

Annual Report

# BESTTuna

Benefiting from Innovations in Sustainable and Equitable Management of Fisheries on Trans-boundary Tuna's in the Coral Triangle and Western Pacific

**Year 2, 2013**



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## 1. Highlights of the BESTTuna programme in 2013

- The BESTTuna PhD course was conducted from January to June 2013. Students were steered through a series of lectures and seminars on fisheries ecology, economics and governance.
- A highly successful second scientific meeting in Wageningen with students receiving feedback from the full BESTTuna team on their questions and methodologies. Amendments to the sub-projects established a clear line of development for 2014.
- Five published articles in international peer reviewed journals and a further three submitted.
- A special tuna session at the MARE People and the Sea Conference, during which five of the six session presenters were BESTTuna members.
- The expansion of communication and dissemination activities has significantly increased the visibility of the programme.

## 2. Education

The BESTTuna team has taken part in a variety of education tasks in 2013 – both as students and lecturers.

### BESTTuna PhD course

The BESTTuna PhD course was given from January to June 2013; led by Megan Bailey with the support of Paul van Zwieten and Simon Bush. The course consisted of:

- Background into the three academic pillars of the BESTTuna programme – fisheries biology and ecology, economics and governance.
- Four modules, each designed around the theories, concepts and methodologies related to the ecology, economics, governance and sustainability of Pacific tuna fisheries.
- Each module consisted of 12 hours of class time, broken into 3 hour sessions twice weekly.
- The course was accredited by WASS and students received 3 ECTS towards the completion of their Training and Supervision Plans (TSPs).

### PhD training and supervision

PhD students also completed a series of other courses in fulfilment of their TSPs, both and outside Wageningen. Research school level courses included:

- Stella Libre took part in the SENSE course on Complex Dynamics in Human-Environment Systems from April 15 to 19, 2013.
- Shinta Yuniarta attended the course on Applied Econometrics for Renewable Resources Economics at FAME - University of Southern Denmark in May 2013.
- Edison Macusi and Widhya Nugroho followed the WIAS introductory course

All PhD students have submitted their research proposals and Training and Supervision plans. At this stage:

- Edison Macusi, Widhya Nugroho and Shinta Yuniarta have received comments from external reviewers and are expected to resubmit a revised proposal and answer to the reviewers by the end of January 2014.
- Frazen Tolentino, Agnes Yeeting and Stella Libre have had their TSPs and research proposals approved by WASS.

### Tuna in the classroom

BESTTuna WUR supervisors developed lectures for courses at Wageningen University, as well as giving guest lectures in the region. These included:

- *Overbevissing van tonijn: Over mensen, vissen, en markten*. Lecture for students at the Dutch Hendrik Pierson College (4VWO). (Rolf Groeneveld)
- *Overbevissing van tonijn: Over mensen, vissen, en markten*. Lecture for first year students in BIN and BGM in the course Economie A. AFI-32806. Rolf Groeneveld.
- *Introduction to the BESTTuna program and the problem with setting targets in fisheries management*. University of the South Pacific, 26 November, 2013, Suva, Fiji. (Megan Bailey)
- *Can cooperation work for juvenile tuna?* Workshop: Finding solutions to saving juvenile tuna, 10 September, 2013. General Santos City, Philippines. (Megan Bailey)
- *Game theory and fisheries: Benefiting from strategic interaction*. University of the Philippines Visayas, College of Fisheries, 4 September, 2013. Miag-ao, Philippines. (Megan Bailey)
- *Limitations of market-based governance*. Ocean and Coastal Governance (ENP 52806), Wageningen University. 10 April, 2013, Wageningen, The Netherlands (Megan Bailey)

### MSc training and research

Two MSc students enrolled and completed thesis research with BESTTuna in 2013:

- Mandy Doddema (Thesis) *On Fisheries Improvement Projects : A case study of a Fisheries Improvement Project for the yellow-fin tuna fishery in Lagonoy Gulf, the Philippines..* Environmental Policy Group.
- Berlianti (Thesis) *Access to the Seafood Savers Programme in the Coral Triangle.* Environmental Policy Group.

BESTTuna also facilitated a total of six internships in 2013:

- Berlianti Berlianti, *Seafood Savers Chain of Custody Development in Indonesia*, WWF-Indonesia, Jakarta.
- Tim Haasnoot (ongoing) *Social standards for tuna fisheries in Indonesia*. ANOVA Fishing and Living program..

- Helen Packer, *Towards Marine Stewardship Council certification of the Handline Yellowfin Tuna in Indonesia with the Fishing & Living™ program of ANOVA Seafood Asia*. Internship with Fishing and Living program, Anova Bali Indonesia, Aquaculture and Fisheries Group Internship report I0555.
- Laksmi Larastiti (Laras), Possibilities for implementing (July 2013) *Towards Marine Stewardship Council certification of the Fair Trade standard Handline Yellowfin Tuna in Indonesian fisheries, Indonesia with the Fishing & Living™ program of ANOVA Seafood Asia*. Aquaculture and Living Program, Anova, Bali Indonesia, Aquaculture and Fisheries Group Internship Report.
- Yaiza Dronkers-Londono (January 2013) *Internship Anova Asia: the Fishing & Living™ initiative in Indonesia*. Aquaculture and Fisheries Group. MSc Internship I
- Melvin Samson (December 2012) *Development of a Catch Documentation Scheme to support MSC Certification of the Philippine Yellowfin Tuna Handline Fishery within the Fisheries Improvement Program of the World Wide Fund for Nature (WWF-Philippines)*. Aquaculture and Fisheries Group. MSc Internship nr. I 0547

### 3. Proposals and leverage funding

A number of research proposals were developed in 2013 to supplement both staff and PhD research, as well as expand the programme to new areas related to tuna governance. Proposals were also written by external international partners in which BESTTuna is designed to feed results into, expanding our wider academic networks, outreach and impact. Of the €656,712 applied for, two proposals at a value of €6,712 were granted. Two of these proposals totalling €650,000 are still pending a final decision.

- Stella Libre submitted a proposal to the Alternate Forum for Research in Mindanao (AFRIM) entitled ‘Analysing fishing effort decisions of Filipino fishermen and its policy implications’. Amount granted: PhP 30,000 (€ 550).
- Larry Digal applied for a grant to research The participation of small- and large-scale Filipino tuna fishers in global value chain through market-based incentive mechanisms. The project proposal complements the first phase of PhD research, which is about market-based incentive mechanisms to promote sustainable tuna fishery. Total Amount Granted: P376,600 (€6162)
- Simon Bush and Arthur Mol were involved in a NWO proposal entitled *Next generation governance arrangements for sustainable global value chains*. Case studies will contribute to BESTTuna research using case studies of information use in tuna value chains. Requested amount: €400,000
- Simon Bush was involved as an international collaborator in the development of the *New Directions in Environmental Governance in Asian Frontier Ecologies*, Canadian SHRRC grant. Requested amount: €250,000
- Ricardo Babaran and Edison Macusi submitted a proposal for a SEARCA grant in the Philippines and were awarded US\$9,558 to conduct a survey among Tuna FAD fishers regarding their effort allocation and catch success in relation to FAD positions.

#### 4. Publications and presentations

##### Peer-reviewed publications

- Bailey, M., G. Ishimura, R. Paisley, and U.R. Sumaila (2013) Moving beyond catch in allocation approaches for internationally shared fish stocks. *Marine Policy* 40: 124-136.
- Bailey, M., U.R. Sumaila, and S.J.D. Martell (2013) Can cooperative management of tuna in the Pacific solve the growth overfishing problem? *Strategic Behavior and the Environment* 3(1-2): 31-66.
- Bush, S.R., P.A.M. van Zwieten and M. Bailey (2013) BESTTuna: Benefiting from Equitable and Sustainable Trans-boundary Tuna in Western Pacific. *Australian Journal of Maritime & Ocean Affairs* 5(3): 107-114.
- Bush, S. R., H. Toonen, P. Oosterveer & A. P. J. Mol (2013). The ‘devils triangle’ of MSC certification: Balancing credibility, accessibility and continuous improvement. *Marine Policy* 37: 288-293.
- Lester SE, Costello C, Rassweiler A, Gaines SD, Deacon R (2013) Encourage Sustainability by Giving Credit for Marine Protected Areas in Seafood Certification. *PLoS Biol* 11(12): e1001730. doi:10.1371/journal.pbio.1001730
- Miller, A. M., S. R. Bush & A. P. Mol (2014). Power Europe: EU and the illegal, unreported and unregulated tuna fisheries regulation in the West and Central Pacific Ocean. *Marine Policy* 45: 138–145

##### Peer-reviewed submissions

- Bailey, M., A.M.M. Miller, S.R. Bush, P.A.M. van Zwieten, and B. Wiryawan (Submitted) Closing the incentive gap: The role of public and private actors in managing Indonesia’s tuna fisheries. *Journal of Environmental Policy and Planning*
- Miller, A. & S. R. Bush (Submitted). Authority without Credibility? Competition and Conflict Between Ecolabels In Tuna Fisheries. *Journal of Cleaner Production*.
- Miller, S. and R. Deacon (Forthcoming) “Aligning Incentives for Fishery Governance: Can Industry Lead the Reform Process?”. Donald R. Leal and Michael Arbuckle, eds. *Aligning Incentives for Fishery Governance*, World Bank.

##### Conference papers

- Adolf, S. (2013) PNA tools for sustainable skipjack tuna management in the Global Value Chain of canned tuna. Paper MARE Centre for Maritime research Amsterdam People and the Sea Conference 26th -28th June 2013.
- Bailey, M. (2013) European demand and the cost of certification: The case of Maldivian pole and line tuna. European Association of Fisheries Economists (EAFE), 16 April, 2013. Edinburgh, Scotland

- Bailey, M. (2013) Pairing public and private actors for incentivized management of Indonesia's tuna fisheries. MARE People and Sea, 27 June, 2013. Amsterdam, NL
- Bush, S.R., M. Bailey and P.A.M. van Zwieten (2013) Private provision of trans-boundary public information. Paper MARE Centre for Maritime research Amsterdam People and the Sea Conference 26th -28th June 2013.
- Bush, S.R., M. Bailey and P.A.M. van Zwieten (2013) Private provision of trans-boundary public information: innovations in Western and Central Pacific tuna fisheries. Paper presented at the ECPR General Conference 2013, 4 - 7 September 2013, Sciences Po Bordeaux, Domaine Universitaire.
- Groeneveld, R. (2013) Can certification improve an open access fishery? An application to Pacific tuna. Paper presented at the 20th Annual Conference of the European Association of Environmental and Resource Economists (EAERE), 26-29 June, 2013, Toulouse.
- Hanich, Q. (2013) Moving beyond rights-based management: Distributing the benefits and costs of conservation in tuna fisheries. Paper MARE Centre for Maritime research Amsterdam People and the Sea Conference 26th -28th June 2013.
- Macusi, E., W.N. Satrioajie, M. Bailey, and P.A.M. van Zwieten (2013) Characterising FAD based tuna fisheries within the Philippines and Indonesia. Paper MARE Centre for Maritime research Amsterdam People and the Sea Conference 26th - 28th June 2013.
- Ram-Bidesi, V. (2013) Tuna fisheries in the Pacific: The case of Parties to the Nauru Agreement to address sustainability. . Paper MARE Centre for Maritime research Amsterdam People and the Sea Conference 26th -28th June 2013.
- Ten Broeke, G., S. Libre and G. Van Voorn (2013) "Using an agent-based model to study the effects of enforced quota for sustainable tuna fishery" ESSA 2013: 9th Conference of the European Social Simulation Association Warsaw School of Economics, Warsaw, Poland, September 16-20, 2013 at the ESSA 2013 conference in Warsaw, Poland. (*Winner Best Student Poster award.* <http://www.wageningenur.nl/en/show/Posterprize-Guus-ten-Broeke.htm>)
- Van Zwieten, P.A.M, S.R Bush, M. Bailey (2013) The current status global tuna stocks. Presentation to the 4th European Tuna Conference Brussels, Belgium - April 22nd 2013.

In addition the University of the Philippines Mindanao was able to produce eight working papers under the Sustainable Development of the Philippine Tuna Value Chain Research Project funded by the Commission on Higher Education. The papers covered various topics from tuna prey times, heavy metals, vegetables in canned tuna to technical efficiency and demand analysis. Five of these papers were presented in the 5th International Conference in Agribusiness Economics and Management last November 2013 held in Davao City, Philippines.

## 5. Management and coordination

### Management

Simon Bush and Paul van Zwieten spent a minimum half day each a week committed to project management and coordination in 2012. Megan Bailey (INREF postdoc) had a 1.0 contract in 2013 – made up of 0.8 fte from INREF and 0.2 fte from Adessium. The main management time spent in 2013 included:

- Organising the annual scientific meeting, Hotel de Wereld, Wageningen, 1-3 July 2013.
- Exploring funding opportunities both in the Netherlands and internationally for PhD field work and/or workshops
- Financial reporting and work plan development.
- Supervision of PhD students.
- Maintenance of BESTTuna website, and increasing the content and value of BESTTuna Facebook and Twitter
- Communication and coordination of research and outreach tasks in partnership with WU and international partners.
- Recruiting and supervising BESTTuna Masters students.

### Workshops and Meetings

The second meeting for the programme was held in Wageningen in August. The meeting was attended by 28 people from the extended BESTTuna team. The main group of attendees was made up of research staff from the collaborating organisations and PhD students.

The meeting provided the an opportunity for BESTTuna program students present their research proposals and receive feedback from their regional supervisors and the international academic advisory board. The meeting also allowed for programme level reflection on questions, coordination and communication.

Key outcomes of the meeting were:

- Reorganisation and labelling of the research themes.
- Coordination of PhD level methodologies and questions.
- Identification of opportunities for MSc internships and research.
- Strategy for further research funding and coordination with the new IFIIT programme.

## 6. Science for Impact

The BESTTuna programme aims to disseminate the results of our research to a broad group of public and private decision makers and opinion leaders to contribute to ongoing reforms in environmental policy and practice. To achieve this the programme stimulates and facilitates a range of social media platforms, communicating research activities, meetings, presentations, graduations and publications. Individual researchers have been provided training in these social media technologies to develop their own communication and engagement strategies. In addition, individual researchers are given the freedom to

actively build their networks. This combined strategy has enabled our researchers to speak to target government policy makers, international multi-lateral organisations, NGOs and companies.

In the second year of the programme attention was given to communicating activities and meetings related to the BESTTuna programme. The results of papers were disseminated through our social media platforms and a series of blog posts were written on the sites of individual researchers.

- Some delays were experienced in developing [www.BESTTuna.org](http://www.BESTTuna.org) due to delays in the redevelopment of the Wageningen University system.
- The Facebook site is liked by 178 people and followed by 89 people (an increase of 85 or 95% from 2012) and the Twitter feed has 66 followers. Both media have proved highly successful in communicating the daily activities of the programme within and beyond our immediate partners.
- Rolf Groeneveld publishes on his personal blog (see <http://grow-fins.blogspot.nl/search/label/BESTTuna>):
  - *Stuff I do: Pacific tuna* (9 September 2012)
  - *WWF Coral Triangle's tuna tube* (12 September 2012)
  - *My tuna paper for the upcoming EAERE conference* (22 April 2013)
  - *Who's the sucker here: Kiribati, Mauritania, or the EU?* (28 May 2013)
  - *Bitung: Plight of the baby tuna* (6 November 2013)
- Steven Adolf - Several articles and blogs written on the subject of tuna fisheries. The blogs can be read at the BESTTuna site. The articles were published in the Dutch national newspaper De Volkskrant:
  - *PNA and Dolphin-mob* (Article 13-04-2012)
  - *GSSI initiative* (Article 7-9-2012)
  - *Oceana concept* (Article 1-2- 2013)
  - *Bluefin Tuna fisheries* (Article 18-6-2013)
  - *Tuna and Orca* (Article 5-9-2013)
  - *EU policy PNA* (Article 25-10-2013)
  - *ICCAT decision* (Article 25-11-2013)
- Megan Bailey published a series of posts from her personal blog site ([www.meganbailey.ca](http://www.meganbailey.ca)) about her travels in the region:
  - *Competitive disadvantage: The cost of fishing for sustainable tuna*
  - *Conservation at the end of a barrel*
  - *Who said what? Memorable quotes from the 4th Pacific Tuna Forum*
  - *Traceability's role in data generation: thisfish*
  - *Scoping study wraps up: 5 countries, 5 weeks, 1,000's of ideas*
  - *Around the world in 28 days*

Dissemination and networking was also done by BESTTuna researchers attending a series of international meetings on tuna fisheries:

- *12th World Tuna Trade Conference Bangkok, 23-25th May 2012*



- *10th Seafood Summit Hong Kong*, 6-8th September 2012
- *IV European Tuna Conference Brussels*, April 2nd 2013.
- *XV National Tuna Congress 2013*, General Santos Philippines.
- *IV Pacific Tuna Forum 2013*, 18-19th September 2013, Honiara Solomon Islands.
- Workshop *Greenpeace Transforming Tuna Fisheries* 17th September 2013, Honiara Solomon Islands
- *10th WCPFC Regular Session* 2<sup>nd</sup>-6<sup>th</sup> December, 2013, Cairns Australia

## **7. Deviations from original work plan (2011 full proposal)**

### **A. Shinta Yuniarta**

The focus of Shinta Yuniarta's PhD has shifted from policy instruments to decision-making under uncertainty and the value of information. The initial plan position 5b was focused on the financial incentives for tuna fisheries management by using bioeconomic model. The problem was limited incentives for fishers who catch juvenile bigeye and yellowfin. This initial proposal aimed to improve the sustainability by using market-based instruments. Since the approaches were related to the stock of several tuna species, the obstacle to address this problem is about poor data quality in Indonesian tuna fisheries. Therefore, addressing the main problem of poor data quality is expected to attain adequate data and information of Indonesian tuna fisheries and reduce the uncertainty that contained in the data. Adequate data and information help the fishery manager to decide proper management plan in the following period. Moreover, this approach can be one of solutions towards sustainability fisheries. Better data in Indonesian tuna fisheries will be beneficial not only for Indonesia, but also for WCPFC. No delay in Shinta's progress is expected from the deviation.

### **B. Project 6 – Informational governance**

The PhD researcher for this position, Ferall Lasi, withdrew from the programme before starting. This has serious consequences for the project that have delayed progress. Most importantly, USP lost their funding for this position because there was no available candidate. In 2013 both USP and WUR have looked for additional funding for this position through the wider BESTTuna network. Although funding remains a challenge, there is a possibility for both a candidate and funding from WWF to fill and support this project. In addition, Dr. Sandra Tarte from USP has joined the supervision team for this PhD.

### **C. Stella Libre**

Stella has decided to withdraw from the University of the Philippines Mindanao (UPM) under the supervision of Dr. Larry Digal and move to the University of the Philippines Visayas (UPV) under the supervision of Dr. Alice Ferrer. This meant that the offer of a funded faculty position at UPM was withdrawn. Stella and Dr. Ferrer are working currently working on a proposal to receive a grant for monthly stipend and research expenses at UPV. No delay in Stella's progress is expected from the deviation.

### D. Frazen Tolentino

A major funding proposal at UPM was not granted by the national government, CHED. As a result funding for Frazen at UPM was not available in July as planned. As a result she has moved to UPV where funds have been made available through a new faculty position. Prof. Larry Digal will continue to provide supervision to Frazen from UPM. No delay in Frazen's progress is expected from the deviation.

### E. Dr. Quentin Hanich joins international advisory board

Due to the retirement of Prof. Martin Tsamenyi, Dr. Quentin Hanich takes over on the international advisory board. Dr. Hanich is also based at the Australian Centre for Ocean Resources and Security, ensuring ongoing institutional collaboration.

## 8. 2013 Budget

See supplementary documents.

BESTTuna research team

#### Scientific Steering Committee

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WWF Dr. Jose Ingles, WWF-Coral Triangle Programme, Email: [ingles.jose@gmail.com](mailto:ingles.jose@gmail.com)

#### Other scientific staff (WU)

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Prof. Dr. Wolf Mooij, Aquatic Ecology and Water Quality Management Group (AEW), Email: [wolf.mooij@wur.nl](mailto:wolf.mooij@wur.nl)

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International advisory committee

1. Prof Anthony Lewis, University of Wollongong
2. Prof. Martin Tsamenyi, Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong,
3. Prof. Robert Deacon, University of Santa Barbara California
4. Prof. Neil Loneragan, Murdoch University

**PhD projects – names, partners and countries.**

PhD	Title	Name	WUR Research Groups involved	Local supervisor (institution), Country	Primary funding
1a	POSTDOC: Integrating innovative tuna governance as a complex social–ecological system	Megan Bailey	Simon Bush (ENP), Paul van Zwieten (AFI)		INREF
1b	POSTDOC: Incentivizing Sustainable Tuna Management through a Credit System	Marielle van Riel	Simon Bush (ENP)	Budy Wiryawanto (IBP), Indonesia	KNAW
2a.	Effort allocation of mixed fisheries on tuna's and small pelagics with juvenile tuna by-catch and their interaction with FADs	Edison Macusi	Paul van Zwieten (AFI), Wolf Mooij (AEW)	Ricardo Barbaran (UPV), the Philippines	INREF/ DOST
2b.	Movement and habitat selection of juvenile tuna in relation to FADs and ocean productivity	Widhya Satrioajic	Wolf Mooij (AEW), Paul van Zwieten (AFI)	Augy Syahailatua (LIPT), Indonesia	INREF/ DOST
2c.	Tuna behaviour and ocean productivity around FADs (2)	Ika Wahyuningrum	Paul van Zwieten (AFI)		
3a.	Fisher level decision making in response to retail and brand strategies for sustainable tuna	Frazen Tolentino	Paul Berentsen (BEC), Simon Bush (ENP)	Larry Dugal (UPM), the Philippines	INREF/ CHED
3b.	Sustainability and its impact on competition, concentration and market dynamics in the tuna canning industry.	Steven Adolf	Simon Bush (ENP), Sietze Vellema (KPI)		Other
3c.	Europeanization of tuna governance through brand and retail strategies	Alice Miller	Simon Bush (ENP)		Other
4a.	Understanding the influence of environmental certification on international cooperation for tuna management in the WCPFC	Agnes Yeeting	Simon Bush (ENP), Rolf Groeneveld (ENR)	Vina Ram Bidesi (USP), Fiji	INREF
4b	Decentralization of tuna fisheries management in Indonesia	Thomas Nugroho	Simon Bush (ENP)	Budy Wiryawanto (IBP), Indonesia	DKP
5a.	Exploring innovative market mechanisms for incentivized tuna management	Stella Libre	Simon Bush (ENP), Paul Berentsen (BEC)		INREF/ CHEF
5b.	Bio-economic modeling of financial incentives for tuna fisheries management	Shinta	Rolf Groeneveld (ENR), AFI	Purwanto (IPB), Indonesia	INREF
6.	Information systems and needs for state, value chain and market-based tuna governance		Paul van Zwieten (AFI), Tuur Mol (ENP)	Vina Ram Bidesi (USP), Fiji	INREF