Takuya Iwamura
Curriculum Vitae

Education:

Ph.D., The University of Queensland, Australia, 2012
- Principle Advisor: Prof. Hugh P. Possingham
- Thesis: Spatial conservation prioritisation under global threats
- Received *Deans' Award for Research Higher Degree Excellence*

Master of Environmental Management, Duke University, USA, 2006
- Advisors: Prof. Stuart L. Pimm and Prof. Dean Urban
- Thesis: Global Conservation Site Prioritization: integrating biological and economical factors into selection criteria

M.S. (Computer science, Social simulation), Keio University, Japan, 2001
- Thesis: Multi-agent simulation for the price limit of the stock market using diverse risk preferences model

Previous academic positions:

2012-2014 Postdoctoral Scholar at Department of Biology & Department of Environmental Earth System Science, Stanford University, U.S.A.

2011 Research fellow, School of Biological Sciences, The University of Queensland

Publications:

1. Nicol, S., R.A. Fuller, **T. Iwamura**, I. Chadès. (2015) Adapting environmental management to uncertain but inevitable change, *Proceedings of Royal Society B.* http://dx.doi.org/10.1098/rspb.2014.2984
1. Butt, N., K. Epps, H. Overman, **T. Iwamura**, J.M.V. Fragaoso. (2015) Assessing carbon stocks using indigenous peoples' field measurements in Amazonian Guyana, *Forest Ecology and Management* **338** 191-199
2. **Iwamura, T.**, E. Lambin, K.M. Silvius, J.B. Luzar, J.M.V. Fragaoso. (2014) Agent-based modeling of hunting and subsistence agriculture on indigenous lands: understanding interactions between social and ecological systems, *Environmental Modelling & Software* **58** 109-127
3. **Iwamura, T.**, R.A. Fuller, H.P. Possingham. (2014) Optimal management of a multispecies shorebird flyway under sea-level rise, *Conservation Biology* DOI:10.1111/cobi.12319
4. Venter, O., R.A. Fuller, D.B. Segan, J. Carwardine, T. Brooks, S.H.M. Butchart, M. Di Marco, **T. Iwamura**, L. Joseph, D. O'Grady, H.P. Possingham, C. Rondinini, R.J. Smith, M. Venter, J.E.M. Watson. (2014) Targeting global protected area expansion for imperiled biodiversity, *PLoS Biology* DOI:10.1371/journal.pbio.1001
5. Watson J.E.M., **T. Iwamura***, N. Butt. (2013) Mapping vulnerability and conservation action in a time of climate change. *Nature Climate Change.* **3** 989-944 ***Credited as a leading author***
6. **Iwamura, T.**, A. Guisan, K.A. Wilson, H.P. Possingham. (2013) How robust are global conservation priorities to climate change? *Global Environmental Change.* **23** 1277-1284

7. **Iwamura, T.**, H.P.Possingham, I. Chadès, C. Minton, N.J. Murray, D.I. Rogers, E. Treml, R.A. Fuller. (2013) Migration magnifies the impact of sea level rise on coastal shorebirds. *Proceedings of Royal Society B.* **280** 1761

8. **Iwamura, T**., K.A. Wilson, O. Venter, H.P. Possingham. (2010) A climatic stability approach to prioritizing global conservation investments. *PLoS ONE* **5** (11): e15103

9. Venter, O., W.F. Laurence, **T. Iwamura**, K.A. Wilson, R.A. Fuller, H.P. Possingham. (2009) Harnessing carbon payments to protect biodiversity. *Science* **326** (5958):1368-1368

10. Venter, O., W.F. Laurence, **T. Iwamura**, K.A. Wilson, R.A. Fuller, H.P. Possingham. (2009) Planning for Biodiversity in Future Climate: Letter in response to Shoo et al. *Science* **327** (5972):1453-1453

11. Carwardine, J., K.A. Wilson, G. Ceballos, P.R. Ehrlich, R. Naidoo, **T. Iwamura**, S. Hajkowicz, H.P. Possingham. (2008) Cost-effective priorities for global mammal conservation. *Proceedings of the National Academy of Sciences of the United States of America* **105** (21): 11446-11450

12. Bode M., J.E.M. Watson, **T. Iwamura**, H.P. Possingham. (2008) The cost of conservation: Letter in response to Kremen et al. *Science* **321** (5887): 340-340

13. Naidoo, R., **T. Iwamura**. (2007) Global-scale mapping of economic benefits from agricultural lands: implication of conservation priorities. *Biological Conservation* **140**: 40-49

Selected Presentations:

Nicol. S, **T. Iwamura**, O. Buffet, I. Chadès (2013) Adaptive management of migratory birds under sea level rise, Proceedings of the 23rd International Joint Conference on Artificial Intelligence, Beijin, China

Iwamura, T., E. Lambin, J.M.V. Fragoso (2013) Modeling the feedbacks between indigenous people and biodiversity through bushmeat hunting and land-use change in Guyana, International Congress for Conservation Biology, Baltimore , USA

Iwamura, T., E. Lambin, J.M.V. Fragoso (2012) Feedbacks between the landuse change of hunter-gather and ecological responses in Guyana, American Geophysical Union Fall Meeting, San Francisco, USA

Iwamura, T., R. Fuller (2011) The impacts of sea level rise on the East Asian-Australasian migratory shorebird flyways: graph theoretical approach, International conference of Spatial Ecology & Conservation, Birmingham, UK

Iwamura, T., H.P Possingham (2011) How robust are biodiversity hotspots to climate change?, International Congress for Conservation Biology, Auckland, New Zealand, *Finalists for best students awards*

Iwamura, T. (2009) Robust global prioritization for biodiversity conservation in the face of severely uncertain impacts from climate change. 2nd European Congress of Conservation Biology, Prague, Czech

Iwamura, T. (2008) Global conservation planning with the impacts from climate change. Society of Conservation Biology annual meeting, Chattanooga, U.S.A.

Other Publications:

Iwamura, T. (2011) Refuge in Climate Storm – prioritizing global investment using climatic stability, *Decision Point* **47**: 10-11. Centre of Excellence for Environmental Decisions, Australia

Refereeing experience for academic journals

Subject editor (guest)

- Ecological Applications

Reviewer

- Proceedings of National Academy of Sciences of United States of America
- Biological Reviews
- Global Change Biology
- Society and Ecology
- Conservation Biology
- Biological Conservation (3 titles)
- PLoS ONE (4 titles)
- Oryx
- Journal of Geography and Regional Planning Review

Teaching Experiences:

2013 Lecturer, Stanford University, BIO 41*, "How to build national parks – Spatial conservation prioritization" * 1 credit intensive course work.

2012 Lecturer, Stanford University, BIO 41*, "Conservation Biogeography: How to conserve what we have?", *1 credit intensive course work.

2006 Teaching Assistant, Duke University, ENV287, *Geospatial Analysis for Water Resource Management*,

Ecology/Conservation-related Experience:

2012 Consultant for Wildlife Conservation Society, NY. Climate change adaptation.

2009 Consultant, Greenpeace. Conduct geospatial analyses and wrote a report "Using Marxan to support decision making for REDD in Indonesia" to address biodiversity - carbon issues."

2006 Field assistant/Modeler, Jaguar conservation corridor project, Selva Maya, Guatemala

2005 Intern, Conservation Science Program, World Wildlife Fund**,** Washington DC

2004 Field volunteer, Research on tree frogs in cloud forest, Bilsa nature reserve, Ecuador

Other professional experiences:

2001-2004 Business management consultant, Booz Allen & Hamilton, Tokyo

- Developed corporate strategies for more than 15 leading companies in automobile, insurance and telecommunication industries
- Performed financial valuation of various companies by calculating EV (enterprise value)
- Led a team to transform a business process (human resource management) for a company of 2.6 billion USD annual sales.

Modeling expertise:

- Spatial modeling
- Agent-based modeling
- Statistics
- Optimization and Machine learning
- Cellular automata

- Graph theoretic applications
- Climate modeling

Computational skills:

- Geographic information system: GRASS GIS, ESRI ArcGIS + python coding
- Remote sensing: NDVI
- Programming language: C, C++, Python, Java, NetLogo
- Statistics software: *R*
- Conservation planning software: Marxan

Awards and Scholarships:

2012 University of Queensland Deans' Award for Research Higher Degree Excellence. Top 10% PhD theses (approx. 1 person per department)

2011 Finalist for Best Student Award (12 out of 144 applicants) at International Congress of Society for Conservation Biology, received $200USD as a prize.

2008-2011 University of Queensland Research Scholarship (Graduate school, UQ) $43,000AUD/year

2008-2011 UQ International Research Tuition Award (Graduate school, UQ) Exemption from paying tuition of $35,000AUD/year

2007 Research Scholar scholarship (School of Biological Sciences, UQ) $5,000AUD

2007 Endeavour Asia Awards (Australian government) $50,000AUD

2006 Research Scholarship (World Wildlife Fund, USA)

2005 Nicholas School of Environment and Earth Sciences Scholarship (Duke University) $4,500 USD

2004 Nicholas School of Environment and Earth Sciences Scholarship (Duke University) $4,500 USD

2000 Travel scholarship for international conference (Keio University)

2000, 1999 Mori Research Scholarship (Keio University) $2,000 USD/year

Languages:

English – fluent; Spanish – basic; Japanese – native

Hobbies:

Hiking; Rock climbing; Mountain biking; Tennis