

**BUILDING COMMUNITY RESILIENCE IN
MINE IMPACTED COMMUNITIES:
A STUDY ON DELIVERY OF HEALTH SERVICES
IN PAPUA NEW GUINEA**

A thesis submitted in fulfilment of the requirements for the degree of

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in

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Building Community Resilience in Mine Impacted Communities

Abstract

The purpose of this study was to explore the building of Community Resilience in mine-impacted communities in Papua New Guinea (PNG). The study aimed to establish the general relationship between community resilience, community capitals and the delivery of health services. It investigated the delivery of health services in three mining communities in PNG to see how these services contribute to or detract from the building of resilience. The study investigated relevant models of community resilience from the literature, and how the way policy functions in PNG can be related to these models. The study also developed a way of quantifying the impact of mining on health service delivery (through the use of community capitals) and the building of resilience in these communities. Furthermore, the thesis develops an indigenous, Melanesian-centric 'Bilum Framework' approach to resilience to create greater understanding of how resilience in the mining communities can be strengthened through improved access to health services.

Three mining communities were selected as case studies, each representing a different stage of mining: (i) the beginning; (ii) the operational; and, (iii) post-mine closure. A mixed method approach comprising both quantitative and qualitative methods was used to collect data for this study. A survey questionnaire was designed to collect views of community members who accessed health services in their respective communities. Results from the survey questionnaire were converted to proxy indicators and led to the development of a Community Resilience Index (CRI) to provide a measure of resilience in each community. The qualitative research methods included document analysis, semi-structured interviews, and purposive observations. Document analysis was important in reviewing relevant policy documents and other literature to link theories to the experiences of the people while the latter methods contributed to describing people's encounters in accessing health services.

Analysis showed inconsistencies in the levels of resilience in these communities that varied with the stages of mining: both the beginning and post- mine closure stages

demonstrated significantly lower levels of community resilience than the operational phase. Findings from the research indicated a lack of access to health services – a key influence in building resilience – is the result a range of factors including insufficient finances, weak sector governance, and the need for infrastructure and transport. The Bilum Framework is proposed as an approach that allows decision-makers to target assistance to strengthen and support specific community capitals and hence more effectively build community resilience in the mining communities in PNG.

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ACRONYMS

APACC	Asia Pacific Accreditation and Certification Commission
ASM	Artisanal and Small-scale Mining
AusAid	Australian Agency International Development Programme
ADB	Asian Development Bank
BCL	Bougainville Copper Limited
BPNG	Bank of Papua New Guinea
BRCS	Brief Resilience Copy Scale
BSP	Bank of South Pacific
CAM	Complementary and Alternative Medicine
CCs	Community Capitals
CCHA	Catholic Church Health Agency
CHPs	Community Health Posts
CHWs	Community Health Workers
CMCAs	Community Mine Development Agreements
CoM	Chamber of Mining
CR	Community Resilience
CRI	Community Resilience Index
CSR	Corporate Social Responsibility
DCD	Development Coordination Branch
DEC	Department of Environment and Conservation
DMPGM	Department of Mineral Policy and Geohazard Management
DoNPT	Department of National Planning and Treasury
EIU	Economic Intelligence Unit
GoPNG	Government of Papua New Guinea
HEO	Health Extension Officer
HIV/AIDS	Human Immunodeficiency Virus
IBSA	Integrated Benefit Sharing Agreement
IMR	Infant Mortality Rate
ISOS	International SOS
JTAI	Jane Thomason and Associates Inc.
KRAs	Key Result Areas
LGL	Lihir Gold Limited
LICHP	Lihir Island Community Health Plan
LINLLG	Lihir Island Nimamar Local Level Government
LLGs	Local Level Governments
LMALA	Lihir Landowners Association
LMC	Lihir Medical Centre
LRN	Low Risk Notification
LSDP	Lihir Sustainable Development Plan
MAC	Mining Advisory Council
MCH	Maternal Child Health
MD	Managing Director
MDC	Mining Development Contract
MHC	Maternal Health Care
MICs	Mine Impacted Communities

MoA	Memorandum of Agreement
MOMASE	Morobe Madang Sepik
MML	Misima Mine Limited
MMR	Maternal Mortality Rate
MR	Mortality Rate
MRA	Mineral Resource Authority
MTDS	Medium Term Development Strategic Plan
MTSA	Misima Towohu Landowner Association
MRDC	Mineral Resource Development Company
NDA	Nimamar Development Authority
NGOs	Non-Governmental Organisations
NHP	National Health Plan
NIIPG	New Ireland Interim Provincial Government
NLLG	Nimamar Local Level Government
NRI	National Research Institute
NTDS	Non Treatable Diseases
OTML	Ok Tedi Mine Limited
OLPLLG	Organic Law on Provincial and Local Level Governments
PDA	Porgera Development Authority
PGs	Provincial Governments
PHC	Primary Health Care
PNG	Papua New Guinea
PNGSDP	Papua New Guinea Sustainable Development Programme
PPLLGSPA	Porgera-Paiela Local Level Government Special Purpose Authority
PPP	Public Private Partnerships
PSOC	Psychological Sense of Community
SMLs	Special Mining Leases
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TCS	Tax Credit Scheme
UNDP	United Nations Development Programme
WB	World Bank
WBG	World Bank Group
WHO	World Health Organisation
WHP	Western Highlands Province

