

#### A wellbeing Analysis of Fishers in a Brazilian Coastal Shantytown

Cintia Gillam and Anthony Charles Saint Mary's University, Halifax, NS Canada

International Marine Conservation Congress IMCC4 August 2, 2016







Vila dos Pescadores

-oogle ear

Aufter and the second

Ma dos Pescadores

### **3-Dimensional Wellbeing Framework**

Material
Subjective
Relational dimensions

Fishers' relational wellbeing, through community cohesion, enables fishers to mobilize themselves against environmental shocks.

#### Wellbeing and Conservation

Conservation initiatives have the potential to enhance community and fishers' wellbeing by improving the availability of the resource (fish and shellfish).

## Case Study: Community of Vila dos Pescadores, Brazil

- Vila dos Pescadores is a mangrove-based slum neighborhood of Cubatão, which developed as a small community of fishers and crab gatherers in the 1960s.
- A large number of fishers in the city of Cubatão are migrants from the semi-arid regions of Northeast Brazil who migrated to the city since the 1960s in search of better living conditions.



Fishing is carried out in several tributaries of the estuarine system of Santos, as well in the main harbor channel.

There are multiple sources of environmental damage in the Santos estuary. The main sources are industrial and domestic pollution.

#### **Research Methodology**

 Case study research with qualitative approaches to investigate social and environmental issues affecting the wellbeing of fishers and community members at Vila dos Pescadores. The main species of crustaceans and fish landed at Vila dos Pescadores dock are the land crab (*Ucides cordatus*); blue crab (*Callinectes sapidus and Callinectes danae*); white mullet (*Mugil curema*), little snook (*Centropomus parallelus*) and common snook (*Centropomus undecimalis*) (Fagundes et al. 2012, p. 27)



Ucides cordatus



Mugil curema



Centropomus undecimalis



Centropomus parallelus

#### Land Crab Ucides cordatus





#### Blue crabs



Callinectes sapidus



Callinectes danae

#### Environmental Disaster in the Santos Estuary: The Fire of April 2015

A fire at the Ultracargo fuel distribution company lasted from April 2 to 10, 2015.

The release of liquid and gaseous effluents caused the death of thousands of fish, damaging fishing in the region.



Right after this environmental disaster, fishers at Vila dos Pescadores were not able to fish, affecting their main sources of income and livelihood.  After the Ultracargo disaster, fishers and community members, with the help of a local NGO (EcoFaxina), collected over 1,000 Kg of garbage in the mangroves within the Santos Estuary.





# Wellbeing and Conservation initiatives

- Pre-existing relational wellbeing is an essential element in fighting environmental disasters in the community.
- Community cohesion led to meetings and actions to revive conservation projects in the past.
- Women demonstrated the need to promote their crafts to supplement their family income from fishing, with the sustainable use of recycled materials from the community.



## Need for Mangrove Conservation to Improve Fishers' Livelihoods

- Fishers and their families at Vila dos Pescadores are proud of being part of a large conservation initiative funded by the São Paulo State Environmental Company (Cetesb) in the 1990s.
- They emphasized the need to reintroduce mangrove reforestation projects with the involvement of children, fishers and other members of the community.



#### Social Organization of Fishers Following the Disaster

 The Ultracargo disaster had the positive result of providing an incentive to boost fishers' material wellbeing by 'pushing' fishers to legalize their status as fishers, by registering at the Ministry of Fishing and Aquaculture (MPA).

## Conclusions

 Conservation initiatives have the potential to enhance community and fishers' wellbeing by improving the availability of the resource (fish and shellfish).

 Fishers and community members are eager to join government-funded conservation projects, but further government-funded mangrove replanting projects are not being implemented due to lack of funding.

#### Recommendations

• Wellbeing is related to environmental quality.

In terms of environmental recovery, resolving environmental contamination from industrial pollutants in the Santos Estuary could benefit from more research on the use of phytoremediation.

Fisheries co-management could be an option to improve the conservation and the wellbeing of fishers and community members.

#### Bibliography

Britton, E., & Coulthard, S. (2013). Assessing the social wellbeing of Northern Ireland's fishing society using a three-dimensional approach. Marine Policy, 37, 28-36.

Charles, A., Allison, E., Chuenpagdee, R. & Mbatha, P. (2012). Well-Being and Fishery Governance. International Institute of Fisheries Economics and trade, Pg. 1-6. Retrieved from <a href="http://core.ac.uk/download/pdf/10195046.pdf">http://core.ac.uk/download/pdf/10195046.pdf</a>

Fagundes, L., Souza, M. R., Tomás, A. R. G., Bastos, G. C. & Tutui, S. L. (2012). Aspectos produtivos da pesca extrativa na Vila dos Pescadores, Cubatão, Estado de São Paulo. [Productive aspects of extractive fishing at Vila dos Pescadores, Cubatão, State of São Paulo]. *Informações Econômicas*, 42(6): 23-32. Retrieved from <a href="http://www.academia.edu/8750319/">http://www.academia.edu/8750319/</a> PRODUCTION ASPECTS OF THE EXTRACTIVE FISHERIES IN VILA DOS PESCADORES CUBAT%C3%830 S%C3%830 PAULO STATE BRAZIL

Gough, I., McGregor, J. A. & Camfield, L. (2010). Theorizing wellbeing in international development. In I. Gough, J. A. and McGegor (Eds), Wellbeing in Developing Countries. From Theory to Research. Cambridge University Press. Print.

Herculano, S. & Pacheco, T. (2008). Building environmental justice in Brazil: A preliminary discussion of environmental racism. *International Clinical Sociology*, pp. 244-265. Retrieved from <a href="http://www.professores.uff.br/seleneherculano/images/Building\_environmental\_HERCULANO\_AND\_PACHECO\_Final\_version\_25jan2011.pdf">http://www.professores.uff.br/seleneherculano/images/Building\_environmental\_HERCULANO\_AND\_PACHECO\_Final\_version\_25jan2011.pdf</a>

Mbatha, P., Rohe, J. & Coulthard, S. (2012). Wellbeing in small-scale fishing communities in South africa. In: Charles, Anthony; Allison, Edward H.; Chuenpagdee, Ratana and Philile Mbatha. *Development for Wellbeing and Sustainability*, Well-Being and Fishery Governance. International Institute of Fisheries Economics and Trade, Pp. 1-6. Retrieved from <a href="http://core.ac.uk/download/pdf/10195046.pdf">http://core.ac.uk/download/pdf/10195046.pdf</a>

McGregor, A. (2008). Well-being, poverty and conflict. Briefing Paper 1/08, ESRC. Research Group on Well-being in developing countries, University of Bath, Bath, UK.

McGregor, A. & Sumner, A. (2010). Beyond business as usual: What might 3-D wellbeing contribute to MDG Momentum? *IDS Bulletin*, 41(1), 104-112. Blackwell Publishing Ltd. Retrieved from <a href="http://onlinelibrary.wiley.com/doi/10.1111/j.1759-5436.2010.00111.x/pdf">http://onlinelibrary.wiley.com/doi/10.1111/j.1759-5436.2010.00111.x/pdf</a>

McCubbin, L. D., McCubbin, H. I., Zhang, W., Kehl, L. & Strom, I. (2013). Relational well-being: An indigenous perspective and measure. Family Relations, 62, 354–365. doi: 10.1111/fare.12007

Weeratunge, N., Bene, C., Siriwardane, R., Charles, A., Johnson, D., Allison, E. H., Nayak, P. & Badjeck, M. (2014). Small-scale fisheries through the wellbeing lens. *Fish and Fisheries*, 15: 255-279. Retrieved from http://www.zef.de/module/register/media/4259 Weeratunge%20et%20al.%202013 SSF%20through%20the%20wellbeing%20lens %20F&F%20early%20view.pd

Paz-Alberto, A. M. & Sigua, G. C. (2013). Phytoremediation: A green technology to remove environmental pollutants. *American Journal of Climate Change*, 2, 71-86. Retrieved from <a href="http://dx.doi.org/10.4236/ajcc.2013.21008">http://dx.doi.org/10.4236/ajcc.2013.21008</a>

#### Photos

Centropomus undecimalis: http://www.pescaki.com/topic/18401-as-esp%C3%A9cies-de-robalo/

Centropomus parallelus: http://cpu90.ifc-camboriu.edu.br/criacac/tiki-index.php?page=Danton+Bittencourt+e+Ellen+Meneguzzi+Rodrigues

Callinectes sapidus: http://animaldiversity.org/accounts/Callinectes\_sapidus/pictures/collections/contributors/cynthia\_parr/sept03\_057/

Callinectes danae: http://crustiesfroverseas.free.fr/illustration.php?n=1&irenavID=6326

Mugil curema: http://www.discoverlife.org/mp/20p?see=I\_RR3478&res=640

Schepis, W. http://www.institutoecofaxina.org.br/2015/04/o-outro-lado-do-incendio-da-ultracargo.html

Ucides cordatus: http://www.icmbio.gov.br/portal/ultimas-noticias/6672-icmbio-fiscaliza-acoes-durante-defeso-do-caranguejo-uca

## Thank You!





