ABSTRACT

National Parks (NPs) are established with the aim of protecting important natural environments. However, numerous conflicts have emerged due to the introduction of park rules restricting local communities from utilising resources within national parks. The aim of this paper is to examine ways in which national parks in various nations employ the collaboration of stakeholders in park management and conflict resolution by focusing on four countries: Germany, Japan, Nigeria and Vietnam. A review of literature available in multiple languages, analysis of administrative documents and informal interview were the methods adopted. We show that challenges hindering co-management in the four countries range from unclear responsibilities of various actors, to weak institutionalised framework, and centralisation of park management. The result implicates that each country can learn different techniques of co-management from other countries, leading to more productive approaches towards national park management and conflict resolution in and around national parks.

Key words: co-management, national park, park volunteers, NGOs, developed country, developing country

INTRODUCTION

One of the objectives of National Parks (NPs) is to protect natural resources within the park while ensuring the needs of local people’s livelihoods (Dudley, 2008). However, many NPs have failed in this regard, generating numerous conflicts with local people due to the restrictions imposed on their use of resources within NPs (von Ruschkowski, 2010). To resolve these conflicts, collaborative management (co-management) has been adopted by park administrations as one of the strategies to reconcile conservation objectives with the interests of local communities (De Pourcq et al., 2015). Co-management is a form of shared governance where authority and responsibility are shared among several stakeholders (Dudley, 2008). However, one of the stakeholders has the authority to make decisions but is required to inform or consult other stakeholders either at the time of planning or implementing initiatives (Borrini-Feyerabend et al., 2013).

Co-management of protected areas has been extensively investigated over the last two decades (Fox et al., 2013). Studies have shown that co-management contributes to the sustainable management of natural resources (Andersson & Agrawal, 2011; Gutiérrez et al., 2011); leads to improvements in local livelihoods (Morsched, 2013); and plays a vital role in conflict resolution (De Pourcq et al., 2015). On the other hand, there has been criticism that it has not lived up to expectations (Dressler et al., 2010), but instead has aggravated the conflict that it was intended to solve (Carlsson & Berkes, 2005).

Although the previous studies found mixed results regarding the effect of the co-management of NPs on managing resources, they are mainly focused on local stakeholders’ participation in park management. While many countries have a three-layered administrative structure with national, regional and local levels, the role of regional administrations in NP management has not been extensively addressed. Likewise, the roles of sponsors, volunteers and NGOs in NP management have received little attention.

Thus, this paper will examine management structures across national-regional-local levels, and the involvement of local stakeholders, NGOs, volunteers and the private sector in NP management by drawing...
cases from Germany, Japan, Nigeria and Vietnam. The rationale for making a comparison across the four countries is that conflicts between local communities and the administrations are said to exist worldwide (von Ruschkowski, 2010). The study aims to identify the strengths and issues that need to be addressed for effective management across different scales and actors of NPs in each country.

METHODS
The study reviewed NP management systems in Germany, Japan, Nigeria and Vietnam. All of them have three levels of administration (national, regional, local), so that the balance between these three scales can be analysed. Furthermore, the four authors have first-hand in-depth knowledge of these countries and their NP management and can analyse documents in the respective languages.

The main methods used for data collection are review of the literature available in English, German, Japanese and Vietnamese, and administrative documents. The literature included journals, books, reports and conference papers on NP and collaborative management in the NPs of the four countries. These were obtained from the Web of Science and Google Scholar search engines. The authors searched: “National park management in the various countries”, “management policies and structure”, “collaborative management” and “co-management”, with “AND” used as a connecting word between keywords for the purpose of retrieving relevant papers, books and reports for the review. Administrative documents on the management of NPs were obtained either directly in each country or through email requests or downloaded from administration homepages. Furthermore, we conducted research in NPs in each country, which provided on-the-ground
background knowledge and helped to clarify issues that were identified from literature and administrative documents. The NPs researched are: Wadden Sea NP, Germany (Funck, 2017); Yakushima NP, Japan (Adewumi, 2017; Nguyen & Funck, 2019); Gashaka-Gumti NP, Nigeria (Adewumi, 2017); and Tram Chim NP, Vietnam.

**COMPARATIVE RESEARCH ON THE CO-MANAGEMENT OF NATIONAL PARKS**

**Management structure across national-regional-local levels**

**Management structure of German NPs**

The history of NPs in Germany is quite recent compared to other developed countries, with the oldest park established in 1970 (von Ruschkowski, 2010). As of 2019, 16 NPs exist in Germany, varying in size between 30.7 and 322 km² and protecting a total area of approximately 10,479 km² (BfN, 2019). All NPs are secured by state law or ordinance and with the exception of one park, comprise more than 90 per cent of public land owned by the federal, state or local government. Although the first NP was established in 1970, Germany did not have a national nature protection law until 1976. This very basic framework has since been reformed several times, with current law being the Federal Nature Conservation Act (Bundesnaturschutzgesetz, 2010).

German NPs are established under the Federal Nature Conservation Act, but are designated and administered at the regional level by the federal states in which each park lies. This has led to an unsystematic designation of NPs, as each state has chosen areas based on its particular regional and local structure rather than on a national concept that could create an integrated network of large-scale protected areas (Job, 2010). The zoning concept is handled differently in each state too. Between 2009 and 2012, EUROPARC, an umbrella organisation of protected areas in Germany, conducted an evaluation of NPs (EUROPARC, 2013) in close cooperation with the federal government. The evaluation revealed that park structures depend on the state laws and ordinances under which the parks are created and therefore differ in each state and park. In only eight parks is the NP administration situated directly below the highest nature protection authority, in others it is integrated into different lower agencies (EUROPARC, 2013).

The full financing of the NP is provided by the federal state in each case. However, it was found that only half of the parks had sufficient funds for park management and maintenance (EUROPARC, 2013). The NPs charge no entrance fees but offer some limited services and facilities.

**Management structure of Japanese NPs**

The first NPs in Japan were established in 1931, and in the same year, Japan’s NPs Law was enacted, which was amended in 1957, becoming the Natural Parks Law. As of 2019, there are a total of 34 NPs in Japan covering 21,907 km² (5.8 per cent) of the total territorial area of Japan (MOE, 2019).

Due to the long history of private land ownership, NPs in Japan comprise state-owned land, local government-owned land and private land (Knight, 2010). The MOE plays a coordinating role in the management of the parks jointly with the state, prefecture and other parties (MOE, 2015). The Forestry Agency or prefectoral government manages land in government-owned forests, while the Forestry Agency is essential in the management of private-owned forests within NPs (Yamaki, 2008).

Parks are administered using a system known as “national park management by zoning and regulation” or “multiple-use system” (Hiwasaki, 2005). The zoning system divides the parkland into three different levels of protection, Special Protection, Special and Ordinary Zones (Jones, 2013). While the designation and zoning of NPs is decided at the national level, since 2008, local authorities have the power to designate certain natural resources under the Act on the Promotion of Ecotourism and introduce access restrictions (Funck & Cooper, 2013) both inside and outside NPs. MOE provides NP management funds, but they are inadequate for park operation. Hence, the MOE declared a law in 2015 allowing local communities to collect entrance fees to resolve these problems. Furthermore, some NPs collect donations or voluntary contributions from tourists, which are used for the maintenance of trails, visitor centres and other facilities (Kubo et al., 2018).

**Management structure of NPs in Nigeria**

Although the initiative to establish NPs in Nigeria started in 1976, it was not until 1979 that the first national park was established. Decree 46 of 1999 which was revised in 2005 as the Nigeria National Park Service (NNPS) Act, is the legal instrument under which NPs are administered. Nigeria has seven NPs, covering a total area of 22,206 km², about 3 per cent of Nigeria’s total land area.

NPs are the preserve of the Federal Government under its exclusive legislative list, and parklands are the property of the government (Amosun & Aredoyin, 2010). NPs in Nigeria are managed and administered by
the Federal Ministry of Environment through the NNPS. Each NP has a Management Committee overseeing the affairs of the park. Since NPs are the sole responsibility of the federal government, they provide funds, tourism businesses and all facilities within the park, and tourists are charged entrance fees.

NPs in Nigeria are divided into zones for the purpose of applying different management principles in each zone that may best ensure the overall management objective for the park. Zoning in the parks consists of management zones (core/wilderness area, buffer zone, multi-use area/enclaves and the support zones) and protection zones or ranges. The aim of the management zone is to facilitate more focused management and proper allocation of park resources and staff to the areas needed while protection zones are operational areas for the protection and monitoring of the park's resources.

Management structure of Vietnamese NPs
The first NP was established in 1962 before the reunification. Vietnam has five main categories of national protected areas that often overlap: special-use forest protected areas, wetlands, marine protected areas, world heritage sites and biosphere reserves. Among these five categories, NPs are considered part of Special-Use Forests (SUFs) protected areas. The SUFs are established under the provisions of the Forest Protection and Development Law of 2004. As of 2016, Vietnam has a total of 31 NPs – equivalent to IUCN Category II – protecting a total area of approximately 10,350 km², covering about 2.9 per cent of the land area³ (The Government of Vietnam, 2010, 2014).

The management tasks for protected areas in Vietnam are divided among several agencies. The Ministry of Agriculture and Rural Development (MARD) and its provincial departments are responsible for managing all SUFs, and scientific research and experiment forests. The management policies of NPs follow the regulations for SUFs' management. Currently, Vietnam has two types of NP: first, the cross-provincial parks or nationally important parks under the management of the Forest Protection Department within MARD; second, the within-provincial parks under the administration of the Provincial People’s Committee (PPC). Among the 31 NPs in Vietnam, eight are managed by MARD while 23 NPs belong to the provincial level (The Government of Vietnam, 2010).

Although the MARD and/or PPC take full responsibility for the management of NPs, the daily operations and management are the responsibility of the National Park Management Board (NPMB). Basically, each NP has a NPMB, a state-owned organisation, which has the functions and tasks of a forest owner and the state-assured conditions for managing, protecting and developing SUFs. NPMBs are funded by the state, but at a very low level. Hence, entrance fees are charged and many Vietnamese NPs are supported with funds from many NGOs.

NPs in Vietnam are divided into zones for management purposes. According to Decision 186 (The Government of Vietnam, 2006), the zones include the strictly protected zone, ecological restoration zone and service-administrative zone. These functional zonings can be adjusted to the boundaries of each sub-zone based on the characteristics and actual situation of each NP and the purposes of forest management and use.

Co-management: involvement of local stakeholders, NGOs, volunteers, private sector and sponsors
Co-management in German NPs
Stoll-Kleemann (2001) reveals that one of the main conflicts faced by German NPs is that local opposition can be aimed at the park designation and at management plans and practices. This opposition is not so much based on conflicts over resource use or on insufficient knowledge of environmental protection but rather, on emotional drivers (e.g. the impression of facing restrictions on day-to-day decisions) and cultural drivers (e.g. the challenge to traditional values and habits). Adding some evidence for a weak interest in local support on the park management side, von Ruschkowski (2010) reports that only three out of the 14 NPs in Germany had placed high priority on the issue of

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Box 1: Stakeholder involvement in co-management in German NPs
A successful example of co-management between several levels of administration and NGOs is EUROPARC Deutschland, established in 1991 to address the shortcomings of the federal structure. Volunteers, nature protection NGOs and local communities play important roles in supporting park administration in Germany. However, voluntary engagements in NPs rely heavily on nature protection NGOs for organisation and recruiting. The involvement of the private sector in NPs is still in the development phase, with only a handful of private companies supporting EUROPARC and partnering with NPs in the tourism sector.
monitoring support among local communities. Ludwig et al. (2012) point out that even when efforts were made to include local communities in decision-making processes on management of deer in the Bavarian Forest National Park, they were not successful due to the underlying territorial discourse. Residents felt that the park in general restricted their home territory and therefore would not accept an offer to cooperate on detailed management questions.

On the other hand, Sieberath (2007) examined acceptance of the relatively new Eifel National Park, which was established in 2004. He concluded that the park in general is well accepted. However, local residents do not feel they have sufficient possibilities to participate in decision-making. He emphasises that NP support organisations that exist in all parks have contributed greatly to a better acceptance of NPs in Germany (Sieberath, 2007). EUROPARC (2013) avers that cooperation with local administration agencies, tourism agencies, educational institutions, support organisations and nature protection NGOs is considered extensive and successful, which has led to an increased acceptance of the parks and their general aims in recent years.

From the above research examples, it can be argued that the issue of acceptance has been neglected in the

<table>
<thead>
<tr>
<th>Category of comparison</th>
<th>Germany</th>
<th>Japan</th>
<th>Nigeria</th>
<th>Vietnam</th>
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<tbody>
<tr>
<td>First NPs</td>
<td>1970</td>
<td>1931</td>
<td>1979</td>
<td>1962</td>
</tr>
<tr>
<td>Number of NPs</td>
<td>16 NPs, covering a total area of 10,479 km²</td>
<td>34 NPs covering 21,907 km²</td>
<td>7 NPs with a total area of 22,206 km²</td>
<td>31 NPs covering 10,350 km²</td>
</tr>
<tr>
<td>Land ownership</td>
<td>More than 90 per cent are public land owned by the federal, state or local government</td>
<td>State-owned, local government-owned and private land</td>
<td>Federal Government of Nigeria</td>
<td>The Government of Vietnam</td>
</tr>
<tr>
<td>Designation</td>
<td>Established under the Federal Nature Conservation Act, but designated by the federal states</td>
<td>Natural Parks Law</td>
<td>Nigeria National Park Service Acts</td>
<td>Forest Protection and Development Law of 2004, but designated by the GOV</td>
</tr>
<tr>
<td>Administration and management</td>
<td>Administered at the regional level by the state in which each park lies</td>
<td>Managed jointly by the state, prefecture and other parties, with MOE playing a coordinating role</td>
<td>Managed by the Federal Ministry of Environment through the Nigeria National Park Service</td>
<td>MARD or PPC through NPMB</td>
</tr>
<tr>
<td>Zoning</td>
<td>Parkland is divided into different zones, but zoning is handled differently in each state and, as a result, the number of zones differs.</td>
<td>Zoning is decided on the national level Zoning system divides the parkland into Special Protection, Special and Ordinary Zones</td>
<td>Zoning consists of management zones and protection zones Management zone: core area, buffer zone, multi-use area/ enclaves and support zones</td>
<td>Zoning consists of strictly protected zone, ecological restoration zone and service-administrative zone</td>
</tr>
<tr>
<td>Park funding</td>
<td>Full finance is provided by the Federal State No entrance or gate fees are charged</td>
<td>Provided by the MOE Entrance fees, donations and voluntary contributions</td>
<td>Solely provided by Federal Government Entrance fees</td>
<td>Funded by the national government Support from many NGOs Entrance fees</td>
</tr>
</tbody>
</table>
development of NPs, especially concerning emotional resistance to restrictions. While some regulations obviously affect economic activities like forestry, others like collection of wild berries and mushrooms restrict traditional ways to enjoy nature. Cooperation with local and regional partners could be an effective strategy for increasing acceptance.

To address the shortcomings of the federal structure, EUROPARC Deutschland aimed to connect professionals from all three categories of large-scale protected areas and nature NGOs. Since 2005, it has branded them together as Nationale Naturlandschaften (national natural landscapes) in cooperation with the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, many of the federal states and more than 20 NGOs. Germany has a highly developed system of charitable organisations. The two biggest national nature protection and environmental NGOs have about 500,000 members each; many others are active on a local and regional level. Branding, evaluation, publicity and research activities by EUROPARC are a successful example of co-management between several levels of administration and NGOs.

Parks try to make up the shortfalls in funds and personnel through long-term volunteers, cooperation with nature protection NGOs and local communities (EUROPARC, 2013). The long-term volunteers offer an important source of young, engaged staff for visitor centres and other educational activities (Funct, 2017). Although the volunteer activity in nature protection in Germany dates back to the 19th century’s bird monitoring, it has been given an official role in federal and state law as Ehrenamt, an expression that designates honorary officials. Another important form of volunteers are participants in the 6 to 18 month-long Volunteer Ecological Year (Freiwilliges Ökologisches Jahr, FÖJ), created in 1993 under federal law but, once again, is run under the responsibility of the states (Haack, 2006). All three forms of voluntary engagement rely heavily on nature protection NGOs for organisation and recruiting. The important role of NGOs might be one of the reasons why private sector involvement in NPs is still in the development phase.

Concerning cooperation with the private sector, the idea of private sponsorship for NPs is relatively weak in Germany. Six private companies support EUROPARC as a national organisation with materials and funds. As a form of mutual benefit, many individual parks have established so-called ‘partner-initiatives’ with local or regional tourism businesses since 2000. These contracts between park administration and tourism businesses aim to increase environmental awareness among tourists, increase regional acceptance of the parks and promote regional development; businesses benefit from using the NP brand. In 2012, 12 parks established initiatives with 564 partners, mainly in accommodation and gastronomy (Hoffmann, 2014).

Co-management in Japanese NPs
As management of NPs is divided between several types and levels of administrative agents, collaboration and coordination is required between them. However, no institutionalised framework exists for this purpose, except those that are also designated as a World Heritage site. In this case, coordinating structures are established and may include some private sector organisations (Tsuchiya, 2014).

Realising that the mixed-use system of NP management in Japan requires collaboration between stakeholders (Jones, 2013), the Natural Parks Law was amended in 2002 to allow the delegation of park management to local non-profit organisations (NPOs) (Kato, 2003; MOE, 2002). This made it possible for community-based organisations to become more involved in park management (Hiwasaki, 2005), and improved public participation. Local community actors are usually involved in conservation activities, such as park volunteers, local nature guides, interpreters and members of local conservation NGOs. However, negative effects are evident in the case of Yakushima. Enforcement of conservation laws has been difficult due to the existence of conflicting interests among various stakeholders (Adewumi, 2017).

Box 2 Stakeholder involvement in co-management in Japanese NPs
Due to overlapping land ownership, various actors are involved in NP management at local and regional level. However, there exists no institutionalised framework for co-management among these groups. To encourage the involvement of local NPOs in park management, the Natural Parks Law was amended in 2002. This has facilitated the involvement of local actors in park management through activities such as park volunteers, local nature guides, interpreters and members of local conservation NGOs. They are usually responsible for clean-up activities in park sites, providing visitor guidance and supervision, repair and maintenance of facilities, among others.
The involvement of the private sector is becoming increasingly prominent. For example, in the case of Nikko NP, a public-service corporation was established with the aim of park cleaning, providing visitor guidance and supervision, facilities repair and maintenance, and research (Sheppard, 2001). The public-service corporation was established through partnership between prefectures, cities and neighbouring towns, and an electricity company and other related business enterprises were established in support of the park.

Park volunteers play an important role in the management of NPs. The current volunteer system was established in 1985 (Kim & Yui, 2001). The park volunteers fill educational and basic park maintenance roles. About 1,520 volunteers were registered in 38 NPs in 2016 (National Park Research Group & Nature Parks Foundation, 2017). However, the park volunteer system has faced issues of ageing volunteers, lack of funding and heavy responsibilities (Miyamoto & Funck, 2016).

The Natural Parks Foundation, established in 1978 as the Natural Parks Beautification and Management Foundation, plays a significant role in park management. The functions of the foundation are to help: (1) conserve and manage the natural environment of NPs and quasi-NPs; (2) maintain and manage park facilities; (3) provide information to visitors; and (4) support volunteers’ activities and the volunteer system (Kim & Yui, 2001; MOE, 2015).

Co-management of NPs in Nigeria
Due to the creation of NPs and especially the enforcement of Decree No. 36 (1991) that prohibits hunting, exploitation of forest resources and trespass into park areas, local people have been deprived of their source of livelihood. This led to illegal exploitation of resources in the park, threatening the existence of the NPs (Adewumi, 2017). An approach was proposed to address the problems associated with excluding human activities from the park. Although the NNPS decree of 1999 states that communities are to be represented on National Park Management Committees and partnerships, it does not specifically give communities rights to forest resources within NPs.

In Nigeria, local people are not fully involved in making decisions because their representatives or the government usually make decisions on their behalf (Eneji et al., 2009). Neither do they benefit directly from tourism within the park. This is evident in Gashaka-Gumti NP where tourism businesses such as chalets, restaurants and souvenir shops are provided by the park, making it difficult for the locals to benefit from tourism and interact with tourists (Adewumi, 2017). In principle, local artefacts should be produced and supplied to the NP by local people so as to serve as a source of revenue for the locals, but this is not the case in Nigeria.

Nevertheless, efforts are being made by each NP to improve the standard of living of communities living within and around the NPs through the community support zone development programme. The community support zone development programme embarked upon by each NP has been one of the approaches employed to achieve the protection and conservation of park resources and attain sustainable development in rural areas (Wahab & Adewumi, 2013). Most NPs in the country provide funds and materials to assist in the completion of community-sponsored projects, provide healthcare services, educational facilities in primary schools, boreholes and reinstate major access roads.

**Box 3: Stakeholder involvement in co-management in Nigerian NPs**

Co-management is a relatively new concept in Nigerian NPs due to the top-down management system adopted in the country. Local communities are not included in decision-making or tourism-related businesses within the parks. To improve the parks’ relationships with the host communities, and to support the well-being of the local people, community support zone development programmes were established. NGOs play a significant role in Nigerian NPs by collaborating with the NNPS to support conservation and empowering the local communities. The private sector is rarely involved in park management in Nigeria. Hence, nature conservationists and tourist investors are facilitating private partnership with NPs in the country.
within host communities (Ewah, 2010; Odebiyi et al., 2015). Furthermore, Gashaka-Gumti NP provides a vocational training centre so as to reduce dependence on the illegal exploitation of park resources (Adewumi, 2017), while Kainji Lake NP provides funds for micro-projects to reduce the poverty level of local communities (Wahab & Adewumi, 2013).

N G O s  h a v e  p l a y e d  a  s i g n i f i c a n t  r o l e  i n  t h e establishment and management of NPs in Nigeria. Nigerian Conservation Foundation (NCF), which is Nigeria’s oldest conservation NGO, established in 1982, was instrumental in the creation of the NNPS and NPs in the country. A 10-year Memorandum of Understanding between Wildlife Conservation Society (WCS) and NNPS was signed in 2011 to help protect endangered wild animals such as elephants (Loxodonta africana), chimpanzee (Pan troglodytes), gorilla (Gorilla gorilla diehli), Preuss’s guenon (Cercopithecus preussi) and Preuss’s red colobus monkey (Procolobus preussi). Smaller NGOs such as Pandrillus, the Nigerian Forest Elephant Wildlife Survey and Promotion group (NFEWSPG), the Yankari Initiative, Fauna and Flora International, among others, have helped in the survival of many conservation initiatives in the country. Also, Gashaka Primate Project (GPP), funded by the North of England Geological Society, London, through Chester Zoo, has, since 2000, been supporting the conservation of primates in Gashaka-Gumti NP and been involved in improving public health and empowering the local economy.

Although the law governing the NNPS is open to private sector participation, only a few have taken the initiative. This is because only a few private sector companies have the resources to commit sufficient funding to conservation in Nigeria. In 2014, some nature conservationists and tourist investors organised a workshop with the aim to promote private partnership involvement in the Nigerian NPs. Action plans were drawn up to help in (1) reviewing the law establishing the NNPS to ensure the possibilities of a working relationship between the NNPS and potential investors in some parks; (2) collection of data and information on the state of the parks and the production of report findings; and (3) broad stakeholder engagement and development of a mechanism for fund raising among others (NCF, 2014).

**Co-management from the perspective of Vietnamese NPs**

According to the Law on Forest Protection and Development (The GOV, 2004), the management of Protection and Production Forests could belong to different sectors including state or private sectors, organisations or households. However, the NPMB organises ecotourism development in NPs in collaboration with other institutions and companies from the state or private sectors.

The management model regarding ecotourism and/or recreation activities in protected areas has been developed since 2006. Based on the principle of SUFs policy, the NPMB has the right to manage ecotourism activities within a park under the following three models: (1) the state-management model, in which ecotourism activities are managed by the NPMB; (2) the private-management model, which involves leasing forestland to private groups or companies to organise ecotourism businesses; and (3) the joint-venture model, which includes existing associations and other forms of investment in ecotourism activities (Ly & Xiao, 2016). In the Vietnamese NPs’ management system, the state-management model is still dominant although several NPs have started to apply the co-existing management model to meet development and conservation needs.

The involvement of volunteers and the private sector in Vietnamese NPs’ management is still new. Recently, Con Dao NPs and Nui Chua NPs collaborated with International Union for Conservation of Nature (IUCN) to call for volunteers’ engagement in sea turtle conservation. Short trips were organised for participants to experience sea turtle conservation in these two NPs.

**Box 4: Stakeholder involvement in co-management in Vietnamese NPs**

In Vietnamese NPs, stakeholders are mainly involved in park management through ecotourism development activities. Due to the development of the ecotourism management model in 2006, the NPMB often collaborates with other institutions and companies of the state or private sectors for ecotourism development. The involvement of volunteers in Vietnamese NPs management is still new. They are mainly involved in sea turtle conservation in collaboration with NPMB and IUCN. While there has been a long history of NGOs’ involvement in Vietnamese NPs, their involvement is mainly related to grants for research and conservation purposes. Local communities are usually involved in running ecotourism ventures developed in the parks and benefit from Sustainable Resource User Groups, allowing the communities to sustainably utilise resources within the park. These involvements are aimed at supporting poor households within the parks.
These activities started in summer 2016 and are ongoing projects that involve volunteers in Vietnamese NPs. A rare case of private sector involvement in Vietnamese NPs’ management is that of Phong Nha–Ke Bang NP, where two private companies, Oxalis Company and The Truong Thinh Group, operate tourism activities in the park (Ly & Xiao, 2016).

Many NGOs and other institutions such as IUCN, the World Bank, World Wildlife Fund (WWF), Swedish International Development Cooperation Agency and Danish International Development Agency have been engaged in Vietnamese NPs for the last decades. However, their involvement is mainly related to grants for research and conservation purposes. Tram Chim NP is a good example of the collaboration between the NPMB, local community, private investors and NGOs in ecotourism and sustainable management in the park.

Tram Chim NP established the Centre for Ecotourism and Environmental Education for managing ecotourism activities in 2003. This offered opportunities for people who can invest financially in tourism services in the park under a scheme called the Tourist Boat Investment System (TBIS). The Tram Chim NPMB introduced the TBIS programme in 2014, to facilitate collaboration between local residents, tourism investors and the NPMB. Investment in the TBIS is open to both local people and the park officers, as “boat investors”. Local poor households are employed as both boat drivers and tour guides.

In addition, Tram Chim NP has established six “Sustainable Resource User Groups”. With the support of the Coca-Cola Company and WWF, wetland resources are co-managed with local communities. This allows local communities to sustainably utilise resources within the park’s boundaries (WWF, 2011). To benefit from these programmes, the following conditions must be met: (1) households living near the park; (2) poor or near poor households; (3) households who contributed to the revolution during the wartime.

Generally, tourism development and sustainable natural resources’ exploitation in the case of Tram Chim NP and its policy aim to support the poor and communities surrounding the park. However, the number of

**Table 2. Principal challenges hindering co-management in the four countries**

<table>
<thead>
<tr>
<th>Case study</th>
<th>Challenges hindering co-management</th>
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<tbody>
<tr>
<td>Germany</td>
<td>Weak restrictions on use of natural resources in the parks due to weak national influence and strong regional interests</td>
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<tr>
<td></td>
<td>The opinions of residents are usually incorporated into planning system at a very late stage</td>
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<tr>
<td>Japan</td>
<td>Multiple and overlapping conservation agencies within the parks</td>
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<td></td>
<td>Weak restrictions for the protection and conservation of NPs</td>
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<td></td>
<td>Inharmonious relationship between stakeholders because most of them have different objectives</td>
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<td></td>
<td>Difficulty in locating responsibilities due to the division of management between different authorities on the national, regional and local levels</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Top-down management approach has hampered local level involvement</td>
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<td></td>
<td>Isolation of NPs from local communities makes them reluctant to accept conservation and hostile to NPs</td>
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<td></td>
<td>Reluctance to incorporate local people in park projects and management because it is deemed as time-consuming</td>
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<td></td>
<td>The long process of information transfer from the top to local people might hinder immediate actions from being taken</td>
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<tr>
<td>Vietnam</td>
<td>Responsibilities of organisations engaged in NPs’ management seem not to be clearly designated</td>
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<tr>
<td></td>
<td>Overlap in management policies of NPs with other protected areas</td>
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<tr>
<td></td>
<td>Conflicts between local users and NPs’ management hinders co-management</td>
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</table>
participants in these activities is still relatively small, with only a handful of low-skilled jobs available.

**CHALLENGES OF CO-MANAGEMENT IN THE FOUR COUNTRIES**

In German NPs, two main barriers to co-management are a weak national constituency and conflicts with local people (Table 2). Although state management allows for the adjustment of management structures to regional conditions, it has hampered restrictions on competing land (and water) uses and led to a lack of funding (Schumacher & Job, 2013), while also carrying the risk of regional actors promoting NPs for mainly economic benefits (Job, 2010). However, the nationwide evaluation conducted by EUROPARC (2013) was a first step in setting common criteria for NP management. Concerning acceptance of NPs, Schumacher and Job (2013) noted that a high degree of local acceptance is visible in the oldest parks (where economic benefits have become visible over the years), parks in former East Germany (because they contributed to the image improvement of little known areas), and the newest parks that were created with better consensus building. However, von Ruschkowski (2010) emphasises the need for better personal communication with local stakeholders and less reliance on formal requirements for participatory processes. Better regional governance remains an unfinished task, maybe because administrations have been relying on Germany’s highly developed regional planning system that does not incorporate residents’ opinions until at a very late stage.

The underlying challenge in co-management in Japanese NPs is its multi-use system (Table 2). This system is characterised by conflicts of interest between stakeholders (Hiwasaki, 2007). Likewise, the relationships between MOE and other stakeholders are not harmonious because most of these stakeholders have different objectives. According to Hiwasaki (2007, p. 111), these divergent objectives are obvious in situations where “one agency is intent on conserving the resources in a given area, another may well be busy undermining them under the pretext of regional development”. In Yakushima NP where there are overlapping conservation bodies and various government stakeholders, it is obvious that stakeholders are not only poorly organised but also oppose each other at times. This has sometimes led to obstruction and criticism of each other and rebuffing each other’s rights (Kato, 2000). The multi-layer management structure of Japanese NPs makes it difficult to allocate responsibilities. Therefore, local stakeholders struggle to find the right person to respond to their calls (Miyamoto & Funck, 2016). Furthermore, the limited land ownership of MOE makes it difficult to impose adequate regulations on NPs. Hence, NPs in Japan have weak restrictions and depend on self-regulation for protection and conservation (Hiwasaki, 2007). Volunteers have to cover the resulting gaps in management without, however, being involved in planning and management decisions (Miyamoto & Funck, 2016).

In the case of Nigeria, co-management has been hindered by the isolation of the NPs from local society (Table 2). The top-down approach adopted by Nigerian parks has hampered local level involvement in planning and development but followed the nation’s centralised form of government. As NPs in Nigeria are found within underdeveloped communities that depend on local natural resources for their livelihood, their encroachment into NPs in order to provide for themselves is exacerbated by their exclusion from park management (Ewah, 2010). Similarly, the direct funding of parks by the Federal Government has limited the interest of park managers in communicating with the states, local governments and the communities. This has resulted in the loss of local support for NPs (Hassan et al., 2015).

Another fundamental problem plaguing co-management in Nigeria is the fact that local people often perceive conservation as a hindrance to development. They are reluctant to accept conservation and are hostile to NPs because they see them as a means of depriving them of their livelihood (Adewumi, 2017). Unless the park management actively involves local communities by giving them a certain degree of control, it will be hard for them to view conservation as representing their socioeconomic and cultural interests (Eneji et al., 2009).

In the case of the Vietnamese NPs, management involves several state organisations (Table 2). Therefore, the responsibilities of those engaged in NPs’ management seem not to be clearly designated, except the role of the NPMB. Especially since some other types of protected areas such as Ramsar Sites, Marine Protected Areas and Biosphere Reserves often overlap with NPs, so that management policies may overlap or become confused. Since NPs in Vietnam belong to SUFs, private sectors and communities are faced with the barriers of participating in management unless they are offered opportunities in ecotourism projects.

Perhaps, one of the most serious challenges of Vietnamese NPs’ management is the conflict between local users and NPs’ management staff. Similar to the situation in Nigeria, the control of human activities in NPs is difficult because many people are dependent on
natural resources in these areas. Therefore, there have been many cases of illegal logging in NPs in Vietnam. It is necessary to practise and apply suitable alternatives, for which community-based management has been suggested. Recently, co-management in Vietnamese protected areas has been widely discussed. This new method should be broadly applied to NPs throughout the country.

The aim of this paper was to identify forms of co-management in Germany, Japan, Nigeria and Vietnam and discuss the challenges each country faces in achieving co-management of the park by reviewing the existing literature on NP management (Table 3). Characteristics of co-management in the four countries were summarised, with an emphasis on management by national-regional-local government, and how local stakeholders, NGOs, volunteers and private sectors are involved in park management. Co-management in the four countries is affected by factors such as the stakeholders responsible for park management, national policy governing the parks and land ownership.

The most significant difference regarding co-management is that various stakeholders, such as volunteers, NGOs and local communities, play important roles in park management in both Germany and Japan, while NGOs are the main stakeholders involved in Nigeria and Vietnam. In Japan and Germany, park volunteer systems are well established and cover the shortfalls in funding and personnel by supporting park administration. The idea of involving volunteers and the private sector is just starting in Vietnam, with volunteers’ involvement limited to sea turtle monitoring and the private sector to ecotourism activities only. Although NPs are established and managed by the national and/or federal state governments, we are of the opinion that incorporating other stakeholders, such as local communities, local governments, NGOs and the tourism industry, can give them a sense of ownership and responsibility. This sense of ownership will make it easier for local people to comply with the policies and guidelines governing the NPs, especially in Nigeria and Vietnam. Just as in the case of Germany where EUROPARC plays a significant role in co-management between several actors, it is recommended that similar conservation agencies be established to encourage collaboration and partnership between community and other stakeholders.

It is important to state that this review was intended to elucidate the successes and challenges in co-management adopted in each case study. The present study may assist other countries in adopting some of the

<table>
<thead>
<tr>
<th>Co-management challenges</th>
<th>Countries affected by the challenges</th>
</tr>
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<tbody>
<tr>
<td>Unclear responsibilities due to overlapping conservation agencies within the parks</td>
<td>In both Japan and Vietnam, the responsibilities of conservation bodies engaged in NPs’ management are not clear, because other protected areas overlap with the national park. Hence, management policies within the parks also overlap and are sometimes confusing.</td>
</tr>
<tr>
<td>Weak institutionalised framework /or national constitution</td>
<td>In Japanese NPs, there is no institutionalised framework for collaboration between the several administrative agents involved, thereby leading to poor organisation among the agents and conflicts of interest. Since the federal states are responsible for park designation in Germany, there is no national system on how to involve other stakeholders in park management.</td>
</tr>
<tr>
<td>Weak restrictions for park protection</td>
<td>NPs in both Germany and Japan are faced with the challenges of weak restrictions for park protection and conservation of resources within the parks.</td>
</tr>
<tr>
<td>Degree of dependence on local natural resources</td>
<td>Level of community dependence on natural resources within NPs in Nigeria and Vietnam is relatively high, resulting in conflicts between parks and communities and hindering acceptance of conservation and co-management.</td>
</tr>
<tr>
<td>Centralised form of park management</td>
<td>The centralisation of park management in both Nigeria and Vietnam has made it difficult for the private sector and communities to directly participate in park management.</td>
</tr>
</tbody>
</table>
productive approaches discussed to improve their management system and foster effective conflict resolution in and around NPs.

ENDNOTES

1Data were collected based on interviews in December 2015.
4It is also translated into English as “Landscape conservation areas”
7http://www.ucl.ac.uk/gashaka/building/

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**RESUMEN**

Los parques nacionales se establecen con el propósito de proteger importantes entornos naturales. Sin embargo, han surgido innumerables conflictos provocados por la introducción de regulaciones que restringen a las comunidades locales el uso de recursos dentro de los parques nacionales. El objetivo del presente documento es examinar las formas en que los parques nacionales en varias naciones recurren a la colaboración de las partes interesadas en la gestión de parques y la resolución de conflictos, centrándose en cuatro países: Alemania, Japón, Nigeria y Vietnam. Los métodos adoptados incluyeron una revisión de la literatura disponible en varios idiomas, el análisis de documentos administrativos y entrevistas informales. Mostramos que los desafíos que obstaculizan la gestión conjunta en los cuatro países abarcan desde responsabilidades poco claras de los distintos actores hasta marcos institucionalizados débiles y la centralización de la gestión de los parques. El resultado implica que cada país puede aprender diferentes técnicas de cogestión de otros países con miras a enfoques más productivos hacia la gestión de parques nacionales y la resolución de conflictos en y alrededor de los parques nacionales.

**RÉSUMÉ**

Les parcs nationaux ont été créés dans le but de protéger les milieux naturels de haute importance environnementale. Cependant, de nombreux conflits sont apparus du fait de l'instauration de dispositions empêchant les communautés locales d'avoir accès aux ressources des parcs. L'objectif de cet article est d'examiner la manière dont les parcs nationaux de divers pays travaillent en collaboration avec les parties prenantes dans la gestion des parcs et la résolution des conflits. Notre étude s'est axée sur quatre pays: l'Allemagne, le Japon, le Nigeria et le Vietnam. Les méthodes retenues comprennent un examen de la littérature disponible dans plusieurs langues, une analyse de documents administratifs, ainsi que des entretiens informels. Nous montrons que les problèmes qui entravent la cogestion dans ces quatre pays sont variés, allant d'un manque de clarté dans les responsabilités des différents acteurs, à la faiblesse du cadre institutionnel, en passant par la centralisation de la gestion des parcs. Le résultat démontre que chaque pays peut apprendre différentes techniques de cogestion provenant d'autres pays, conduisant ainsi à des approches plus productives en matière de gestion et favorisant la résolution des conflits à l'intérieur et autour des parcs nationaux.