Green Recovery from Covid-19 amidst the Climate Crisis: The Legazpi City Way

Local Government, the Climate Crisis and a Green Recovery from COVID-19
04 September 2020, 3:00 PM Philippine Time

COVID-19 Impacts: People

As of 22 September 2020

Confirmed Cases

New	Total
3	273

Recoveries

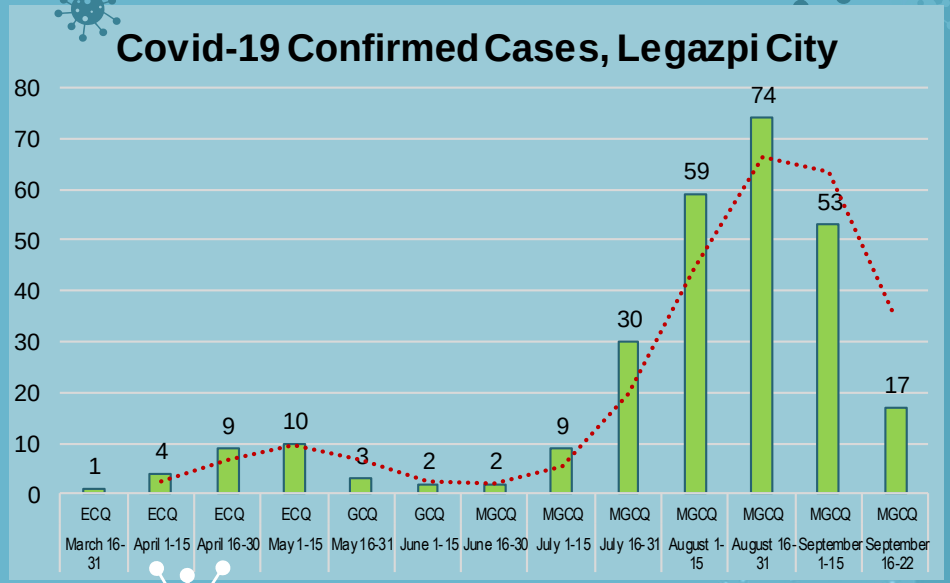
New	Total
3	205

Deaths

New	Total
0	13

Active Cases

New	Total
3	55



COVID-19 Impacts: People

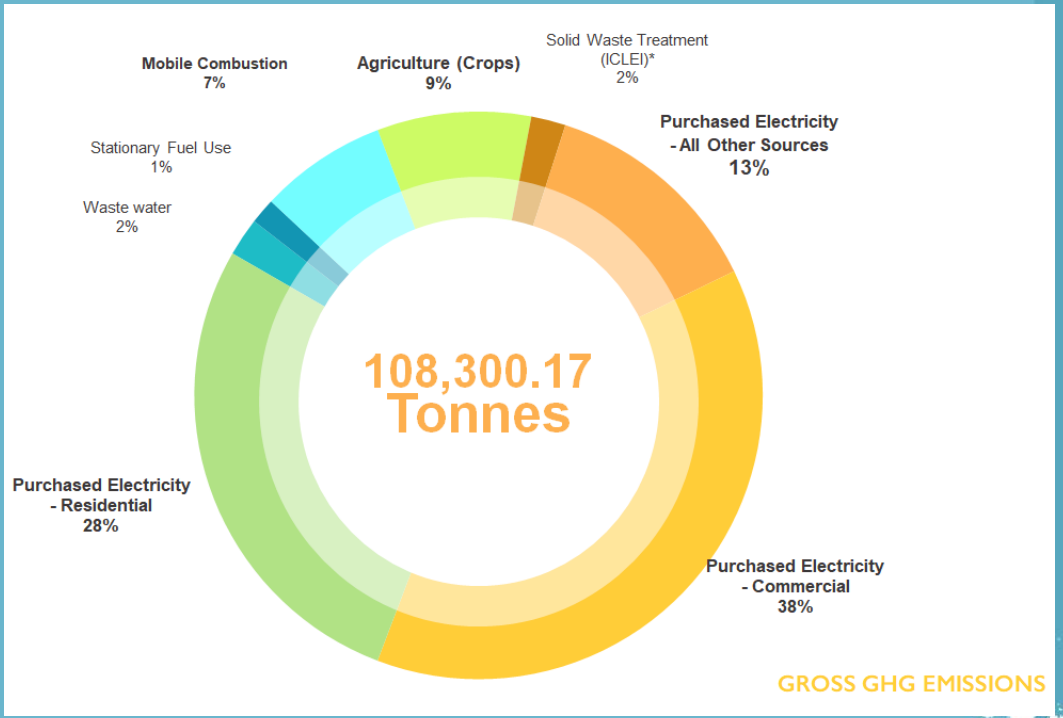
- **People Movement**
- **New way of doing things**
- **Reliance on vaccine as cure**

- **Hazards brought by climate change drivers**: flood, rain-induced landslide, lahar, strong winds and storm surge, urban heat, sea level rise; **and geological setting** of the city

- **Compounded risk become more complex and encompassing**.
- **Must take up the challenge of solving each problem simultaneously**.

COVID-19 Impacts: Environment

- Domestic & Health Wastes
- Biodiversity “break”
- Greenhouse Gas (GHG) emissions
  - Transportation
  - Purchased Electricity



COVID-19 Impacts: Economy

- Business disruptions
- Temporary/permanent closures
- Reduction of operations; displaced workers
- Potential closure of around 250 business establishments and 2,460 jobs lost
- Projected cash in-flow loss of Php 70 million and 13,950 MICE delegates for tourism
- Local Climate Change Funds realigned to Covid-19 response

Towards Green Recovery

- **The Local Climate Change Action Plan (LCCAP) is our entry point to green recovery.**
- **Hitting two birds:**
  climate resilience, and
  an economic development pathway that considered – low carbon emission

LAND AREA | 61.65 sq. km.

POPULATION | 96,639

City Climate Resilience | Legazpi City

INCREASING TEMPERATURES

WETTER OR DRIER PLAUSIBLE FUTURES

FLOODING

SEA LEVEL RISE

STORM SURGE

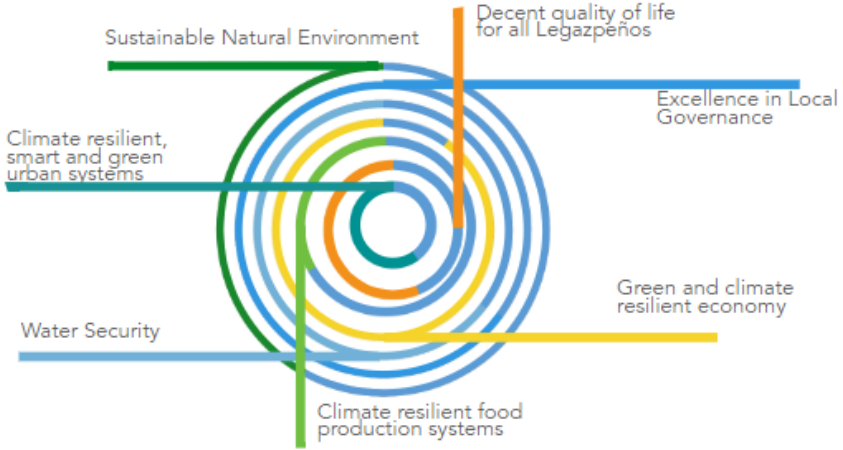
RAIN INDUCED LANDSLIDE

LAHAR FLOWS

INCREASING GREENHOUSE GAS EMISSIONS

CITY VISION

By 2028, the City of Legazpi will serve as the international gateway to Luzon and Visayas; it will be the Philippines' top tourism hub, offering world-class tourism-related facilities and services. The progressive growth of Legazpi will be complemented by a vibrant, technology-driven and sustainable environment as embodied by a green, resilient and climate-adaptive economy, matched by excellence in local governance, all contributing to a smart, highly committed and happy citizenry.



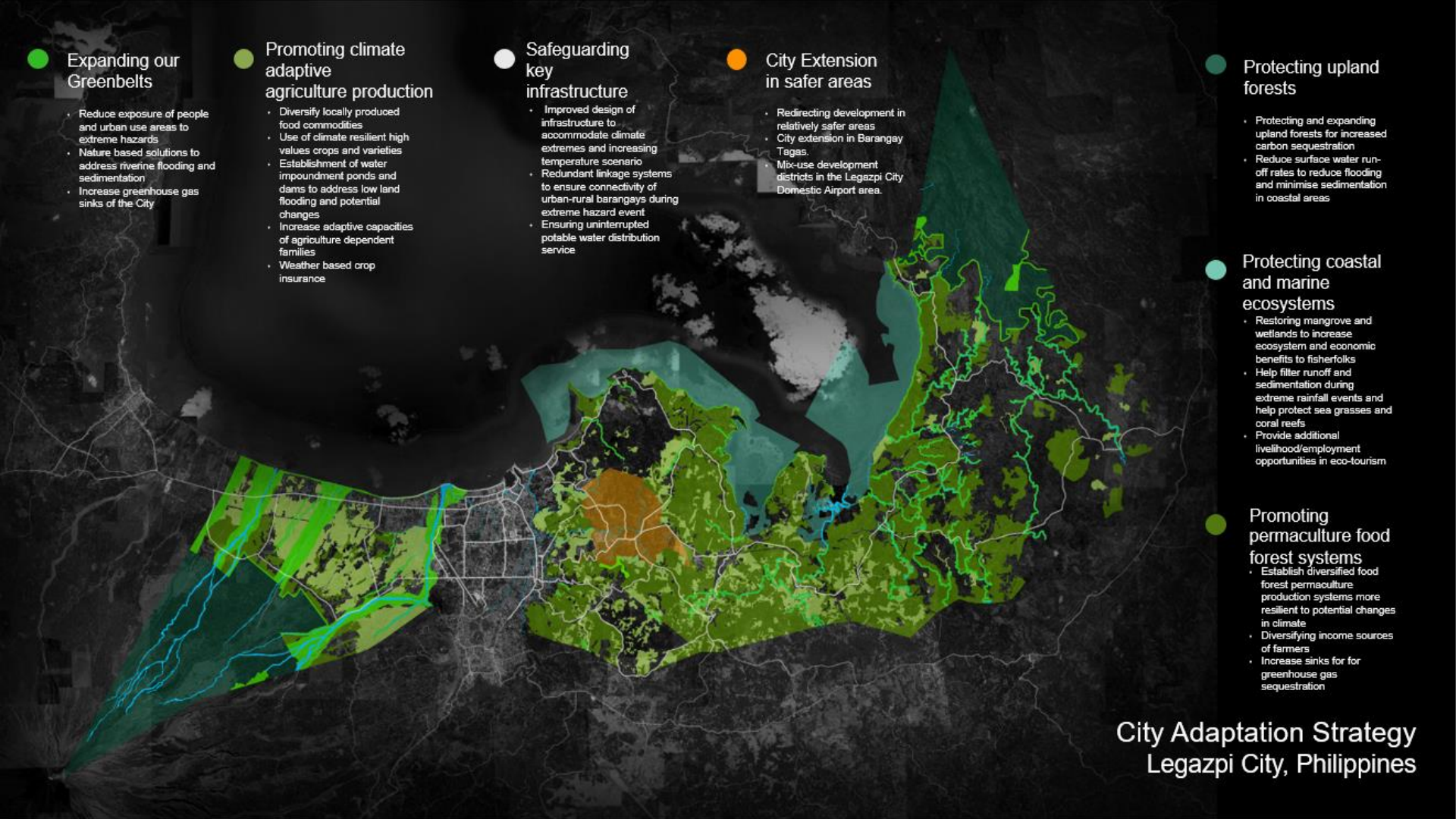
STRATEGIC PRIORITIES

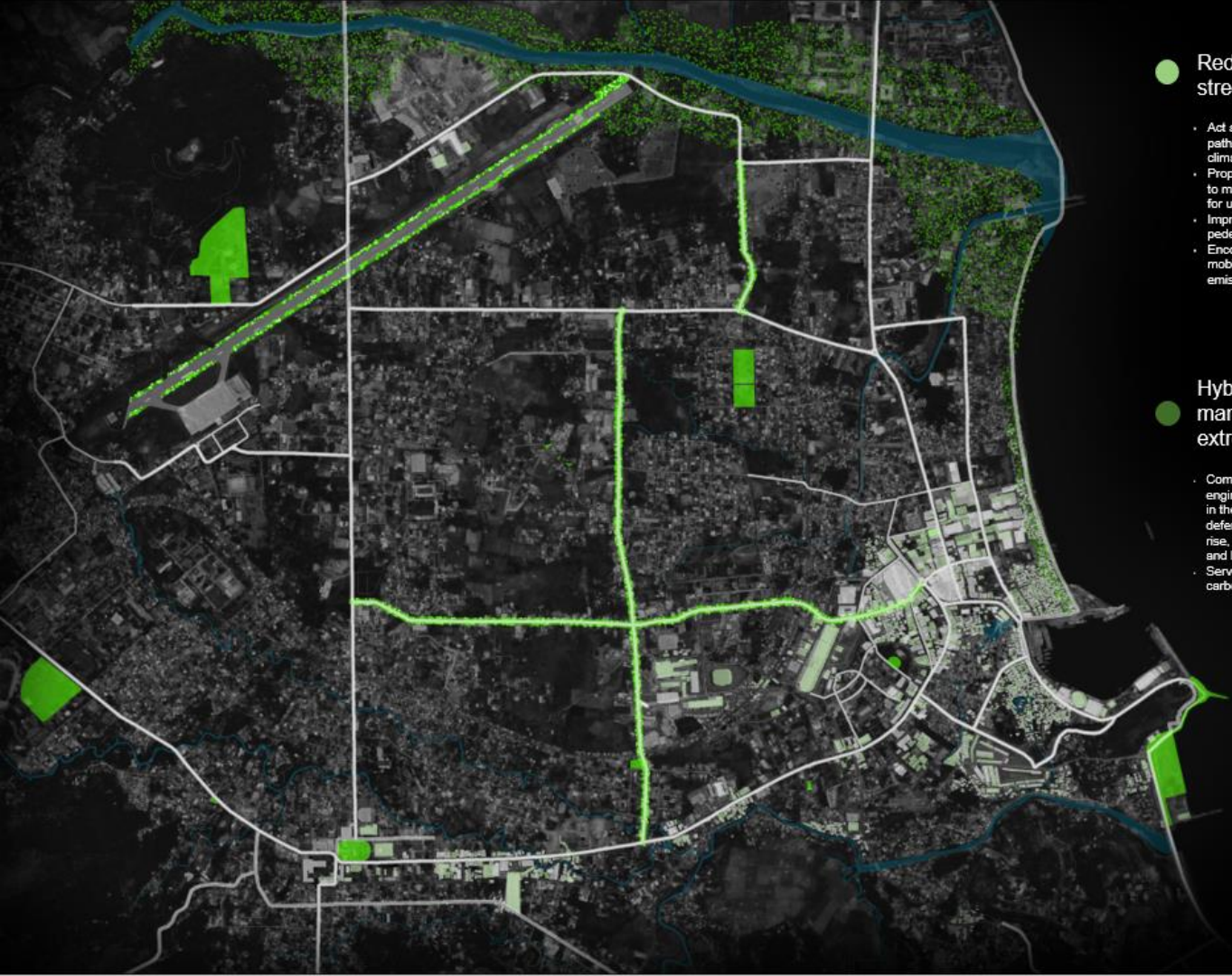
Immediate/Short-Term

- Organization and mobilization of local bodies
- Provision of food and basic needs (est. 65,000 families)
- Social welfare and other social assistance to affected populations
- Social compliance and preventive measures
- Health care services and testing capacity

Long-Term Strategies

- **Retrofitting the existing programs and projects to fit the needs of a green recovery framework**
- **Sustainable development goals**
- **Sendai Framework**


Expanding our Greenbelts
Reduce exposure of people and urban use areas to extreme hazards
Nature based solutions to address riverine flooding and sedimentation
Increase greenhouse gas sinks of the City
Promoting climate adaptive agriculture production
Diversify locally produced food commodities
Use of climate resilient high values crops and varieties
Establishment of water impoundment ponds and dams to address low land flooding and potential changes
Increase adaptive capacities of agriculture dependent families
Weather based crop insurance
Safeguarding key infrastructure
Improved design of infrastructure to accommodate climate extremes and increasing temperature scenario
Redundant linkage systems to ensure connectivity of urban-rural barangays during extreme hazard event
Ensuring uninterrupted potable water distribution service
City Extension in safer areas
Redirecting development in relatively safer areas
City extension in Barangay Tagas.
Mix-use development districts in the Legazpi City Domestic Airport area.
Protecting upland forests
Protecting and expanding upland forests for increased carbon sequestration
Reduce surface water run-off rates to reduce flooding and minimise sedimentation in coastal areas
Protecting coastal and marine ecosystems
Restoring mangrove and wetlands to increase ecosystem and economic benefits to fisherfolks
Help filter runoff and sedimentation during extreme rainfall events and help protect sea grasses and coral reefs
Provide additional livelihood/employment opportunities in eco-tourism
Promoting permaculture food forest systems
Establish diversified food forest permaculture production systems more resilient to potential changes in climate
Diversifying income sources of farmers
Increase sinks for for greenhouse gas sequestration
City Adaptation Strategy
Legazpi City, Philippines



Redesigning our streetscapes

- Act as breezeways and air paths to reduce micro-climate temperatures
- Proper orientation of roads to maximise prevailing winds for urban cooling
- Improve walkability and pedestrian experience
- Encourage non-motorised mobility to reduce GHG emissions

Expanding public open green spaces

- Serve as breezeways and air paths to improve micro-climate
- Transforming river and creek areas as public access corridors
- Increase carbon sequestration

Hybrid solutions to manage climate extremes

- Combining nature and engineering based solutions in the design of coastal defences against sea level rise, storm surges, floods and lahar flows.
- Serve as GHG sinks for carbon sequestration

Heat adaptive built environment

- Designing buildings, streets, neighbourhoods and districts to accommodate future increase in mean temperatures
- Formulate regulations to reduce urban temperatures such as solar reflectance, building orientation relative to prevailing winds and sun path, building densities and typologies, and natural shading interventions.

City Adaptation Strategy
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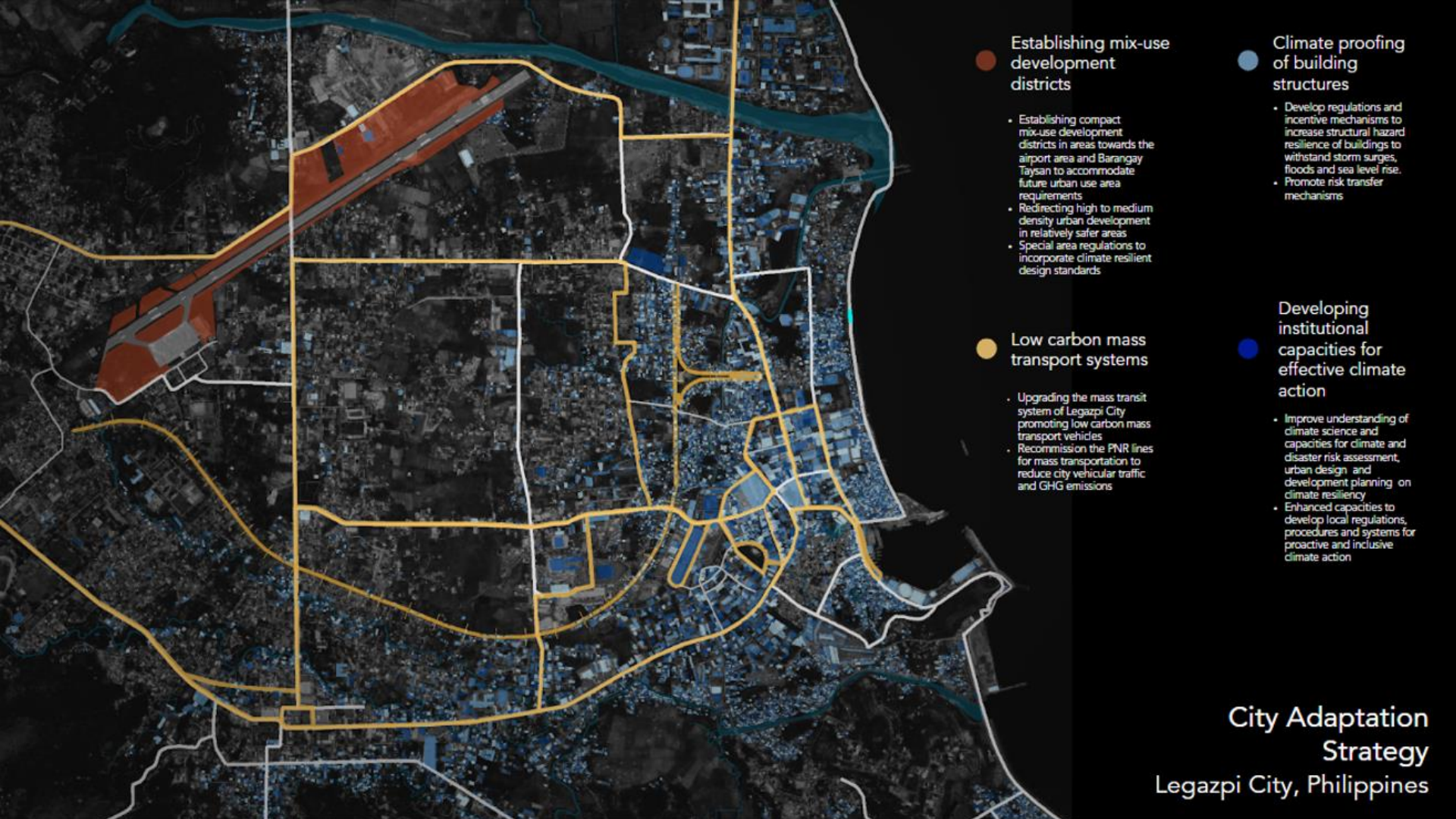

Establishing mix-use development districts

- Establishing compact mix-use development districts in areas towards the airport area and Barangay Taysan to accommodate future urban use area requirements
- Redirecting high to medium density urban development in relatively safer areas
- Special area regulations to incorporate climate resilient design standards

Climate proofing of building structures

- Develop regulations and incentive mechanisms to increase structural hazard resilience of buildings to withstand storm surges, floods and sea level rise.
- Promote risk transfer mechanisms

Low carbon mass transport systems

- Upgrading the mass transit system of Legazpi City promoting low carbon mass transport vehicles
- Recommission the PNR lines for mass transportation to reduce city vehicular traffic and GHG emissions

Developing institutional capacities for effective climate action

- Improve understanding of climate science and capacities for climate and disaster risk assessment, urban design and development planning on climate resiliency
- Enhanced capacities to develop local regulations, procedures and systems for proactive and inclusive climate action

City Adaptation Strategy

Legazpi City, Philippines

Harvesting rainwater

- Harness rainwater to anticipate potential impacts of changes in mean seasonal rainfall patterns to the domestic water supply
- Contribute to the reduction of flood water volumes affecting low-lying communities

Redesigning riverside corridors

- Treating rivers as integral part of the urban landscape
- Provide areas for income and employment opportunities to increase adaptive capacities of at risk families
- Climate proofing of buildings to withstand extreme flood events and reduce potential casualties
- Serve as areas for non-motorised mobility

Increasing water permeability of built areas

- Encourage the use of permeable surfaces to increase water absorption of the urban landscape to reduce surface run-off.
- Reduce thermal mass of the urban landscape to reduce micro-climate temperatures
- Contribute to ground water recharge

Establishing dual purpose parks for flood management

- Establishment of water impoundment parks to temporary detain water during extreme rainfall events
- Additional green spaces for GHG sequestration

City Adaptation Strategy
Legazpi City, Philippines

Legazpi City is fixing the right mix, in order to build a strong foundation and taste a better, greener and safer future.

Welcome to Legazpi City!