



Geography

Franz Steiner Verlag

Zin Mar Than

Socio-Economic Development of Indawgyi Lake, Myanmar

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Indawgyi Lake, Myanmar

URBAN AND REGIONAL DEVELOPMENT IN MYANMAR

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Volume I

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LIST OF ABBREVIATIONS

ASEAN	=	Association of Southeast Asian Nations
CDMA	=	Code Division Multiple Access (channel access method in cellular networks)
cf.	=	confer, compare
DAAD	=	Deutscher Akademischer Austauschdienst (German Academic Exchange Service)
e.g.	=	exempli gratia (for example)
FFI	=	Flora and Fauna International (an NGO)
FOW	=	Friend of Wildlife (an NGO)
GDP	=	Gross Domestic Product
GSM	=	Global System for Mobile Communications (channel access method in cellular networks)
HIV	=	Human Immunodeficiency Virus
IUCN	=	International Union for Conservation of Nature and Natural Resources
KIA	=	Kachin Independence Army
KIO	=	Kachin Independence Organization
KNU	=	Karen National Union
MAXQDA	=	Software package for qualitative data analysis
NCA	=	Nationwide Ceasefire Agreement
NGO	=	Non-governmental Organization
NLD	=	National League for Democracy
R&D	=	Research and development
Ramsar	=	Convention on Wetlands of International Importance (called after Ramsar, Iran, where the convention was signed)
SIM	=	Subscriber Identification Module (integrated circuit chip for mobile phones)
SME	=	Small and medium size enterprises
SPSS	=	Software package for statistical analysis
SWOT	=	Acronym of Strengths, Weaknesses, Opportunities and Threats
UN	=	United Nations
UNESCO	=	United Nations Educational, Scientific and Cultural Organization
UNICEF	=	United Nations International Children's Emergency Fund
UWSA	=	United Wa State Army
WCED	=	World Commission on Environment and Development

PREFACE

This study was submitted as a doctoral thesis under the title “Socio-Economic Development Potentials in the Indawgyi Lake Area, Kachin State, Myanmar” to the Faculty of Mathematics and Natural Sciences of the University of Cologne. The date of the thesis defense was on 24th October 2016.

Prof. Dr. Frauke Kraas and Prof. Dr. Josef Nipper were the reviewers.

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SUMMARY

Indawgyi Lake in Kachin State, located in the northern part of Myanmar, is the largest inland freshwater lake of the country with a rich aquatic flora and fauna, rich biodiversity and is still a largely intact ecosystem. Since 1999, the area has been declared as the “Indawgyi Wetland Bird Sanctuary”. Around the lake area eleven village tracts with 38 villages consists with a little more than 50,000 population. However, the socio-economic development of the area is hampered by the protracted unstable political situation and by factors caused by its peripheral location. These factors resulted in poor administrative structures and infrastructure deficits. At the same time the local population, depending heavily on the natural resources, is facing mounting challenges, some of which are internal, others also externally influenced, such as an increasing population (partly due to in-migration) and the rising exploitation of natural resources. Deficits in handling environmental issues are evident. In general, research on the potentials of the area is absent.

These facts and the growing importance of a sustainable development in today's globalized world have led to apply the concept of endogenous development as intellectual base for this study. The research aim – finding out the potentials of the area and discussing possible development paths – can be subdivided into three objectives: 1) investigating the present socio-economic conditions (demographic, social, infrastructure, economic, governance and conservation aspects) of the Indawgyi Lake Area; 2) investigating how the local people evaluate the current situation and the future development; 3) based on the results, identifying and discussing the potentials of the region for future development in detail. Especially solutions for current critical aspects and future threats are discussed, as well as ideas for ways and means to develop eco-tourism in the area.

The empirical work was conducted in two phases in 2014 and 2015 using a mixed method approach. The quantitative primary data were collected applying a questionnaire for a total of 216 households in ten villages around the Indawgyi Lake. These data were analysed using SPSS. To get qualitative data altogether 54 experts were interviewed and field observation and participant observation methods were applied. The interview data were analysed using MAXQDA. The results of the quantitative and qualitative analyses were combined by triangulation and interpreted based on the SWOT concept.

Main economic activities are agriculture, fishery and gold mining. One of the current challenges of the agricultural sector is a sub-optimal land use management (e.g. monoculture cropping systems). Challenges of the fishery sector are over-fishing, ignoring the closed season and practicing illegal fishing methods. In the gold mining sector visible and invisible impacts can be mentioned as current and future threats. For instance, sedimentation can be observed in the lake. Other visible threats like drug use and health problems are predominant in the mining area. As

an invisible and a future threat mercury contamination can be pointed out, because mercury is used in gold extraction.

Imbalances in the migration patterns, which have negative impacts on development, can be found in the area. The area offers unskilled labour opportunities in the mining and fishery sectors. Simultaneously people, who are educated, have to leave the area and look for qualified jobs in other parts of Myanmar resulting in a brain drain for the region. Currently, a big threat for the area is the unstable political situation including ethnic armed conflicts. Peace negotiations between ethnic armed groups and central government are underway since 2012.

The identified challenges are discussed sector by sector and possible solutions are described. For example, how adverse effects of the monoculture cropping system can be mitigated, how overfishing can be prevented or how the brain drain process can be reduced. The economic development potentials are identified and discussed as for instance added value processes for farming, fishery and mining products, which are still underdeveloped due to lacks in infrastructure. Since 2013 upgrading of the main road has started and in 2015 electricity supply was established already for several villages. These are positive signs for future development. In particular, a focus is put on eco-tourism, which has not developed until now, as a fourth basic economic sector for the area.

However, also possible negative impacts of development need to be kept in mind. For instance, a better accessibility includes the threat, that the carrying capacity of the ecosystem of the area will be overstrained. Therefore, development of eco-tourism should be environmentally sound. However, the most important factor is to achieve a stable political situation, otherwise the development of the region cannot be moved forward successfully.

ZUSAMMENFASSUNG

Der Indawgyi Lake, im Kachin State im nördlichen Teil Myanmars, ist der größte Süßwassersee des Landes mit einer reichen aquatischen Flora und Fauna, einer hohen Biodiversität und einem (weitgehend) intakten Ökosystem. Seit 1999 ist die Region als Schutzgebiet („Indawgyi Wetland Bird Sanctuary“) ausgewiesen. Die sozio-ökonomische Entwicklung wird allerdings eingeschränkt durch eine schon lang andauernde instabile politische Situation und durch Faktoren, hervorgerufen durch die periphere Lage. Mangelhafte Verwaltungsstrukturen und Defizite in der Infrastruktur sind als Folgen zu nennen. Gleichzeitig ist die lokale Bevölkerung – stark abhängig von den natürlichen Ressourcen – steigenden Herausforderungen ausgesetzt. Einige sind lokal verursacht, andere kommen von außen wie z.B. ein Bevölkerungswachstum (z.T. Einwanderung) und eine wachsenden Ausbeutung natürlichen Ressource. Defizite im Umgang mit der Umwelt sind evident. Insgesamt liegen kaum wissenschaftliche Informationen über die Region vor.

Diese Situation und die wachsende Bedeutung nachhaltiger Entwicklung in einer heute globalisierten Welt sind der Anlass, für diese Studie das Konzept endogener Entwicklung als gedankliche Basis zu nehmen. Das Ziel der Untersuchung – Identifizierung und Diskussion der Potentiale – ist unterteilt in: 1) Analyse der aktuellen sozio-ökonomischen Struktur (demographische, soziale, infrastrukturelle, ökonomische, administrative Aspekte sowie Umweltschutz) der Region; 2) Aufzeigen der Einschätzungen der lokalen Bevölkerung zur gegenwärtigen und zukünftigen sozio-ökonomischen Situation; 3) Herausarbeitung der Potentiale der Region für zukünftige Entwicklung, basierend auf den gefundenen Resultate. Insbesondere werden Lösungen für gegenwärtige kritische Aspekte und zukünftige Gefahren angesprochen und Ideen für einen Ökotourismus diskutiert.

Die empirische Arbeit wurde in zwei Phasen in 2014 und in 2015, basierend auf einem „mixed method“-Ansatz, durchgeführt. Primärdaten wurden durch eine Haushaltsbefragung von 216 Haushalten in zehn in Seenähe gelegenen Orten erhoben und mit SPSS analysiert. 54 Experteninterviews bilden die Grundlage für die qualitative Erhebung, ergänzt durch Informationen aus teilnehmender und allgemeiner Beobachtung. Die Interviews wurden mit MAXQDA analysiert. Alle Daten (quantitative und qualitative) wurden durch Triangulation miteinander verknüpft und vor dem Hintergrund des SWOT-Konzeptes interpretiert.

Die Hauptwirtschaftsbereiche sind Landwirtschaft, Fischerei und Goldgewinnung. Eine der aktuellen Herausforderungen in der Landwirtschaft ist eine suboptimale Anbaupraxis (z.B. Mono-Anbau-System). Probleme in der Fischerei sind Überfischung, die Nichtbeachtung von Fangverbotszeiten und die Anwendung illegaler Fangmethoden. Die vom Goldbergbau hervorgerufenen Gefahren lassen sich aufteilen in sichtbare und unsichtbare. Z.B. fließen Abwässer in den See und erzeugen Sedimentation. Andere Gefahren wie Drogenkonsum und Gesundheitsprobleme sind im Bergbaugebiet weit verbreitet. Als unsichtbare und zukünftige

Gefahr ist zudem die Kontaminierung mit Quecksilber, welches bei der Aufbereitung des Goldes eingesetzt wird, zu nennen.

In der Region werden durch Migration starke Ungleichgewichte erzeugt. Die Region bietet Möglichkeiten für ungelernte Arbeitskräfte im Bergbau und in der Fischerei. Gleichzeitig verlassen gut ausgebildete junge Menschen die Region und suchen sich Arbeitsstellen in anderen Teilen Myanmars und tragen so zu einem brain-drain für die Region bei. Gegenwärtig ist auch die instabile politische Situation mit bewaffneten ethnisch motivierten Auseinandersetzungen eine große Gefahr. Friedensgespräche zwischen den bewaffneten ethnischen Gruppen und der Zentralregierung sind seit 2012 wieder aufgenommen worden.

Die Herausforderungen werden diskutiert und Lösungswege werden aufgezeigt. Wie kann z.B. das Mono-Anbau-System reduziert oder das Überfischen vermieden werden oder wie lässt sich der brain-drain-Prozess abmildern. Die ökonomischen Entwicklungspotentiale werden identifiziert und u.a. diskutiert wie eine Weiterverarbeitung der erzeugten Produkte in der Region erfolgen kann, was bisher kaum geschieht wegen Mängel in der Infrastruktur. Seit 2013 wird die Hauptstraße, die um den See führt, ausgebaut und 2015 sind mehrere Dörfer an das öffentliche Stromnetz angeschlossen worden, gute Zeichen für die zukünftige Entwicklung. Insbesondere wird in der Studie auf die Etablierung eines Ökotourismus, der bisher nicht vorhanden ist, als ein möglicher vierter Wirtschaftssektor für die Region eingegangen.

Aber es sind auch negative Entwicklungseinflüsse zu berücksichtigen. So besteht die Gefahr, dass durch die angestrebte bessere Erreichbarkeit der Region die Aufnahmekapazität des Ökosystems überschritten wird. Insofern ist ein zukünftiger Ökotourismus in enger Abstimmung mit den Belangen des Umweltschutzes zu gestalten. Am wichtigsten allerdings ist es eine stabile politische Situation; ansonsten kann die Entwicklung der Region kaum erfolgreich sein.