RESEARCH ARTICLE
Open Access

Journal of Veterinary and Animal Sciences
ISSN (Print): 0971-0701, (Online): 2582-0605
https://doi.org/10.51966/jvas.2022.53.2.170-177

Study on personal profile of members in biodiversity management committees of Kerala

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Citation: Chithra, S., Jiji, R.S., Senthilkumar, R., Anu, G. and Radhika, G. 2022. Study on personal profile of members in biodiversity management committees of Kerala. *J. Vet. Anim. Sci.* **53**(2): 170-177
DOI: https://doi.org/10.51966/jvas.2022.53.2.170-177

Received: 13.05.2021 *Accepted: 24.06.2021* *Published: 30.06.2022*

Abstract

This is a study of the personal profile of members in Biodiversity Management Committees (BMCs), functioning under selected local self-governments of Kerala. BMCs constitute the grass root level institutional machinery for decentralized biodiversity governance. Five BMCs each from six districts, two each from the northern, central, and southern zones were selected purposively based on key informant technique. The selection of districts was based on criteria viz. indigenous cattle population, documentary evidence on native livestock of conservation value and expert guidance by subject matter specialists. Data regarding personal attributes of two hundred and forty members, eight each from thirty selected BMCs, procured through e-surveys and telephonic interviews were analyzed statistically. Results indicated dismal representation of women (37.08 per cent) as well as youth (21.25 per cent) in the committees. Another significant finding was the prevalence of political/ social workers among BMC members (61.66 per cent). The representation of stakeholder communities including those of farming, livestock and fisheries was minimal (17.08 per cent), whereas there was absolute absence of traditional knowledge holders and practitioners of indigenous medicine. Graduates and postgraduates together constituted nearly half of the respondents. All the members reported a working experience of five years in BMCs. The findings regarding training exposure in biodiversity management among BMC members revealed that a vast majority received not more than one training (79.58 per cent). Only a few had attended two or three training programmes (16.25 per cent). The Awards/recognitions received by individual members in biodiversity management was minimal (0.42 per cent), whereas at organizational level, 43.33 per cent of BMCs received only one and 3.33 per cent received more than one awards.

#Forms part of the MVSc thesis of the first author submitted to Kerala Veterinary and Animal Sciences University, Pookode, Wayanad, Kerala

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Keywords: *Biodiversity management committees (BMCs), personal profile, biological diversity act*

Biodiversity Management Committees (BMCs) under local self-governments constitute the grass root level institutional mechanism to implement the provisions of National Biological Diversity Act, 2002, Rules (2004) and Access and Benefit Sharing (ABS) Guidelines, 2014, pertaining to biodiversity conservation, sustainable use, and distribution of benefits ensued from the use of bio-resources and related knowledge in a fair and equitable manner. The statutory obligations that come under their purview include documentation of bio-resources including indigenous animal and plant genetic resources of cultural and economic value and allied knowledge in the form of People's Biodiversity Registers (PBRs) and taking lead in promoting conservation and sustainable development of invaluable biodiversity falling within their jurisdiction. Moreover, BMCs are presumed to take part in ABS of bio-resources that can enhance the livelihood status of local communities.

Kerala has exemplary reputation of being the first state that established BMCs as well as Peoples Biodiversity Registers (PBR) in all Local Self-Government institutions (LSGIs). As per mandate, BMC is constituted with president of local body as chairperson, secretary of local body as secretary and a team of six nominated permanent residents in LSGI's jurisdiction, representing cross section of the society as members. Kerala State Biodiversity Board (KSBB) has put in place well-crafted guidelines to facilitate effective functioning of BMCs as per mandate. However, despite considerable headway made in such primary procedural formalities, much remains to be done for realizing the cherished organizational goals. This is especially true with regard to optimal and rational management of livestock genetic diversity that requires persistent efforts.

Though disaggregated data on pertinent personal attributes of members of BMCs could be a proactive tool in identifying and bridging gaps in local biodiversity governance, literature review reveals few studies in this regard. The study assumes significance in this context.

Materials and methods

The study was confined to two districts each, from northern, central, and southern zones of Kerala. The selection of districts was based on criteria viz. indigenous cattle population, documentary evidence on native livestock of conservation value and expert guidance by subject matter specialists (Anilkumar and Raghunandanan, 2005; Jayadevan *et al*., 2015; KSBB, 2016; NDDB, 2016; Singh, 2017; Anilkumar, 2018; Sreelakshmi and George, 2019). Accordingly, the districts of Kasargod and Kozhikode; Palakkad and Idukki; and Kottayam and Alappuzha were selected purposively from northern, central, and southern Kerala, respectively (Bryman, 2016). Five Biodiversity Management Committees (BMCs) from each selected district were chosen purposively based on key informant technique (Tremblay, 1957), wherein, key informants were the district level coordinators.

The organizational structure of BMC comprised of a chairperson, secretary and six other members including the convener. Data on personal profile of 240 respondents, eight from each BMC under study, were procured using structured questionnaire that was administered through e-surveys and telephonic interviews and subjected to frequency and percentage analysis.

Among the personal attributes studied, *Occupation* was operationally defined as the area/domain of work in which the respondents were engaged most of the time or derived income from, apart from their role as members of BMCs. *Training exposure* referred to the number of trainings undergone by respondents in the domain of biodiversity management. *Working experience* implied number of years of experience of the respondents as members or officials of BMCs. *Awards and recognitions received* referred to the number of awards or recognitions received by individual respondent for his or her performance in biodiversity related activities.

Results and discussion

It is obvious from the data (Figs.1 and 2) that representation of women as well as youth in the Biodiversity Management Committees under study was at a dismal low scale despite adherence to the norms of one third reservation for women, as mandated by the Biological Diversity Rules, 2004 (NBA, 2004). This implies that women's participation at grass root level biodiversity management machinery and decision-making processes remained marginal even with fifty percent reservation for women in local self- government institutions of the state, enviable social development indicators and plethora of gender-responsive missions for poverty alleviation and livelihood enhancement.

In the policy context, Kerala Gender Equality and Empowerment Policy, 2015 (Department of Social Justice- GoK, 2015) envisages participation of both genders in conservation activities and prevention of environmental degradation. The state Environment Policy, 2009 (Department of Environment- GoK, 2009) recommends women specific environment awareness programmes delivered through local bodies and women's organisations. However, it is high time to scrutinize the gender dimensions of our biodiversity policy towards synergies with Gender Plan of Action, 2015-20 of CBD (Secretariat of CBD, 2015). In its preamble, CBD recognizes the crucial role played by women in biodiversity conservation and its sustainable use and underlines the need for their active partaking in policy formulation and implementation at all levels. Proposed Post 2020 Biodiversity Framework (CBD, 2019) also envisages mainstreaming of gender perspective for accomplishment of Sustainable Development Goal (SDG) 5 on gender equality. Global biodiversity outlook 5, 2020 (Secretariat of CBD, 2020) recommends integration of gender dimensions into the national biodiversity management frameworks as a key strategy to address implementation challenges. Thus, owing to the widespread recognition of women's crucial role as users and managers of bio-resources, gender sensitive policies and programmes linked to biodiversity management and leadership in key institutions could be critical entry points to women empowerment. This would eventually facilitate accomplishment of objectives linked to biodiversity conservation and sustainable development as well.

A few reports have come out with findings on gender disaggregated data in biodiversity management spheres. For instance, Namibia, under its community based natural resources management programme, reported that women constituted 30 percent of conservation management committee members, engaged in indigenous plant genetic resources management (CBD Secretariat, 2017). An assessment report (UNEP/CBD, 2016) on national biodiversity management plans of CBD member countries indicated that 67% of plan reports had at least one reference to gender or women, while 33% did not talk about either. Women were mentioned as beneficiaries in 30% of reports, 28% mentioned women as stakeholders whereas, 19% characterised them as resource managers and only 1 % of reports referred to their role as agents of change. With respect to gender responsive outcomes, the sixth national report of India (MoEF&CC -GOI, 2018) has highlighted the representation and participation of women Self Help Groups in environment synced development programmes. However, inclusion of gender disaggregated data on leadership, managerial and decision-making roles at various levels of biodiversity governance could have brought more accountability.

Another notable finding is the minimal representation of youth in BMCs under study. Nearly half of the members were above fifty years old. At this juncture, it would be interesting to read this finding along with the demographic picture of the state that is aging faster in comparison with rest of India. The elderly population in the state is well above the national average, whereas the national demographics is in favour of youth (KSPB, 2020). While the rich experience of elderly work force could be a valuable human resource, there should be concerted efforts to ensure substantive inclusion of youth in decision making and political processes related to biodiversity management at grass root, national as well as

international levels. Global Youth Biodiversity Network of CBD (CBD, 2017) has been a role model that leverages perspectives of youth across nations to enhance achievement of Aichi Biodiversity Targets. The most recent observations from assessment of national reports indicate that among younger people, understanding of biodiversity is on rise at a rapid rate (Secretariat of CBD, 2020). As envisaged, youth could provide leadership in creating public awareness of the values of biodiversity and measures to conserve and use it sustainably. An empowered youth force could be instrumental in effective updating and implementation of National Biodiversity Strategy and Action Plan (NBSAP). They could also contribute towards innovative knowledge and technology base for scientific bioresources management. Moreover, our National Biodiversity Target no.1 pertains to capacity building with special focus on youth (MoEF&CC-GOI, 2014; Onial, *et al*., 2018). ENVIS Centre on Biodiversity (Fauna) under ministry of Environment, Forest and Climate Change has devised Green Skill Development Programme (GSDP) Mobile app to skill India's youth (MoEF&CC-GOI, 2019).

Another significant finding is about the prevalence of political/ social workers among BMC members (Fig. 3). The representation of stakeholder communities including farming, livestock and fisheries was minimal whereas, there was absolute absence of traditional knowledge holders and practitioners of indigenous medicine. This could be attributed to the political affiliation that might creep in while nominating members by the local bodies. However, as ecosystem management is a social process that addresses socio-economic and cultural diversity of local communities in addition to management of natural and genetic resources (UNEP-CBD, 2004), substantial inclusion of social and political workers could be justifiable to some extent. Nonetheless, there has been increasing evidence that an interdisciplinary approach could be the cornerstone for sustainable thoughts on eco-management (Bull *et al*, 2016). Indigenous wisdom and scientific acumen along with political will, could facilitate judicious decision making and implementation at grass root level administration and management of bioresources. Kerala Biological Diversity Rules, 2008 (Department of Environment, GoK, 2008) strategizes a multidisciplinary team in BMCs, representing a cross section of society comprising of crop, livestock and fishery farmers, practitioners of indigenous medicine, forest dwellers, tribal leaders, researchers, teachers, environmentalists, and other potential persons.

The ecosystem approach of biodiversity management that is envisaged in Convention on Biological Diversity (UN, 1992), strategic priority area on sustainable development of Global Plan of Action on Animal Genetic Resources (FAO, 2007) and World Summit on Sustainable Development (UN, 2002) cannot be materialized without interdisciplinary approach. Undoubtedly, documentation of availability and use of local bio-resources and chronicling of associated knowledge, innovations, applications, and practices held by local communities would necessitate an inter-disciplinary teamwork at grass root level biodiversity management institutions. Hence, it is imperative to integrate the ecosystem approach into multiple sectors and production systems impacting biodiversity such as agriculture, animal husbandry, forestry, fisheries and so forth and the same should reflect in institutional machinery for biodiversity management. UNEP-CBD guidelines on ecosystem approach for biodiversity management (UNEP-CBD, 2004) as well as Global Biodiversity Outlook 5 2020 (Secretariat of CBD, 2020) underlines the importance of increased stakeholder participation and inter-sectoral cooperation and communication at various levels including creations of networks for sharing experience and information.

The findings regarding respondents' educational status (figure 4) and experience in biodiversity management strike an optimistic note. However, deploying capacity building exercises towards optimal bio-literacy of the potential task force seems to be a strategic imperative. KSBB has instituted awards for model as well as for best BMCs (KSBB, 2020), though no awards have been set up for rewarding individual merits of members. (Figs. 6 and 7). The scheme for incentivizing BMCs

Personal Profile

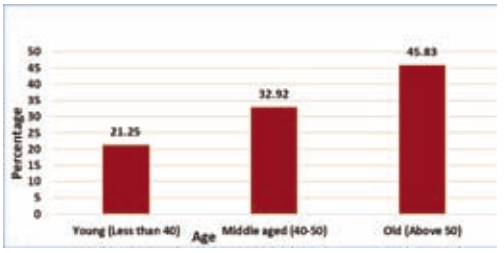

Fig. 1. Distribution of respondents based on age

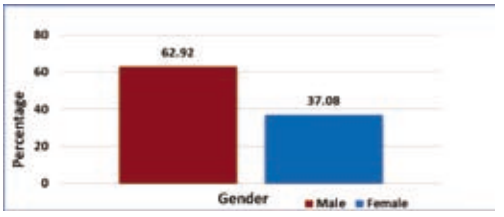

Fig. 2. Distribution of respondents based on Gender

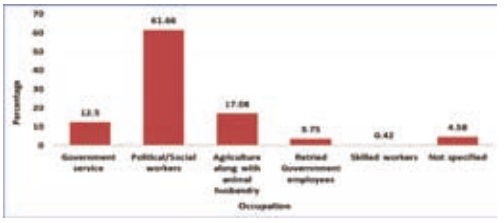

Fig. 3. Distribution of respondents based on Occupation

through criteria-based selection of model BMCs and their capacity building has been a well thought out strategy.

The findings regarding training exposure (Fig. 5) in biodiversity management among BMC members reveals that a vast majority received not more than one training. Only a few had attended two or three training programmes. This implies that there is absolute necessity for policy initiatives at organizational level for further capacity building of the members in biodiversity management realm. Lack of biodiversity education as well as ignorance of biodiversity related issues among stakeholders whose decisions and initiatives have an impact on biodiversity has been reported as an important factor hampering achievement of objectives mandated by Convention on Biological Diversity as well

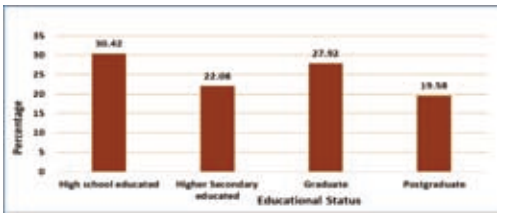

Fig. 4. Distribution of respondents based on Educational Status

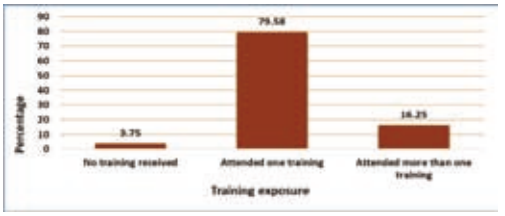

Fig. 5. Distribution of respondents based on Training exposure in biodiversity management

All the respondents reported a working experience of 5 years in BMCs.

Awards/recognitions received by members

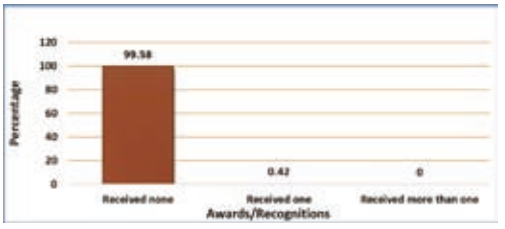

Fig. 6. Distribution of respondents based on Awards/recognitions received by members

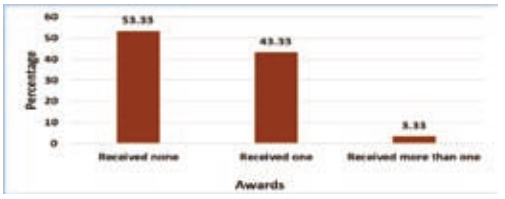

Fig. 7. Distribution of BMCs based on Awards received

as biodiversity erosion at an unprecedented rate (Navarro-perez and Tidball, 2012; Basnet *et al*., 2019). In this context, it would be pertinent to discuss about our National Biodiversity Target number one that mandates building biodiversity awareness including its value and measures for conservation and sustainable use among substantial section of

the population. This would essentially require institutional capacity building at various levels of governance. The Communication, Education and Public Awareness (CEPA) programme of CBD could be utilized as a strategic instrument to attain this target (Hesselink *et al*., 2007). A recent analysis of national reports of CBD member countries reveals that none of the Aichi Biodiversity Targets have been met fully within the stipulated period (Secretariat of CBD, 2020). Different educational, societal, technical, and institutional factors along with the lack of political will, dearth of empowered human resources and lack of public education and awareness have been recognized as obstacles in this regard (Navarro-Paraz and Tidball, 2012). Global Biodiversity Outlook 5, 2020 observes 'building human capital and institutions' (SDG 3, 4, 16) as a potential driver that contributes towards 'conservation and sustainable use' of biodiversity (Secretariat of CBD, 2020).

Conclusion

The study elucidates the need for gender dis aggregated data on leadership, managerial and decision-making roles at various levels of biodiversity governance along with a close scrutiny of the gender dimensions of our biodiversity management policy towards synergies with international instruments such as Gender Plan of Action of Convention on Biological Diversity (CBD). Also, there should be concerted efforts to ensure substantive inclusion of youth in decision making and political processes related to biodiversity management at grass root level. Integration with international platforms such as Global Youth Biodiversity Network of CBD and national platforms like Green Skill Development Programme of Ministry of Environment, Forest and Climate Change is the need of the hour. Another critical requirement would be the deployment of an interdisciplinary team of multiple stakeholders at grass root level Biodiversity Management Committees (BMCs), as this would facilitate ecosystem approach in biodiversity management. Also, the findings call for intense capacity building and incentivizing measures towards optimal bio-literacy of the potential task force at BMCs.

Acknowledgements

Authors gratefully acknowledge the facilities and support provided by Kerala Veterinary and Animal Sciences University. Also, we are extremely thankful to the authorities of Kerala State Biodiversity Board and Biodiversity Management Committees for the cooperation extended in collection of required data.

Conflict of interest

The authors declare that they have no conflict of interests.

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