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**PhD Candidate**

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**Citizenship:** Swedish

**Fields of Concentration:**

Environmental Economics  
Fisheries Economics  
Behavioral Economics

**Desired Teaching:**

Environmental Management  
Resource Economics  
Behavioral Economics  
Public Economics

**Dissertation Title:**

*Fisheries and behavior – management, uncertainty, and networks*

**Expected Completion Date:** May 2017

**Papers:**

“Coordination and common pool resource management – empirical evidence from a Swedish shrimp fishery” [job market paper]

“Cooperation under risk and ambiguity” (with Martin Kocher, Peter Martinsson, and Nam Pham-Khanh) [dissertation chapter]

**Works in Progress:**

“Network formation and quota trading – analysis of the Swedish ITQ-system” [dissertation chapter]

“Institutions and risky behavior” [joint project with Peter Martinsson, Martin Kocher, Nam Pham-Khanh, Ola Olsson and Hoang-Anh Ho]

**Graduate Studies:**

University of Gothenburg, 2012 to present  
Supervisors: Associate Professor Håkan Eggert and Professor Peter Martinsson

**Undergraduate Studies:**

Bachelor of Science in Economics, University of Uppsala, 2011

Master's program Environmental Economics and Management, the Swedish University of Agricultural Sciences (began PhD studies after completing year one of the 2-year program)

**Fellowships, Honors and Awards:**

Adlerbertska Stipendiestiftelsen Travel Grants; 2013

Paul och Marie Berghaus donationsfond Travel Grant, 2013, 2016

**Research Experience:**

*Research assistant* for Professor Katarina Elofsson, the Swedish University of Agricultural Sciences. Background research for a report on *Cost-effectiveness of biodiversity enhancing practices in Swedish farmland* on behalf of the Swedish Board of Agriculture, May-Aug 2012

**Teaching Experience:**

*Lecturer*, SMG130: Multi-disciplinary Case Study of Environmental Problems, (Undergraduate level), 2014, 2015, 2016

*Teaching Assistant*, Micro economics (Undergraduate level), 2014

*Teaching Assistant*, HNE205: Methods of Economic Analysis (Undergraduate level), 2013

**Conference and Seminar Presentations:**

Efd 10<sup>th</sup> Annual Meeting, Pucón, Chile, 2016, *Planned*

IIFET, Aberdeen, United Kingdom, 2016

Ulvön Conference on Environmental Economics, Umeå, Sweden, 2016

BEGG Workshop on Behavioral and Experimental Economics, Gothenburg, Sweden, 2016

IAREP SABE Joint Conference, Sibiu, Romania, 2015

10<sup>th</sup> Nordic Conference on Behavioral and Experimental Economics, Tampere, Finland, 2015

**Professional Affiliations:**

Marine Graduate School, Centre for Sea and Society, University of Gothenburg (affiliated)

European Association of Environmental and Resource Economists (EAERE)

Economic Science Association (ESA)

International Institute of Fisheries Economics and Trade (IIFET)

**Languages:**

Swedish (native), English (fluent), Spanish (working proficiency)

**Other activities:**

Phd representative in the Department Board, Department of Economics, University of Gothenburg. 2013-2014.

“Framtidsprojektet” – interdisciplinary think tank about future challenges in agricultural practices and fisheries with focus on greenovations, the Royal Swedish Academy of Agriculture and Forestry, 2012-2013

**References:**

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### **Dissertation Abstract**

The design of effective natural resource management is one of the most pressing tasks today. It requires the development of institutions, both local and transboundary, that can cope with pure open access and other scarcity problems brought about by climate and demographical changes. Fish, the world's most traded food item in volume, is often used as the canonical example of bad resource management. However, there is a general recognition that successful fisheries management requires well-defined harvesting rights and institutions to enforce those rights. Such property rights institutions, referred to as catch shares in the economic literature, have the potential to solve the coordination problem of fisheries since it reduces the individual incentive to race for fish. Catch share programs vary in design but usually apply different tools and area specific regulations, season length, and degrees of transferability of the harvesting right. The appropriate institution is certainly context specific and depends crucially on the spatial distribution of the fish stock.

The challenge is to reduce the problems of overfishing and degradation of marine ecosystems without compromising the social benefits received from fisheries and its derivatives. Luckily, there should be scope for both; the World Bank (2009) estimates that the annual loss of potential revenues in fisheries is USD 50 billion. One way to measure the effectiveness of management regimes is thus to look at the impact on revenue creation in a fishery. Management necessarily involves setting up rules and institutions that change the existing opportunities of the resource users. To understand the ways in which this affects behavior, and to identify the “winners and losers” of the system is another way to evaluate management regimes.

Finally, successful management of natural resources relies on ways to deal with uncertainty. How are managers to predict resource users' behavior, when they face both natural and strategic uncertainty? To take into account the behavioral aspects of uncertainty when introducing new institutions is one important step towards more successful management of our natural resources. My dissertation “**Fisheries and behavior – management, uncertainty, and networks**”, explores the effects of management regimes on fisher behavior and economic outcomes in the Swedish fishery in two independent chapters. In a third chapter the effects of natural uncertainty on willingness to contribute to public goods is explored.

In Chapter One, “**Coordination and common pool resource management – empirical evidence from a Swedish shrimp fishery**” (my job market paper), I evaluate the effect of two different spatial regimes on revenue creation. I use a unique data-set combining the data from all trips carried out with a registered shrimp trawl during the period 1997-2013 with the dock-side prices obtained for the harvest. By sorting the trips into control and treatment groups, based on the geographical position of the hauls and the temporal variation of the management regimes, I evaluate the causal effect of a territorial user rights in fisheries (TURF) regime respectively a Co-management using a difference-in-differences strategy. Both management regimes alter the incentives in the fishery by introducing additional rights of internal management and by restricting harvesting access by outsiders completely in the TURF, and partly in the Co-management. I show that the five vessels participating in the TURF increase their revenues on average with 15 %, whereas the revenues of the 27 vessels participating in the Co-management are reduced by 26 %. The mechanisms behind these revenues effects are explored in additional analysis. The reason for the big difference in revenues is largely explained by the fact that the vessels in the TURF manage to coordinate their harvesting effort such as to increase quality and timing of high expected prices, whereas the Co-management vessels instead experience increased competition of harvest.

In Chapter Two, “**Network analysis of quota trading: evidence from the Swedish ITQ system in the pelagic fisheries**” (work in progress) I make use of network analysis to analyze the effects of the Swedish system of Individual Transferrable Quotas (ITQs) in the pelagic fishery. The system has led to a substantial decrease in fleet capacity, from 80 to 37 during the period 2009-2016. However, theoretical efficiency of the ITQ system relies on key assumptions regarding the transferability of the property rights, such as no income effects of initial allocation of quotas, perfect information among participants, no or low transaction costs, and well-functioning capital markets. If those are violated, the vessels that remain in the system are not necessarily the ones that are most efficient. I find that many of the key assumptions are violated a priori by construction of the system, such as a substantial income effect brought about by the grand-fathering allocation of quotas. By analyzing the evolution of the network and the characteristics of the vessels carrying out the transactions I can analyze the determinants of successful trading, and how that differs from the theoretical efficient outcome of the system.

In Chapter Three, “**Cooperation under risk and ambiguity**”, I explore jointly with Martin Kocher, Peter Martinsson, and Nam Pham-Khanh, the effects of uncertainty on voluntary contributions in a lab using a public good game experimental set-up. Previous literature on social dilemmas has taught us that a great deal of the effect of strategic uncertainty, and of the institutions that alleviate some of the coordination problems. However, the effect of natural uncertainty - in terms of the effect size of voluntary contributions to a public good – on contributions is still an unexplored area. Using the standard methods of illustrating risk (known probabilities) and ambiguity (unknown probabilities) in the lab, we find that the average effect of uncertainty is negligible. Our findings prove the generalizability of previous experimental studies of public goods, abstracting from natural uncertainty, motivating the use of the standard parsimonious approach.