


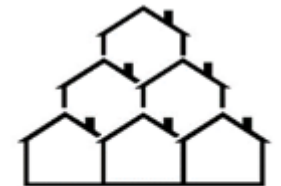
BUILDING SUSTAINABLE RESILIENT HOUSING IN PAPUA NEW GUINEA

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IFC

**International
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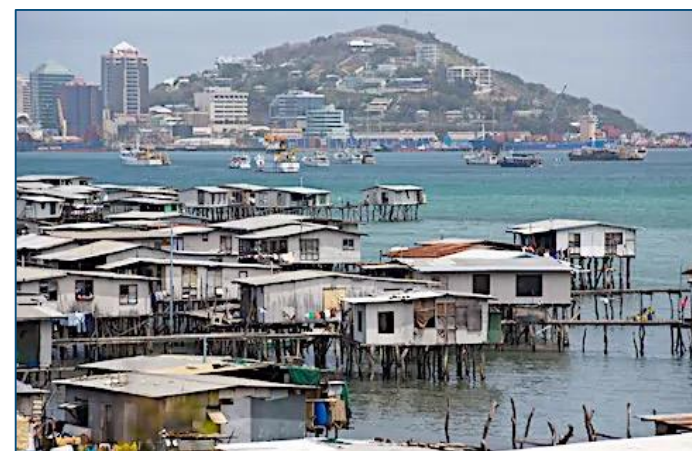
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About Papua New Guinea

One of the least urbanized and most culturally diverse countries in the world.



- USD 2,550 GDP per capita
- High cultural diversity (850 languages or 12% of world's languages)
- Low population density (8 million)
- Low urbanization (13%)
- Growing housing deficit
- 5,000 new housing units need to be built every year



A country facing many natural hazards



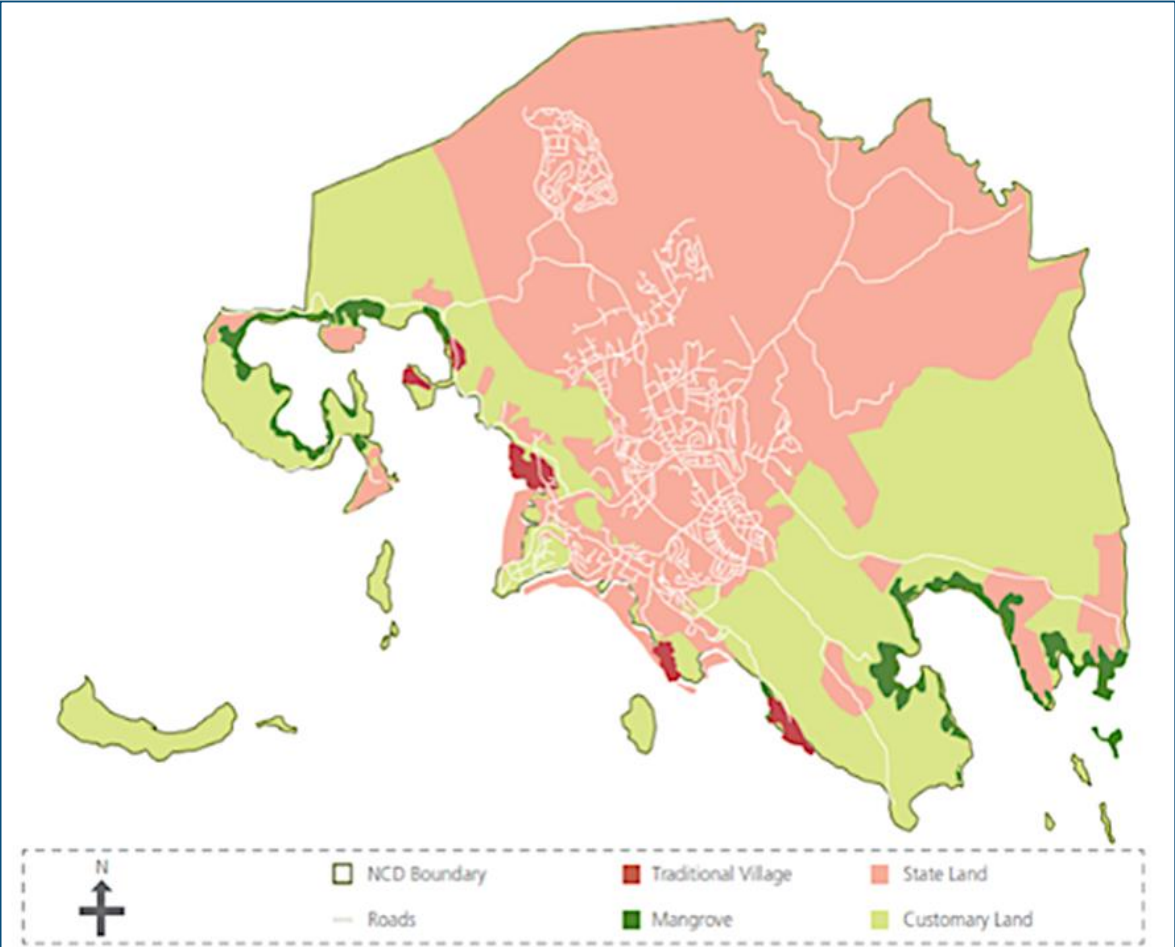
But also a huge opportunity:

- 18 people per km²
- Lowest urbanization rate
- Fast growing economy
- Port Moresby has 1,500 people per km²
(Kuala Lumpur has 6,700 per km²)

Port Moresby has the unique opportunity to build a resilient and sustainable city from scratch.

A rare opportunity

50% of land in Port Moresby is Government owned and empty



But opportunities abound....

How can we transform Port Moresby into a resilient and sustainable city?



The little (titled) land available is subject to land-use economics and is very expensive.



Yet, Port Moresby's slums are some of the least dense in the world.

The time to invest in resilience is now

Once the city is too dense, changes become difficult to undertake

Enforcing structural standards-
avoids later retrofits which are
difficult and expensive

Nepal- 17% urban

2015 earthquake destroyed tens of
thousands of homes

Structural retrofits are being
undertaken on many others

Enforcing structural standards not
only saves costs but many lives



Enforcing zoning-
avoids relocation caused by natural
hazards

Philippines- 47% urban

Typhoon Haiyan destroyed much of
the coast around Tacloban

Families are being relocated in new
developments

Relocation can be difficult,
expensive and harms social fabric



Increased density-
avoids slum upgrading and air
quality issues

Mongolia- 69% urban

Most polluted city in the world
due to ger coal stove heating,
poor insulation and low density
environment

New changes to densify and add
insulation

But difficult to implement



What will the future Port Moresby look like?

Port Moresby has the rare opportunity to decide today what it should look like tomorrow.

Traditional housing



Formal housing



Future housing



PNG needs to promote 'smart density' to achieve sustainability



Density decreases land and infrastructure costs

Land is available now but we should plan for the future

- Even though POM can continue to build single-family units, it shouldn't
- The government should start to encourage vertical building and living
- Need a condominium law
- Need to encourage change in cultural preferences
- But continue to adopt green building practices which are inherent in the local culture (most local buildings meet already meet EDGE standards but none have yet to be certified).

Smart density will curtail urban sprawl and reduce housing costs.

Housing public-private partnerships can encourage resilience

PPPs can incentivize developers to:

- ✓ Develop affordable housing
- ✓ Densify
- ✓ Go green
- ✓ Build according to seismic structural standards
- ✓ Respect zoning

By:

- Providing key incentives (subsidized land and infrastructure)
- Applying conditions to development



EDGE certified developments in Haiti thanks to USAID incentives for complying developers.

Local assets to build on

- ✓ 40 year mortgages at 4%
- ✓ Rental rates are almost as high as Manhattan's
- ✓ Growing middle class: strong effective demand and financeable demand
- ✓ Government has land and willingness
- ✓ Recent investments in infrastructure
- ✓ Private sector has financial and technical capacity


IFC is developing resilient housing in PNG through public-private partnerships

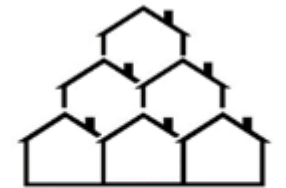


Plus a beautiful landscape, history and cultural diversity!



Thank you!

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