z., **Frans V.F.**, Xu Z., Qiu X., Xu F., Li Y. (2019). Assessing the water and carbon footprint of hydropower stations at a national scale. **Energy Policy** 676:595-612. <https://doi.org/10.1016/j.scitotenv.2019.04.148> - 1 citation
- Augé A.A., Otley H., Rendell N., **Frans V.F.** (2018). Spatial distribution of cetacean strandings in the Falkland Islands to define monitoring opportunities. **Journal of Cetacean Research and Management** 19:1-7. <https://archive.iwc.int/?r=7931>
- **Frans V.F.**, Augé A.A., Edelhoff H., Erasmi S., Balkenhol N., Engler J.O. (2018). Quantifying apart what belongs together: a multi-state species distribution modelling framework for species using distinct habitats. **Methods in Ecology and Evolution** 9:98-108. <https://doi.org/10.1111/2041-210X.12847> - 9 citations - [Altmetrics](#): 40 (top 5%)
- **Frans V.F.**, Augé A.A. (2016). Use of local ecological knowledge to investigate endangered baleen whale recovery in the Falkland Islands. **Biological Conservation** 202:217-137. <https://doi.org/10.1016/j.biocon.2016.08.017> - 13 citations; 4 news mentions (e.g., [Popular Science](#)) - [Altmetrics](#): 60 (top 5%).

GOVERNMENT REPORTS

- **Frans V.F.** (2019). Suitable habitats for New Zealand sea lions: mapping and restoration. Creating a database of suitable sites on the mainland. *Prepared for: New Zealand Department of Conservation*, Wellington, New Zealand.

MASTER THESIS

- **Frans V.F.** (2015). Recolonization of the New Zealand sea lion (*Phocarctos hookeri*): using predictive niche models to identify suitable breeding habitats for management. **MSc. Thesis**, Göttingen, Germany.

PRESENTATIONS:

CONFERENCES AND INVITED TALKS

- **Frans V.F.** (2019). New Zealand sea lion habitat mapping: final report. **Conservation Services Programme (CSP) and New Zealand sea lion Threat Management Plan (TMP) - Technical Working Group (October 2019)**, New Zealand Department of Conservation, Wellington, New Zealand.

- **Frans V.F.** (2019). Finding suitable habitats for the recolonizing New Zealand sea lion. **CSP and New Zealand sea lion TMP - Technical Working Group (March 2019)**, New Zealand Department of Conservation, Wellington, New Zealand.
- **Frans V.F.** (2018). Kickstarting a literature review with R. **R and Data Science Lightning Talks**, R-Ladies East Lansing, East Lansing, Michigan.
- **Frans V.F.** (2016). A whale of a tale: using local ecological knowledge to investigate baleen whale recovery and distribution around the Falkland Islands. **University of Alaska Fairbanks**, Fairbanks, Alaska.
- **Frans V.F.**, Augé A.A., Engler J.O., Edelhoff H. (2016). A whale of a tale: using local knowledge to predict baleen whale distribution around the Falkland Islands. **International Association of Landscape Ecology**, Asheville, North Carolina.
- **Frans V.F.**, Augé A.A., Engler J.O., Edelhoff H., Chilvers B.L., Erasmi S., Balkenhol N. (2015). Recolonization of the New Zealand sea lion (*Phocarctos hookeri*): using Maxent to identify suitable breeding habitats for management. **International Association of Landscape Ecology World Congress**, Portland, Oregon.

PUBLIC OUTREACH: ORAL PRESENTATIONS

- **Frans V.F.** (2016). Return of the whales in the Falkland Islands' waters. **Chamber of Commerce**, Stanley, Falkland Islands.
- **Frans V.F.** (2015). From a big city to a big world: opportunities in science. **Geospatial Data Visualization Workshop for High School Students (Fall 2015)**, City University of New York, Manhattan, New York.
- **Frans V.F.** (2012). アラスカの漁業 [Alaska Fishing]. **Friends of Fukuoka**. Fukuoka, Japan.

NEWSPAPER ARTICLES

- **Frans V.F.** (2016). Recuperación de las ballenas en las Falklands, y una explosión de avistamientos. [Merco Press](#). May 11, 2016.
- **Frans V.F.** (2016). Whale recovery in Falklands and an explosion of sightings. [Merco Press](#). May 4, 2016.
- **Frans V.F.** (2016). Whales returning indicates survey. [Penguin News](#) 27(42):7-7.
- **Frans V.F.** (2015) Mapping historical whale sightings. [Penguin News](#) 27(6):8-8.

WEB BLOGS

- Engler J.O., **Frans V.F.**, Augé A.A. (2016) Multi-state species distribution models: what to do when species need multiple habitats. [Methods Blog](#). Sep 4, 2017.
- **Frans V.F.** (2016). Marine Spatial Planning: Mapping historical whale sightings to manage the future! [SAERI Blog](#). May 3, 2016.
- **Frans V.F.** (2015). Marine Spatial Planning: Mapping historical whale sightings to help manage the future. [SAERI Blog](#). Nov 20, 2015.

TV/NEWS BROADCASTS

- *Falklands in Focus*, [Falkland Islands TV \(FITV\)](#), Stanley, Falkland Islands. May 16, 2016. Television. Topic: washed up sei whale at Cape Dolphin.

WORKSHOPS:

DATA AND CODING IN R

- Data visualization in R (intermediate), **Social Science Data Analytics Initiative**, East Lansing, MI, June 24, 2019. Co-led.
- Introduction to data visualization: GGPlot2, **R-Ladies East Lansing**, East Lansing, MI. Oct. 8, 2018. Co-led.
- Introduction to tidy data with R, **R-Ladies East Lansing**, East Lansing, MI. Nov. 5, 2018. Co-hosted.

PEER REVIEW: *Austral Ecology* (1); *Biodiversity and Conservation* (1); *Biological Conservation* (2); *Ecological Applications* (1); *Journal of Applied Ecology* (2); *Journal of Avian Biology* (10); *Methods in Ecology and Evolution* (1)

PROFESSIONAL MEMBERSHIPS: *American Scientific Affiliation*; *Society for Conservation Biology*; *International Association of Landscape Ecology (IALE)*; *British Ecological Society*; *American Association for the Advancement of Science (AAAS)*

PROFESSIONAL DEVELOPMENT: **ATTENDED CONFERENCES**
• IALE 2015; IALE 2016; ASA Meeting 2019

WORKSHOPS

- **Summer Intensive on Community-Engaged Scholarship** **July 2018**
Michigan State University, Lansing, Michigan
- **Model Data Preparation Workshop** **April 2016**
US-IALE Conference 2016, Asheville, North Carolina
- **Introduction to HexSim Workshop** **July 2015**
Species Distribution Modeling (SDM) Workshop
IALE World Congress 2015, Portland, Oregon

GRADUATE COURSES IN MODELING AND STATISTICS

- **Michigan State University (2018 - present)**
Geosimulation (agent-based modeling in Python); Introduction to meta-analysis in ecology; Modeling natural resource systems; Spatial data analysis; Spatial ecology; Statistical methods in Ecology and Evolution I & II; Theoretical population and community ecology; Modern statistical models in ecology; Statistical methods in temporal ecology
- **Georg-August-University Göttingen (2012-2015)**
Biodiversity and ecosystem functioning; Ecological modeling; Ecological models - from populations to networks
- **Lincoln University (2012-2015)**
Advanced geographic information systems; Research methods in ecology

LEADERSHIP POSITIONS:

CAMPUS ACTIVITIES

- Director, **Statistics in the Community** **Oct. 2019 - present**
- Fisheries & Wildlife Representative, **Council of Graduate Students** **Aug. 2019 - present**
- Associate, **Social Science Data Analytics Initiative** **Jun. 2019 - present**
- Workshop Co-organizer, **R-Ladies East Lansing** **Aug. 2018 - present**

COMMUNITY ENGAGEMENT & MINISTRY

- President, **Every Nation at MSU**, East Lansing, MI **Oct. 2019 - present**
- Science advisor, **The Cross Impact**, Lagos, Nigeria **Sep. 2019 - present**