

State of the Mangroves in the NATIONAL CAPITAL REGION

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I. INTRODUCTION

The National Capital Region (NCR) or Metro Manila is a populous megacity and host the seat of the Philippine government. This 63,600 ha metropolitan area lies in the southwestern portion of Luzon and bounded by Manila Bay on the west. It houses about 11 million inhabitants from 16 cities and 1 municipality. Along its 41.22 km coastline, which stretches from Navotas in the north to Las Piñas in the south, are 17 barangays, some built-up areas, and patches of vegetation in the cities of Las Piñas, Parañaque, and Navotas (**Appendix G**). Based on the Survey and Mapping of Foreshore Report, the NCR has a total of 86.76 ha remaining foreshore areas.

These coastal barangays depend directly and indirectly on Manila Bay for their daily subsistence. The livelihood for the majority in the coastal areas relies on agricultural and fisheries production. Other residents have informal jobs, ranging from vending, backyard farming, and shellfish cultivation. The rest are employed in private and public establishments such as manufacturing industries.

Importance of Mangroves

The name Manila came from the word “may nilad.” Nilad is a local term for a mangrove species, *Scyphiphora hydrophylacea*, that was once abundant along the coast of Manila Bay. This shows that mangroves have been a part of the region’s ecology and history. The verdant mangroves of NCR provide the following ecosystem services: (a) carbon sink for residential, commercial and industrial emissions in the cities of Parañaque, Las Piñas, and Navotas; (b) natural filters of pollutants from the bordering rivers; (c) physical barrier to storm surge; (d) habitat of migratory birds; and (e) ecotourism area.

II. STATUS OF MANGROVES IN THE NATIONAL CAPITAL REGION (NCR)

NCR has approximately 65 ha of mangrove areas in the cities of Las Piñas, Parañaque, and Navotas. Overwashed and fringing mangroves cover about 36 ha of the Las Piñas-Parañaque Critical Habitat and Ecotourism Area (LPPCHEA) and the adjacent Coastal Road. These mangrove communities boast the densest population of mangrove and mangrove-associated species in Manila Bay. The 29.47 ha mangrove areas in Sitio Pulo, Barangay Tanza, Navotas City hold the remaining old stands of mangroves in NCR. **Table 16** provides a breakdown of the old stand, secondary growth and mangrove plantation in NCR. Presently, there are about 15 mangrove species: Saging-saging (*Aegiceras corniculatum*), Bungalon (*Avicennia marina*), Api-api (*Avicennia officinalis*), *Bruguiera cylindrica*, Pototan (*Bruguiera sexangula*), Buta-buta (*Excoecaria agallocha*), Kulasi (*Lumnitzera racemosa*), Nipa (*Nypa fruticans*), Bakauan Lalake (*Rhizophora apiculata*), Bakauan Babae (*Rhizophora mucronata*), Bakauan Bato (*Rhizophora stylosa*), Nilad (*Scyphiphora hydrophylacea*), Pagatpat (*Sonneratia alba*), Tabigi (*Xylocarpus granatum*), and Piyag-aw (*Xylocarpus moluccensis*). Associated species are Bangkoro (*Morinda citrifolia*) and Banalo (*Thespesia populnea*).

Table 16. Estimated areal extent of mangroves in NCR (ha).

Old stand	Secondary growth	Plantation
29.47	36	0

Resource Ecological Assessment (REA) of Manila Bay in 1995 recorded a total of 794 ha of mangrove. In 2003, the remaining mangrove forest around Manila Bay was 298 ha for Cavite, 30 ha for NCR, and unknown for Region 3 (NAMRIA). These values were subject to ground truthing. In 2005, the ground truthing activity by the Manila Bay Environmental Project estimated 288.8 ha of mangroves for Cavite, 24 ha for NCR and 241 ha for Region 3.

In 1996, the REA recorded six mangrove species, namely: *Aegiceras corniculatum*, *Avicennia lanata*, *Avicennia marina*, *Avicennia officinalis*, *Nypa fruticans*, *Rhizophora mucronata*, and *Sonneratia alba*. In 2005, the mangrove monitoring (Aguinaldo et al. 2005) recorded the following 16 major mangrove species from nine families: *Aegiceras corniculatum*, *Avicennia marina*, *Avicennia officinalis*, *Bruguiera cylindrica*, *Bruguiera gymnorhiza*, *Ceriops decandra*, *Excoecaria agallocha*, *Lumnitzera racemosa*, *Nypa fruticans*, *Ocrotia octodonta*, *Rhizophora apiculata*, *Rhizophora mucronata*, *Sonneratia alba*, *Sonneratia caseolaris*, *Xylocarpus granatum* and *Xylocarpus moluccensis* (the dominant species).

III. MANGROVE PROTECTION AND MANAGEMENT

The need to preserve and protect the mangrove communities within Manila Bay and all the wildlife species therein is apparent. Because of this, the LPPCHEA was declared through Presidential Proclamation 1412-A (January 2008). LPPCHEA is the first declared “critical habitat” in the Philippines. The area was also designated as the 6th Philippine Ramsar site in 2013 which calls for a stronger and more serious effort in the maintenance and protection of all its biological resources. On March 5, 2012, Barangay Tanza passed Barangay Ordinance No. 04-S2011 to declare the mangrove area of Tanza as a “Marine Tree Park.” This is in recognition of the area’s biological richness and integrity, potential ecotourism value, ecological importance, and the need for its protection and conservation. Envisioning the same fate for the Navotas Marine Tree Park, the DENR-NCR has been working on having the area declared as another “critical habitat” for conservation in Metro Manila.

The Protected Area Management and Biodiversity Section of the DENR-NCR manages both the LPPCHEA and the Navotas Marine Tree Park. Mangrove rehabilitation, enrichment planting, and regular monitoring of survival rate have been undertaken since 2008. The overall survival rate of mangroves in Parañaque, Las Piñas, and Navotas is 70%.

Impacts of Mangrove Rehabilitation

The loss of mangroves corresponds to the reduction in fish catch per year. A hectare of mangrove produces up to 3.6 tons of litterfall per year providing a lot of food for marine life. The economic equivalent of one hectare of mangrove per year is estimated at Php 22,800 (White & Trinidad, 1998). Among the many intangible benefits of mangrove forests is its role in protecting coral reefs and seagrass beds from sedimentation and pollution.

IV. SUMMARY AND RECOMMENDATIONS

Since the mangroves of both the LPPCHEA and the Navotas Marine Tree Park are greatly affected by solid and liquid wastes deposition coming from various sources, laws on solid waste management must be strictly enforced. Strict compliance with the law will require the practice of mandatory garbage segregation at the household level and solid waste recycling. An intensified information and education campaign on the importance of mangroves and the threats they face must also be undertaken.

V. REFERENCES

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