

# **Gender Roles in the Mangrove Reforestation Programmes in Barangay Talokgangan, Banate, Iloilo, Philippines: A Case Study Where Women Have Sustained the Efforts**

**FARISAL U. BAGSIT\* and CARIDAD N. JIMENEZ**

Institute of Fisheries Policy and Development Studies, College of Fisheries and Ocean Sciences, University of the Philippines Visayas, 5023 Miagao, Iloilo, Philippines.

## **Abstract**

A study was conducted to understand the roles played by female and male members of the Talokgangan Concerned Citizens Association (TaCCAs) in the mangrove reforestation programme in Barangay Talokgangan, Banate, Iloilo, Philippines. When established in 1997, more members were men than women, but by 2010 most of the members of TaCCAs were women. Most members now are over 50 years of age, have elementary education, and have been residents since birth. Respondents reported that they joined the TaCCAs to help their community, to benefit from government projects, to organise as a group and to have other sources of income. Women's participation was higher in the planning process, during meetings, nursery development and in maintenance, as well as in mangrove management and protection. Men were involved in the construction and maintenance of fences in the mangrove area. Some of the benefits the respondents enjoyed from the mangrove replanting included protection from strong waves during typhoons, stability of the soil where their houses stood and monetary incentives from selling mangrove seedlings. Some of the issues encountered by the members included lack of support from other community members, lack of funds, and conflict within the household over time devoted to the work.

## **Introduction**

Banate-Barotac Bay has traditionally been recognised as one of the richest fishing grounds in Panay Island, Philippines. However, fisheries production has significantly declined due to illegal fishing practices and the destruction of important habitats. Hence, the Banate-Barotac Bay Resource Management Council Inc. (BBBRMCI) was created in 1996. The BBBRMCI is an inter-local government unit (LGU) alliance between the municipalities of Barotac Nuevo, Anilao, Banate and Barotac Viejo, in the Province of Iloilo, which aims to restore, preserve, and create opportunities and save the Bay from further deterioration.

Starting in 1997 under the resource generation component of a unified coastal resources management (CRM) plan, one of the early initiatives of the BBBRMCI was the rehabilitation of mangrove forests. In total, the four municipalities combined have 180.68 ha of mangrove cover

---

\* Corresponding author. E-mail address: fubagsit@upv.edu.ph

(BBBRMCI et al. 2010). One of the major efforts under this initiative was awarding 3.5 ha of mangrove area in Barangay Talokgangan, Banate, Iloilo to the Talokgangan Concerned Citizen Association (TaCCAs), a people's organisation (PO) that was also established in 1997. The BBBRMCI, the Philippine Department of Natural Resources (DENR) and TaCCAs entered into a Memorandum of Agreement (MOA) in 2006 for the co-management of the mangrove area. The Local Government Code of the Philippines mandates that the LGUs enlist the support of POs and non-government organisations (NGOs) in the formulation and implementation of development policies and programmes (IIRR, LGSP, and SANREM CRSP/Southeast Asia, 2001).

While detailed information on the techniques for mangrove reforestation is available, and the government as well as the private sector appears willing to invest substantial amounts of funds into mangrove rehabilitation, the success of these efforts varies greatly, and is often limited in scale and time (Erftemeijer and Bualuang, 2011). People's participation and responses play an integral part in project implementation. Sound policies and programmes should draw on insights from development projects with respect to understanding the roles of women, men, and institutions and of people's interactions with the environment (Rola, 1995). To date, there is little information on gender in natural resource management. Most empirical studies on gender focus on agriculture (Kumar, 2011; Lu, 2010; Rola 1995), water and sanitation (Rathgeber, 1996), post-harvest activities and trade (Tran-Nguyen and Zampeti, 2004; Siason et al. 2001; Lopez-Rodriguez, 1996).

Hence, this study was conducted to describe the roles played by female and male members of the TaCCAs in the mangrove reforestation programme in Barangay Talokgangan, Banate, Iloilo, Philippines. Specifically, it aimed 1) to determine the gender roles in the protection and management of mangroves and 2) to identify the issues encountered in the implementation of the mangrove reforestation project.

## **Materials and Methods**

Primary data were generated using a semi-structured interview complemented by a Focus Group Discussion (FGD) with all active members of the TaCCAs. The questions referred to information on the roles played by the women and men relative to mangrove nursery development and maintenance, mangrove planting, mangrove management, protection and maintenance, reasons behind participation in the mangrove reforestation project, the benefits they derived from the mangrove resource, as well as the issues they encountered in the project implementation. Secondary data were also used.

## **Results**

The study was conducted in Barangay Talokgangan in the municipality of Banate (Fig. 1). Barangay Talokgangan is a coastal barangay located about 1 km north of Banate town proper. It has a total land area of 17.72 ha and a total population of 2,488, with 520 households (JICA and

BBBRMCI, 2008). Some residents are engaged in farming, fishing, fish trading, fish processing, hired services (e.g. motorcycle/pedicab driver, carpentry work, laborer, etc.) and government service, while others are employed in private agencies (e.g. as security guards or salesladies). There were two POs established in the area, the Talokgangan Small Fishermen Association (TaSFA) and TaCCAs.

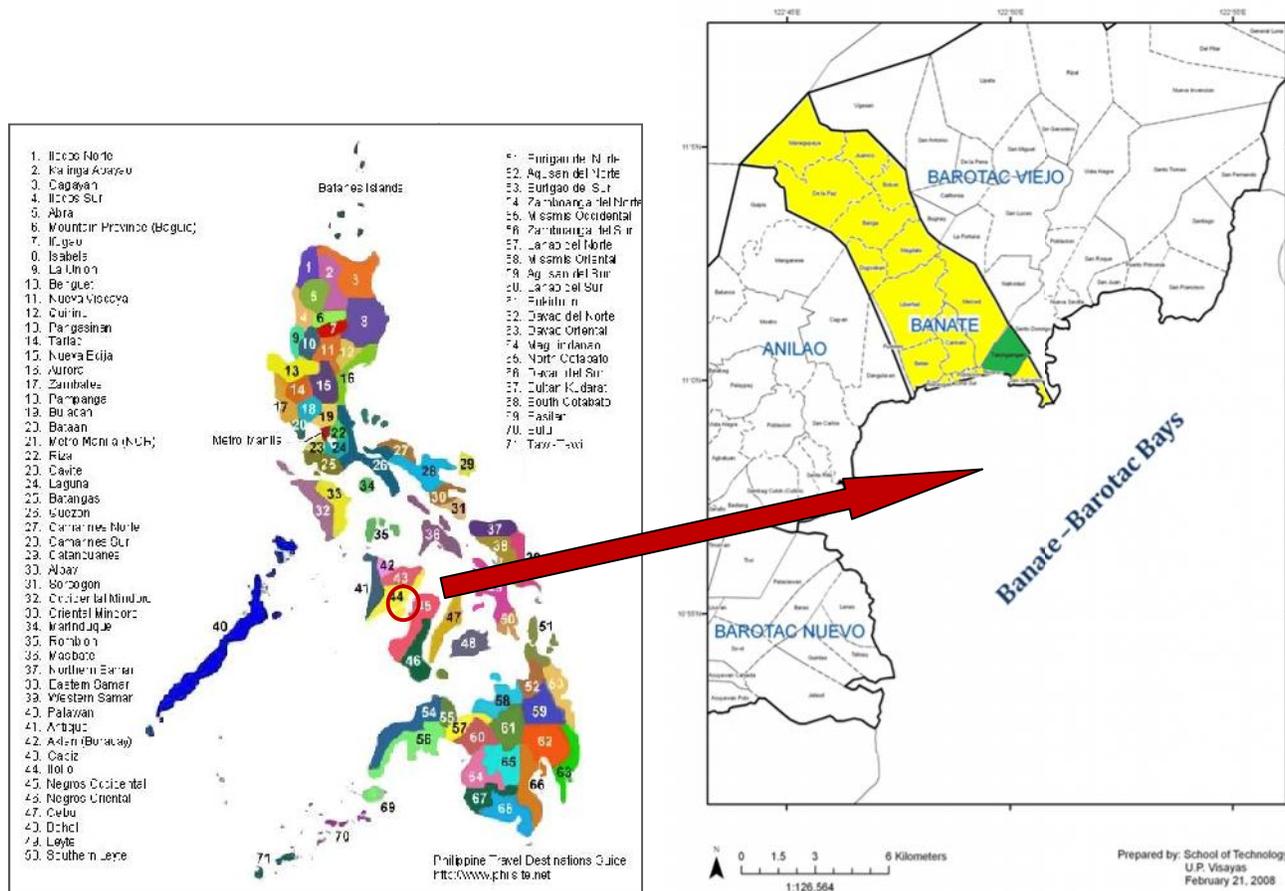


Fig 1. Maps showing Barangay Talokgangan, Banate, Iloilo, Philippines.

The majority of the 13 respondents were women (11), of whom most were married (12) and older than 50 years of age (12). All members had attained elementary education and most had been residents of Barangay Talokgangan since birth (10). The average number of children of the respondents was four, the majority of whom were older than 18 years (12). The average annual income was PhP 35,199.84 (~US\$ 819). Some of the respondents augment their meager earnings by selling mangrove seedlings/propagules from the mangrove reforestation project nursery. TaCCAs members are able to sell large quantities of mangrove seedlings/propagules in a single transaction (e.g. US\$ 133) to students and government agencies engaged in mangrove tree planting. Net proceeds from selling the seedlings/propagules are divided equally among the TaCCAs members

who participate in the potting and selling of mangrove seedlings/propagules for a particular transaction. In a household, the person who earns the money decides on how and where to spend his/her income.

The respondents' primary reasons for joining the TaCCAs included: to help other people and their community (8); to benefit from government projects/avail of loans (6); to be organised as a group (3); and to have another source of income (3).

Household chores fall within the responsibilities of the women. Women also played a significant role in most of the activities of the mangrove reforestation project, compared to their male counterparts who undertook fewer tasks (Table 1). Women's participation was higher than that of men's in the mangrove nursery development and maintenance, and planting, protection, management and maintenance of mangroves. Men on the other hand, were more involved than women in preparing fencing materials (cutting bamboo), and constructing and maintaining fences in the mangrove area. Planning and decision-making however were tasks shared by women and men.

**Table 1.** Gender roles in the mangrove reforestation project.

Activities	Men	Women
<i>Mangrove nursery development and maintenance</i>		
1. Preparing planting materials		✓
2. Preparing nursery area		✓
3. Potting seedlings/propagules		✓
4. Cutting bamboo stakes (for the fence)	✓	
5. Fencing	✓	
6. Purchasing polybags and other materials for the nursery		✓
<i>Mangrove planting</i>		
7. Transferring of mangrove seedlings/propagules to the planting area		✓
8. Digging holes prior to planting		✓
9. Planting mangroves		✓

---

*Mangrove management, protection and maintenance*

10.	Attending meetings		✓
11.	Planning	✓	✓
12.	Decision-making	✓	✓
13.	Coordinating with other agencies/organization		✓
14.	Sales		✓
15.	Monitoring		✓
16.	Clean-up of mangrove area		✓
17.	Accounting of income and expenses		✓
18.	Safekeeping of funds		✓
19.	Installing sign boards		✓

---

Respondents spent an average of 3-4 hr wk<sup>-1</sup>, usually from 06:00-09:00 hrs, depending on the workload, to perform their duties as co-managers of the mangrove area.

Some of the benefits the respondents enjoyed from the mangroves included protection from strong waves during typhoons and stability of the soil where their houses stand. Respondents recognised that mangrove stands along the shore had helped buffer their houses by serving as wind and wave breakers. Before the reforestation project, seawater reached the barangay's main road, about 0.3 km from the shoreline, during typhoons. In recent years however, with the mangrove reforestation project, residents noticed that during typhoons their houses were no longer inundated by seawater.

Another benefit the respondents enjoyed was the monetary incentive from selling mangrove seedlings/propagules and this motivated the TaCCAs members. While respondents acknowledged the remuneration they received from selling mangrove seedlings/propagules, they expressed their concerns about the unpaid balance for the planting materials and labour in their previous transactions with a government agency which hired their services.

Issues encountered by the TaCCAs members during project implementation included lack of support from other community members, loss of planting implements, lack of funds to support their activities and marital disputes in the household.

## Discussion

The TaCCAs was organised, through the assistance of the BBBRMCI, in response to deteriorating conditions in the coastal barangay of Talokgangan. It initially started with 28 members: 17 men and 11 women. Some of the male members were also members of the TaSFA while the females were wives of fisherfolk who were TASFA members. At the time of the study (October 2010), only 13 of these members remained active and 11 of them were women. Membership diminished when the Aquasilviculture Livelihood Project implemented by the TaCCAs within the mangrove area failed. Gradually, the men lost interest in the PO since they could no longer see potential income in the mangrove reforestation project. Since the establishment of TaCCAs in 1997, its leadership changed twice but each time it was headed by a man. At present, a male heads the organisation.

The average age of the respondents was 59, an observation that raises concerns for the sustainability of the mangrove reforestation project. Younger members will need to be recruited to TaCCAs if the initiative is to continue.

The average annual income (~US\$ 819) of the respondents is well below the PhP 62,000.00 (~US\$ 1,442) annual income of the Philippine bottom 30% income group which is considered poor (Erica, 2011). With this very minimal income, most of it is spent on food for the family. Others leave some provisions for their children's education and medicine. Since incomes are inadequate to cover other expenses than food costs, proceeds from the mangrove nursery, although small, contribute significantly to the household expenses, giving the women a greater sense of self-worth.

The women's performance of household chores is a reflection of their traditional roles as mother, wife, and housekeeper (Santiago, 2008). Although half of the women respondents had work such as operating a small store or dressmaking, they reported that they gave priority to their mangrove activities when their participation was especially needed. This was demonstrated in their high participation in most of the mangrove activities. A similar study entitled "Role and contribution of men and women in mangrove rehabilitation in Region VI, Philippines", presented by Dr. Alice Joan Ferrer during the 9<sup>th</sup> Asian Fisheries and Aquaculture Forum and the 3<sup>rd</sup> Global Symposium on Gender in Aquaculture and Fisheries (GAF3) also showed high levels of women's participation in the mangrove rehabilitation activities in three of the six sites in Western Visayas, Philippines.

In the TaCCAs case, most respondents had grown-up children who had started their own families and this allowed the women to be more involved in the mangrove reforestation activities than if they had been raising their own children. Because it gave additional family income, the women found time to do their mangrove reforestation duties especially when there was a large order for mangrove seedlings/propagules and even when there was a conflict in their schedules. Most of the women's work (e.g. acting as a barangay official or dressmaking) was done within the community, allowing them to go to the mangrove reforestation site at times convenient to them. The

women considered maintenance activities in the mangroves to be “meetings”. Since they were all neighbours, they relayed discussions about recent plans and commitments of TaCCAs during their meetings to those who were not able to attend. The woman Barangay Councilor, who was a member of TaCCAs, facilitated effective coordination and communication with the Banate LGU and with the BBBRMCI. Consequently, a good feedback mechanism was in place for monitoring and extending technical assistance related to the co-management of the mangrove resources. This observation is contrary to the results of the study conducted by Plaza-Moralde (2007) in Samal Island, Davao Province, where men had higher participation rates compared to women in all phases of mangrove rehabilitation activities. In Barangay Talokgangan, the men were not always around to participate in most of the mangrove reforestation activities because they have regular employment activities.

Although women and men in coastal communities are dependent on coastal zone ecosystems for their livelihood, women and men depend upon, exploit and manage coastal resources in different ways. In the Philippines, a number of initiatives highlight the significant role of women, particularly in coastal resources management (Lopez-Rodriguez, 1996; Tambuyog Development Center, 1999). As shown by the members of the TaCCAs, women perform multiple roles. Rola (1995) showed that women involved in upland farming systems in the Philippines undertake household tasks and also generally do farm work, off-farm work and non-farm labour. In addition, activities of women have a direct bearing on the welfare of the family as they generally look after all the members of the household.

Planting mangroves entails time and effort. Government agencies that contract the services of TaCCAs for their own mangrove planting activities need to realize that people’s time has a cost to them. Replanting their own mangroves, however, also benefits the local community and people should be prepared to make some investment of their own time.

One of the issues encountered by the TaCCAs members during project implementation was the lack of support from other community members because the others considered mangrove activities a waste of time. One respondent reported a marital dispute due to her absence from the household. Domestic violence/abuse occurs particularly when the wife takes part in resource conservation activities rather than remains at home and does household chores (Jimenez, 2004).

This paper highlights the significant role played by women in a mangrove reforestation project. The members of TaCCAs, almost all of whom are now women, are determined to sustain the organisation in spite of its low membership. The commitment and cooperation of the members to serve TaCCAs has increased their consciousness of coastal resource management. The reforestation project has afforded them protection along the coastal zone and has also provided them additional income through the sale of seedlings/propagules. These are concrete benefits, felt by TaCCAs members and the community as a whole, which can serve to promote more active participation in

the organisation and other similar initiatives. Community involvement, particularly in this case women's participation, can sustain a development project. By contrast, the fishermen's association, TaSFA has not remained active because some of its members transferred to other places in search for alternative employment. According to one respondent, the declining catch from the seas can no longer feed their families. Another reason that contributed to the inactivity of the TaSFA was that no member took the lead in reviving the organisation. The previous leadership had issues with the management of finances, resulting in loss of confidence among the members.

### Acknowledgement

The authors wish to thank the management and staff of the BBBRMCI, especially Yolanda Aberde, Roselle Bacpung and Auxilladora Perocho. Our deepest appreciation is also given to the women and men of TaCCAs, most especially Nanay Monita and Nang Marilyn, for the invaluable assistance they extended during the conduct of this study.

### References

- BBBRMCI. 2010. The BBBRMCI experience. Navigating success through the cluster approach to coastal resource management, Second edition. Panorama Printing Inc., March 2010. Banate-Barotac Bays Resource Management Council Inc (BBBRMCI), Iloilo Provincial Government (IPG) and Japan International Cooperation Agency (JICA). 83 pp.
- Erfteimeijer, P.L.A. and A. Bualuang. 2011. Participation of local communities in mangrove forest rehabilitation in Pattani Bay, Thailand: Learning from successes and failures. In: Strategies for wise use of wetlands: best practices in participatory management. pp. 27-35. In: Proceedings of a workshop held at the 2nd International Conference on Wetlands and Development, November 1998, Dakar, Senegal (ed. M. Gawler).
- Ericta, C.N. 2011. Families in the bottom 30 percent income group earned 62 thousand pesos in 2009 (Final Results from the 2009 Family Income and Expenditure Survey). Number: 2011-07, released: February 4, 2011. Accessed at: <http://www.census.gov.ph/data/pressrelease/2011/ie09frtx.html>, on 7 February 2011.
- International Institute of Rural Reconstruction (IIRR), Local Government Support Program (LGSP), and SANREM/CRSP/Southeast Asia. 2001. Enhancing participation in local governance: Experiences from the Philippines. International Institute of Rural Reconstruction, Philippines-Canada Local Government Support Program and SANREM CRSP/Southeast Asia. 197 pp.
- Japan International Cooperation Agency (JICA) and Banate-Barotac Bays Resource Management Council Inc (BBBRMCI). 2008. Participatory coastal resource assessment of Barangay Talokgangan, Banate, Iloilo, June 6-7, 2008. In: Participatory coastal resource assessment for Banate and Barotac Bays. June-July 2008. 300 pp.
- Jimenez, C.N. 2004. Understanding the role of gender in fishing community development. DANYAG, UPV Journal of Humanities and Social Sciences. VIII:182-202.
- Kumar, N. 2011. NGO Experience-gender perspective in eco-management. Accessed at: <http://www.womenenvironment.org/detail.php?pageId=294>, on 11 January 2011.
- Lopez-Rodriguez, L. 1996. The fishers of Talangban: Women's roles and gender issues in community-based coastal resources management. In: Seeds of Hope: a collection of case studies on community-based coastal resource management in the Philippines, (eds. E.M. Ferrer, L.P. dela Cruz and M.A. Domingo), pp. 67-82. College of Social Work and Community Development (CSWCD), University of the Philippines.

- Lu, J.L. 2010. Gender analysis of women in the Philippine agriculture and their occupational issues. *Journal of International Women's Studies* 14:73-82.
- Plaza-Moralde, G.R. 2007. Gender participation in mangrove rehabilitation project among barangays in Samal Island, Davao Province Region XI. 10<sup>th</sup> National Convention on Statistics (NCS). EDSA Shangri-la Hotel, Manila. October 1-2. 13 pp.
- Rathgeber, E.M. 1996. Women, men, and water-resource management in Africa. In: *Water management in Africa and the Middle East: challenges and opportunities*, (eds. E. Rached, E. Rathgeber, and D. Brooks), pp. 49-69. International Development Research Center, Ottawa.
- Rola, M.M. 1995. Gender roles and attitudes in upland farming systems in the Philippines. *Palajiwa News*. The coarse grains, pulses, roots and tuber crops in the humid tropics of Asia and the Pacific (CGPRT). *Centre Newsletter* 12(4):1-12.
- Santiago, C. 2008. Philippines: Country gender profile. Japan International Cooperation Agency. Accessed at <http://www.jica.go.jp/activities/issues/gender/pdf/j03phi.pdf>, on 1 February 2011.
- Siason, I.M., E. Tech, , K.I. Matics, P.S. Choo, M. Shariff, ,E.S. Heruwati, , T. Susilowati, N. Miki, A.B. Shelly, K.G. Rajabharsi, R. Ranjit, , P.P.G.N. Siriwardena, M.C. Nandeesha and M. Sunderarajan. 2001. Women in fisheries in Asia. In: Williams, M.J., N.-H. Chao-Liao, P.S. Choo, K. Matics, M.C. Nandeesha, M. Shariff, I. Siason, E. Tech and J.M.C. Wong (eds.) 2002. *Global Symposium on Women in Fisheries*. Sixth Asian Fisheries Forum, 29 November 2001, Kaohsiung, Taiwan.. pp. 21-48. WorldFish Center and Asian Fisheries Society, Penang.
- Tambuyog Development Center. 1999. Fostering gender fairness in coastal resource management: A community-based project in the Philippines. International Center for Research on Women and the Centre for Development and Population Activities. 4 pp.
- Tran-Nguyen, A. and A. Zampetti. 2004. Trade and gender opportunities and challenges for developing countries. United Nations Inter-Agency Network on Women and Gender Equality Task Force on Gender and Trade, United Nations, Geneva. 503 pp.