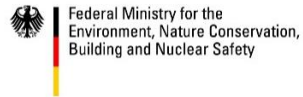




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City Baseline Information for Resilient and Green Recovery

Cities of Tagum and Ormoc, Philippines



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Overview of the baseline report

This report intends to describe the impact of the COVID-19 pandemic in cities of Ormoc and Tagum in the Philippines. City data on number of cases, displaced workers, and closed businesses are processed to determine sector and locale that are impacted by the pandemic.

In both cities, COVID-19 gravitated towards the poor in urban areas.

The paper further discussed the development gaps of the urban poor and urban settlements that may further worsen the pandemic situation.

In both cities, it is detected that the locales of virus infection are the same areas where the displaced workers and families below poverty threshold live.

This report also discussed the strategic role of urban spaces in recovery – road networks, parks, and open spaces. It is detected that these spaces, however available, are not fully optimized to address the pandemic impacts. It also suggests some urban plan and design considerations, and outlines thematic considerations for recovery – water access, housing conditions, access to internet, access to food, and other basic services.

This report intends to provide information to facilitate the resilient and green recovery planning in cities. This initiative is part of the Building Climate Resiliency through Urban Plans and Designs (BCRUPD) project with funding support from the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of the Federal Republic of Germany.



Tagum City

COVID-19 pandemic is affecting the poor in urban areas

The city recorded a total of 206 cases of April 10, 2021. From these cases, 96.60% are present in 14 urban barangays out of 23. All (100%) urban barangays have COVID-19 cases, while there are 4 rural areas without cases. In urban areas, economic impacts due to pandemic recorded 97.26% of 547 displaced workers and 93.98% of 497 closed businesses. Of the total 259, 444 residents, 89.86% lives in urban areas.

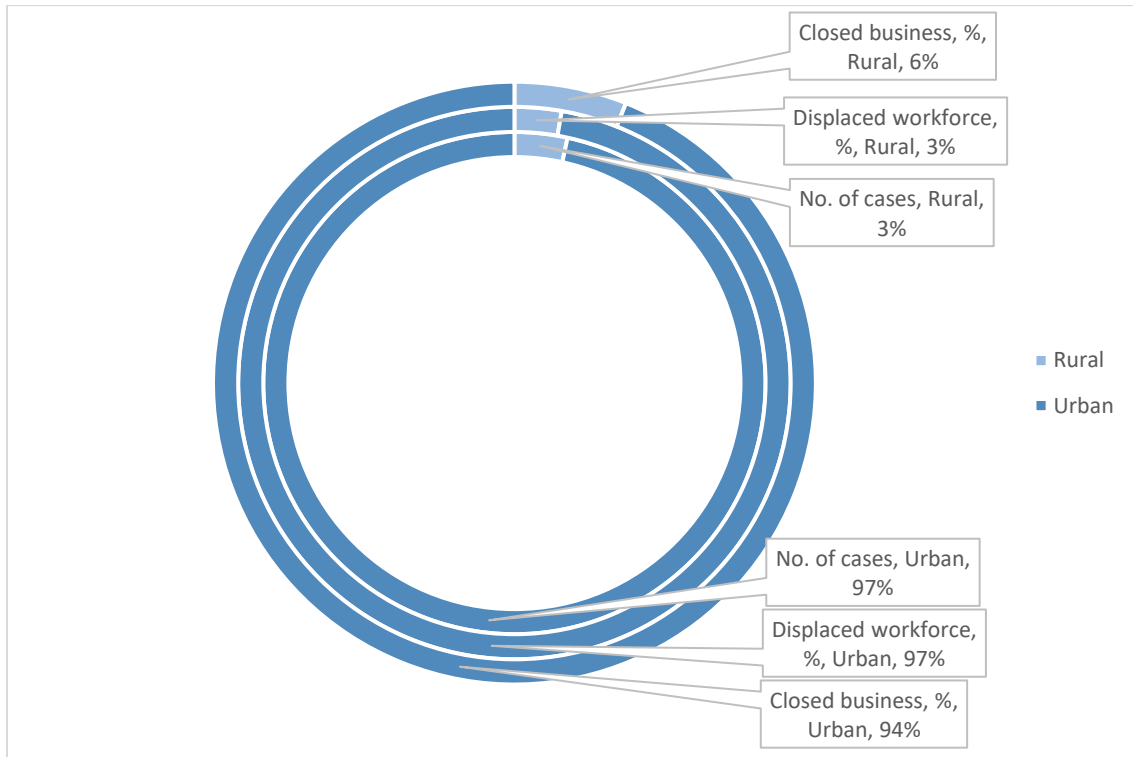


Chart 1. Relationship of COVID-19 pandemic to workers displacement and business closures in urban areas

These conditions will worsen the existing development concerns in the urban areas where the poorest segments of the population also lives – 85.07% of 12, 525 informal settlers, 82.07% of 18, 196 families below poverty line, and 75.76% of 8, 674 conditional cash transfer beneficiaries.

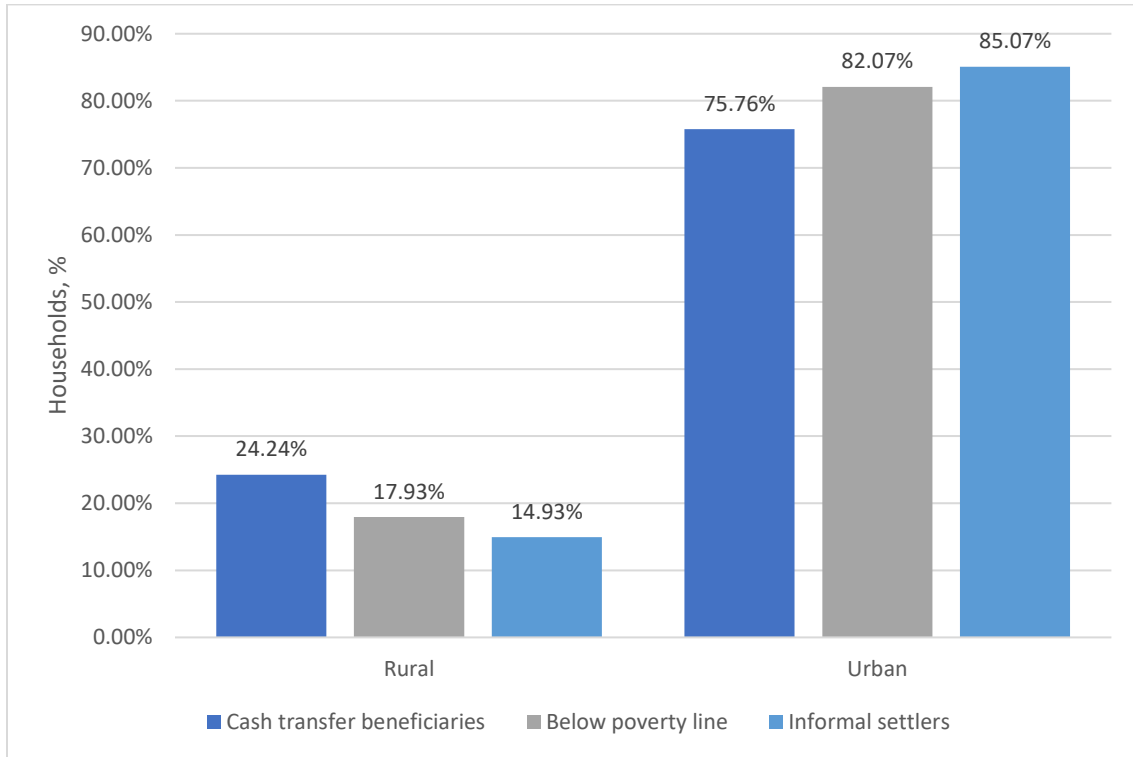


Chart 2. Relationship of COVID-19 pandemic to poverty indices – poverty line, housing informality, cash transfer beneficiaries

Based on number of COVID-19 cases, the top 5 hotspots are the urban villages of Apokon, Magugpo East, Magugpo North, Mankilam, and Visayan Village.

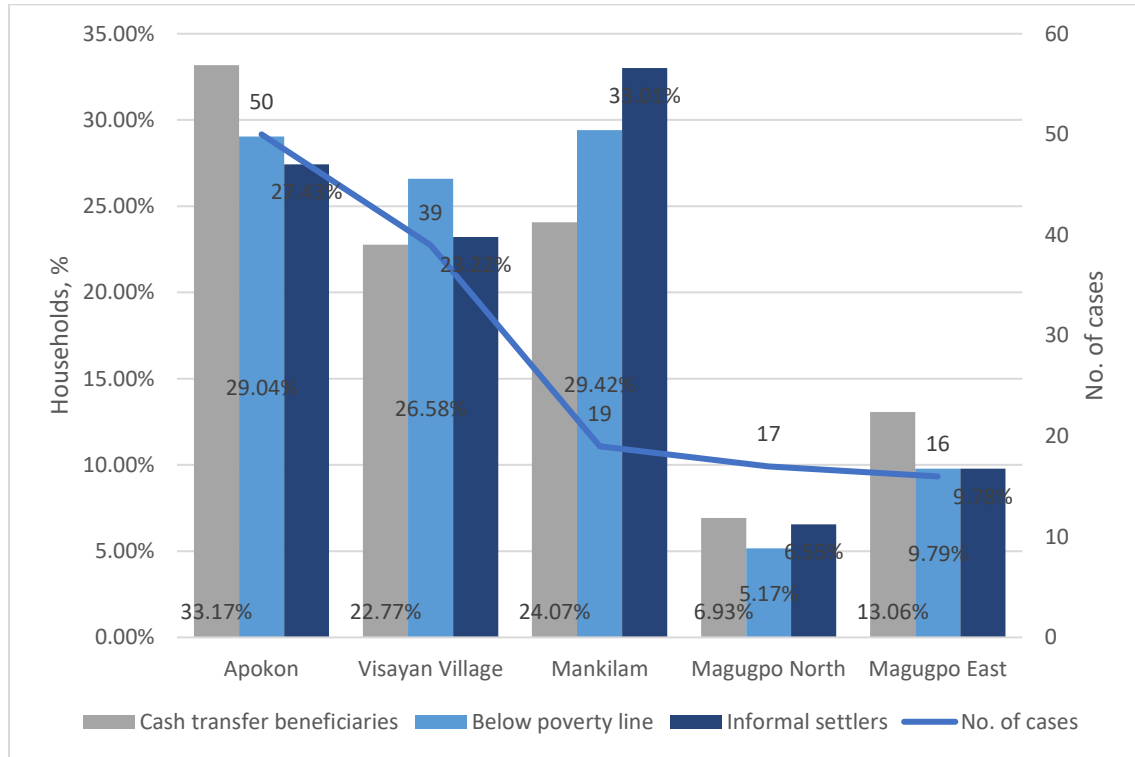


Chart 3. Top 5 affected barangays and its poverty indices

On top of these concerns, all urban barangays are all assessed to have high risk to flood. The city is expected to experience increasing rainfall by additional 154 mm by 2050, which provide opportunity to increase water resources being demanded for sanitation and other domestic uses. While, increasing temperature by 2.3C will put current water sources at risk to depletion. The overlapping of risks (e.g climate change, poverty and pandemic) will further aggravate the vulnerability of the urban areas and the poor settlements.



Pandemic stresses innovating urban basic services delivery

The primacy of water as resource to facilitate sanitation and other domestic uses has been emphasized by the pandemic. Water sources serviced 85.08% of the population, of which only 65.27% are classified as Level III (with household taps). Urban barangays accounted to 95.19% of Level III usership. All hotspot barangays have access to water.

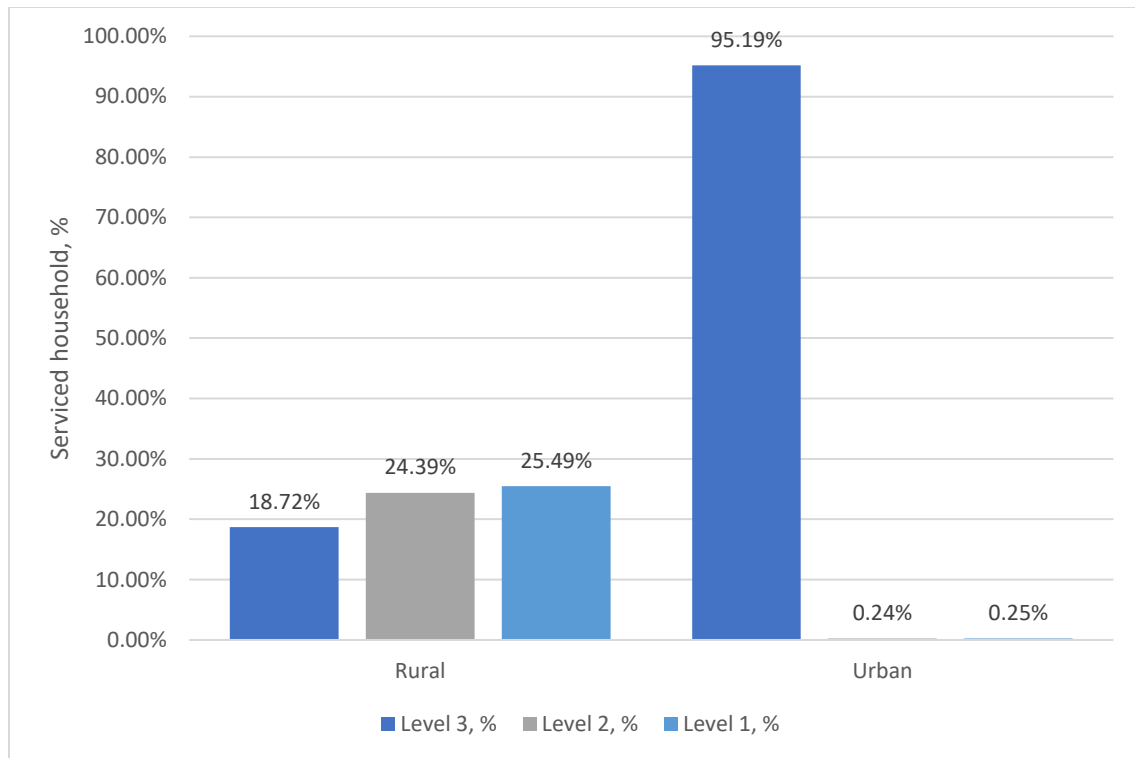


Chart 4. Characteristics and scope of water sources and services

However, the situation in the rural areas shows more difficulty. Busaon and Liboganon have no water access. In New Balamban, about 64.54% of the population is being serviced, all coming from Level I sources (natural sources without household distribution system). San Agustin, with no COVID-19 cases, has the lowest coverage at 17.60% all coming from Level I sources.

With prevalence of remote practices of work-from-home setups and online classes, the demand for domestic water uses is expected to increase. The service gaps and high dependence on either Level I or Level II sources may encourage going out, physical aggregation, and bad hygiene practices. The city should take advantage of sustainable water resource management practices and projects – storm water harvesting, forest rehabilitation and protection, and increasing canopy cover in urban areas.

Our household dwellings have emerged our common place of work and education. There is 54.13% of housing units made from concrete materials, 43.96% characterized as semi-concrete, and 1.91% made of light materials. In terms of tenure, there is 4.83% (or 12, 525) informal settlers. All hotspots barangays recorded above 30% semi-concrete housing units. The city should look on schemes to provide resilient,



adequate, and affordable housing units for all. Now, adequate housing includes assessment of area and design that facilitate house quarantine and isolation.

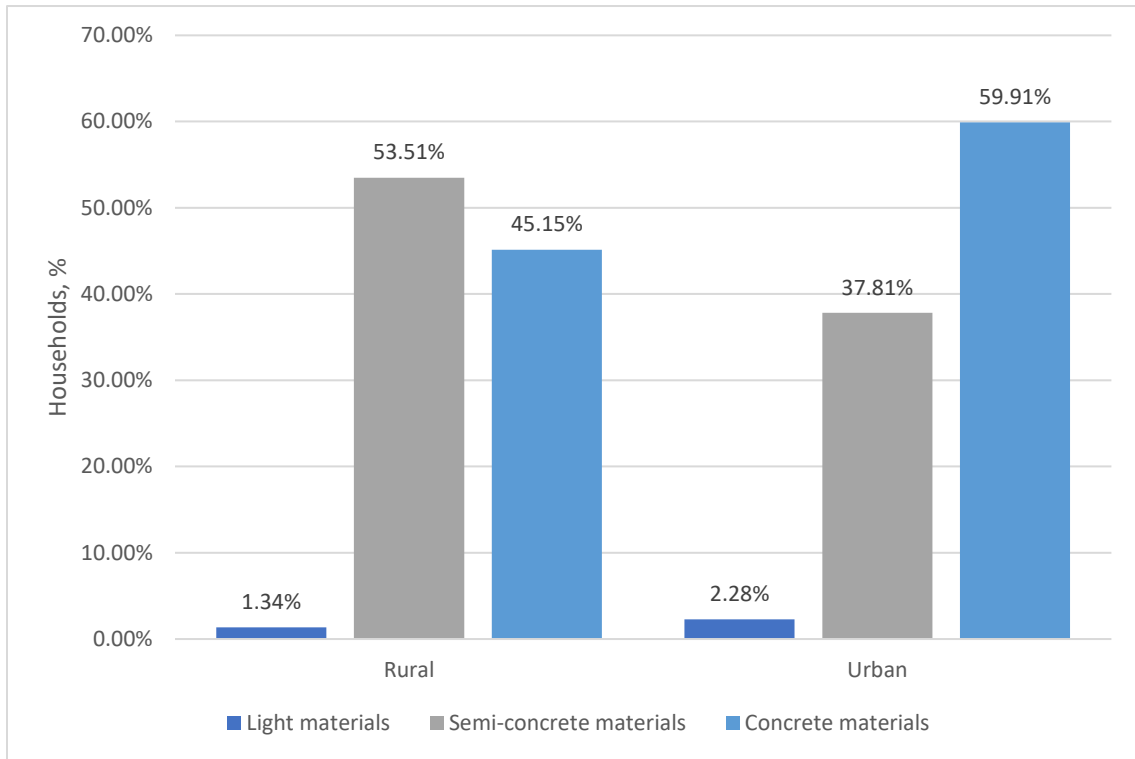


Chart 5. Characteristics of housing materials

Use of internet expands progressively beyond communication, and increasingly serves as platform for public information on COVID-19 protocols and updates, business transactions, work delivery, and education. The average internet coverage in the city is 77.61%. All urban barangays are with access to internet, except Madaum and Magdum with 90% and 80% coverage, respectively. Coverage of the 9 rural areas ranges from 70% down to 30%. The city should look on closing the digital divide by not only ensuring widest coverage and optimal speed, but also addressing the increasing demand on electronic devices and high cost of internet subscription.

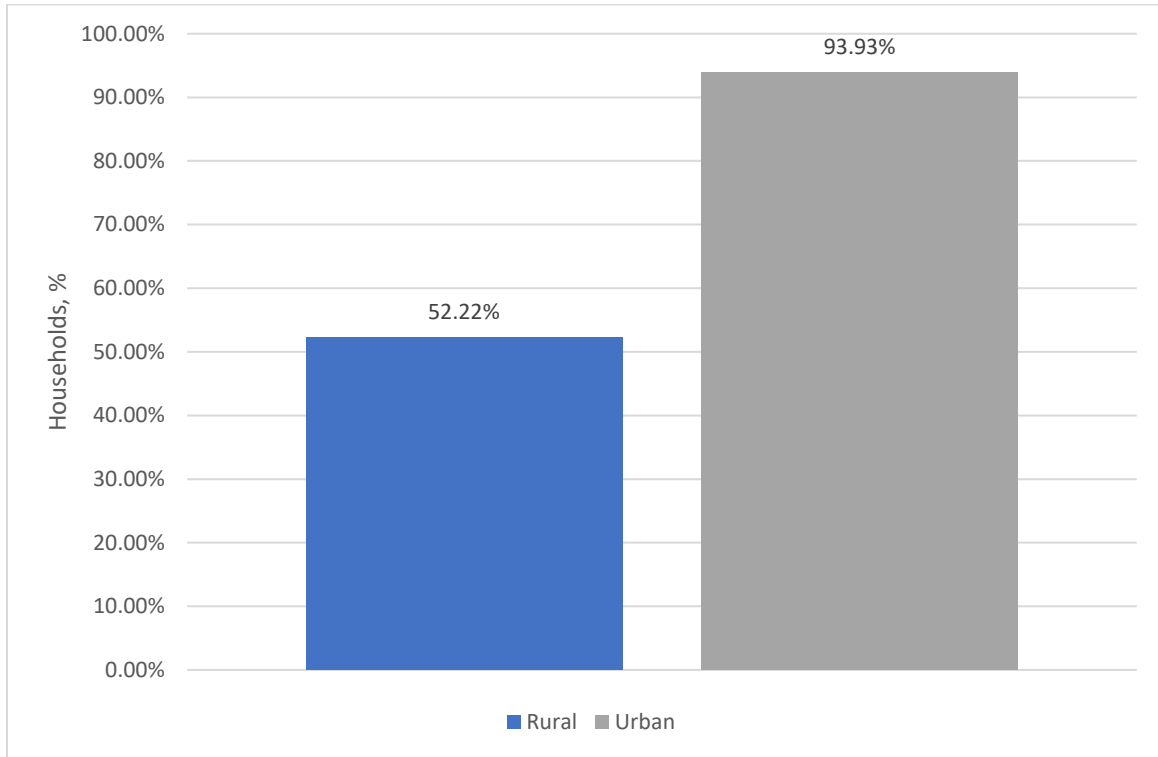


Chart 6. Coverage of internet services

Internet became the primary conduit of public delivery of health services that includes COVID-19 information and updates, isolation and testing protocols, and medical teleconsultations.



Pandemic directs the optimum use of public spaces

The city has a total of 701.01 kilometers of road network. The average distance of barangays to access the urban center is at about 6.78 kilometers. The main tertiary hospitals are located within 4 kilometers from the city center. These are Davao Regional Medical Center in Apokon, United Doctors Hospital in Magugpo Poblacion, Medical Mission Hospital and Tagum Doctors Hospital in Visayan Village. These hospitals are located within COVID-19 hotspot barangays. The 3 isolation centers of the city are in Apokon (3.6 kilometers), Canocotan (7 kilometers), and Visayan Village (2.5 kilometers). There are no barangay level isolation centers.

All barangays have their halls, health clinics, daycare centers, and primary schools. All 14 urban barangays have their secondary schools, while tertiary institutions are in Apokon, Magugpo South, Magugpo West, Mankilam, and a vocational school in La Filipina.

Tagum Public Market in Magugpo West is the main *and lone* publicly managed service market for the whole city. Its average distance from the barangays is 7.37 kilometers. In critical event that COVID-19 infection rate increases, temporary closures/lockdowns will significantly disrupt access to and supply of food in the city. The farthest barangay is Libangon at 16.60 kilometers, while Magugpo Poblacion is the city center.

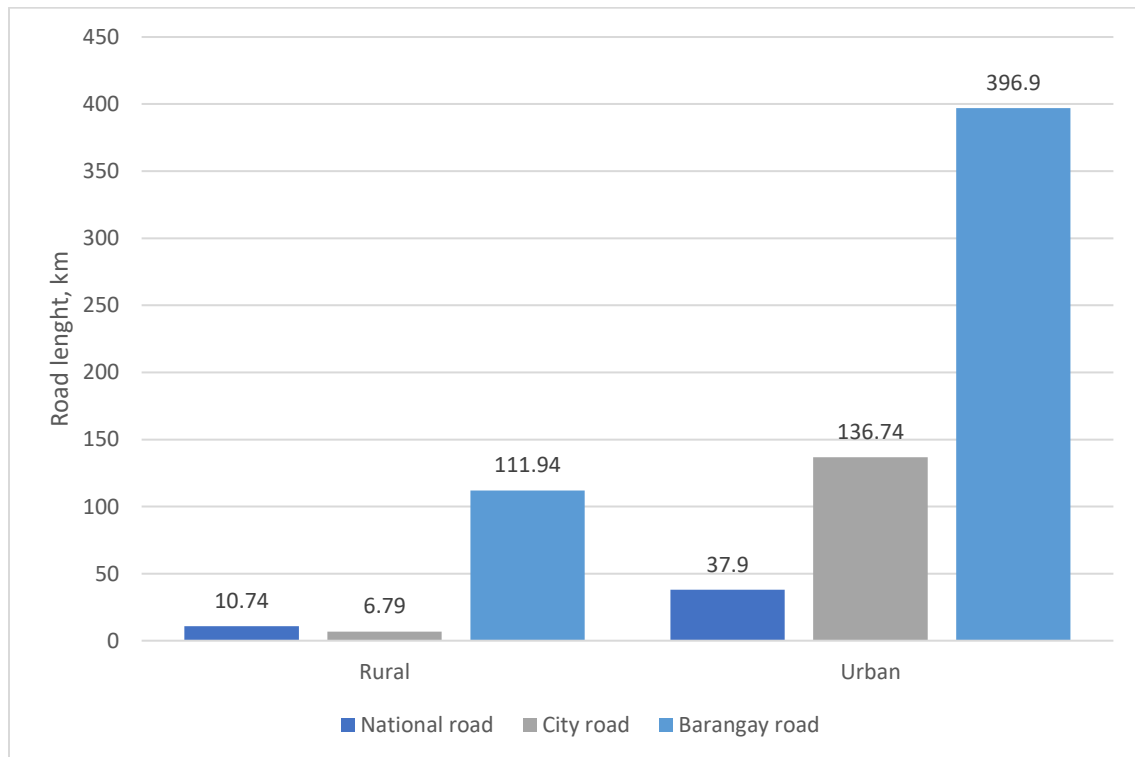


Chart 7. Characteristics of street network

The city should look on how street networks will rationalize the circulation of people and goods during and after the pandemic. Street networks should facilitate emergence of satellite urban cores or secondary development nodes that are near to cater basic services (i.e, satellite government transaction



offices) and food supply (i.e., flea markets, mobile markets). Design of street networks should also consider nature-based solutions to address climate hazards (i.e., flood and urban heat), adequate accommodation of articulated density (usership capacity in consideration of physical distancing), and access to parks and open spaces.

Parks in the city comprises a total area of 72.94 hectares (or 0.40%) out of 18, 463.44 hectares of city’s total land area. This translates to average of 15.0947 square meters per capita, while the average population density is 23.7164 per hectare (10 000 square meters). All barangays (100%) allotted parks and open spaces based on their land use plan.

In hotspot barangay of Apokon, the estimated park area per capita is 9.2425 square meters, respectively. The other 4 barangays allotted lower than `1 square meter per capita. All barangays are above the ideal population density at 40 person per hectare. The rural barangay of San Agustin, with no COVID-19 cases, allotted the highest park area with 281.6143 square meters per capita.

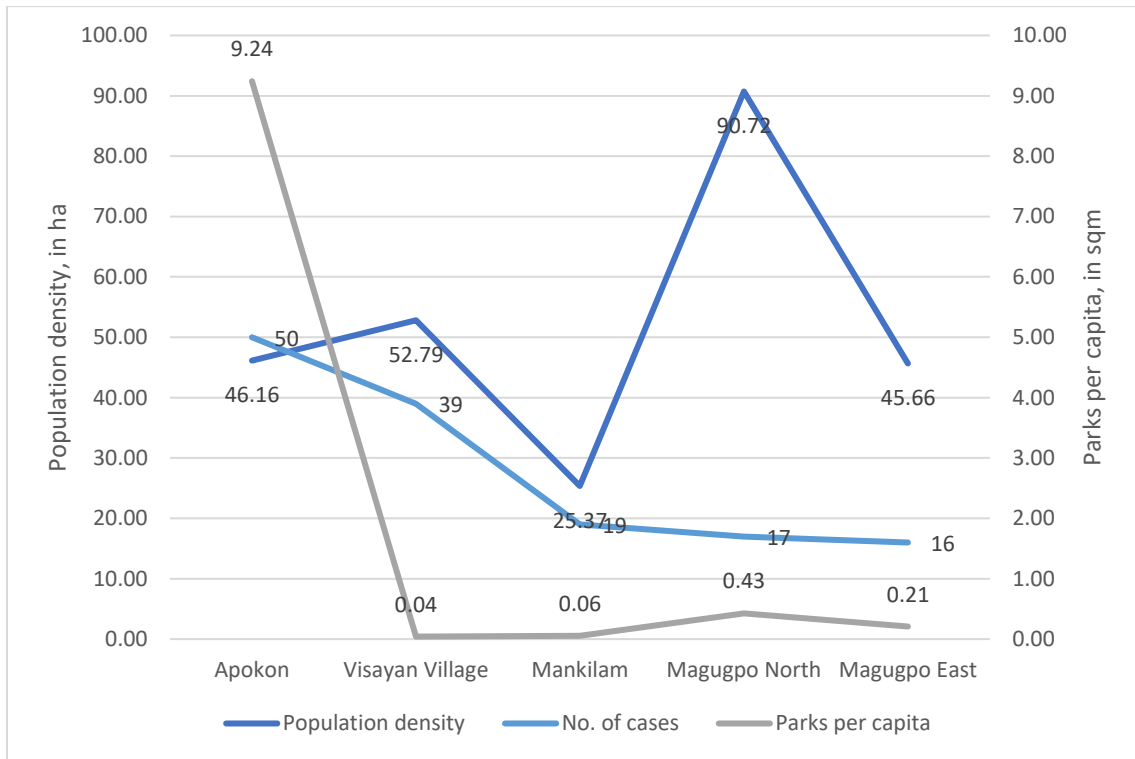


Chart 8. Relationship of density and park area

Parks and open spaces are considered important in COVID-19 response and recovery. It functions as place of livelihood (especially the informal economy), communal gardens, physical and mental health activities, social recreation and leisure, and government venues for public information and response operations (i.e., temporary isolation sites, relief distribution sites). The city should design or redesign its parks and open spaces that facilitate these benefits. Further, it must be designed to address risks and to take advantage of opportunities from climate changes.



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Designing parks and open spaces will be further effective when these spaces are planned in a network across the city. These spaces should ensure that it accessible to the population. Ideally, a park or open space is available within 400 to 800 meters or 5 to 10-minute walk from residence. Parks and open spaces allow effective management of population density and public health.

Access the baseline information data of [Tagum City](#).



Ormoc City

COVID-19 pandemic is emphasizing the role of urban areas in local economy

The city recorded a total of 910 cases of April 10, 2021. From these cases, 62.46% are present in 43 out of 44 urban barangays. While the 6 out of 66 rural barangays remain without cases. In urban areas, 86.76% of 438 business establishments closed. This resulted to displacement of 15, 594 workforces living in both urban (32.84%) and rural areas (67.16%). This underscores the important role of urban areas as locale and focal of city economic activities. The urban center has been the major node of development in the city where concentration of services and retails are rapidly increasing in the last three years. While agriculture in rural is still being practiced, the economic base is transitioning to participation to commercial services. This development direction is espoused by it land use plan.

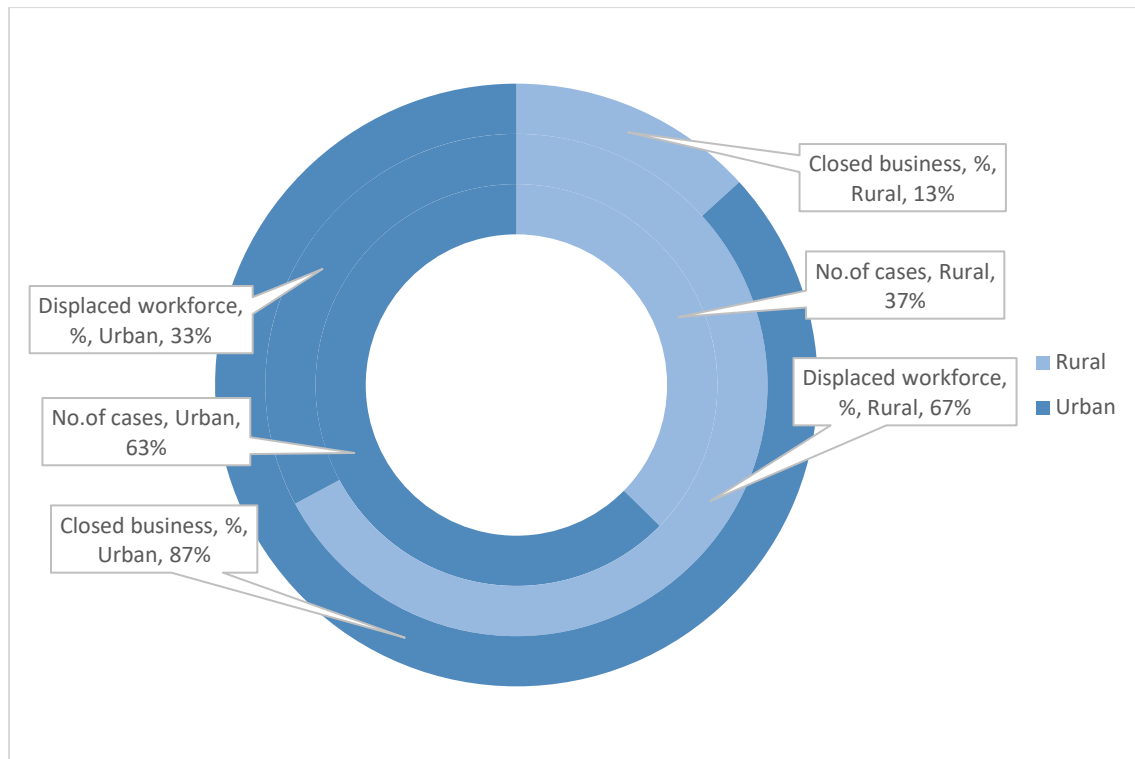


Chart 9. Relationship of COVID-19 pandemic to workers displacement and business closures in urban areas

These conditions will worsen the existing development concerns in the urban areas where the poorest segments of the population also lives – 25.78% of 24, 319 families below poverty line, 19.94% of 9, 192 conditional cash transfer beneficiaries, and 37.59% of 3, 147 informal settler families.

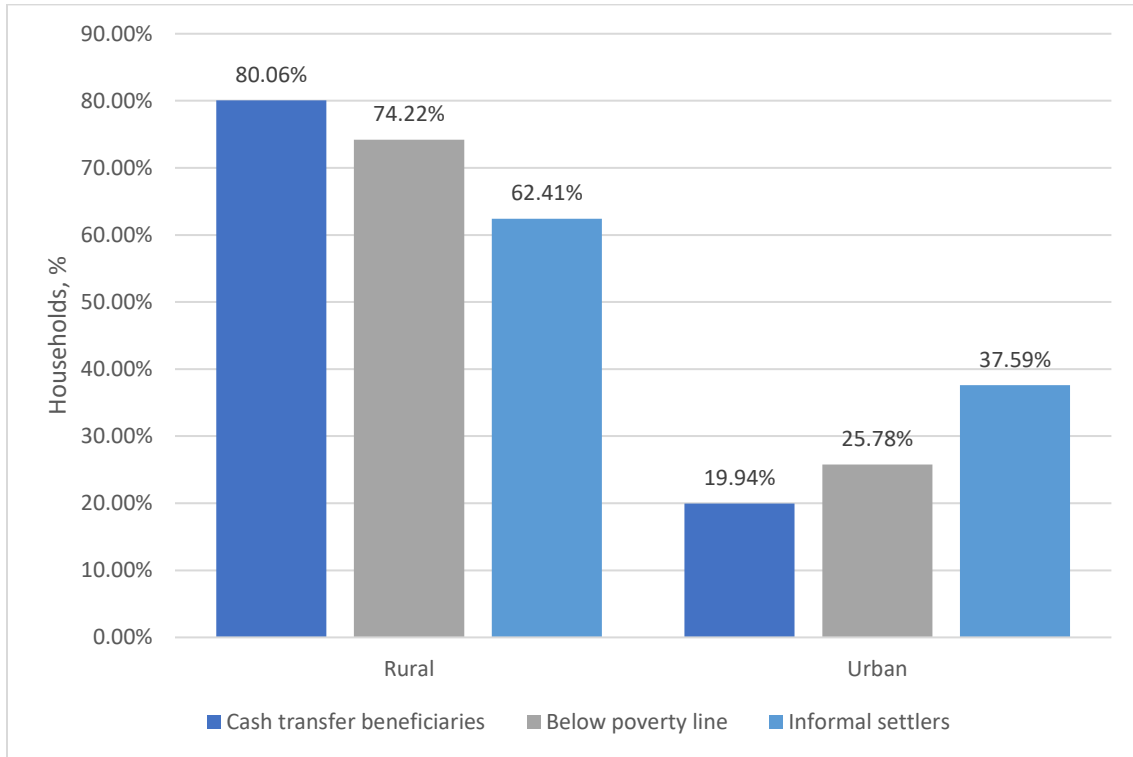


Chart 10. Relationship of COVID-19 pandemic to poverty indices – poverty line, housing informality, cash transfer beneficiaries

Based on impact of COVID-19 to economy, the top 5 hotspots are the urban villages of Tambulid, Cogon Combado, San Pablo (Simangan), Punta, and Linao.

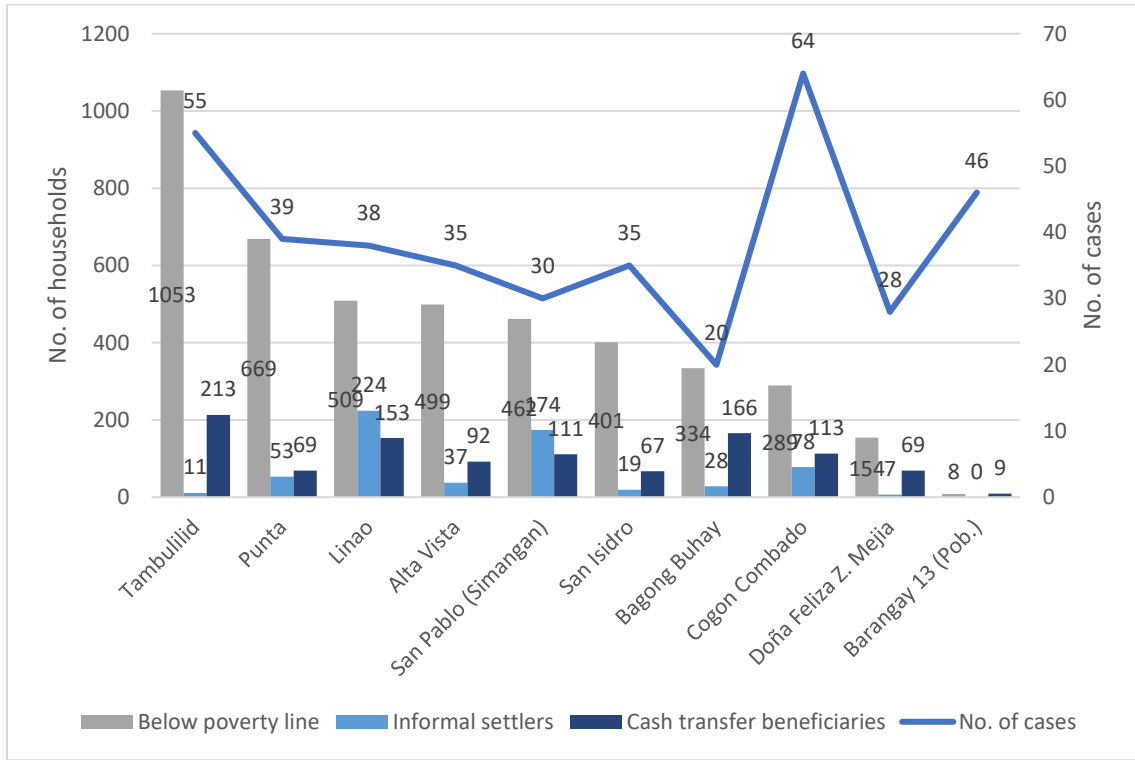


Chart 11. Top 10 barangays below poverty line

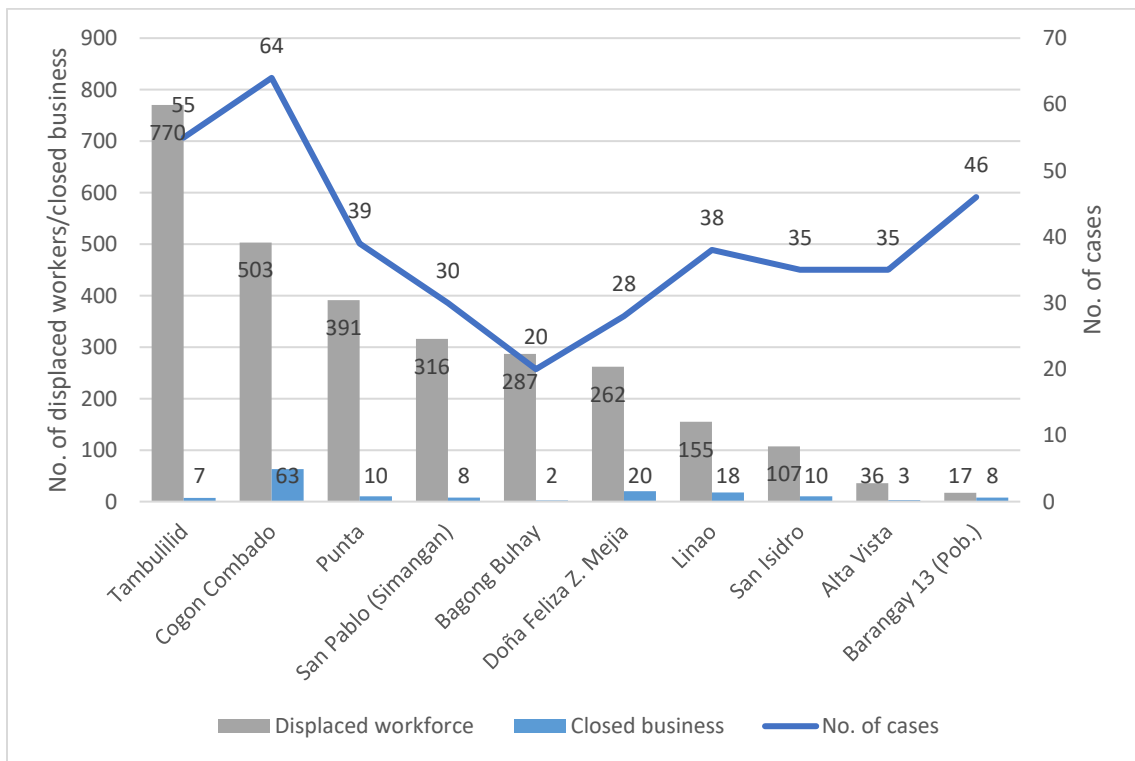


Chart 12. Top 10 barangays with most displaced workers



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On top of these concerns, 37 out of 44 urban barangays are all assessed to be at risk of flooding, 6 to storm surges, and 5 to rain-induced landslide. The city is expected to experience increasing rainfall by an additional 220 mm by 2050, which provides an opportunity to increase water resources being demanded for sanitation and other domestic uses. While, increasing temperature by about 2.3°C will put current water sources at risk of depletion. Considering flood hazard, the city may experience commercial damages of about PHP718.5 million in high-risk areas.



Pandemic stresses optimizing urban assets to increase basic services delivery

Water as a resource has to be protected and harnessed to facilitate sanitation and other domestic uses. Water sources serviced the whole population, of which 75.45% are classified as Level III (with household taps), while the remaining 24.55% are Level II (communal faucets). All urban barangays are with Level III water supply facility. There are 26 rural barangays that are fully serviced under Level II. There is no barangay with Level I sources.

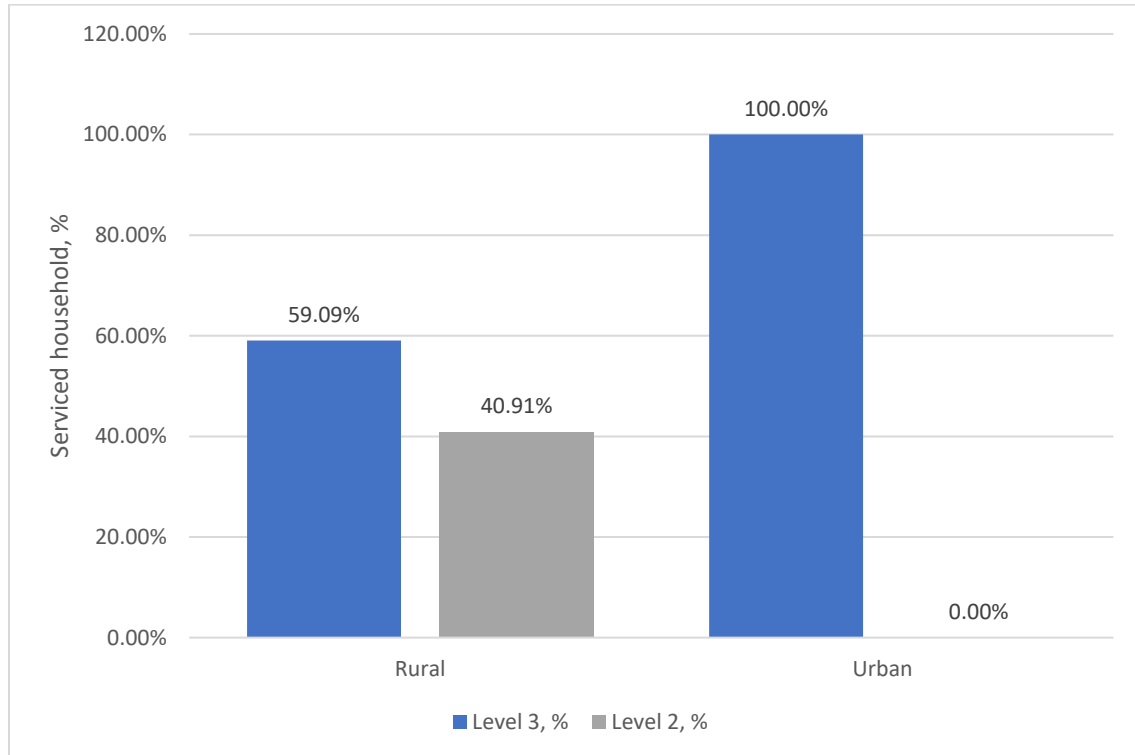


Chart 13. Characteristics and scope of water sources and services

Work-from-home setups and online classes increases demand for domestic water uses. Level II sources may encourage going out, physical aggregation, and bad hygiene practices in rural barangays. The city manages the water supply system. Thus, it should take advantage of sustainable water resource management practices and projects – storm water harvesting, forest rehabilitation and protection, and increasing canopy cover to ensure continued sufficient supply in urban areas.

Our household dwellings have emerged our common place of work and education. There is 72.07% of housing units made from concrete materials, 18.25% characterized as semi-concrete, and 9.68% made of light materials. In terms of tenure, there is 6.76% (or 3, 147) informal settler families in the city. Among hotspot barangays, Cogon Combado recorded housing units at 31.13% made from light materials and 22.87% made from semi-concrete materials. The city should look on schemes to provide resilient, *adequate*, and affordable housing units for all. Adequate housing includes provision of better ventilation and available spaces quarantine and isolation.

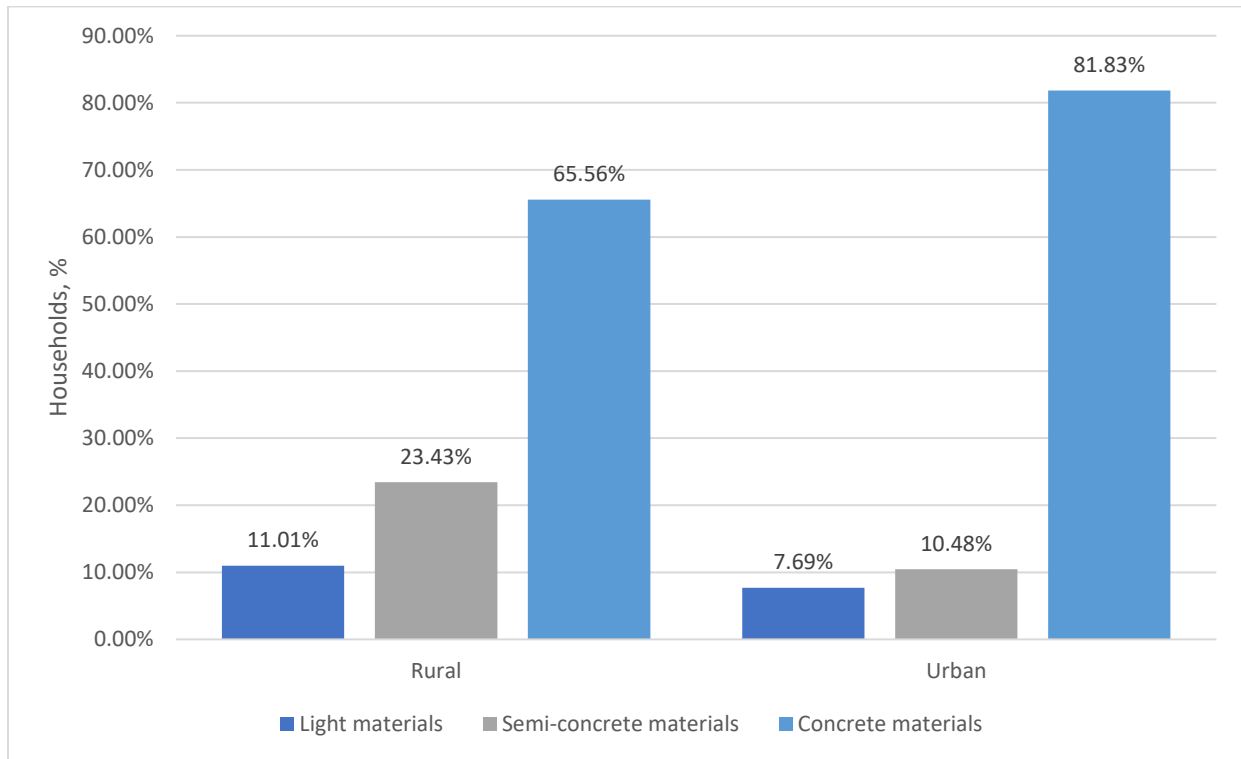


Chart 14. Characteristics of housing materials

Use of internet expands progressively beyond communication, and increasingly serves as platform for public information on COVID-19 protocols and updates, business transactions, work delivery, and education. There is internet coverage in all areas of the city – about 75.45% are serviced with routers, while the remaining 24.55% relies on their mobiles. The city should look on how high internet coverage is accessed by the population considering the limitations on cost for electronic devices and subscription bundles.

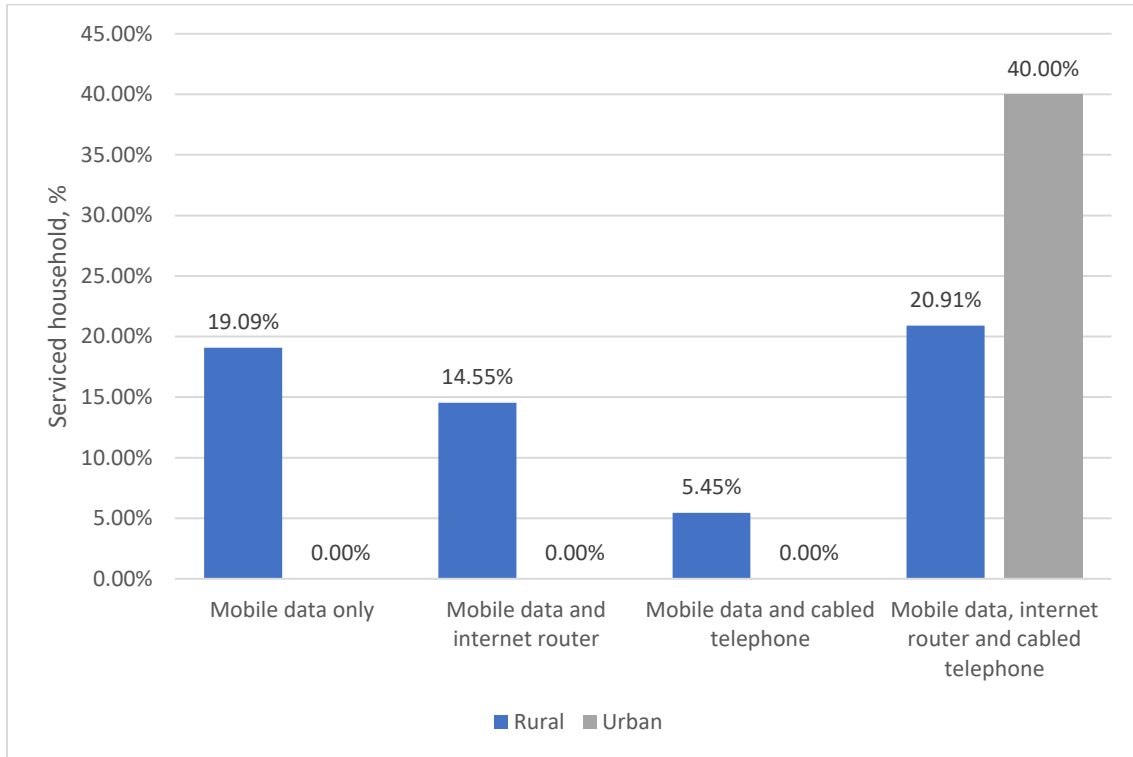


Chart 15. Coverage of internet services

Internet became the primary conduit of public delivery of health services that includes COVID-19 information and updates, isolation and testing protocols, and medical teleconsultations.



Pandemic highlights the need to increase open spaces

The city has a total of 438.97 kilometers of street network. The average distance of barangays to access the urban center is at about 8.23 kilometers. The main tertiary hospitals are located within 2 kilometers from the city center. These are Ormoc District Hospital in Cogon Combado, and OSPA-Farmers Medical Center in Can-adieng, and Ormoc Doctors Hospital in the urban center. The city has sped up the revitalization of now City Unified Hospital in San Pablo serving as service hospital for symptomatic cases. The central isolation centers are existing structures of the National Housing Agency’s housing project at Dayhagan and city’s evacuation center in Ipil. All barangays have respective isolation centers to cater spill-out from the central isolation facilities. All barangays have its public halls, health clinics, daycare centers, and schools. The 3-in-1 centers support delivery of health and other social welfare services in 5 clusters, located in Curva, Dona Feliza Mejia, Ipil, San Pablo, and Valencia.

Ormoc Public Market in Barangay 2 is the main publicly managed service market of the city. Food supply distribution is supported by satellite markets in both urban (Camp Downes, Linao, San Isidro, San Pablo and Tambulilid) and rural areas (Curva, Danao, Ipil, Liberty, Manlilnao, Margen, Sabnga Bao, San Pablo, and Valencia). Urban barangays have access to market within 1.26 to 3.57 kilometers.

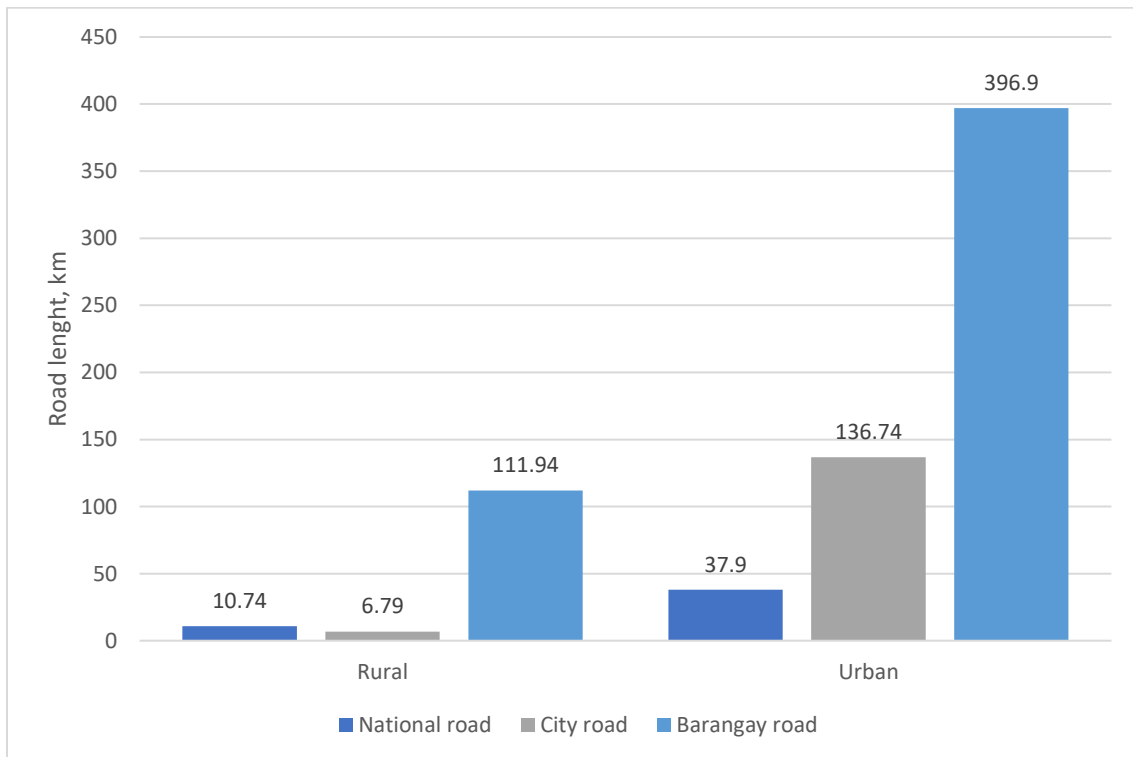


Chart 16. Characteristics of street network

Resilient street network facilitates establishment and thriving of development nodes in multi-nodal development strategy. Street networks must be designed and managed in sustainable manner. It can be



designed or redesigned applying nature-based solutions that addresses flooding and urban heat. It can also be managed with the population by introducing urban gardens or planting of fruits trees along strips and sidewalks. This approach can be replicated in parks and other open spaces that the road connects.

Parks and opens spaces comprises a total of 239.14 hectares, including buffers, out of 46, 430 hectares of city’s total land area. This translates to average 31.28 square meter per capita. The average population density is 36.62 per hectare.

In hotspot barangays, there no parks available within the barangays of Tambullid and Linao. In the urban center (Barangays 1 to 28), population density is 80.01 per hectare and allotment of parks is 24.29 square meters per capita.

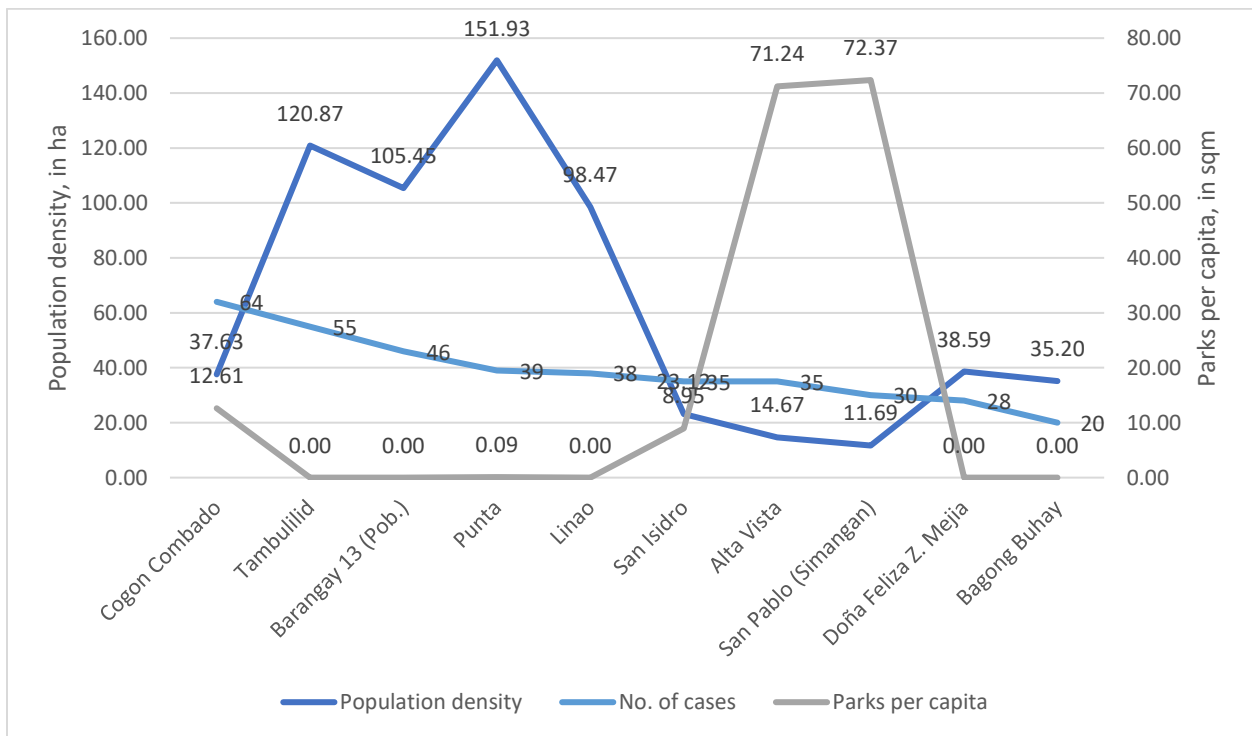


Chart 17. Relationship of density and park area

Parks and open spaces are considered important in COVID-19 response and recovery. It must be planned and designed in a network that support the wholistic development endeavor of the city – healthy population, increased food supply, and climate resilient. The ideal spatial requirement is the presence of accessible parks 400 to 800 meters or 5 to 10-minute walk from residence. Parks and open spaces allow effective management of population density and public health. Parks must be always accessible to the public. While some barangays are within ideal population density level, spaces are not easily accessible due to private ownership.

Access the baseline information data of [Ormoc City](#).