Climate Change Impact & Adaption Action in Lalitpur, Nepal

ネパール・ラリトプル市
における
気候変動の影響と適応

ललितपुर महानगरपालिका

Presented by :

Manjali Shakya Bajracharya

Deputy Mayor,

Lalitpur Metropolitan City

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Lalitpur Metropolitan City (LMC)

ネパール・ラリトプル市

- Popularly known as Patan is **the oldest of the three major cities** in the Kathmandu Valley .
- History dating back to 2,300 years, also **known as City of Fine Art and Craft**.
- It's a cultural city and rich in heritage.
- Lalitpur is registered as **World Craft City**.
- Rich historic past, extremely rich in its arts and architecture with **world heritage site and ancient settlements** still intact and thriving.
- Oldest Municipality of Nepal and with restructuring in **2017 became Metropolitan with 29 wards.**
- Area - 36.12Sq. Km and population about 295,000.

ネパール・ラリトプル市はカトマンズ渓谷で最も古い都市、歴史は2300年にさかのぼり芸術・工芸の古都として知られる。人口は29万5千人。

Climate Change Impact in Nepal

ネパールが直面する気候変更の影響

- Nepal - **10th most affected country** according to the Climate Risk Index with 80% population at risk
- **Combination of factors**: fragile mountainous topography, highly variable monsoon, unplanned settlements.
- Winters are drier and monsoon summers wetter, with threefold **increase in rainfall**.
- Incidences **of droughts, forest fires, heatwaves, flash floods, and disease** outbreak increasing.
- **Floods and landslides** are the most frequent hazards in past 40 years.
- With **melting ice** these events are expected to increase as climate change accelerates.

Climate Change Impact in Lalitpur Metropolitan City

ネパール・ラリトプル市における気候変動の影響

Increased intensity of heavy rainfall overwhelming urban infrastructure - causing urban flooding
大雨の増加

Riverine **infrastructure and settlements at higher risk** and impacted by increasing flood incidences
河川流域の災害リスク

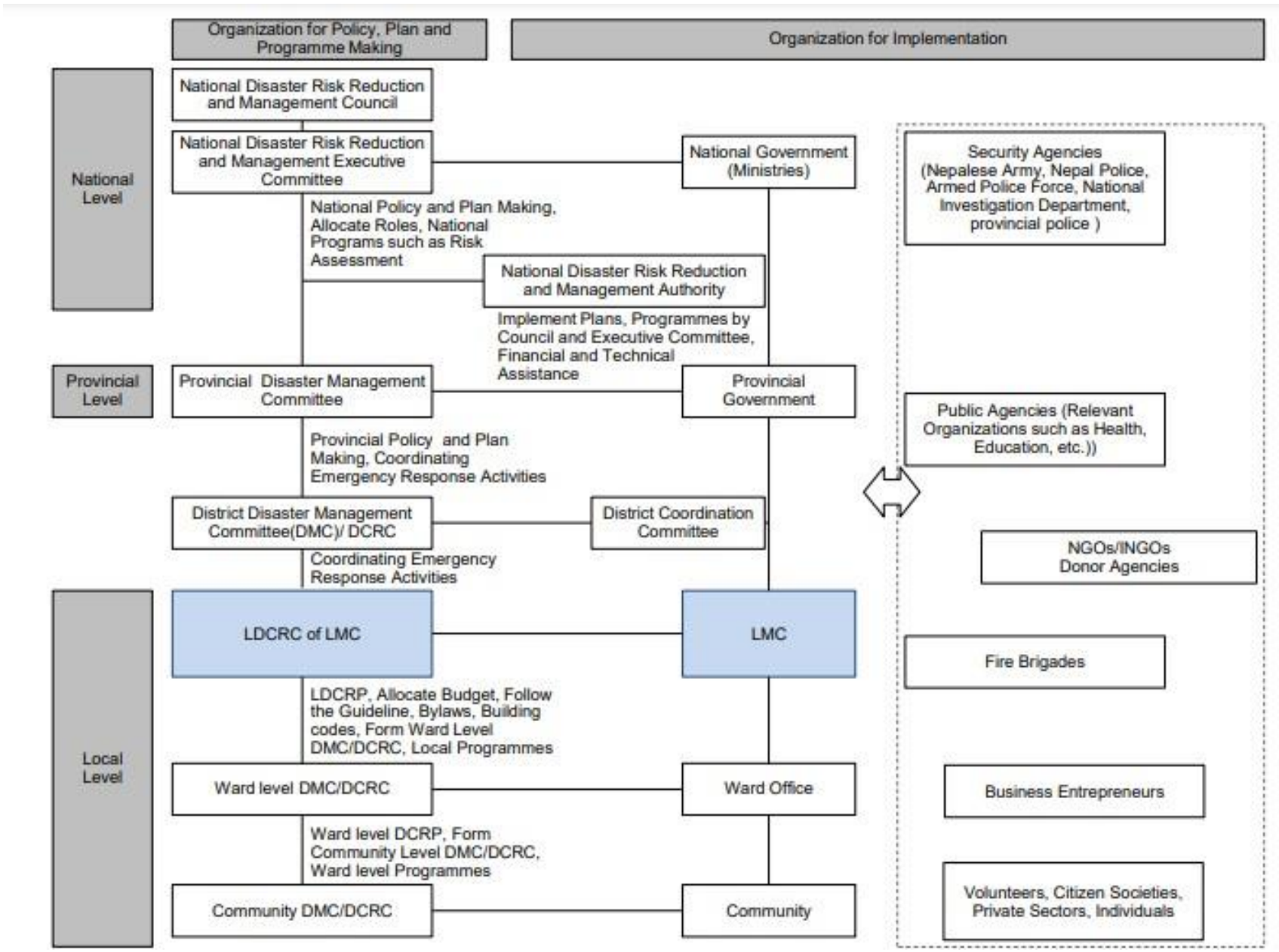
Landslide and erosion
土砂災害

Drought and water scarcity
干ばつ・水不足

Epidemic – dengue and water borne diseases
デング熱や水を原因とする感染症の増加

Institutional Structure of Disaster & Climate Resilience (DCR)

防災と気候変動対策の政府組織



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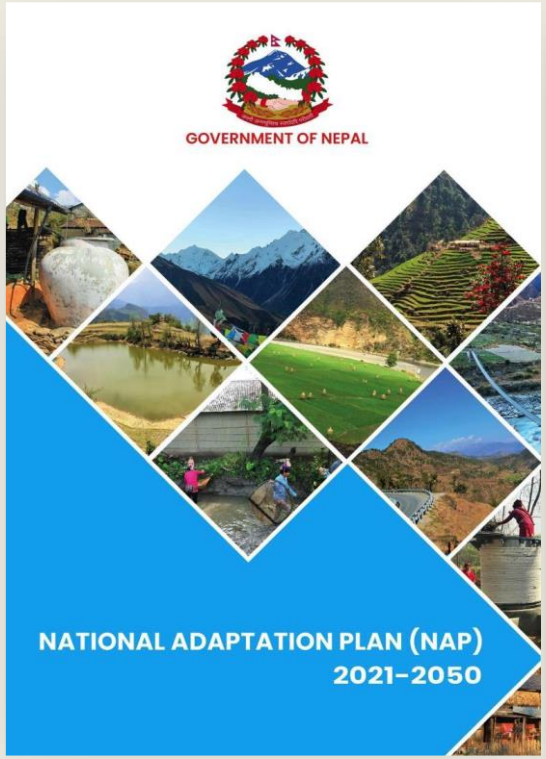
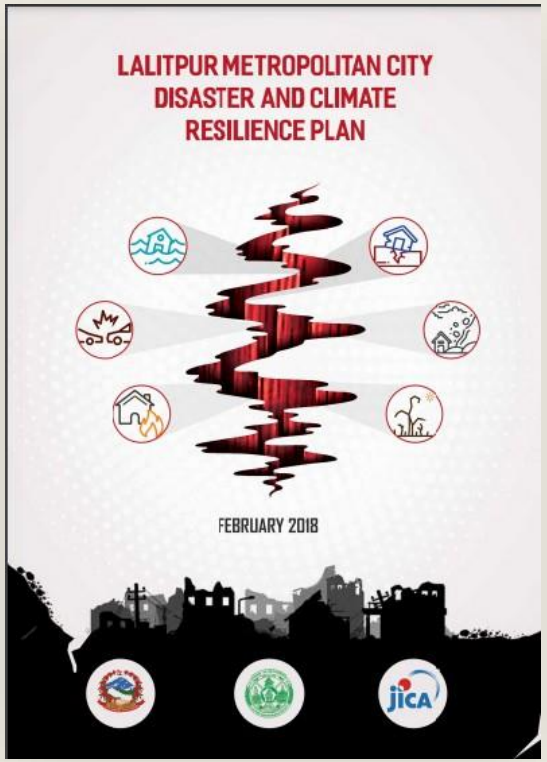
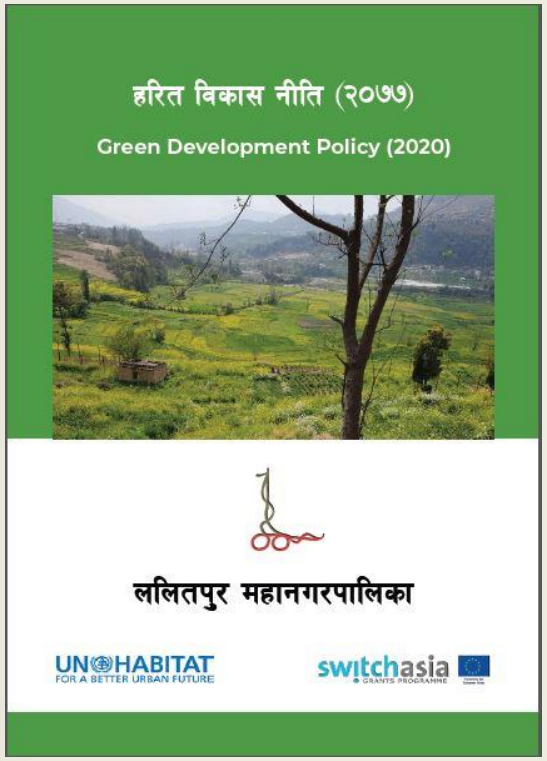
ラリトプル市の気候変動対策







国家適応計画2021-2050, ラリトプル防災・気候変動計画・グリーン開発政策

National Adaptation Plan 2021-2050

Sectoral Action Plan focused on Priority Adaptation Programme and implementation mechanisms

Lalitpur Disaster & Climate Resilience (DCR) Plan

Planned, integrated, coordinated and comprehensive approach to prepare, mitigate, respond, and recover from natural and climate induced disasters.

Green Development Policy

Build nexus between Development and DRR/CCA for building resilience and low-cardon development path

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ラリトプル市の気候変動対策

- **Key Interventions/Priorities:**
  - Revitalization of **Blue and Green Infrastructures** (ponds, public parks)
  - Reconstruction of **Social Infrastructures** to revitalize built environment
  - Promotion of **Clean Mobility** and **Walkability** (cycle route/trails and stand)
  - Training and Entrepreneurship creating **Green jobs** (indigenous technologies – heritage, hospitality, tourism, artisans)
  - **Solid waste management** – 3R (Reduce, Reuse, Recycle), source segregation, composting

主な優先分野： ブルー＆グリーンインフラ、社会インフラの改善、ウオーカブルなまち、グリーンジョブの創出、廃棄物管理の改善

Climate Action of Lalitpur Metropolitan City
ラリトプル市の気候変動対策

Greening Priorities

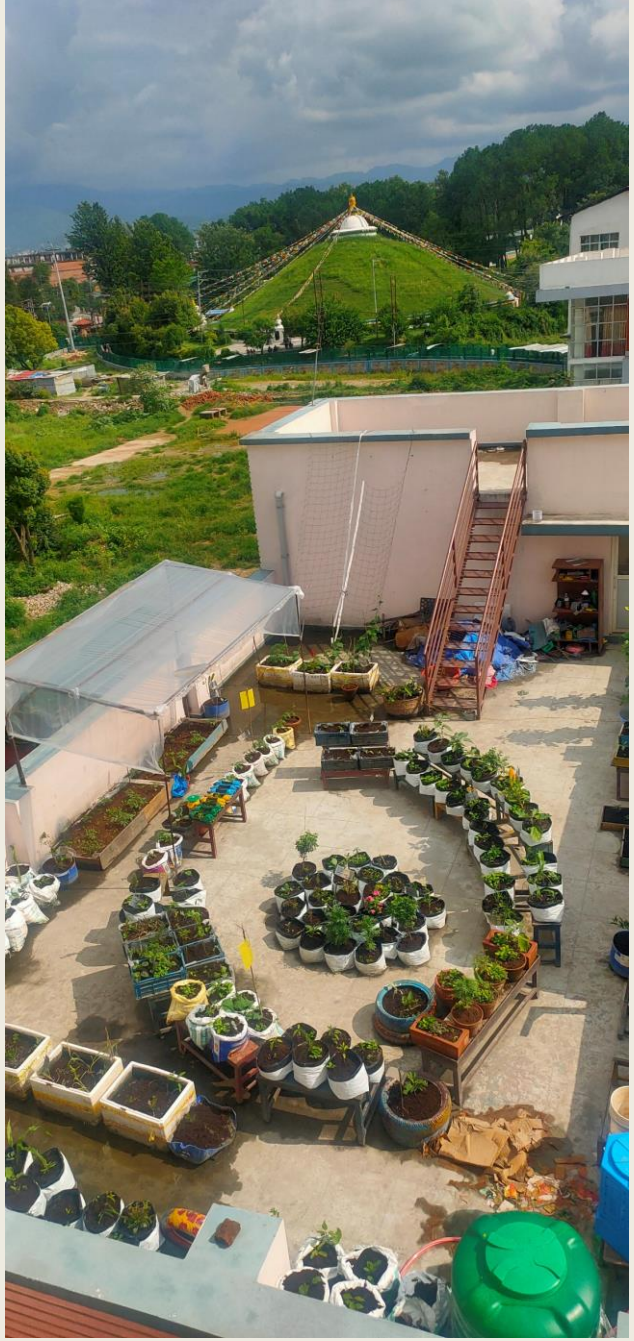
緑化の優先策：毎年1000本の植樹、グリーンビルディング、河川沿いの親水公園、都市農業

1000 tree plantation every year (Corporate Social Responsibility)

Eco-Friendly **Green Buildings**

Riverfront **parks and public space** reclamation

Urban Agriculture for waste management and food security



Challenges and Lesson Learned

課題と教訓

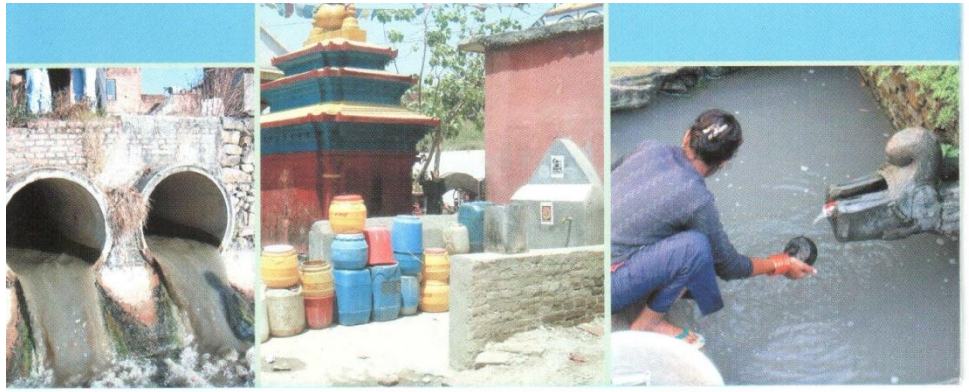
- Ecological restoration with ever increasing population
- Solid waste management
- Shifting the priority from grey to green infrastructure
  - at political level
  - at people's level
- Community participation is a must for sustainable management

- for ownership, management and maintenance

- Partnership & Participation

  - municipality-community-private sector

人口が増加する中での環境の保全、廃棄物管理、グリーンインフラへのシフト、コミュニティ参加、民間やコミュニ地のパートナーシップの構築



Potential collaborating areas in climate Change adaptation

気候変動・適応分野における連携の可能性

- Climate and Disaster Risk **Adaptation and Mitigation**
- Particularly **Urban Flood Management**
- **Green Building** Materials and Technologies
- **Nature Based Solutions** for Public Space and Infrastructure Revitalization
- **Rainwater Harvesting** and **Ground water recharge**
- Water and **Wastewater Management**
- **Ecological restoration** for urban bio-diversity

気象災害リスクへの適応と削減、特に都市洪水管理、グリーン素材や技術、自然由来の技術、雨水利用、地下水の涵養、水・下水管理など

Thank you !

Hff]hf]nf]kf .