ROSKILDE UNIVERSITY TEKSAM

Sustainable forest management in Jozani Chwaka Bay National Park

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Abstract

Jozani Chwaka Bay National Park is located in the south-east region of Zanzibar and attracts millions of tourist each year. This tourist flow is mainly due to the fact that Jozani had been declared a biodiversity hot spot with endangered species and variety of mixed forestry vegetation. At first glance, Jozani enjoys rather stable status which is mainly due to the collective efforts of various forest related actors. In fact, the Park had become widely associated with community based forest management and is indeed performing relatively well.

Nevertheless, the 3 months of field work in Jozani for an NGO called JECA (Jozani Environmental Conservation Association) had led to the establishment of some warning patterns that question the sustainability of the forest management in Jozani. Hence, this report aims at providing an understanding of Jozani as a complex social-ecological system consisting of numerous conflicts primarily related to overexploitation of the scarce forest resources pushed by the high poverty levels and the lack of alternative income generating means for the forest communities. JECA is among the many actors that approaches this problem with a strategy that not only aims at mitigating those conflicts but actually trying to end them in the long run by providing means of self-empowerment to the 9 villages that coexist in the boundaries of Jozani.

Despite all the progress achieved and the outstanding results in the management of Jozani, there are still some doubts over the sustainability Jozani. Therefore, the report also aims evaluating the sustainability performance of Jozani and providing a perspective on how Jozani could be managed even more sustainably whit JECA being the main facilitator. Put in a problem oriented context, the report aims at answering the following question: *How could JECA increase the capacity for sustainable forest management in Jozani Chwaka Bay National Park?*

The findings indicate that JECA has a good potential or capacity to contribute to more sustainable forest management in Jozani by pushing forward alternative income generation programs to slowly become the mainstream forest management initiatives and not the tourism related, as it is at present. JECA could do that only in a setting of good ecosystem governance while acting as a mediator addressing conflicts from the local communities to the governmental authorities and increasing its co-operation with internal actors in Jozani for more efficient results.

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THANK YOU AND GREAT SUCCESS TO ALL OF YOU!

Acronyms

AIGA - Alternative Income Generating Activity

CBFM – Community Based Forest Management

CBNRM - Community-Based Natural Resources Management

CBO - Community Based Organization

CoFMAs – Community Forest Management Agreements

CSOs - Civil Society Organizations

DCCFF - Department of Commercial Crops, Fruits and Forestry

GDP - Gross Domestic Product

GoZ – Government of Zanzibar

IGA - Income Generating Activity

INGO – International Non-Governmental Organization

JCBCP - Jozani Chwaka Bay Conservation Project

JECA – Jozani Environmental Conservation Association

JOCDO - Jozani Credit Development Organizaion

MDGs - Millennium Development Goals

NGO – Non-Governmental Organization

PRPs - Poverty Reduction Plans

TZIVA - Tanzania Zanzibar International Volunteer Association

UN – United Nations

UNDP – United Nations Development Program

VCC - Village Conservation Committee

ZBC - Zanzibar Butterfly Centre

ZSGRP - Zanzibar Strategy for Growth and Reduction of Poverty

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1. Problem Field

1.1. Area of interest

The motivation behind writing this project report came from my personal ambition to test my educational knowledge in practice. Therefore, it was decided to do a three month internship program in Zanzibar through an organization called TZIVA (Tanzania Zanzibar International Volunteer Association). As the name of the organization implies, it deals primarily with the recruitment of (international) volunteers and allocating them in governmental or non-governmental organizations according to the volunteers' interests. ¹

Being a student at TekSam (Roskilde University, Denmark), I am particularly interested in the topics of environmental conservation and I have already done a critical project about tree plantations in Tanzania implemented as CDM projects. I had an initial understanding of what could be the main challenges that Zanzibar faces with regards to its forest resources, such as their unsustainable use by the local communities to meet their daily needs enforced by poverty. Therefore, I decided to volunteer in the field of forest management in order to get a first-hand understanding of the current issues within this field. This insight knowledge obtained through the active involvement in the daily working activities facilitated to a great extent the choice of problem to be investigated in this project report.

Through the assistance of TZIVA, I had been allocated to work in an NGO called JECA (Jozani Environmental Conservation Association).² As the name implies, the organization's main activities are in the field of protecting the environment, especially the forest resources around Jozani forest while finding alternative methods for the local communities to improve their livelihoods. After discussing my potential with TZIVA and JECA members, it was agreed that I would be working a total amount of 5 days per week: 3 days in the field, where I was following and participating in JECA's activities in order to get understanding of the current practices and issues that local communities were facing in the Jozani Chwaka Bay district; 1 day in the office where I had to write an evaluation paper of the field related activities from the previous 3 days in

² For more information on JECA visit www.envaya.org/jeca

¹ For more information on TZIVA visit www.tziva.org

the form of proposals for capacity building on more efficient forest management and development practices and; the last working day I had to spent assisting TZIVA with their development program as well.

The key aspect of my work was in developing the proposal papers for JECA based on each working week (See Appendix CD, Proposals for JECA). It was decided that based on all the ideas or propositions in those documents, which were quite simplistic at the time, JECA would choose one idea that has a potential for further development. At one of my field visits to Bungi village, where JECA was educating farmers about drip irrigation systems using an example of entrepreneur farmer who had already established this system for commercial tomato production, I was approached by two farmers who showed big interest in this type of technology. They asked me if I could develop a pilot project for them to see how they could implement such a system. I gladly accepted and after discussing this idea with Mr. Ali³ and Mr. Said⁴ based on the proposal paper (See Appendix CD, Proposals for JECA, Proposals Week 10), we decided to try assisting a single farmer by implementing a drip irrigation system on his land through writing this project report which could set the basis for a more thorough proposal that could finance this initiative.

However, despite my ambition to accomplish this initial idea, I soon realized its limitations being too many for this type of academic study. Hence, I was supervised to shift this approach by conducting a more explorative and general study, reflecting upon my internship experiences and applying them to the study requirements of Roskilde University, Denmark⁵. After going through the vast amount of collected data in terms of observations (see Appendix CD, Field notes) and the proposal papers, I started to establish an analytical pattern that led to an interesting phenomenon to study. Despite the many efforts and remarkable achievements of both governmental and non-governmental actors to sustain a balance between Jozani forest and the surrounding local communities, there are still conflicts present and this report would try to shed light on the plausible causes behind this phenomenon, as well as provide a perspective on how they could be diminished through JECA being the main mediator.

³ Chairman of JECA

⁴ Chairman of TZIVA

⁵ "1.The background for and development of local, regional and international environment oriented policy, planning and regulation.

^{2.} Measures and strategies in the implementation of policy, plans and regulation with effects on man and nature.

^{3.} Environmental and development initiatives and the effects thereof." (TekSam 2009)

1.2. Problem Area

The first association most of the people relate to when Zanzibar being mentioned is "Paradise" (Field notes. 02.02.2013). The main islands of Unguja and Pemba, together with many other small islands in an archipelago located in the East African Indian Ocean are forming Zanzibar, which is indeed a very beautiful location that attracts so many tourists annually that the revenues have the biggest share of the national economy (URT. 2012: 18). However, there are always two sides of the coin and thus this paradise for the tourists is seen completely from another perspective by the majority of Zanzibar's population. Despite the economic growth in the country, poverty is still among the biggest challenges (UNDP. 2009: 2); and in order to sustain their lives and those of their families, Zanzibaris had to literally rely on the surrounding natural resources. (Field notes. 10.02.2013)

Zanzibar is a semi-autonomous entity that maintains political union with mainland Tanzania since 1964 (RGoZ. 2007: 2). Despite its own executive, legislative and judiciary bodies, Zanzibar still remains largely politically influenced and dependent on Tanzania (Menzies. 2007: 32). Due to its unfavourable historical past, such as being enslaved and ruled by the Portuguese, Oman and British Empires until its freedom in 1963, Zanzibar and Tanzania in general had a very slow development kick-start. According to the UNDP Human Development Index 2013 statistics, Zanzibar ranks among the countries with the lowest development standards - Nr. 152 of approximately 200 countries. (UNDP. 2013: 146)

In 2000, the representative government of Zanzibar had prepared a Zanzibar Development Vision 2020 framework that aims at providing guidelines for the long term development initiatives of the country. The main objective is to eradicate extreme poverty by 2020 as this issue is acknowledged to be the greatest burden for the people of Zanzibar and the country's overall development. (UNDP. 2009: 3) Statistics (2007-2012) with 33.4 % living between the national poverty line and 67.9 % of the population living below the minimum of 1.25 US \$ a day, clearly illustrate the severity of the poverty situation in Zanzibar and Tanzania in general. (UNDP. 2013: 160) Eradicating poverty will inevitably contribute to meeting the Millennium Development Goals (MDGs) agreed at the General Assembly of the United Nations (UN), but most importantly would change Zanzibaris lives to the extent where they would see Zanzibar as a place to be proud to live in. They would see it as "A Paradise", and not as a place that they

want to run away by any chance. (Field notes. 21.02.2013) According to the Vision 2020, the Ministry of Finance and Economic Affairs concludes that: "(...) poverty eradication could be synonymous to empower people to successfully manage their lives and have a say on the course of their development." (UNDP. 2009: 3).

Vision 2020 further emphasizes on the importance to protect the environment as a valuable asset for the overall development of the country. Among some of the guideline targets set in the framework are: "Promote life quality that is socially desirable, economically and environmentally sustainable" (Ibid: 32) and "Encourage sustainable and equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment, health and safety". (Ibid: 32) In fact, the aspect of sustainable development is among the highest priorities, together with eradicating poverty, which are placed on the top governmental agenda for 2020 (RGoZ. 2007: i).

The revolutionary government of Zanzibar had prepared a number of Poverty Reduction Plans (PRPs) in order to provide operational guidelines for reaching mid-term milestones towards achieving the objectives of the Development Vision 2020. Despite the first generation of PRPs (2002) showing significant progress, there were still some major challenges in the Plans, especially with regards to stakeholder participation in the preparation process (Ibid: 8). As a result, the government had launched Zanzibar Strategy for Growth and Reduction of Poverty (ZSGRP) which evaluates and improves further the shortcomings of the PRPs. The ZSGRP emphasize on the importance of stakeholder participation and that the cross-sectoral approach towards development would provide a more comprehensive and integrated framework towards the Vision 2020 goals. (Ibid: i) The president Karume statement expressed in the ZSGRP says: "The ultimate objective is to achieve high standards of social well being to the citizens. In the process, the Government recognized the need to further improve Good Governance and National Unity." (Ibid: i) In addition, when it comes to addressing the issues of poverty and sustainable development, the Strategy further stresses on the aspect that: "Exploitation of natural resources will be made in such a way that it does not affect needs of future generations. The strategy will ensure all negative effects on environment are avoided." (Ibid: 32)

All the interventions mentioned above illustrate a clear pattern: despite the government's effort to mitigate poverty, it is still a major issue that imposes further constrains to the overall

development of the country and to the well-being of its citizens. In addition, there are indicators showing even more concerning tendencies towards the near future of Zanzibar. The research obtained during the internship period had significantly assisted this report in terms of understanding the development issues and their interconnectedness in a great detail and the following lines will outline some of those concerns.

Despite the increasing rates of urbanization in Zanzibar, the majority of the poor population, 83.4 % is still located in the rural dwellings. (URT. 2012: 51) Due to the lack of opportunities for income generation, the poor local communities in the villages have to sustain their lives by literally relying on everything that their surrounding natural environment could supply them with. There are some efforts to establish alternative modes to diversify income opportunities among the local communities, so their dependence on the natural resources is reduced.

Beekeeping, tree plantations, credit schemes, agroforestry, butterfly breeding, seaweed projects are among the many initiatives that unfortunately only few villagers could benefit from at present (See Appendix, Proposals; Field notes 18.02.2013). These projects are primarily a result of the remarkable efforts by NGOs working within the fields of development, conservation and empowerment and their contribution to alleviating poverty and contributing to the overall development of Zanzibar worth attention to be further elaborated on.

Although tourism has the biggest percentage of the overall GDP (Ibid: 18) with an annual growth rate of 5.7 % (ACORN. 2008: 7), it does little to eradicate poverty levels. Large international monopole tourism agencies are taking over the land with the highest natural and recreational value for almost no money, violating property rights and bribing the government institutions to escape taxes for instance. The tourists on the other hand are coming to Zanzibar through international tourist agencies that had already collected the revenue for an all-inclusive tourist package (Field notes. 04.02.20012, 16.02.2013). At the end the actual money from the tourism sector in the governmental official budget is considerably less and the amount of money that reaches the poor population directly is almost not noticeable. (URT. 2012: 97) There are some ecotourism projects which allocate a significant share to the local communities from the tourism revenue and there are already good feedbacks as it will be further illustrated in the report. However, the tourisms sector is highly seasonably dependent and reliable on the country's overall stability and safety in terms of political and social conflicts and thus it could be implied

that this approach would not prove efficient and sustainable in the long run when addressing poverty alleviation. (Field notes. 08.04.2013)

The bottom line is that, the alternative modes of income generation to resource dependent communities has little contribution to mitigating poverty levels and as a result the forest and marine ecosystems are experiencing major stress, undermining their resilience. Forest trees and mangroves had been cut to supply household needs for cooking and sold on the market for charcoal or construction materials. According to the ZSGRP: "The proportion of people using solid fuels that include wood and charcoal is 96percent; the proportion is higher in the rural areas (98percent) compared with urban areas (93percent). Zanzibar relies a great deal on wood products for cooking." (RGoZ. 2007: 25) Considering the issue of population growth⁶ and their vital dependence on the scarce forest resources⁷ (see Appendix CD, Table 1), there is clearly a cause for concern.

There are already numerous cases showing how the exploitation of these limited resources could have devastating permanent consequences on the environment and its biodiversity including inhabiting human populations. For instance, poor local communities living in a mangrove habitat had cut the mangroves to provide for their needs. Consequently, the clearing of the mangrove area had led to three drawbacks: deforestation due to the lack of forest cover, leading to loss of biodiversity; desertification due to the salinity levels becoming so high that the soil is becoming useless as the mangroves are not able to absorb the salt from the Ocean, and: migration by the communities inhabiting these areas as the presence of mangroves were naturally balancing off the Ocean levels and due to their clearance, now the communities are literally forced by the rising Ocean levels to abandon their settlings flooded by the salty water and move to another location due to their own inability to use the surrounding resources in a sustainable manner (Field notes 04.03.2013).

This is just one example that illustrated the devastating consequences that the local communities are having on the environment. In addition, coral rag forests which are dominating Zanzibar's forest landscape are highly valuable on the market as construction materials used for the overall

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⁶ "(...)3.1 % and a population density of 370 per sq kilometers" (RGoZ. 2007:2)

⁷ "(...)the forest vegetation in Zanzibar covers about 63,908ha equivalent to 23.7% of the total land area" (RGoZ. 2008: 7)

infrastructural innovation of the country, as well as to meet the expanding demand of the tourist sector for building large hotels. The demands for stone and sand materials are further contributing to the loss of forests as big areas are cleared by the land mining industry. Deforestation is occurring also due to the forest land being cleared and transformed into arable parcels for agriculture. Fire practices for clearing land are also contributing to the numbers of forest losses. The decreasing quantity and quality of the forest resources had also inevitable negative effects on the natural habitat found in the forests ecosystems. Biodiversity loss of species such as the Red colobus monkey and the Ader's duiker came to the point where they were almost extinct (RGoZ. 2008: 7-16).

Taking into consideration all the aspects mentioned above, it is reasonable to believe that there is a direct correlation between the degradation of the forest resources and the mainstream development of Zanzibar. The local communities that rely directly on the forest resources are also contributing to the warning statistics, even though it is hard to blame them as they are simply trying to 'make a living' in its direct context. It is highly unlikely that the local communities will stop or at least mitigate those unsustainable practices related to the surrounding forest resources, at least unless they had other alternatives to sustain their lives. In addition, the lack of co-operation and communication among various actors and levels of governance is a major weakness that undermines the existence of vital ecosystems due to the inability of current forest management parties to address conflicts efficiently (Field notes. 18.03.2012). In other words, there is a need for a better forest management by the government bodies and all the relevant actors; a management that would prove sustainable in the long run not only for the forest but for the local communities surrounding them as well.

This approach had been already recognized by the UN General Assembly in what they call sustainable forest management. A non-legally binding Resolution on all types of forests was proposed as a guideline or framework of instruments for States to follow in their pursuit to achieving sustainable forest management practices that would also lead to the meeting the MDGs. (UN. 2008: 3) "Sustainable forest management, as a dynamic and evolving concept, aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations." (Ibid: 4) n addition UN Member States are: "Recognizing that forests and trees outside forests provide multiple economic, social and

environmental benefits, and emphasizing that sustainable forest management contributes significantly to sustainable development and poverty eradication." (Ibid: 1).

Considering the outlined current situation in Zanzibar, it could be implied that sustainable forest management could be not the only, but at least one of the methods that could significantly contribute to empowering the local people and the overall population while ensuring that the forest resources would remain for the future generations to come.

So far, it was emphasized on the challenges that the forests of Zanzibar and their communities are facing. However, Zanzibar unlike many African countries, had already achieved significant progress in the management of its forest resources. This is mainly due to the shift of policy making being extremely restricted to public participation to a policy making that allowed and promoted stakeholder participation. (Menzies. 2007: 31) This paradigm could be well observed at The Forest Resources Management and Conservation Act No. 10 (1996), where the term community based forest management (CBFM) started to gain importance on the political agenda. The Act had linked forestry with sustainability criteria as it emphasizes on reaching the following objectives:

- (a) to encourage and facilitate the active involvement of local people in the sustainable planning, management, use and conservation of forest resources;
- (b) to preserve and enhance the environmental functions of forest resources; and
- (c) to meet Zanzibar's demands for forest produce within the framework of sustainable forest management. (ZGZ. 1996: 176)

The National Forestry Policy (1999) is a direct outcome of The Forest Resources Management and Conservation Act No. 10 and it had embarked on the same principles that are in line with the ideology of sustainable forest management set by the UN General Assembly. (See Appendix CD, Fig. 1) It was the National Forestry Policy that facilitated the formulation of the Community Forestry Management Agreements or CoFMAs "which gives community inclusive rights of forest management, forest resources utilization and share benefits accrued from forest resources at community level." (URT. 2012: 70). Moreover, this strategy had been promoted by the

government as essential prerequisite to increase the country's economic growth, enhance its overall development while ensuring environmental stability. (Menzies. 2007: 43)

It could be inserted that the government of Zanzibar is indeed on the right direction towards managing its forest resources in a more sustainable manner. There are some indicators of good governance such as the democratic and decentralized character that the forest resources are being managed through CBFM practices on which would be elaborated further. A lot of progress had been made as well, especially when it comes to integrating environmental constellations in various sectoral programs. (UNDP. 2009: 32) The government had begun to acknowledge that forests are complex systems or in theoretical terminology social-ecological systems⁸ that require complex or social-ecological governance⁹. The achievements from Jozani Chwaka Bay Conservation Project (JCBCP) are good example to illustrate the ongoing progress.

Zanzibar has been recognized as a biodiversity hotspot by international actors who made significant efforts to protect its unique biodiversity (Menzies. 2007: 33). Being the largest forest on Unguja Island (see Appendix CD, Fig. 2), Jozani had been acknowledged by the government of Zanzibar in 1990 to be of remarkable local, national and global importance due to its unique biodiversity and thus became a biodiversity hotspot. Jozani was initially declared a Forest Reserve (2,500 ha¹⁰) in 1940 but due the government's conservation efforts it had become a National Park (5,000 ha or circa 57 km²). The current physical boundaries of Jozani National Park are actually larger as there is a buffer zone that exceeds 80 km². In 1995, the Department of Commercial Crops, Fruits and Forestry or DCCFF had begun a project called Jozani Chwaka Bay Conservation Project. (GEF. 2004: 15-18) The project had been described as an" *Integrated Conservation and Development Project (ICDP) aiming at conserving Zanzibar's biological diversity...and the surrounding environment while improving the living conditions of people surrounding the protected area.* "(Menzies. 2007: 35)

Despite the government efforts to apply measures of forest management such as the JCBCP, there are still major conflicts between the local communities¹¹ inhabiting Jozani Chwaka Bay

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⁸ Please refer to the theoretical framework chapter for more details

⁹ Please refer to the theoretical framework chapter for more details

 $^{^{10}}$ 1h2 = 0.01 km²

¹¹ There are 9 villages surrounding Jozani Chwaka Bay National Park: Bwejuu, Charawe, Cheju, Chwaka, Ukongoroni, Unguja Ukuu, Pete, Michamvi, and Kitogani (GEF. 2004: 17)

National Park¹². (Field notes. 10.02.2013) A research for the preparation of WWF-EACFE Programme had concluded that "Threats to Jozani biodiversity are mainly due to habitat alteration as a result of inherent indiscriminate tree cutting in villages around the national park. This is done primarily due to lack of alternative livelihood source of income." (Dallu: 4)

The JCBCP aims at basically resolve those threats by the effort of many organizations, both governmental and non-governmental. The main bodies behind the establishment of the project were the DCCFF and the well-recognized INGO, CARE International 13. (Menzies. 2007: 35) The efforts of NGOs (from small grass-root organizations to international umbrella organizations) to maintain the fragile forest ecosystem in Jozani in balance and to assist local marginalized communities in achieving better livelihoods, are remarkable. (Field notes. 18.02.2013) Such NGO is Jozani Environmental Conservation Association (JECA) who was actually established by CARE as an independent association to be the representative and responsible body for the local communities around Jozani. (Menzies. 2007: 36)

CARE had established JECA with the long term objective that JECA would be able to replace CARE as an independent mediator between the local communities or the village conservation committees (VCCs) and the governmental institutions when it comes to the forest management in Jozani. JECA members are representatives from the villages nearby Jozani and hence they are familiar with the everyday conflicts emerging from the local communities' correlation with the forest resources. (Ibid: 37) The research during the internship period had revealed that JECA is indeed very actively involved in forest management activities in Jozani.

The main activities of the Association are as follows:-

- Protect, develop and conserve natural resources found in the Jozani Chwaka bay area
- Educate and provide guidelines to the Association members on the wise use of natural resources
- Take specific remedial action for badly degraded areas such as replanting of mangrove area, closing forest areas for use, carrying out soil conservation measures, closing a reef area for fishing, banning destructive activities etc
- Help to improve life standard of the surrounding community by introducing alternative income generating activities, training, advisory services and some times provide financial support
- Represent members of shehia and their conservation committees, in discussion and negotiations with other institutions and stakeholders

Source: www.envaya.org/jeca

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¹² Referred as Jozani hereby

¹³ Referred as CARE hereby

The field work and active participation in JECA's activities are indicating that there is a progress towards implementing principles of sustainable forest management in Jozani and its communities. (Field notes. 13.02.2013, 04.03.2013, 26.03.2013) There is already a good capacity base in terms of legislation to continue these sustainable forest practices; but if Zanzibar is seriously committed to reaching the objectives set in its Vision 2020 plan, then there is a need to increase this capacity even further. Eradicating extreme poverty is not an easy task and since the majority of Zanzibari's population lives in rural forest dependent societies, then empowering this marginalized group of people would prove a win-win scenario. As mentioned, sustainable forest management will lead to better livelihoods by protecting and enhancing the forest resources at the same time.

Considering the complex character of Jozani being a social-ecological system, however, there would be many obstacles along the path leading to successful forest management. Even at the early stages of the field work, warning trends become to emerge, indicating that the long term goal of conserving Jozani as a stable ecosystem with self-empowered local communities might be threaten due to the low levels of co-operation and communication among forest bodies on various scales (Field notes. 18.02.2013, 18.03.2013). This is a major weakness which led to the assumption based on the 3 months of field work in Jozani; that JECA could contribute to a more sustainable forest management practices by acting as a middle man between the local communities and the governmental bodies while increasing its co-operation with other NGOs working in the same field. The proposed theoretical trialogue model of governance in the theoretical framework chapter clearly illustrates that there is a need of organizational body to facilitate good ecosystem governance or sustainable forest management.

The aim of this report is not to encourage or promote JECA to follow the model or principles of sustainable forest management by becoming the one and only accountable organization in Jozani for all other forest groups. Nevertheless, JECA could serve as a theoretical case to illustrate that shift in Zanzibar's overall forest management practices is needed as well as possible, and the report would try to provide understanding on this matter by answering the following problem formulation.

1.3. Problem Formulation

How could JECA increase the capacity for sustainable forest management in Jozani Chwaka Bay National Park?

1.4. Research questions

The table below illustrates to a great extent the overall reasoning or the analytical process through which the framed problem would be answered. It is an interpretation of few research techniques or models presented in Olsen & Pedersen's (2008: 184, 212) workbook for Problem-Oriented Project Work.

The following research questions aim primarily at guiding the analysis of the report as well as structuring the empirical chapters to some extent. The *intended outcomes* column mainly illustrates the preliminary expected results from answering a certain research question. The last column represents the analytical tools found feasible to answer the research questions such as theoretical concepts or data collection methods.

| Question | Intended outcomes | Data/technique and theoretical concepts |
|----------------------------------|---------------------------------|---|
| 1. What is the current situation | To show that Zanzibar despite | Governmental reports: |
| in Zanzibar according to the | its general underdeveloped | Development Vision 2020, |
| overall development and its | status and many challenges, | ZSGRP. |
| sustainability? | the government had | Interview. |
| | emphasized on the importance | |
| | to develop sustainably and that | Good governance. Social |
| | is well seen in its political | ecological governance. |
| | agenda. | Social-ecological system. |
| 2. What are the governmental | To show all or at least the key | Governmental policies: |
| and non-governmental | actors involved in the | ZSGRP, National Forestry |
| interventions in creating a | management of Jozani with a | Policy, The Conservation Act |
| more sustainable forest | critical eye towards limited | Previous scientific studies |
| management environment at | co-operation and | Interview. Field notes. |
| Jozani Chwaka Bay National | communication among them | |
| Park? | which resolve in the overall | Trialogue model. Social- |
| | inefficiency of managing | ecological governance. Social |
| | Jozani sustainably in the long | network (a table presenting all |
| | run. | the actors in Jozani with their |
| | | forest related activities). |

| | | D |
|---------------------------------|----------------------------------|--------------------------------|
| 3. How Jozani Chwaka Bay | To show that Jozani is actually | Previous scientific studies on |
| National Park is performing | on the right track towards | Jozani. Field notes. |
| according to the sustainable | sustainable forest management | |
| forest management indicators? | and that there are already clear | Social-ecological system. |
| | indicators, such as | Common pool resources. |
| | understanding Jozani as a | Community based forest |
| | social-ecological system. | management. |
| 4. What are the strengths and | To show that JECA has a good | Field notes. Interview, |
| weaknesses of JECA in terms | capacity in terms of | Scientific reports. |
| of the already existing | knowledge how to address | 1 |
| capacity for implementing | local forest conflicts. They are | Trialogue model. Social- |
| sustainable forest | involved directly or indirectly | ecological governance. |
| management? | with many other NGOs | Adaptive co-management. |
| | operating in Jozani. They have | Social network. |
| | a good connection with the | |
| | government as well. They | |
| | could become a mediator for | |
| | all the relevant parties in | |
| | Jozani but their main | |
| | weakness is that they have a | |
| | shortage of resources: skillful | |
| | labour, budget etc. | |
| 5. What initiatives could be | To show that more co- | Previous scientific studies. |
| | | |
| considered by all the relevant | operation and communication | Field notes. Interview. |
| actors to increase the capacity | among the various forest | |
| of Jozani Chwaka Bay | parties would lead to a more | |
| National Park to become a | efficient sustainable forest | Adaptive co-management. |
| success story for sustainable | management in Jozani. In | Social networks. Good |
| development? | addition this objective could | (ecosystem) governance. |
| | be achieved by building | |
| | capacity on the already | |
| | existing institutional set-up | |
| | and arguing that JECA is the | |
| | most suitable candidate to | |
| | carry out these tasks. | |
| | <u> </u> | |

2. Methodology

2.1. Research design

Taking into consideration that this report is an outcome of 3 months internship field work, the research was carried out primarily by using qualitative research techniques or participatory methods such as observations and interviews. This approach was chosen as the research on this topic is still limited and therefore the project could be regarded as an exploratory study where new insights into the investigated area were obtained. The conducted research sets a good basis to raise questions and to test assumptions which could be further developed into actual initiatives. (Mikkelsen. 1997: 84)

This exploratory study and the qualitative research techniques used to represent the empirical findings are also closely related to the inductive research approach. In other words, the research design was carried out following the inductive reasoning where, the researcher "begins with specific observations (data), notes any patterns in those data, formulates one or more tentative hypotheses, and finally develops general conclusions and theories." (Greenwood. 2007: 9) This approached proved particularly suitable to incorporate and test the findings from the field work into this project report.

2.2. Collection of data

2.2.1. Secondary empirical data

Secondary quantitative empirical data such as information obtained through internet sources and publications, government documentation, academic books written on the investigated topic and statistics were used mainly in relation to constructing the empirical chapters of this report.

2.2.2. Primary empirical data

Since the project is an outcome of the author's internship experience, the report relies mainly on primary empirical data obtained through qualitative research techniques such as observations and interviews.

2.2.2.1. Observations

A vast amount of data was recorded in the form of field notes (See Appendix CD, Field notes). These field notes are result of the researcher's active involvement in field work activities for JECA through the use of participant observation methods. In addition, direct observations had supplemented the field notes by providing relevant descriptive data from the daily experiences obtained throughout the internship period. The use of observation methods had proven efficient in giving an in-debt understanding and up to date information on the investigated topic and its' aspects (Mack et al. 2005: 15).

The inductive approach in collecting this data was very time consuming. Nevertheless, the time spent on carefully systemizing and decoding the field notes, allowed the author to integrate them easily with the other qualitative and quantitative data in order to strengthen the reliability and validity of the project findings.

2.2.2.2. Interview design

It was decided to conduct a semi-structured interview with a single farmer, Mr. Suleiman Issa Khamis¹⁴. The semi-structured type of interview allows the interviewer to structure the interview to some extent by preparing an interview guide (see Appendix CD, Interview Guide) with theme questions to guide the researcher during the interview process. The theme questions derive primarily from the research questions and the theory and are aimed to collect knowledge to assist the investigation (Bryman. 2008: 442). The greatest strength of this type of data collecting method is its flexibility in terms of leaving space for both the interviewee and the interviewer to discuss issues out of the interview guide framework. In such way, important information could be revealed which was not initially expected by the interviewer, making this type of data collecting method preferable among researchers. (Ibid: 437)

The interview was tape recorded (See Appendix CD, Recorded Interview) with the permission of Mr. Suleiman in order to keep and transcribe all the information (See Appendix CD, Interview Transcript). This information was further systemized by coding the transcript to make it operational with regards to its appliance mainly to the analytical part of the report, by sorting the relevant information in themes. (Punch. 2005: 199) A copy of the transcript, as well as the

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¹⁴ Referred as Mr. Suleiman hereby

project report would be given to the interviewee and all the relevant parties assisting and interested in this report.

2.2.2.3. Interview sampling frame

The interview sampling frame was chosen according to the estimated capacity in terms of knowledge which the potential informants would like to share with the researcher. In the academic realm, this technique is referred to as purposive sampling, where the researcher chooses its' informants based on the valuable knowledge they possess on the topic, as them being most likely experts in a certain area. (Ritchie & Lewis. 2003: 78). According to all these considerations, Mr. Suleiman was decided to be the most suitable person to interview.

Mr. Suleiman has a very favourable position in the context of forest management in Jozani. He has been a farmer most of his life¹⁵ and thus he has a considerable amount of knowledge on local farming practices. He is well known and respected among other farmers as he is also partly employed in JECA and advices the NGO as well as the farmers on better farming practices, how to overcome some challenges. In addition, his arable land is used as a good example for illustrating sustainable agricultural initiatives, such as agro-forestry, to other interested farmers. Mr. Suleiman is also employed as a tourist guide in Jozani, where he educates the tourists about the fragile eco-system in Jozani forest and shows them the various and unique life forms found there.

The main reason for interviewing Mr. Suleiman was that, at some point of the internship period it was decided to attempt and establish a pilot drip-irrigation system for a single farmer with a small plot of arable land. There was a vast interest from other farmers to establish this type of irrigation system. After discussing the matter with JECA on who could be the most appropriate applicant for such a pilot initiative, and after evaluating the land of Mr. Suleiman, it was decided that he is the most suitable candidate. Personal relations had no effect on this decision as the long term goal is to be able to establish drip-irrigation systems for the majority of farmers around Jozani forest; a goal that Mr. Suleiman could significantly contribute to by sharing his knowledge on the matter and by his favourable position among the farmers community.

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 $^{^{15}}$ There is no information on his age, but he seems to be in his early 50 ies

2.3. Validity, Reliability and Triangulation

According to Olsen & Pedersen (2008: 195), the validity of a report depends on the accuracy and credibility of the collected data and its relevance to the investigated problem. Taking into consideration that the report relied mainly on qualitative research methods to collect the empirical data, it could be asserted that the overall validity of the report is tangible. The publications acquired from governmental and non-governmental institutions are considered to be trustful sources of information. In addition, the interview provides the report with solid first-hand knowledge on the relevant problem. The validity of the report could be questioned partly when referring to the use of field notes but this aspect would be further elaborated in the following delimitations chapter. Nevertheless, when it comes to the data collected, it is reasonable to believe that the project is a valid piece of academic work.

The reliability of a project depends on whether or not another study could replicate the findings of this report using the same research methods to obtain the needed empirical data (Bryman. 2008: 376). To what extent the project could be considered reliable depends on how this data would be used by the other research team. If this data is applied in a similar manner to the analysis, than the probability of reaching the same results would be greater and so the reliability of this report, respectively.

Triangulation is a method used by scientific researchers for the purpose of strengthening the validity and completeness of their findings. There are few types of triangulation which basically revolve around the same principle, e.g. combining different methods or types of data in order to give credibility to the findings in a study. (Hussein. 2009: 4) Since this report relied on both qualitative and quantitative research methods to collect the necessary data for carrying out this study, the discourse behind the methodological triangulation seems to be the most suitable to argument the overall validity of the project report. "(...) Methodological triangulation as the use of both qualitative and quantitative data collection methods and analysis in studying the same phenomenon." (Ibid: 4) This approach allows the researcher to test his/her data for consistency and thus assuring its validity by crosschecking the different types of data. Put differently: the interview, the observations and the already published data used in this report are all testing the credibility of each other in a way that, at the end only the valid data will remain and become useful to this study.

2.4. Delimitations

The main difference between limitations and delimitations is that to what extent the researcher has control over some external aspects of the research. Limitations are those external factors that negatively influence the performance of the study and on which the researcher has no control; while delimitations are those factors that the researcher decides to selectively include or exclude from the study in order to define the scope of the study. (www.bold-ed.com)

Taking into consideration the author's close connection to his field work, the initial aim of the report was to be used in developing a pilot drip-irrigation system for Mr. Suleiman. The author sincerely regrets that he had to establish limits on this project report which were primarily imposed by University regulations but mostly due to the very limited time frame available to accomplish these high expectations. Nevertheless, this research and its academic content could be used in further developing a call for proposal paper that could hopefully manage to become accredited by a funding or donor organization. This is where the author expresses his sincere apologies to Mr. Suleiman and JECA in general for any misleading promises and hopes for patience and understanding by all of them!

It is acknowledged that perhaps one of the major weaknesses in this report could be in relation to the use of the field notes and especially those obtained through participant observation. Many scholars are questioning the validity of this type of data as being extremely subjective. Due to the researcher's active involvement in the study, he/she is meant to build biases towards the study subject, whereas scientific research requires being strictly objective. (Mack et al. 2005: 15). The field notes used in this report indeed contain some subjectivity. However, it could be argued that they are still valid for the findings of this investigation as through the induction approach these observations were tested in order to reach tangible conclusions. In addition, the triangulation method strengthens further their validity by crosschecking this type of data relevance to the other types of data collected. And lastly, there are scholars who believe that any type of qualitative data is subjective by its essence and could not be completely objective. Moreover, when it comes to participant observations, the researcher is seen "As someone who has directly experienced the social phenomena of interest, you are capable of taking positions about the meaning of your data with confidence that you are "getting it right."" (Guest. 2013: 80)

The author of this report had to place limits on the generalization of this study as well, mainly due to the time and budget available to carry out this research. As an exploratory study, the findings could not be generalized for the whole population or the whole Island of Zanzibar. In addition, the field work was carried out in a specific area around Jozani forest. Therefore, the scope of this project could be defined by the following parameters: investigating the challenges of local communities in relation to their surrounding forest resources in Jozani Chwaka Bay National Park (9 villages) for the year 2013 (February – April) through the field work activities in collaboration with JECA (see Appendix CD, Proposals).

The case study of Mr. Suleiman further limits the chances of this study to be generalized. However, this decision was selectively chosen by the researcher due to the favorable position and skills that Mr. Suleiman has in comparison to other farmers in the Jozani are, for instance. He could be of fundamental importance for continuing this study into a drip-irrigation system pilot project in a mid-term perspective and hopefully expanding it further in the long-term by assisting other farmers to develop in a similar way.

The research could have included more interviews with farmers or surveys in order to increase the generalization of the findings. However, this was not possible as the language was a major barrier in doing this research. Mr. Suleiman was chosen for many reasons as a relevant source of information, but one of them was that his English skills were considerably better than the rest of the relevant actors. Despite that, the author acknowledges that the information gathered through the interview is not of big relevance to the investigated problem in this report. This is a serious weakness when it comes to the collection of relevant data on the study topic, but as mentioned several times already, the initial scope of the study as well as the interview guide were completely different from the matter presented in this report. The limitations further imposed difficulties in terms of flexible methods to avoid this inconsistency. Nevertheless, the interview is only slightly useful in this study but could be highly valuable for its perspectives.

The theoretical framework could have been broaden through the inclusion of dependency theory or development theories to provide a better understanding of the current status of Zanzibar and its forest related challenges. This perspective was decided to be left out of the project in order to prevent overloading the report with complex theoretical discourses.

2.5. Limitations

One of the biggest challenges in writing this project report was the language barrier. Throughout the field work, the use of English was very limited. However, with assistance by JECA and TZIVA members the needed information for writing this report was obtained to some extent.

The time frame available for completing this report was very limited, considering the amount of working hours spent at JECA and TZIVA. Hence, it was a very intense process to write the report and many considerations had to be changed and simplified.

During the internship period, the availability of internet and the unreliable power supply further imposed some restrains on the research as it took considerably more time to carry out the necessary tasks. Due to these connectivity issues and other issues, the supervision given by my supervisor was also limited to some extent.

2.6. Project Design

The first chapter of the project report is setting the framework leading to the problem being investigated or more precisely to the initiative that could provide perspective on how to overcome the problem. In addition, research questions were formulated in order to guide the project structure in answering the framed problem.

The next (current) chapter presents the methodological considerations on the report. In other words, it outlines the research design of the project, the methods used for collecting the data and its validity. In addition, the delimitations had set the scope and target of the project report.

The third chapter will outline the theoretical considerations of the report that would assist operationalizing the empirical data in the analysis chapter. The theory of social-ecological governance and its relevant concepts would contribute to the better understanding of sustainable forest management in the context of Jozani. In addition the trialogue model of governance has supporting arguments to the social-ecological governance theory and will mainly argue in favor of JECA having the potential to contribute to a more sustainable forest management in Jozani.

The empirical chapters will be constructed more or less accordingly to the table presented in the research questions section as its structure aims at providing the needed data to answer the questions. Therefore, the first sub-chapter will briefly present the profile of Zanzibar with

regards to the overall development and its sustainability. This would be followed by another section emphasizing on the forest governance as contributing to achieve the overall development targets. Thereafter, the contribution of the NGO sector or the civil society to the forest management in the context of Jozani will be briefly outlined. The empirical chapters would end with information on JECA, emphasizing on their accomplishments in the overall managing of Jozani, as well as their weaknesses.

The analysis chapter could be basically divided in two sub-chapters that are oriented in investigating different aspects of the report. The analysis will begin with placing Jozani within the context of social-ecological system in order to apply the theory of social-ecological governance to the empirical data. This linkage is essential when it comes to the understanding of this sub-chapter as its aim is to evaluate the performance of Jozani in a sustainable forest management setting. This sub-chapter would end up with a mini-conclusion addressing the performance of Jozani from a critical stand in order to make the link to the next analytical sub-chapter that would actually give the answer or more precisely provide a perspective to the framed problem.

The conclusion would be the last chapter of the report, where the findings would be clearly systemized in a constructive manner. The conclusion is where the actual answer of the investigated problem would be outlined while reflecting upon the initial assumption.

3. Theoretical framework

In order to fully understand the choice of theories with regards to their relevance to the investigated problem it is rather important to place some of the essential theoretical terms in a proper and suitable project context. Since Jozani is a complex ecosystem constructed of many living beings including humans and their interaction with each other in this forest habitat, it is reasonable to term Jozani a social-ecological system. "We must understand the world, region, or community as a social-ecological system (also termed a coupled human-environment system) in which people depend on resources and services provided by ecosystems, and ecosystem dynamics are influenced, to varying degrees, by human activities" (Chapin et al. 2009: 6) This point will be further expanded in the analysis.

A plausible way to analyze if a social-ecological system is experiencing any threats to its social-ecological balance or if it is following the needed sustainable patterns could be provided by the discourse of social-ecological governance. "In the context of sustainability, social–ecological governance addresses problems of maintaining social and natural assets while sustaining ecosystem services" (Kofinas. 2009: 77). The ideology of social-ecological governance resemble to a great extent the concept of sustainable forest management and hence the following section and the overall report would argue that in order to achieve sustainable forest management there is a need of social-ecological governance in the context of adaptive co-management.

In addition by governance, it is referred to good governance and the trialogue model will elaborate further on the aspects that constitute good governance in relation to ecosystem governance. "In essence, good governance promotes democratic management of ecosystems (...)" (Hattingh et al. 2007: 2), and "It is also important to note that good governance requires a systems approach that is based on the inclusion and inter-dependence of all its components and every segment of society" (Ashton. 2006: 33)

3.1. Theory of Social-Ecological Governance

Social-ecological system is an entity consisting of components, organisms and the products of human activities within a defined area or boundary. Hence, there could be numerous cases of social-ecological systems depending on the scope of the study (Chapin et al. 2009: 9). However, what is common for all social-ecological systems is that, they are with high level of uncertainty and constantly changing. (Olsson et al. 2004: 1) Therefore, understanding of these systems could

be best achieved through a holistic approach towards seeing the word as a complex unity of interactions between ecological, political and social (cultural) processes. These interactions could resolve in negative or positive feedbacks on a system, where negative feedbacks resolve in stabilizing the system and vice versa. (Chapin et al. 2009: 10) If sustainable management of the Earth's resources is to be achieved, than resource management should be perceived from a social-ecological system perspective (see Appendix CD. Fig. 3). In other words, sustainable resource stewardship requires "moving beyond notions of resource management as control of resources and people, toward an approach of adaptive social-ecological governance." (Kofinas et al. 2009: 77) When it comes to the long term sustainability of social-ecological systems it is important to acknowledge that these systems would change inevitably by their nature. However, this change could be addressed more efficiently through sustainable pathways or mechanisms to facilitate the management of the scarce resources. (Chapin et al. 2009: 26)

Social-ecological governance in its essence is about the collective efforts of actors towards achieving and maintaining a desirable state of social-ecosystem system. These actors could be "self-organized citizen groups, NGOs, government agencies, businesses, local communities, and partnerships of individuals and organizations..." (Kofinas et al. 2009: 77) Social-ecological governance requires a cross-scale interaction between those stakeholders at various levels for an effective resource management to take place. In other words, this type of governance argues for a combined approach with both bottom-up and top-down strategies to address the complexity of issues related to the maintenance of a certain social-ecological system. The linkages from these stakeholder interactions create as sort of social network, where problems could be easier identified and solved through the collective knowledge and strengths possessed by the various actors. (Ibid: 93) The reason why social-ecological governance had become preferable tool to address resource management practices is due to its flexibility to adapt to current challenges or threats to the social-ecological system. Consequently, this approach is also known as adaptive social-ecological governance as it differs from the conventional resources management techniques through its ability to overcome immediate challenges while providing a rational sustainable perspective in the long run for a more effective co-operative resource management base. In addition, social-ecological governance is based on the sustainability principles of achieving social and economic prosperity while ensuring ecosystem stability. (Ibid: 77, 78)

Although, social-ecological governance seems to be the ideal approach towards sustainable resource management, it has its weaknesses or challenges in terms of prerequisites, such as: "(1) building responsive institutions that provide for collective action; (2) finding a good fit of institutions with social-ecological systems; (3) building and maintaining strong community-based resource governance; (4) linking scales of governance for communication, responsiveness, and accountability; (5) facilitating adaptive learning; and (6) generating innovation." (Ibid: 78) However, there are a few strategies that could facilitate overcoming those challenges as the following text will illustrate.

Adaptive co-management is a key concept when it comes to the pursuit of social-ecological governance. The rationality behind this statement comes from the terminology itself as co-management argues for the allocation of power and tasks among local resource dependent communities or actors on a collaborative basis, while adaptive management being about resource management achieved through learning by doing. In other words, it is a resource based strategy that promotes the cooperation of local resource based communities in a sort of decision-making network with various scales of governance (regional, national and global). Adaptive co-management finds its application in practice by addressing issues such as ecosystem conservation, resource distribution, education, empowerment, education, policy making any other resource based conflicts. The strengths of this typical resource based approach come from its flexibility to address immediate changes within a social-ecological system by finding alternatives to the problems. These alternatives are built in a holistic manner through the variety of interactions and networking of well-informed stakeholders (Ibid: 78). "When effective, the outcomes of adaptive co-management stimulate innovation in problem solving." (Ibid: 101)

This multi-scale interactive network should be approached with caution as having various stakeholders could resolve in increased conflicts over the natural resources due to the various group interests. (Ibid: 96) An ideal social-ecological governance "(...) requires a process of continuous reflection on the performance of institutions to improve and in some cases transform them to better suit emergent conditions." (Ibid: 101) Hence, a deeper understanding of the various groups and their roles in shaping a resilient social-ecological system is needed.

Institutions, organizations and social networks, all could have positive or negative influence on the social-ecological systems. By the collective action or the cooperation of individuals to

achieve a certain goal, the capacity of people to shape their own desired world significantly increases. Understanding those relationships and how people interact is an essential precondition towards managing the common resources in an equal or sustainable manner. (Ibid: 82) In other words, it "(...) requires effective communication among key actors, some level of intergroup cooperation, as well as political know-how and maneuvering" (Ibid: 80)

Institutions are social formal/informal rules and norms which impose boundaries on human behavior and hence are of particular importance to the governance systems. They "assign the roles assumed by individuals and organizations in society, direct the allocation of resources to individuals and organizations, and affect human interactions." (Kofinas. 2009: 80) A key factor for the efficient and consistent performance of institutions is the promotion of stakeholder involvement through co-management of the natural resources. (Ibid: 81) In addition, good social-ecological governance is based on effective institutional set up. (Ibid: 87)

Organizations on the other hand could be regarded as "social collectives with membership and resources". (Ibid: 81) There are varieties of human organizations with different structural and behavioral features. However, when it comes to effective social-ecological governance, there could be distinct two types of organizations, namely centralized and decentralized. Organizations having decentralized structure are preferable in terms of addressing issues regarding social-ecological governance as their small size allows them to be more flexible in their activities and easier to adapt to changes, while incorporating efficiently information. (See Appendix CD, Table 2) Considering the unpredictable and changing character of a social-ecological system it is reasonable to argue that decentralized organizations would prove more efficient than centralized in their task to address resource management issues. (Ibid: 81-82)

Non-governmental organizations (NGOs) are especially common in relation to development and empowerment projects. In theory, these types of organizations tend to build capacity among marginalized groups by mainly relying on stakeholder participation methods to address community issues. (Ibid: 95) NGOs also tend be involved in a sort of network as their structure allows them to "communicate better internally and with other groups" (Ibid: 95)

Social networks are among the key parameters that are vital for maintaining a desirable state of social-ecological system. The interaction of individuals, organizations and institutions

establishes links or relations that facilitate the dissemination of information and resources across various scales of social-ecological governance. These social networks could bring an innovative change in terms of establishing *resource regimes* through changing path dependency patterns. In other words, when there is already existing infrastructure that eases the interaction and communication among the various resource groups then a shift from conventional resource management to adaptive social-ecological governance could occur, for instance. (Ibid: 82)

All these components of social-ecological governance are indeed very important when addressing natural resources. However, perhaps the biggest asset that this type of resource governance has to offer is when it comes to addressing the locality of a problem. Put differently, without the participation of the *local communities* in managing the *common-pool resources*, the conflicts would be everlasting. The concept of *common-pool resources* used here is not a new terminology as its ideology is very closely related to that of social-ecological systems. "Common-pool resources constitute some of the most important natural resources but are highly vulnerable to overexploitation because of an array of problems associated with securing their sustainability." (Ibid: 83) Therefore, local communities that directly rely on those resources for their social well-being could contribute to more efficient social-ecological governance by the relevant knowledge they possess in addressing issues of local character. In addition, "Strong local-scale systems of social-ecological governance increase the likelihood that governance at other scales will be successful." (Ibid: 90)

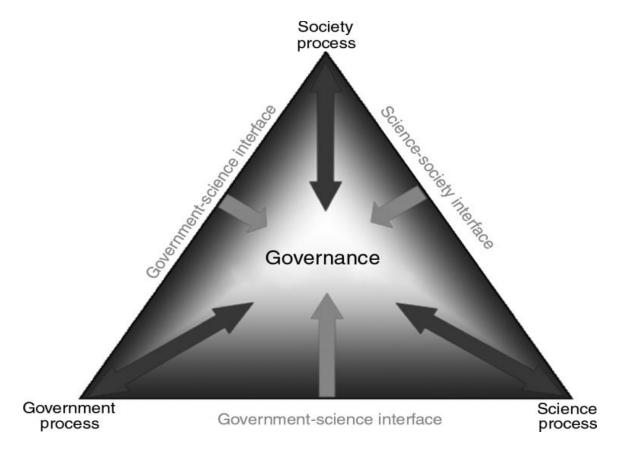
3.1.1. Application of the theory to the project

The theory of social-ecological governance and its main concepts are found to be of particular relevance to the investigated problem and would find useful application in the analysis part through few aspects. First of all, the concept of social-ecological system or common-pool resources would add to the argumentation that Jozani should be assessed as a complex ecosystem, with many internal conflicts. The concept of social-ecological governance or adaptive co-management would mostly assist the next stage of analysis, where it will be argued that this approach would increase the overall capacity of Zanzibar to manage its resources in a more sustainable manner. In addition, the role of the forest resource actors outlined in the theory will contribute to the notion that JECA as local community based NGO has a significant potential to further contribute to sustainable forest management practices. There are many factors

that determine good adaptive social-ecological governance but the stress had been on promoting collaboration and communication among numerous stakeholders on various scales in order to better address the social-ecological system challenges. The context of social networks thereby, becomes highly relevant to building the capacity of JECA to contribute to more efficient sustainable forest management in Jozani. The analysis would further elaborate why JECA should increase or promote the co-operation among the various forest related stakeholders in the sustainable management of Jozani forest.

3.2. Trialogue model

The Trialogue model of governance is a theoretical approach that argues in favor of good governance. According to the model, good governance constitutes of three elements and their interrelation. (See Figure below) The degree of good governance is determined by the linkage of those components. In other words, the model argues that more collaboration would tighten the partnership between the government, society and science and thus resolve in 'better' or *good governance*. (Ashton. 2006: 31)



Source: Hattingh et al. 2007: 12

The Trialogue model was introduced by the International Symposium on Ecosystem Governance (2005) and finds its most common application in addressing complex ecosystems such as water bodies. Nevertheless, its principles could be applied to the management of forest resources as their complex character had been already outlined. The purpose of this model is to achieve good governance that is based on democratic principles regarding the management of ecosystems, while strengthening the partnership between the three pillars (Hattingh et al. 2007: 12)

Considering the complexity of ecosystems by their nature and the recently emerging efforts to manage them sustainably, the trialogue model identifies two approaches that might lead to better results in the management of scarce natural resources. If existing bodies are unable to cope with the emerging challenges, then new alternative forms of organizations could be created. Or, adapting the already existing organizations by allocating them more responsibilities. Either ways, successful ecosystem governance or good governance is solely achievable through an integrated approach. (Ibid: 13) Since ecosystem governance is a process and the outcomes of a certain resource management strategy is context related, then conclusions on which approach is more efficient or preferable could not be reached.

An approach that favors the ideology of the trialogue model and the principles of good governance respectively, when addressing the locality of the resource conflicts is, the Community-Based Natural Resources Management (CBNRM). This type of ecosystem management is characterized by decentralizing the management from the top to the bottom or local community level that focuses on the collective management of the community towards the better use of common resources. In addition, this approach has proven to be rather efficient in mitigating resource related conflicts. (Ibid: 14)

There are many factors that are context dependent, to a specific country for instance, that could have positive or negative consequences on the process of achieving good governance. Corruption is among the negative factors that could have devastating effects, especially in the interface government-society. Corruption is not always exposed publicly, but that does not mean that the society is unaware of it. Consequently, the notion of trust and accountability is being threatened which will inevitably resolve in bad governance. The collective effort of civil society groups and international donor agencies, for instance, are starting to raise awareness on the global political

arena to combat corruption by promoting corruption free governance in developing countries (Ibid: 13).

In order to reach good governance, the science-society and science-government interfaces are also of particular importance. The private sector should move towards technologies that bring innovation. However, the government has to encourage the private sector to follow this path by enabling a suitable political framework in the first place which promotes research and development initiatives, for instance. (Ibid: 14)

Perhaps the most appropriate way to summarize the whole discourse behind the trialogue model would be to cite the following paragraph.

"Governments, societies and aid institutions are concerned with supporting the development process in order to provide social and economic stability and raise the welfare in underdeveloped countries. In line with the need for sustainable development, it is essential for governments, society and the private sector to find co-operative solutions with which to manage scarce natural resources effectively. By doing this, the outcome is more likely to reflect good governance." (Ibid: 14)

3.2.1. Application of the theory to the project

The trialogue model is used as a supplement to the theory of social-ecological governance to further illustrate the importance of good governance principles in regards to efficient resource management. Put differently, the model further adds to the notion that sustainable resource management requires an integrated approach that promotes the active co-operation among various scales, such as government, society and science. This framework will assist the analysis by providing an understanding of the interplay between the governmental, social and technological (science) aspects within the context of Jozani, being an indicator for good governance processes. Thereby, the model could be operationalized further by providing a perspective on the role of JECA in the ecosystem governance as having a significant potential to become a leading body to facilitate the processes of sustainable forest management in Jozani.

Having outlined the theoretical framework, there could be established a correlation between the two theories that leads to the following pattern: co-operation and communication on various levels and various actors is needed to achieve good governance, and by that good social-

ecological governance, which will resolve in better sustainable forest resource management which in turn will contribute to sustainable development and the overall development.

4. Empirical chapters

4.1. Zanzibar sustainability framework

Zanzibar has a land territory of 2,450 km² represented by the islands of Unguja (1530 km²) and Pemba (920 km²). The forest cover constitutes 23.7 % of the total land area of Zanzibar and includes variety of vegetation species, some of which had an extremely high biodiversity value such as the coral rag forests and the mangrove forests (see Appendix CD, Table 1) (RGoZ. 2008: 1,7).

Zanzibar has a political union with mainland Tanzania since 1964. However, as a semiautonomous entity, it has its own House of Representatives which has the power to decide over all development matters of Zanzibar; however, through a parliamentary debate with Tanzania. (KCK. 2003:11) The political performance however, is associated with many internal and external conflicts. Clashes between the two ruling parties CCM and CUF are based on an ethnical division between Arabs (CCM) and Africans (CUF). There had been numerous stipulations in fraud and corruption at the elections which had not only lowered the government's autonomy to its citizens but also resolved in international aid withdrawing its (financial) support. (Menzies. 2007: 32). Conflicts between Zanzibar and Tanzania over the natural resources are deeply contested, especially after crude oil reservoirs were found at the near offshore of Zanzibar (Field notes. 08.04.2013).

Population in Zanzibar is estimated to be approximately 1.3 million (51% women) with an annual growth rate of 2.9 % (URT. 2012: 9, 54, 52). Despite the good economic performance in recent years, the rapid population growth is among the key factors that still classifies Zanzibar as underdeveloped county with very high levels of poverty. From 187.5 billion Tsh¹⁶ in 1990 the GDP had escalated to the remarkable 395.7 billion Tsh primarily due to the development of the service sector (mainly tourism related), which now contributes to 51 % of the total GDP. Although, the economic growth rate remains an average of 6 % annually, the poverty levels as

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 $^{^{16}}$ 1.000.000 Tsh = 612 US \$ (June 2013 currency trends)

illustrated previously are a major concern for the overall development as well as its sustainable performance. (RGoZ. 2008: 19)

The problematized current development trends are directly imposing challenges to the sustainability performance of Zanzibar. The government had acknowledged that "Zanzibar experiences a combination of poverty, rapid economic liberalisation and population growth (Figure 1), which together are putting tremendous pressure on the environment and natural resources." (UTR. 2012: 8)

As a response to those challenges, the government had placed environmental or sustainability issues on the top of its agenda and this is well observed in constitutional and legislative terms. A policy that has remarkable influence in incorporating sustainability on the wide political scale is the National Environmental Policy from 1992. The main purpose of the policy is to provide guidelines on how "to protect and improve the environment in a manner which contributes to the quality of both present and future generations. The concept of quality of life embraces economic, social and cultural aspects, as well as environmental." (RGoZ. 1992: 1) The first criteria to follow in the successful implementation of the policy states clearly and with capital letters to "Improve COORDINATION BETWEEN PARTY, GOVERNMENT AND PRIVATE INSTITUTIONS in planning and decision-making, particularly where there are conflicting interests in the utilisation and protection of natural resources. (Ibid: 4)

In addition, all the policies addressed in the problem field of this report, as well as in the national report prepared for the UN Conference, Rio+20¹⁷ emphasize on the importance of implementing integrated, cross-sectional policy making to achieve sustainable development. "Integrated planning and decision making have always been promoted in the country. Integrated planning is undertaken within the national context and in accordance to national policies." (URT. 2012: 108)

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¹⁷These include: National Strategy for Growth and Reduction of Poverty (NSGRP - MKUKUTA) (2010-2015), The Zanzibar Strategy for Growth and Reduction of Poverty (ZSGRP - MKUZA)(2010-2015), the Tanzania Development Vision 2025 and Zanzibar Development Vision 2020, the National Environment Action Plan (NEAP), and currently, the National Five Year Development Plan (2011-2015). (URT. 2012: X)

In order to obtain an even deeper understanding on the achievements and the challenges that Zanzibar is facing with its sustainable development, the report would look deeper into its forestry sector.

4.2. Forest Governance

When reading this chapter, it is essential to keep in mind Jozani within its context as actually Jozani Chwaka Bay Conservation Project had a big influence in shaping the forest policies (Menzies. 2007: 35)

There is a strong need for the efficient governance of the forestry sector, as Zanzibar is heavily dependent on the socio-economic values that forests bring to its development. Directly forestry accounts for only 1 % of the GDP. However, its value is much greater as through agro-forestry for instance it contributes 30 % of the GDP (RGoZ. 2008: 3). The highly dependent local communities on forest resources are further increasing the socio-economical value of Zanzibar's forests. The recreational value of forests that attracts that many tourists combined with the biodiversity richness found in forest ecosystems, plus the indirect contribution to CO2 mitigation, all lead to one conclusion: "forests provide numerous essential benefits, many of which are vital to the fundamental well-being of the nation" (RGoZ. 1999: 1)

The National Forestry Policy for Zanzibar officially not only acknowledged the essential importance of Zanzibar's forests but also placed them in a context of sustainability. According to the policy, its' primarily goal is to "protect and develop forest resources for the social, economic and environmental benefit of present and generations of the people of Zanzibar" (Ibid: 2). In order to reach this objective, the government had set the following three goals to follow in an inseparable manner:

- 1. "Social goal: Strengthen the role of forestry in alleviating poverty and increasing equity in resource management and utilisation.
- 2. Economic goal: Strengthen the role of forest resources in promoting economic development, meeting demand for forest products, in creating income and increasing national revenues efficiently; and

3. Environmental goal: Protect and conserve forest resources including wildlife and flora, and enhance the role of forest resources in maintaining soil and water conservation and other environmental benefits." (Ibid: 3)

Perhaps among all the major achievements of this policy, The Zanzibar Forest Resources Management and Conservation Act no. 10 of 1996 and the National Forest Resources Management Plan 2008-2020 was the shift between centralized (top-down) based forest management to a community based forest management (CBFM), primarily due to the signed Community Forest management Agreements or CoFMA (Menzies. 2007: 30). CoFMAs are the legally binding documents that assure local communities rights over the management of the forest resources. Village conservation committees (VCCs) are the official signatories of the agreements and act as local governmental bodies that incorporate forest management into local bylaws. VCCs are sort of speak the mediator between the governmental agencies and the local communities. (Ibid: 48) CBFM started to get influence after year 2000, when 7 CoFMAs were signed and current results show very optimistic trends. (Ibid: 37) The agreements give the power and confidence of the local forest communities that they have direct control to decide over their future in terms of forestry rights, such as "who uses the resources and how" (Ibid: 38). Forest management, in its essence actually seeks to answer these questions (Ibid: 125) and the attachment of *community* to this term means that the answer of this question should be made by the community as well as for its benefit by establishing, for instance schools, mosques, clinics etc. (Ibid: 147) CBFM had become an indicator for good governance as it allows and promotes more active civil participation in forest related matters (Ibid: 174) In addition, a study made by Nicholas Menzies on CBFM in Zanzibar had concluded that, "The word empowerment is much abused in the discourse of development, but there is evidence in Zanzibar that community-based resource management can contribute to more accountable governance and a shift of some powers from government to citizens." (Ibid: 45)

Clearly, the forest governance is influenced and directed towards sustainable forestry. The government had also stressed on the importance to develop human resources that would be capable to deliver the needed forest management services efficiently. There was indeed a good capacity in terms of human resources, infrastructure, technical equipment and other facilities that proved to be highly efficient in managing the forests in the intended collective and sustainable

way. However, due to the inability of the government to allocate the budget properly by meeting the needs of the forestry sector to maintain its capacity and due to declines in external funding, all these resources are now seriously lowered (RGoZ. 2008: 17). The government, itself, had acknowledge this capacity issue in the Zanzibar National Forest Resources Management Plan 2008-2020 as a weakness, stating that the forest sector is "(...) not able to train, recruit and maintain competent manpower to the satisfactory level, as well as maintaining the infrastructure." (Ibid: 17)

This capacity issue deserves special attention as without the needed capacity, there could not be any expectations towards more efficient forest governance. The following example, clearly illustrates the severity of this issue. The DCCFF had appointed forest rangers to national parks, such as Jozani to patrol and legally sanction illegal activities, such as tree cutting. There was a meeting between JECA members and the forest rangers to discuss issues related to protecting Jozani's forest resources. The meeting ended with a conclusion that the illegal cutting activities are not even slightly under control as the rangers (approximately 20) simply does not have the human resources to regulate a big area like Jozani. There was a consensus that more co-operation was needed between all the parties, including JECA, if the forests are to remain in their desired status. (Field notes. 18.03.2013)

Primarily due to the low capacity to address forest management efficiently, the efforts of civil society organizations such as (I)NGOs, CBOs, VCCs to increase the capacity for a more efficient or sustainable forest management are not only remarkable but actually compulsory for managing the forest sector. (Menzies. 2007: 150) The following chapter would present a list of NGOs and their activities in forest management applied to the case study of Jozani-Chwaka Bay National Park.

4.3. NGOs interventions in Jozani

Before commencing to introduce the various NGOs involved in the management of Jozani, it is important to present Jozani in a deeper perspective, as well as to set the proper terminology within a context. Many of the NGOs in Jozani are actually small community based organizations (CBOs) or other type of community groups. Therefore, it is more appropriate to use the concept of Civil Society Organizations (CSO) which is defined by the World Bank as: "(...) non-

¹⁸ The meeting holds an essential understanding of the problem investigated in this report. Please refer carefully to the field notes from 18.03.2013 for more details.

governmental and not-for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations. Civil Society Organizations (CSOs) therefore refer to a wide of array of organizations: community groups, non-governmental organizations (NGOs), labor unions, indigenous groups, charitable organizations, faith-based organizations, professional associations, and foundations". (www.worldbank.org. 2011). Thereby, the report will primarily refer to NGOs, though it will make use of all the terms as inter-replaceable within the context of CSOs.

Jozani was officially declared National Park in 2004. The negotiating and planning process that had led to its current status, however, took significant time from the first efforts made on the Jozani Chwaka Bay Conservation Project. This delay is not necessary a point for criticism but quite the contrary as the planning process was carried out in a very participative manner, where through consultation with the forest communities, the government was able to reach the most optimal decisions. The communities were able to shape political decisions on matters concerning the borders of the park, compensation to farmers¹⁹, allowed activities within the park and to decide on the revenue-sharing scheme from the tourism activities. (Menzies. 2007: 42) The last point is of vital importance when it comes to alleviating poverty levels among the 9 villages that are in the boundaries of Jozani and deserves special attention.

Jozani is among the leading eco-tourism destinations in Zanzibar and with its favorable location attracts a great amount of tourists each year. Eco-tourism is defined as "a form of nonconsumptive resource management that has been promoted as a subsector of the world's fastest-growing industry – tourism – that protects the environment while directly benefiting communities" (Ibid: 144). Due to their negotiations on the revenue-sharing scheme, the current percentage ration is: "the community receives 38 percent of income for development activities through JECA; 27 percent is allocated to park management (a part of which is also channeled through community); DCCFF receives 24 percent; and the treasury receives 11 percent "²⁰ (Ibid: 42). Considering the total percentage that goes to the local communities and the high revenue

 $^{^{19}}$ Red Colobus monkeys and their increasing population are destroying farmland products (Menzies. 2007:

²⁰ The percentage from the research illustrates similar figures: 80 % to the community and 20 percent to the government (Field notes. 13.02.2013)

from the tourists²¹, it could be implied that this is an outstanding achievement towards improving the livelihoods of the local forest communities. There are already visible benefits in terms of improved access to electricity, schools, local clinics etc. (Ibid: 148). Based on the field work carried out in Jozani, there is a pattern that the mainstream development of Jozani in the long run would most likely remain its status quo by focusing on eco-tourism as the main tool for empowering the local communities. Whether or not this strategy could be regarded as a good practice of sustainable forest management would be further discussed in the analysis chapter. There are number of alternative measures to improve the livelihoods of the forest communities inhabiting Jozani. However, at present they are only a few initiatives implemented by various NGOs and they are mostly in its beginning stage. Nevertheless, it worth noticing some of the leading actors that favors this approach and that had actually reached significant achievements despite their limited capacities.

There are many NGOs operating in the Jozani district and all of them deserve equal attention and respect in their efforts to manage forest related conflicts. JECA, CARE International²², ZBC²³ (Zanzibar Butterfly Centre), JOCDO (Jozani Credit Development Organization)²⁴, CBOs (Community Based Organizations), Jozani Educational Centre are among the few that the field work allowed to get a deeper, first hand understanding in their objectives and activities. Considering their small size in terms of membership, their achievements are truly remarkable, as it has been emphasized numerous times already. Unfortunately, to describe each of them within the time and page frame of this report would be impossible and thereby further delimitations had to be imposed on this matter. A list of the NGOs that the research was able to become directly familiar with is presented in a table format. (See Appendix CD, Table 3a,3b or List of NGOs.exl) The table summarizes briefly the main objective(s) of a certain NGO, its activities to reach the objective, as well as its strengths and weaknesses to achieve its mission. The table is indeed a critical part for the understanding of this report and despite the author's wish to elaborate further on aspects concerning each NGO; this was the most appropriate decision to make. Therefore, in

²¹ "Total entry fee revenue for 2003 was US \$ 88,847" (GEF. 2004: 24)

For more information, please visit: www.care-international.org (last visited: 09/06/2013)

²³ For more information, please visit: www.zanzibarbutterflies.com (last visited: 09/06/2013)

²⁴ For more information, please visit: <u>www.jodco.blogspot.dk</u> (last visited: 09/06/2013)

order to fully understand the problem and the proposed solution(s) to it, please refer carefully to the summarized Table 3a,b or (List of NGOs excel format)in the Appendix CD. Nevertheless, since JECA is in the core of this project more and since there is limited up to date literature published on their activities, it is necessary to emphasize a bit further on their role in the management of Jozani.

4.4. JECA

JECA was officially established in 1998 by CARE as an umbrella organization to advise the newly established VCC. As a result JECA was initially created as advisory committee represented by 3 VCC members from each village in the Jozani district. A year later, the DCCFF together with CARE had registered JECA as an NGO, a local institution that has the responsibility to facilitate VCC activities. (Hassan & Said. 2006: 9) JECA constitutes of approximately 10 active members²⁵ and they are all from the surrounding villages. (Menzies. 2007: 47)

Throughout the implementation phases of JCBCP, however, JECA was appointed further responsibilities by the DCCFF and CARE. The organization now is highly dedicated to educate and raise awareness on forest conservation activities and the benefits thereby; promoting alternative/innovative income generating activities (IGAs); provide assistance to savings and credit groups; implementing development and empowerment projects for improved livelihoods; as well as addressing community issues to the government and the DCCFF in particular. (GEF. 2004: 19) A research made by the Global Environmental Facility, evaluating the performance of JCBCP had identified the following achievements by JECA with regards to the management of Jozani:

"JCBCP has strengthened civil society through the creation of JECA to represent community interests to the GoZ and DCCFF;

- *JECA* effectively gained the trust of the local communities;
- *JECA* succeeded in supporting the communities efforts to manage natural re-sources (through the Village Conservation Committees (VCCs) and IGAs; (Ibid: 24)

²⁵ This is an assumption based on the field work. The number might be greater but from personal encounters with JECA members this is the closest estimate.

- Recovery plans for the Ader's duiker has been developed and implemented in 6 local communities (shehias) through JECA; (Ibid: 25)

- VCCs and JECA were involved in extensive consultations concerning the change in state of Jozani from a 'conservation area' to a 'National Park'; (Ibid: 26)
- The Jozani Forest visitor shop is run by JECA revenues average around US\$1000 per month with a profit of US\$300;" (Ibid: 27)

In conclusion,

"JECA has fulfilled a useful role in building community confidence and trust between the communities and the GoZ and DCCFF. It has built internal networks with communities and external networks with the private sector through IGA activities." (Ibid: 27)

The 3 months of field work for JECA verify the above mentioned accomplishments. It could be further added that some JECA members are also involved in the eco-tourism in Jozani as they indeed have a remarkable environmental knowledge on forest related issues. They have a great confidence and leading skills which make them very accountable and respectful not only among the local communities but by all the forest management parties. Perhaps the highest asset that JECA has is with regards to its knowledge base. JECA is directly involved with all the other NGOs delivering services in Jozani. As a result, they have knowledge on innovative farming initiatives, sustainable eco-forestry practices, credit schemes, ecosystem dynamics, beekeeping, conservation and many other areas. Since most of them are farmers themselves, it is much easier for the local communities to accept them as equal which is a big advantage in working with marginalized local communities (Field notes. 10.02.2013 – 16.04.2013).

However, JECA has its weaknesses and perhaps the biggest constrain for the organization to fully develop its potential is the lack of human resource capacity. In practice, JECA is involved in all the projects around Jozani, directly or indirectly assisting the other NGOs with their activities. The current staff is simply not able to cope with all the work overload and matters sometimes are getting worse since donor companies are imposing very strict project deadlines. The knowledge base that JECA has is indeed remarkable as mentioned; however, the type of knowledge is mostly local in character and the lack of highly skillful labour is a challenge to consider. (Field notes. 13.03.2013). The long term common vision of JECA and CARE is that,

JECA would replace CARE as an independent mediator in the forest management of Jozani. (Menzies. 2007: 37). However, JECA is still dependent on CARE's funds and other donor organizations to carry out its activities and projects. The technical capacity in terms of office and transportation equipment is also very low which significantly lowers the operational potential of JECA. To cite the chairman of JECA, Mr. Ali when discussing the biggest challenges of JECA related to their activities and project, he pointed out: "Funding and technical capacity" (Field notes.12.03.2013).

5. Analysis

The following analysis will be divided in two sections. The first will assess the current forest management practices in Jozani in order to outline the achievements towards more sustainable practices in the forest management of Zanzibar, as well as some of the key challenges that Jozani is currently facing or might face in the long run with its forest strategies. The second section will look into how JECA can contribute to a more sustainable forest management in Jozani, in a long term perspective while discussing why exactly JECA is found to be the most appropriate among all actors to carry out this task.

5.1. Sustainable forest management in Jozani?

The analysis will take point of departure in placing Jozani within the context of social-ecological systems. The report had showed that Jozani is indeed a complex system, consisting of many entities living together in a closed ecosystems or habitat, defined by the boundaries of Jozani National Park. The discourse behind viewing forests or other ecosystems argued that socialecological systems are inevitably changing by nature and that interactions could have effect on its resilience, e.g positive or negative feedback. In the case of Jozani, the local communities had a positive feedback on the performance of this social-ecological system and thus are threatening its existence. In this setting, Jozani could be linked also to the theoretical concept of commonpool resources which acknowledges the sustainability issue of natural resources imposed by their overexploitation. In addition, Mr Suleiman (see Appendix CD, Interview Transript), as well as previous studies had stated that the main reason for the forest degradation is due to the high poverty levels and lack of alternative income generated activities (AIGAs). The bottom line is that everyone (government, NGOs, VCCs, local communities themselves) understands clearly the problem in an interrelated perspective. Understanding Jozani in the context of socialecological system is by itself an outstanding achievement in addressing the management of forest resources in a more sustainable manner. In order to provide a perspective on how the sustainability of managing Jozani forest resources could increase, particularly through the assistance of JECA, the current status of Jozani should be evaluated with regards to its forest management. Put differently, the following section would seek to answer the question: How sustainable is the forest management in Jozani?

This report had made a selective use of variety of terminology related to forest management. Concepts such as sustainable development, sustainable forest management, good ecosystem governance, social-ecological governance, adaptive co-management, common forest resource management etc., illustrate one pattern. Efficient development initiatives should be perceived within the context of social, economic and environmental values and success is determined by the degree to which those values are integrated into a strategy that assesses them as equally important. In addition, this strategy requires the collective actions of all the parties to efficiently address the three pillars into an integrated matter. Here is where the concept of good governance or as in this case good ecosystem or social-ecological governance comes to play an essential role. Hence, the sustainability of forest management in Jozani would be mainly assessed through those governance principles and since governance is a process than Jozani would be also analysed as a process.

Once again, "Sustainable forest management, as a dynamic and evolving concept, aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations." (UN. 2008: 4). Traces of sustainable forest management in Zanzibar could be found as early as 1992, when Zanzibar had implemented its first National Environmental Policy. When closely looking at the goal of the policy "to protect and improve the environment in a manner which contributes to the quality of both present and future generations. The concept of quality of life embraces economic, social and cultural aspects, as well as environmental." (RGoZ. 1992: 1); it is actually a reformulation of the above defined concept of sustainable forest management. Moreover, the same policy had already shown indicators of good governance by formulating decision making on a participatory basis, as well as through an integrated approach with other sector policies: "Improve COORDINATION BETWEEN PARTY, GOVERNMENT AND PRIVATE INSTITUTIONS in planning and decision-making, particularly where there are conflicting interests in the utilisation and protection of natural resources. (Ibid: 4)

The following Forest Resources Management and Conservation Act No. 10 of 1996 further expands exactly on the same principles of sustainable forest management. It actually has the concept in its strategy:

(a) to encourage and facilitate the active involvement of local people in the sustainable planning, management, use and conservation of forest resources;

- (b) to preserve and enhance the environmental functions of forest resources; and
- (c) to meet Zanzibar's demands for forest produce within the framework of sustainable forest management. (ZGZ. 1996: 176)

And with the National Forest Policy of 1999 aiming to "protect and develop forest resources for the social, economic and environmental benefit of present and generations of the people of Zanzibar" (RGoZ. 1999: 2); it is by no hesitation that the government of Zanzibar is following the principles of sustainable forest management on its political development agenda. Having these principles in the legislative framework is already a progress towards building the capacity for efficient forest management. However, what is on paper usually does not seem to find the same implication in reality. Therefore, through the formation of Jozani as a National Park, those principles would be tested. It is reasonable to take the goals set in the National Forestry Policy as indicators for sustainable forest management.

- 1. "Social goal: Strengthen the role of forestry in alleviating poverty and increasing equity in resource management and utilisation.
- 2. Economic goal: Strengthen the role of forest resources in promoting economic development, meeting demand for forest products, in creating income and increasing national revenues efficiently; and
- 3. Environmental goal: Protect and conserve forest resources including wildlife and flora, and enhance the role of forest resources in maintaining soil and water conservation and other environmental benefits." (Ibid: 3)

They would serve as evaluation criteria towards the sustainable forest management performance of Jozani.

The JCBCP is perhaps the biggest trigger factor that led not only to the establishment of Jozani as a National Park but that also had an effect in shaping the forest policies in a sustainable manner, one which favors Jozani and its communities. In fac,t the associated governmental interventions could be best suited to the framework of social-ecological governance which

promotes the management of ecosystems through the collective efforts of relevant stakeholders. The CoFMAs served exactly that function, as VCCs were the legal representatives of the communities to address conflicts to the government in order to reach consensus on how to act upon those conflicts in the most efficient social-ecological manner. As a result the term community based forest management (CBFM) became widely associated with Jozani. This type of management is actually acknowledged to be indicator of good governance by the trialogue model which argues for the need of co-operative efforts to manage scarce natural resources, through what the model refers to as Community-Based Natural Resources Management (CBNRM).

The point of the matter is that social conditions significantly improved after the introduction of CBFM in Zanzibar and primarily due to the efforts of CARE to establish Jozani as National Park. As a result the communities had increased their social capital mainly by becoming aware that they can actually had influence on policies that are directly having impact on them. As Mr. Suleiman expressed in the interview, the situation now is better as the local communities had gained confidence that they actually have a say in the way the forest resources would be managed. However, he also mentioned that "Now is better, but before because sometimes just at the seminar or the meeting, we discuss about environment, all the farmers better going like that. Yes just talk like that in the group and in the committee and just to start like that is better. But just after the meeting, it's finished." (See Appendix CD, Interview Transcript) In other words, what Mr. Suleiman is trying to say and what the field work revealed is that, despite of the collective efforts to manage Jozani, there are still many challenges unresolved or in simple words "A lot of talking, no action". A plausible explanation to this phenomenon could be provided by the trialogue model, arguing that the interface between some or all of the three links is weak or problematic and thus resolve in weakened governance. The meeting between JECA and DCCFF forest rangers clearly illustrates this problem as despite the good intentions at the end the forest is still being cut and improvements seems to be lacking. (Field notes. 18.03.2013)

Nevertheless, the CBFM had resolved in many social benefits such as the setting of Jozani borders, the compensation from the Red colobus monkeys crop damages, the tourist sharing-scheme, all those achievements are due to the involvement of local groups such as VCC, JECA or other relevant participants. JOCDO (Jozani Credit Development Organization), for instance

had made significant achievements in empowering women through the community credit based scheme program. The numerous meetings attended at the field work period had shown that there is a great emphasis on equality in forest management as women were equally present at all the meetings, sometimes they were even majority, especially when it comes to CBOs (Field notes. 12.02.2013, 25.02.2013).

Moreover, JECA is further promoting equality as essential towards sustainable forest management as the VCCs are still experiencing some issues with who should be in the committee. A meeting with VCC about the allocation of the compensation money from a REDD project raised the question of the efficiency of the VCC membership. JECA approached the issue by proposing that the members of the VCC should be from various backgrounds in order for decisions to be most efficient. In other words, farmers, fishermen, teachers and as much as possible diversified members should be in the committee as this would increase the knowledge base to approach issues more efficiently (Field notes. 03.04.2012). In this way, the VCC will decide upon the utilization of available resources, both natural and capital, on the principle of adaptive co-management, which is a preferable form of social-ecological governance as: "When effective, the outcomes of adaptive co-management stimulate innovation in problem solving." (Kofinas et al. 2009: 101)

The work of other NGOs in assisting local communities with projects oriented towards AIGAs (See Appendix CD, Table 3a,b or List of NGOs.exl) has also indications to improve their social well-being by giving them the opportunity for some financial stability. There is an interesting phenomenon that the common well-being living standards had improved but the poverty levels per individual are still high. This leads to investigating the economic performance of Jozani according to the sustainable forest management aspects.

The point mentioned above refers to the many improvements taken place recently in the communities. This is where the concept of AIGA comes to place. There is an important distinction between IGA and AIGA, where the later approach is more appropriate to use in line with sustainable forest management practices. When looking at Jozani as a social-ecological system, where humans are the imposing direct threat though overexploitation of the forest resources, which is by itself an IGA some of the forest clearing is market oriented, than it

becomes clear why AIGAs had entered the context of Jozani and promoted by all the NGOs in the area.

However, despite the many AIGAs projects to empower the local communities by promoting self-sustainable business/market initiatives for the marginalized groups in Jozani, the percentage of those projects actually contributing to poverty alleviation is still minor. This could be explained by the lack of interest from the individuals themselves, the lack of information that there those projects are actually existing, the lack of skills to manage the projects or all of these factors put together (Field notes. 18.02.2013, 01.05.2013). In other words there is a need for a certain capacity base in order for AIGA to enter the mainstream development or management of the forest resources.

At present, however, the most 'alternative' income generating activity is eco-tourism. Alternative was intentionally placed in brackets, as there are indicators that the labeling of tourism as eco-tourism is another 'greenwashing' strategy for the thriving tourism companies to become even more thriving on behalf of the environmental which eventually would be degraded or permanently destroyed due to inability to manage this expanding sector in reasonable, sustainable frames. (Menzies. 2007: 144-145). This report does not take a critical stand towards eco-tourism in Jozani; however, it seeks to address its effects with caution, especially in the long run, questioning its status as 'alternative' IGA.

The shift from forests having only market value, as forest products or byproducts to forests being valued for their esthetic value which attracts that many tourists is a remarkable achievement. Declaring Jozani a biodiversity hot spot clearly indicates this point and with the tourist sector now being the leading source of economic growth, then it could be inserted that this approach is indeed a good economic strategy for the overall development. In addition, the sharing scheme of all the eco-tourism projects in Jozani, with 80 % of the revenues going to local communities' development has outstanding achievements for the short span of just 5-6 years. This revenue had resolved in better living standards for the communities through innovating villages with facilities such as schools, mosques, clinics as well as providing them with electricity, water and many other necessities for a basic well-being.

In addition, eco-tourism is the main source of income to local NGOs such as JECA to carry out their projects aimed at providing AIGAs to the conventional methods of clearing forest to meet basic needs. Some of the tourist revenue, as well as funding mainly from UNDP and CARE had allocated small plantations to the communities, so they could still meet their forest demand for personal use or for income generation by selling them on the market. In addition agroforestry started to enter the agricultural mainstream at Jozani, and JECA is also the leading NGOs in promoting this strategy by educational means, as well as through crop nursery donations to farmers. Farmers also started to become aware of the benefits from beekeeping, on which JECA is particularly focusing its efforts at the moment. Butterfly farming from the ZBC gives the opportunity to communities to increase their incomes. All those programs are definitely aimed at bringing new economic values to the conventional economic utilization of forest resources by providing AIGAs that actually bring constant income through the benefit of protecting the forest resources. However, they have a slight effect in alleviating poverty levels as they are still in its beginning stages and at the moment all of the programs were possible due to the eco-tourism revenues. In addition some of the locals are not even aware that such programs exists which is a serious issue to consider. (Field notes. 01.05.2013)

This strategy could be again referred to adaptive social-ecological governance and is indeed efficient in providing sustainable forest management practices as the current results show. However, the main focus on the future management of Jozani from the governmental and non-governmental parties, including JECA and the VCCs, is on eco-tourism. Tourism had become a spear with two blades and as already mentioned it slightly benefits those in need, the marginalized poor communities, while slowly but certainly destroying the precious environment that Jozani and Zanizbar in general still have. (Field notes. 16.02.2013) Unfortunately, the effects of 'eco'-tourism might already had devastating permanent damage²⁶ and the dependency on its incomes had mainstreamed it in the economic development agenda to the extent that it would be hard to imagine that the agricultural sector, for instance, will become once again the leading contributor to the economic stability in Zanzibar. The point here is that, the promotion of ecotourism or tourism in general is good initiative, in the short term, to generate some initial income

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²⁶ Just a slight example: pictures showing coral reefs 5 years ago had nothing in common to the same pictures taken at the time of the internship period. The scuba diving business is expanding, while the employees had no or little education about the importance of coral ecosystems and their protection (see field notes)

to boost other IGAs or AIGAs. However, relying on this approach as being the main economic per formant in the long run, would most likely prove highly unsustainable as there are already evidences all over Zanzibar. The discourse behind adaptive social-ecological governance provides a flexible approach towards achieving a shift in policy making of ecosystems through the establishment of *resource regimes*. In other words, if Jozani wants to achieve sustainable forest management, the eco-tourism has to give its leading role to AIGAs, which would become the new resource regime. As the theory of social-ecological governance argues, this shift is most likely to occur or most facilitated in a *social network* setting and through the assistance of decentralized organizations, such as NGOs. This is what the final section of the analysis would investigate in details. However, in order to finalize the sustainable performance of Jozani forest management, the last factor should be evaluated, e.g. environmental objective.

The environmental achievements in Jozani since the beginning of JCBCP are perhaps the most easiest to evaluate as the results are visible all around Jozani. The tittle National Park by itself incorporates the environmental significance that is attached to Jozani. Being a biodiversity hot spot further increases the natural value of Jozani and since the starting stage of JCBCP, the almost extinct species of Red colobus monkey and Ader's Duiker are now enjoying a thriving status. (GEF. 2004: v) In addition, Jozani is a highly complex ecosystem consisting of coral rag forest, mangroves and many other vegetation species that are of high interest to be studied by researchers, for instance. The DCCFF forest rangers, JECA and all other NGOs and communities are putting tremendous efforts to protect this fragile ecosystem. For instance, through their collective actions, they were fighting for more than a week to stop a fire in Jozani that destroyed 50 ha of forest land. However, the fire could have been stopped much earlier if they had good equipment or technological capacity to deal with this issue.

Forests have numerous benefits and JECA is the main actor that creates awareness about this new innovative thinking: to benefit more from the forest while protecting it, instead of just simply cutting it. Significant improvements have been already achieved in this direction. In fact this has become the new resource regime or mission for all the NGOs in the area: "Protect the environment while empowering the local communities through alternative income generating activities"

In conclusion, it could be said that there are many indicators of sustainable forest management already taken place in Jozani. Considering the time span of conservation efforts at Jozani which began since 1990 through the JCBCP or the operation Jozani as National Park since 2004, it could be said that the achievements are indeed outstanding. The collective efforts or the promoted CBFM are clear indicators of good social-ecological governance. However, there are some emerging challenges such as the concerning growth of eco-tourism which should be closely regulated; the poverty levels are still high and communities still rely on forest products to a great extent due to the AIGAs having little impact on the communities well-being; although cooperation and communication are essential to community based forest management, there is still a gap between institutions, organizations and local communities. The point is that, planning or management generally speaking is a process which requires adaptive techniques for its efficient performance. Therefore, the concluding argument towards Jozani's sustainable forest management could be that: it is in the right direction but reflective or adaptive learning from the current challenges is needed, if this direction is to be kept. After all, an ideal sustainable forest management based on ideal adaptive social-ecological governance "(...)requires a process of continuous reflection on the performance of institutions to improve and in some cases transform them to better suit emergent conditions." (Kofinas et al. 2009: 101). However, as illustrated in the theoretical framework, this approach has its weaknesses or challenges in terms of "(1) building responsive institutions that provide for collective action; (2) finding a good fit of institutions with social-ecological systems; (3) building and maintaining strong communitybased resource governance; (4) linking scales of governance for communication, responsiveness, and accountability; (5) facilitating adaptive learning; and (6) generating innovation." (Ibid: 78), and the following analysis would provide a perspective on how those challenges could be diminished with the assistance of JECA.

5.2. JECA as sustainable forest management mediator?

This part of the analysis should be regarded more as a perspective than an actual answer or a solution to the problem being investigated. It is sort of speak, a theoretical consideration towards more efficient sustainable forest management at Jozani, in which JECA could play a key role. The following analysis would primarily argue that there is a need for an efficient institutional set-up that could facilitate all the interventions in Jozani in an effective manner which will assure the long-terms sustainability of this social-ecological system. The trialogue model of governance

clearly summarizes the proposed argumentation of this section: "Governments, societies and aid institutions are concerned with supporting the development process in order to provide social and economic stability and raise the welfare in underdeveloped countries. In line with the need for sustainable development, it is essential for governments, society and the private sector to find co-operative solutions with which to manage scarce natural resources effectively. By doing this, the outcome is more likely to reflect good governance." (Hattingh et al. 2007: 14)

The trialogue model and a research made by Menzies (2007) on building capacity in common ecosystem management suggest that there are two approaches towards meeting the emerging challenges in an adaptive co-management manner. (Menzies. 2007: 133) Establishing new institutions is not always the preferable strategy as the process is complicated administratively and very time consuming. The second approach argues for building capacity on the already existing institutions to cope with the new demands for ecosystem management. This approach argues that there is a need for a strong social network that will be able to establish a new resource regime through the adaptive co-management efforts of forest parties. In addition, the second strategy has the advantage of using the already existing institutional set-up, which is preferable in terms of existing capacity as the various parties had different comparative advantages that together will boost the overall performance of the forest management. (Ibid: 150)

In other words, all the NGOs working in Jozani (See Appendix CD, Table 3a,b or List of NGOs.exl) constitute a sort of social network with a common goal but with different means to achieve it. All of them have also different strengths and weaknesses (comparative advantage) which could actually complement each other. It is reasonable to believe that, if their efforts are combined than the common objective would be reached much easier and quicker. This is what the rest of the report will try to provide an understanding of, with JECA being a case or perspective towards implementing this innovative strategy.

JECA was established with the long-term objective to become CARE International's successor in the management of Jozani. There are indicators showing that JECA had achieved progress in that direction as all other NGOs in Jozani are dependent on CARE's funding for their projects while JECA is mainly CARE's accountable body to assure that the funding is spent appropriately. In addition, JECA is a sort of advisory body to the rest of the NGOs at Jozani, as there has been always consultation with JECA on matters regarding who are the most feasible applicants for a

certain project or program. In fact, this is one of JECA's activities, e.g. to evaluate the potential of all the candidates for a certain project²⁷ and report to the organization responsible for the actual implementation of the project.

The field work for JECA, as well as assessment report by GEF (2004) on their performance had revealed that JECA has the potential in becoming the leading institution or mediator for all the forest management parties. "JECA has fulfilled a useful role in building community confidence and trust between the communities and the GoZ and DCCFF. It has built internal networks with communities and external networks with the private sector through IGA activities." (GEF. 2004: 27). This achievement is of key importance when looking at Jozani's performance from a social network perspective, where the active co-operation within the institutional or organizational set up enables better social-ecological governance, which in turn would inevitably lead to a more efficient forest resource management. It is important to mention that JECA is an active member of ANGOZA (Association of NGOs in Zanzibar), which aims at building capacity among the NGOs under its umbrella (above 100 members) to effectively catty out their activities, especially when it comes to participating in governmental decision-making through a network setting, where NGOs can exchange practices and information (www.angoza.or.tz) As far as the field work had shown none of the other NGOs in Jozani is registered under ANGOZA (Field notes. 08.04.2013) This membership is placing JECA in a very good partnership with other NGOs and hence contribute to the overall performance of JECA by increasing its knowledge and network base.

Perhaps an example would illustrate more clearly what contribution exactly JECA could have to increase the sustainability of Jozani management. Currently there are 4-5 eco-tourists spots around Jozani which are relatively close to each other but operated by different NGOs or actors. All of them are operating on the cost sharing scheme (80% to the local communities) and there are undergoing developments to create a few more eco-tourism locations, in the nearby area. There is a shared vision that in the distant future, all these eco-tourism locations could be united in a single tourist package. In other words, connect all the tourist spots in a sort of network with

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 $^{^{27}}$ For, instance the budget allows donating only 50 beehives in total, while the candidates are twice more. (Field notes. 19.02.2013)

the objective that the revenues from such a tourist package would reach its peak and improve the livelihoods of the local communities. (Field notes. 18.02.2013)

The idea is indeed with good potential to develop as acknowledged by all the actors involved; however the biggest constrain is the 'know how' aspect. The last section of this report was trying to provide a guideline, exactly to this aspect, arguing in favor of JECA being the organization/institution with the highest potential or capacity to contribute to this goal. In other words, JECA's favorable position and skills could significantly facilitate this process as they already have good established connection between the government and the local communities. What is lacking is the co-operation between the NGOs in addressing common goals such as the establishment of the eco-tourism package. If the establishment of this eco-tourism package is reflected through a forest management perspective, then JECA could become the responsible body to effectively implement this project. Other projects within the framework of forest management could be approached in similar manner by JECA being the guiding mediator between all the various interventions in Jozani. It is important to have an institution as such, as the capacity to manage the forest resources would definitely increase, since the weaknesses/disadvantages of one NGO could be complemented by the strengths of another NGO and vice versa, creating a very efficient environment for work. JECA has a good overview of all the NGOs and their activities and hence this is why it could be the most feasible for the task.

To increase even further the long term sustainability of Jozani and its forest management, JECA could generate innovations through adaptive learning, for instance. Put differently, JECA could reflect upon the current eco-tourism practices with a critical eye, especially towards their contribution to meeting the environmental goals and promote AIGAs as advantageous, instead. It is undeniable that such a transition will take significant amount of time but considering the warning trends of the escalating tourist expansion, this approach seems rather reasonable. (Menzies. 2007: 48)

It has been argued so far that JECA has a good potential to become the mediator organization in Jozani or in other words to take over the role of CARE International. However, this has to happen in a setting of trialogue governance in order to take any effect. In other words, the government should further increase its efforts towards a more sustainable forest management in Jozani by, for instance, strengthening its interface with the society and the science aspects

through promoting innovative development, investing in research and development initiatives, fighting its corrupted bodies etc. At present the governmental support to Jozani is somehow lacking as Mr. Suleiman pointed out in his interview and as the field work also indicated.²⁸ In conclusion, in order for JECA to build capacity for a more efficient forest management, firstly their capacity should be increased. This could apply to all the NGOs operating in Jozani. At the end, it all comes back to linking sustainable forest management with good (ecosystem) governance.

 $^{^{28}}$ JECA has only two motorcycles donated by the DCCFF. The rest of the technological base comes primarily from UNDP but it is very outdated. (Field notes. 13.02.2013)

6. Conclusion

The findings of this internship report reveal an important understanding of forest management practices in Jozani Chwaka Bay National Park. The detailed investigation on Jozani performance according to sustainable forest criteria had provided up to date information that could prove to be essential in the near development of Jozani. There are clear indicators of good ecosystem governance in Jozani which are in the essence of successful sustainable forest management.

Despite the relatively short operational span of Jozani under community based forest management principles, the results are outstanding. Social, economical and environmental benefits from this type of management could be literally observed everywhere in Jozani. The collective efforts of governmental, non-governmental and civil society groups had shaped Jozani in the status that deserves admiration for its achievements. In conclusion, forest management in Jozani is 'good' but is it 'sustainable'? The fact of the matter is that the term 'sustainable' by definition requires a long term perspective. Therefore, only time could tell if the current forest management practices are indeed sustainable for the future generations to come.

In this report, it was emphasized that there are indeed sustainable aspects within the forest management of Jozani. However, the 'eco'-tourism had entered as a mainstream in the management of Jozani and currently all the other activities are solely dependent on tourism revenues. The report further added to the notion that this strategy could prove to have a devastating long term consequences in Jozani in a social-ecological perspective. Put differently, there are already indicators that tourism is not only destroying the environmental but actually is not benefiting the local communities, even slightly. Governmental officials started to recognize this threat, as well as everyone else, but the reality is that Zanzibar had become so dependent on the tourism that it is hard to imagine that this trend could be reversed.

Despite those warning patterns, the field work for JECA had brought optimism to this study, a hope for a better future of Zanzibar, its forests and their local communities. NGOs in Jozani, not only JECA, are indeed having remarkable influence in protecting the forest resources while trying to empower the forest dependent communities through alternative income generative activities (AIGAs). AIGAs have the potential to become the new system regime for a sustainable forest management in the long run. However, this potential or capacity is seriously weakened by the dependence on the ecotourism activities, the lack of co-operation between the NGOs and

perhaps the lack of initiative to push forward this approach in the mainstream forest management, while replacing the tourism sector.

The report had argued that JECA could significantly contribute to increasing the capacity of addressing the forest management in Jozani more efficiently or sustainable by becoming the mediator institution/organization that favours the development of AIGAs approach over the expansion of ecotourism activities. Through adaptive co-management with the rest of the NGOs operating in Jozani, JECA could strengthen the co-operation with all the relevant actors and thus increase the capacity or the chances that AIGAs will enter the mainstream forest management, which in turn will increase the sustainability performance of Jozani. This was actually the initial assumption of the report and the results from the analysis show that there are indicators that this assumption could hold true. Whether or not JECA would take this role is not that important in the overall development context. What is important is that, if Zanzibar is committed to meet its 2020 vision targets then current forest management would most likely fail to contribute to the overall development and meeting the targets respectively. Even if JECA is appointed or considers carrying out this resource regime or transition towards more sustainable forest management practices, it could not achieve this task if the rest of the social network is not willing to commit to co-operative actions in addressing the common resources in the benefit of the commons.

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