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Mumbai and the Sanjay Gandhi National Park

Challenges and opportunities of nature conservation in a growing city

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PREFACE

The Sanjay Gandhi National Park Capstone Project has been conducted as one in a series of culminating consultancy projects that seeks to produce knowledge and expertise of Urban Protected Areas and their management. The present project has been conducted in partnership and with the support of the Urban Protected Areas Network (UPAN) and the Sciences Po MPA Programme.

***THE MASTER OF PUBLIC AFFAIRS (MPA)** at Sciences Po provides an interdisciplinary training in applied, action-oriented and comparative social science, as well as training in leadership, strategy and ethics. As a critical component of the second-year curriculum, the Capstone project is a group research project, based on original field research, which generates a deliverable product for the client.*

***THE URBAN PROTECTED AREAS (UPA) NETWORK** began in 2009 at the initiative of the Institut Libertas and the Gecko Laboratory of l'Université Paris Ouest-Nanterre-La Défense. It is an international, independent, decentralized and non-profit network, which brings together protected area managers, local authorities, representatives of civil society and teams of researchers, to collaborate on Urban-Nature issues, with particular attention to the role of protected areas in urban dynamics. The UPA Network now partners with the MPA in a series of consultancy capstone projects.*

We would like to extend our warmest thanks to the above-noted partners for providing this interesting and challenging research opportunity. Particular thanks go to Mr. Frédéric Landy (Gecko Laboratory at Université Paris-Ouest Nanterre La Défense) for sharing his time and insights and to Glen Hyman (Sciences-Po Paris, IUCN, UPAN) for including this project as part of the urban protected areas research programme. We would also like to thank our supervisor, Damien Krichewsky from the Centre Sociologie des Organisations (Sciences-Po Paris) for his guidance throughout the research project and for the valuable input that helped shape this final report.

We would also like to thank all of the individuals and organizations who generously shared their time and knowledge with us in Mumbai, our friend and translator, Palaksha Shetty for his tireless contribution, the Maharashtra State Forest Department for

showing us the beauty of SGNP, all Forest Department staff, for their hospitality, especially Mr. Suresh Thorat, Chief Conservator of Forests (Thane Circle). Finally, to the outgoing Park Director, Dr. P. N. Munde, we wish you all the best in your future endeavors (and thank you for the chilies!)



EXECUTIVE SUMMARY

Our research was to better understand the dynamics and the actor system in the urban protected area in order to formulate grounded policy recommendations for park management. To fulfill this endeavor, our research programme was built around the question: *How can the Park Management be improved in the context of Mumbai's urban development?*

To answer this question, we chose to follow a “two-pillar approach”, sociological approach and a grounded public policy approach. The sociological approach is grounded in the recognition that the organization is necessarily connected to its environment and serves a social function in responding to the demands of the surrounding society (Friedberg, 1988). Thus, we considered multiple levels of interaction within and between the many organizations that make up the Sanjay Gandhi National Park (SGNP) actor system. The grounded public policy approach is centered on policy research and development of long-term perspectives and opportunities for the Park Management of SGNP.

Our fieldwork, conducted January 9 – 23, 2011, held Park Management as the central organization in the actor system and aimed to develop a thorough understanding of the Park's position within Mumbai's urban context. In addition to a thorough review of existing research, media reports, and other secondary sources, our research included confidential interviews with over 60 individuals; every effort made to include wide representation from all components of the SGNP actor system. Our research allowed us to identify a multitude of influences acting in concert with one another, to shape the Park's conservation outcomes in a variety of issue areas as well as to attempt to enhance the strategy of the Park Management.

We begin by walking the reader through the recent history of SGNP in the first three chapters. Before the High Court ruling, the prospects of nature conservation in SGNP were not very promising; a growing population in Mumbai and a degrading protected area. Encroachment began and continued to grow. On the other hand, resources (i.e.

budget, political support and staff) did not suffice to face the challenge. By 1997, about half a million slum-dwellers had settled in SGNP. Many despite being illegal settlers were allowed legal access to utilities. In the eyes of local politicians settlements translated into rapidly increasing vote bank. In 1997 after the Public Interest Litigation (PIL) filed by Bombay Environmental Action Group (BEAG), the High Court of Maharashtra ruled the eviction of illegal encroachments, the rehabilitation of illegal settlers. It also ruled the construction of a wall around the limits. Building on the legal victory of 1997 the Park Management has made great progress with respect to encroachment.

As of January 2011, encroachers that had settled in the Park after 1995 were declared non-eligible and thus evicted. Around 8000 eligible families had been rehabilitated in Chandivali. The others, circa 20000 families, were waiting for rehabilitation expected to take place in the next 2 to 5 years. Moreover, the Park Management had effectively eliminated risk of new settlements through tight policing practices. Finally, these chapters also refer to matters, other than encroachment, that required the attention of the Park Management. These include wildlife human conflicts, the legal tribal settlements of the Park and infrastructure facilities (e.g. power lines cutting across the Park).

In chapter four we highlight four areas of interest. We refer to the highly fragmented actor system. We describe the Park Management's strategy as defensive and, to some extent, judiciary. Also, we talk about the asymmetries: disadvantages faced by the Park Management when dealing with numerous independent economic driven pro-urbanization actors. The last section of the chapter is about the value of the Park.

SGNP has value as a recreational, tourism and educational setting. It also provides the city with ecosystem services including oxygen production, carbon sinking, buffering floods and water provision. Interestingly enough, we learned about existence and bequest value, which relates to the pleasure individuals get by the very fact of knowing about it and the contentment of making the Park available to future generations,

respectively. A survey of 1995 showed that less than 25 percent of the people living in the Metropolitan Region of Mumbai visit the SGNP more than three times in their lifetime. However, almost 90 percent were concerned about the growing encroachment and wanted to see some change.

In chapter five, we explain the current strategy of the Park is understandable. The legal defensive strategy of the Park Management has proved effective to deal with encroachers and to legitimize the actions of the Park. It leverages the strength of the legal arguments against encroachment with the power of the High Court to overcome its bargaining weaknesses or asymmetries. In fact, it is effective to deal with all sorts of illegalities. In addition, the strategy requires no compromises and no need to collaborate, cooperate, build, or sustain supporting coalitions.

However, it is our belief that as long as the root cause, the ongoing urbanization process, are present, the pressure and thus risks will continue to build-up. In the past, this has not only produced encroachment, but wild leopards were locked-up; power transmission lines and pipelines were built. Meanwhile, the largest water treatment plant in India continues to discharge in the Vihar Lake. With threats not breaching the law and, as rehabilitation process moves ahead and thus encroachment fades, the strength of the legal strategy is expected to fade as well.

Thus, chapter five proposes readers to take a step back to look at the city-park interactions from another perspective, a longer-term perspective to envision the macro-forces driving the conflict. Rampant urbanization is responsible for fueling Mumbai with people, driving real-estate prices up and creating incentives for encroachment. On the other side, growing environmental concerns have materialized in the form solid pro-environment legislation, flourishing protected areas and growing social support. We point out to the fact that the current strategy builds on the sound green legislation but fails to harness the growing social awareness.

Therefore, we propose complementing the ongoing defensive legalistic strategy with a value-based approach. The approach aims at articulating the two-driving forces so that

these coexist without clashing. The suggested value-based approach requires the Park Management to allocate the resources at its disposal to create value permitting the people of Mumbai, and India, to derive increasing amounts of satisfaction from using and, most importantly, not using SGNP. This will enable an increasing proportion of citizens to perceive the Park as an asset to the city and to become advocates for the Park.

Finally, chapter six sets out some indicative recommendations. Rather than making specific recommendations, the purpose of the chapter is to show how the value-based strategy can become operational and thus be translated into concrete decisions to be implemented. The Park Management should think of its value proposal to the citizens of Mumbai and invest time structuring products /services with the ability to distribute use and non-use values to the different peoples of Mumbai. To do this, the chapter includes an indicative portfolio, which embodies the value proposal, illustrates the concept and also compiles some new product ideas to serve as food for thought. Since products /services compete for scarce resources, compiling the portfolio is about prioritizing and making compromises to find the product mix that has the ability to deliver the most value with the same resources. Many of these indicative products /services aim at exploiting the opportunity represented by the non-use value which the Park Management seemed to discount. In that sense, the chapter suggests a set of products that have the potential to bolster the public support, enhance governance and legitimate Park Management's decisions at the same time.

Overall, we believe, the value-based approach is a framework that adds worth by effectively complementing the current successful reactive strategy with a preventive component that will become increasingly valuable in the future as encroachment decreases.

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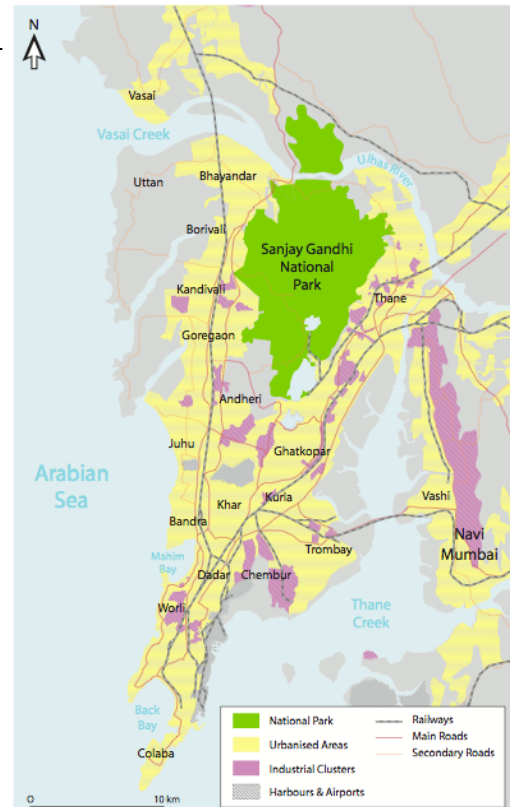
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SANJAY GANDHI NATIONAL PARK

SGNP is a green oasis within one of the most populous cities in the world. With approximately 20 million inhabitants in the surrounding urban region, the 104 sq. km of SGNP offers a sanctuary of sorts for Mumbaikars and tourists alike.

SGNP is located in the region of the Western Ghats of India. This area is a mountainous range along the western coast of India that is well known for its beauty and immense biodiversity. The Park itself is a diverse ecosystem that encompasses a protected area of approximately 104 sq. km, including the Tangareshwar Sanctuary to the north (95.25 sq. km), a public recreational area (Borivali: 5.75 sq. km), a non-notified buffer zone (10.38 sq. km), and a core zone (86.96 sq. km) which if officially notified and requires special permissions of Park Management to access.

Fig. 1 – Mumbai and SGNP (Bon et al, 2008)



The SGNP boasts a wide variety of flora and fauna and wildlife, including many species of insects, types of mammals, and a myriad of bird species. Inside the Park, there are two lakes: Vihar and Tulsi. Both of these lakes have great historical importance to the city of Mumbai and its people. In addition archeological sites within the Park trace back to the Golden Age of Buddhism in 1st century BC. Religious sites are scattered around the park; the most famous being the Kanheri Caves, 109 caves in an area overlooking the Park that bring up to 10000 visitors per year. The Park's Lion and Tiger Safari provides another major tourist attraction within the Park.

The Park falls under the managerial authority of the Maharashtra State Department of Forests but it is home to a number of other government authorities and NGOs that

operate within the Park's boundaries, including the Archeological Survey of India, the Municipal Corporation of Greater Mumbai (BMC), the Bombay Natural History Society (BNHS), and others. Birdwatchers, local morning walkers, and foreign as well as Indian tourists use SGNP as a green space for its recreational activities, its history, its ecosystem or its simple outdoor trails. Developers see great potential in SGNP land while environmentalists appreciate the value of the flora and fauna and ecosystem services the Park provides. The Park, thus, means many things to many people. The different values of the Park, the activities and the users present challenges to the Park and to the governing body of the Park, the Forest Department and more directly the Park Management. As one of few national parks in the world located in an urbanized setting, SGNP is truly unique. It provides different attractions, activities and different experiences for the local visitor to the foreign tourist, or to the tribal – or *adivasi* – people.

Fig. II - Landmarks in SGNP, (Modified, Bon et al., 2008)



(Disclaimer: not drawn to scale.)

1 GROWING CITY; GROWING PARK

1.1 A CITY AND ITS PARK

In the peacefulness of SGNP and the bustling of Mumbai, these two areas constrained by their shared geographical area have bound and parallel stories. Under different authorities and legislations, they were created and enlarged, leading to a positive and negative influential mutual relationship. Furthermore, both the use of land and its status has played a role in defining the coexistence of urban agglomeration and green space.

To gain an understanding of the current story, this chapter will introduce the early history of the city and park relationship as well as the different actors. Actors throughout the story while creating threats and challenges to SGNP and its Park Management have also cooperated with Park Management and SGNP to enlarge and conserve the Park from the growing city of Mumbai. Government, non-governmental organizations, native inhabitants are among some of the actors that have influenced the different dimensions of the Park and city interface. The interdependencies between city and park form part of the story of the coexistence of a national park within an urban setting and will remain an important part in the future of the Park and the growth of the city.

1.2 GREEN SPACE WITHIN A GROWING MUMBAI

A city created of 7 marshy islands, and a park created of different private lands. This is the story of how Mumbai and SGNP came to be.

1.2.1 GROWING MUMBAI

“BomBaia”, as was named by the Portuguese, was created out of seven separate swampy islands inhabited by *Koli* people, a community of deep-water fishermen. In 1668 these islands and the mainland port were leased to the British East India Company

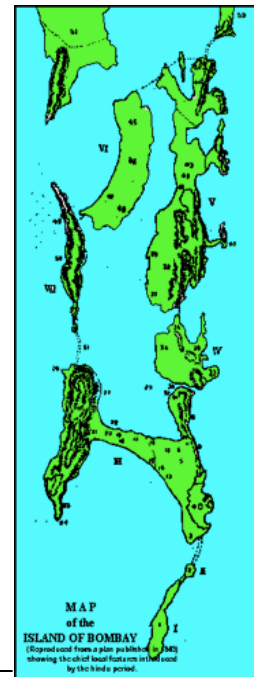
to use as a key port in the region. This marked the very beginning of Mumbai's importance and its development.

With development came the need to change the landscape to fit the vision of "BomBaia" as an economic center. By the end of the 18th century, the seven swampy islands were welded together under various engineering projects and land reclamation strategies sponsored by the British government. Eventually, with the reshaping of "BomBaia", these lands were making "BomBaia" one of the main trading points for the British East India Company and the British government

As a booming port city and industrial center, the economic prosperity attracted an ever-increasing population. Indians from throughout the country migrated to gain a piece of the wealth. (Bon et al. 2008) From 1910 until 1940s, Mumbai had a large but steady population located only on the tip of the stretch and had less than 2 million inhabitants. This was just the beginning of the island's expansion.

A new influx of people in the 1950s led the government under the Bombay Municipal Extension Act of 1950 to create Greater Mumbai. This new land would take into account the urban growth towards the north. In 1957, it was extended again, and the Brihan-Mumbai Municipal Corporation (BMC)¹

Fig. 1.1 - Island of Bombay and its 7 islands (Unknown Source)



¹Municipal corporations are the local governments of each city or town which serve as the legislative body that sets governance policies. There are 8 municipal corporations which make up the MMR: Brihan-Mumbai Municipal Corporation (BMC), Thane Municipal Corporation, Navi Mumbai Municipal Corporation, Kalyan-Dombivali Municipal Corporation, Mira-Bhayander Municipal Corporation, Ulhasnagar Municipal Corporation, Bhiwandi-Nizampur Municipal Corporation, and Vasai-Virar Municipal Corporation.

became the Municipal Corporation of Greater Mumbai. This new area (438 sq. km) included the areas where SGNP is currently located.

With the growth of land and the continued immigration by the end of the 1970s Greater Mumbai had doubled in population from that of the 1940s, and the city territory had increased by about 1000% (4355 sq. km). With the surge in the number of inhabitants, Greater Mumbai became the MMR in a little over a decade.

By the 1980s MMR began an economic decline as the industrial sector began a downturn, and the increase in population did not stop. However, the economic downturn did lessen the population of immigration to Mumbai by a growth rate of 50% instead of 100% (Zerah, 2007). This continued growth was not centered on the peninsula of Mumbai.

The increase in the 1990s expanded into new regions north of the peninsula: Thane Municipal Corporation, an area much closer to SGNP. In Thane, the population increased by more than 60% per year from 1990-2001 (Zerah, 2007). The increasing population around SGNP meant that non-defined boundaries of the Park faced growing pressures as more population and development was occurring around the area defined as SGNP's protected area today.

1.2.2 EARLY CONSERVATION OF GREEN SPACE

Mumbai attracted people, and the demand for certain amenities, including land space and water, increased. In the mid-19th century, water became a concern for public authorities, as the needs of those living in Bombay were not being met. Therefore, the British government appointed a committee to attempt to solve this challenge. Their

solution was to build dams on the River Tasso which over time would create three lakes: Tulsi, Vihar and Powai² (Latkar et al., 2005).

By the end of the 19th century, Vihar and Tulsi lakes became protected under the jurisdiction of the local government, Bombay Municipal Corporation (BMC).³ As one of the main forms of getting water to the peninsula, the catchment areas were protected by the BMC through the acquisition of about 10 sq. km from private owners. This forest area was the first step in creating a green space and recognizing that Mumbai depended on this area to meet water supply (Bon et al., 2008).

Two decades later the area around these two lakes was designated as a protected area by the State government and protected and operated by Forest Officers.⁴ Under section 29 of the Indian Forest Act of 1927, the Indian Forest Service declared this green space as protected forest in order to protect it from removal of natural resources, quarrying or any other further damage to the area (Indian Forest Service, 1927). Furthermore, as a designated protected area, the green space around the Vihar and Tulsi lakes as well as the flora and fauna were protected from being cut down for cultivation, used as pastureland for cattle, or for any other activity that would degrade the land and cause harm to soil and public health. This act also enabled the protection of the forest through the regulation of the production of timber (IFS, 1927). Moreover, it was the first of

²Vihar is the largest lake with a surface area of 700 hectares and Full Supply Level (FSL) of 9200 million gallons. Tulsi Lake upstream from Vihar has a surface area of 135 hectares and FSL of 2294 million gallons. (Together, Tulsi and Vihar cover an area of 11 sq. km.) The Powai Lake has a surface area of 210 hectares and FSL of 1200 million gallons, but unlike the two other lakes the water in this lake is un-potable. However, encroachers who use the water for domestic use have affected Vihar. (Latkar et al., 2005)

³ Bombay Municipal Corporation: Refer to Footnote 2. Vihar and Tulsi lakes which reside within the Park borders are still under the jurisdiction of the BMC. Powai Lake created through the damming of the Mithi River as Tulsi and Vihar were, does not lie within SGNP borders but is also under the jurisdiction of BMC.

⁴ ““Forest-officer” means, any person whom * * * the State Government or any office empowered by * * * the State Government in this behalf, may appoint to carry out all or any of the purposes of this Act or to do anything required by this Act or any rule made thereunder to be done by a Forest-officer” (Indian Forest Service, 1927)

many legal actions to enable the forest authorities to regulate and protect this forest area (Zerah, 2007).

Further legal actions were taken in 1939 with the transfer of the Parks management and regulation from the centralized Indian Forest Service to the Maharashtra State Forest Department. The regulation and management of the green space was given to the state government and under their jurisdictions and acquisition legislation the protected land increased the size of the green space around Vihar and Tulsi lakes. In 1947, the municipal government added an additional 21 sq. km to the green space (Bon et al., 2008). By the 1950s, the protected forest was 32 sq. km under the governance of Department of Parks and Gardens of Bombay State while Vihar and Tulsi lakes were still governed by the BMC.

The second important legal status was implemented; this time to protect not only the catchment area but also to create a green space for the people of Mumbai. 20,26 sq. km of privately-owned land was pieced together to become the Krishnagiri National Park under the provisions of the Bombay National Park Act of 1950.⁵

1.2.3 AN INHABITATED PARK⁶

The government's legislation not only created a green space to protect the catchment areas, the flora and fauna, but we begin to understand an evolution in the relationship between the Park authorities, the local landlords and tribes due to the new legislation. Landlords (also known as *Inamdars* and *Khot*) once exploited the area for

⁵ Under the IUCN Category II of protected areas and under this act, a national park is a "large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities." (http://www.iucn.org/about/work/programmes/pa/pa_products/wcpa_categories/pa_categoryii/)

⁶Bapat, J. (2005) *Development Projects and Critical Theory of Environment*, Sage Publications India.

commercial foresting, but through the Bombay National Park Act of 1950 this forest was protected from further degradation through the Department of Parks and Gardens of Bombay State (Bapat, 2005: 112). The protection of the Park's fauna and flora did not take into account the landlords and tribes which were dependent on the land. This sparked a potentially contentious relationship between landlords and tribes living on or using the land because according to the legislation they would not be allowed to continue in the same ways. This new act was critical for the land status of the forest area but had a significant impact on the relationship between the government and the actors living on forest land.⁷

Given the beginning of this patchwork of national park, it is important to note that these acquired lands were not desolated. In addition to the Kolis people and local landlords, Yeour and the Chena people also inhabited the area, which would eventually become SGNP. The Kolis, Chena and Yeour tribes were in northern Mumbai before the creation of the green space and depended on the land for survival. The Varli tribe was also prominent in the Thane side and depended on agriculture for survival. As opposed to the Kolis who inhabited the Borivali side (east) land since before the British government held power, according to an expert on the tribal people in SGNP; the Chena and Yeour people have claimed to be there for 8 generations or approximately since at least the 19th century. These tribal people inhabited and depended on the land, but they were not protected from government acquisition of their territories until the Forest Rights Act of 2006 (see Chapter 3).⁸

⁷Forestland is reference to a section of land covered by forest that might not have been designated as protected or notified area under any legislation.

⁸The Forest Rights Act of 2006 stated that tribal people had a right to their land and could not be taken under the Indian Forest Act of 1927 or the Wildlife Protect Act of 1972. The **Kolis**, Yeour and Chena people had a right to revenue village status. Every tribal person had a right to a piece of land and to use the forest as they had for so many centuries. Controversy due to the environmental degradation will be brought up in later chapters.

Despite the tribal people and their history on the land, by the 1960s more land would be added to Krishnagiri National Park. In 1968 under the guidance of the Chief Minister of Maharashtra, the area known as Krishnagiri National Park was extended by 47 sq. km to create Borivali National Park. The green space was now 68.27 sq. km of national park under the Maharashtra Forest Department.

By the 1970s there was a growing need to protect the national park as well as the political will to expand the national park due to the growing population, the environmental degradation, and the political rhetoric, which is addressed in a following section. With the increase in population, landlords would rent land to new residents who wanted to buy a piece of the land. Tribals were not the only ones living on the land and using the natural resources to meet basic need, slum pockets began appearing in different areas of the forestland. This other inhabitant in the zone of the Park is important to note for the future history of SGNP. In an interview with one of the former residents of Borivali National Park, he stated,

"In 1970 I moved there. I use to stay outside the Park but they got out and then they were in the Park...I earned Rs. 2 per day in Borivali (quite ok for the day). Soon after I got married and I wanted a room to properly stay. So, there were slum properties for Rs. 10 in the fringes of the Park. You could buy the house but I didn't buy the land. We just give the slumlord 10 or something. Then that became part of the national park..."

An increase of people living in these areas was in addition to the Kolis, Chena and Yeour people living on their tribal lands. Communities of *padas* in parts of the forestland appeared because landlords sold these hamlets to tribal, *adivasis*, and non-tribal people. As we learned from interviews, families believed that they had purchased the land and had their home on their own property (Zerah, 2007).

The degradation of flora and fauna in this area which would become SGNP was not only linked to the local landlords, tribal people and the increase in non-tribal inhabitants, but

also to the Forest Department and the Indian Government itself. Private stone-quarrying companies within the Park boundaries to supply construction material were constructed on forestland. Moreover, the government allowed for an agro-based (bacon) factory to operate in the Park, as well as the government-owned satellite company and the air force base on forestland. These have also led to some of the loss of trees, soil erosion, disruption of the ecosystem, etc.

1.2.4 THE PROTECTION OF SGNP AND THE ENVIRONMENT

The increase in human inhabitants on forestland and the subsequent degradation was not only occurring in SGNP, but apparently all over India as well. However, unique to this area is the closeness between the national park and the city. The increase protection of land as national park was influenced by a new conception of nature conservation at the national level. Under the leadership of PM Indira Gandhi (1966-1977; 1980-1984), conservation of the environment became a primary goal for the administration and the different levels of the Indian government.

“We (Indira Gandhi and India) share your concern at the rapid deterioration of flora and fauna. Some of our own wild life has been wiped out, miles of forests with beautiful old trees, mute witnesses of history, have been destroyed. Even though our industrial development is in its infancy, and at its most difficult stage, we are taking various steps to deal with the incipient environmental imbalances....” (Sharma, 2008).

Thus, at the state and local level, there was an urgent need to push the conservation movement to save the natural resources India still had.

Given the political will on themes of the environment, in 1972 the National Wildlife Protection Act was enacted. It aimed to protect areas throughout India, but more specifically in Mumbai it protected Krishnagiri National Park from further deterioration of the ecosystem and forest area. This act aimed to ban hunting and harvesting of the

ecosystem and established protection of certain species. It would restrict the uses of the land by restricting visitors from a certain area.

Under the 1974 Acquisition of Revenue Land, the Maharashtra Private Forest Acquisition Act, 1975 and Maharashtra Urban Areas Preservation of Trees Act, 1975, the extension of the Park was done but later proved to be controversial in the legal battles to follow (see Chapter 2). The acquisition act allowed 10 sq. km from the Chena village in the Thane Municipal Corporation, and later Forest Department authorities made a purchase of 15 sq. km as a private purchase for the national park. However, the Forest Department, inhabitants on these lands, such as the former resident of the *pada*, political entities and NGOs defending the rights of tribals and non-tribal debate whether the expansions were not registered. This will be further developed in the following Chapter. However, it is important to see the beginning of contention between actors. At this point in time, regardless of the tension rising between Forest Authorities and inhabitants, the Forest Department now managed 93 sq. km.⁹

By 1981, the Government changed the name of the Park from Borivali National Park to SGNP. The Central Government under the Forest Conservation Act of 1980 “restricted the de-reservation of forest or the use of forest land for non-forest purpose”. In efforts to continue the protection of the forest, in 1983 under the rights granted by passed acts, the State-run Forest Development Corporation now managed an additional 20 more sq. km to make the national park area 87 sq. km and a total area of 103 sq. km.

1.2.5 OVERLAP OF MUMBAI AND SGNP

The expansion of both Mumbai and SGNP was leading to more controversy at the end of the 1980s and early 1990s with the increase of non-tribal inhabitants, government

⁹Borivali National Park was 69 sq km of national park and 24 sq km of non-notified land.(Bon et al., 2008)

buildings, factories and tribals. There were pieces of land, which were designated national park, but in certain areas people looking for a home in Mumbai or companies used the lands. The relationship between park and city actors was inevitable given the overlap between Mumbai land and SGNP land.

Mumbai as a growing city was expanding north in order to create room for the economic center of India. Encroaching on SGNP was an option that certain actors, such as lower socially economic individuals, chose. However, SGNP was also expanding into territory that was inhabited by tribals as well. Expansions from SGNP and Mumbai meant an increase in the tensions between the actors at the city-park interface.

By the 1990s the non-defined boundaries of the Park allowed for an expansion of SGNP into Mumbai and Mumbai into SGNP. Moreover, further increases in tensions at the city-park interface. This increased the presence of growing pressures: need for land and need for basic necessities from both humans and animals. The Wildlife Protection Act of 1972 was intended to protect certain flora and fauna through the central and state government ability to declare an area a wildlife sanctuary, national park or closed area, as well as and to regulate and restrict activities that might harm the wildlife; such as industrial activity and hunting. Under this act, SGNP with its undefined boundaries should have been protected.

However, the pressures had not lessened by the 1990s in SGNP; instead they had only increased with the growing population living on the periphery and within what was deemed national park land. In order to protect the environment in the face of these pressures and further degradation throughout India, the Ministry of Environment and Forests (at the central level) revised the Wildlife Protection Act of 1972 to reinforce the national park and the protection of the fauna and flora at a national level. For SGNP, These special provisions ensured that hunting was completely outlawed, but that the needs of the tribal and inhabitants on forestland were understood in order to provide for their welfare.

Until this point SGNP had only acquired land and protection through national acts which granted the fauna and flora protection from further degradation. However, Mumbai through its increasing population and government offices on national park land was in need of space. Chapter 2 will lead us into the next phase of SGNP, which was marked by a major legal battle to prevent the Park from being destroyed by its urban environment.

1.3 SUMMARY

- Through wildlife and forest legislation and regulation, the forest authorities were able to acquire lands from private owners as well as land belonging to the municipal government to protect and expand the national park territory.
 - The acquisition of land by SGNP had occurred from private property belonging to native inhabitants as well as non-native inhabitants. Moreover, companies' government-owned as well as private had entered the scene and began using the natural resources regardless of the protection acts and the need to preserve natural resources.
- At the city interface, Mumbai had grown from just the tip of the peninsula to Great Mumbai (438 sq km) to MMR (4738 sq. km) in a century through expansion north of the peninsula and including other municipal corporations in its regional planning.
- The history of both city and park demonstrates constant growth leading to an “encroachment” on each other. This proximity between city-park interface leads to increase tension between inhabitants and Park authorities. The acquisition of land where different actors believed they owned land causes strains leading to a proliferation and introduction of threats and challenges that culminate in violence and the intervention of the High Court system presented in Chapter 2.

2 THE PARK STRIKES BACK – LEGAL TAILWIND AND CONSOLIDATION

In 1995, an environmentalist organization, Bombay Environmental Action Group (BEAG), filed a Public Interest Litigation¹⁰ (PIL). This opened a new chapter in the Park-city relationship, as it resulted in a substantial shift of power in favor of nature conservation and SGNP. It opened a window of opportunity for the SGNP to strengthen its territorial integrity and to evict different types of encroachers.

The PIL court rulings are of particular interest for this report as they play a major role in structuring the conflict – and alliances – between city and park actors. The external intervention of the court destabilized the earlier modalities of coexistence between park and city and gave rise to new dynamics on which current relationships are based. The process of interpretation, appropriation, and implementation of the court orders sheds light on the resulting actor system and their respective interests, positions and strategies. Finally, the PIL marks the emergence of a new power – civil society organizations – in the city-park interface. It was the BEAG that pursued litigation and achieved court orders in favor of nature conservation; and another NGO, Nivara Hakk Suraksha Samiti (NHSS) defended the interests of slum dwellers and secured adjustments and modifications for these orders in favor of the slum dwellers.

¹⁰ Public Interest Litigation (PIL) is an instrument in Indian law to start legal action for the protection of the public interest. It can be introduced by any third party, not necessarily the aggrieved party, to a High Court or to the Supreme Court in form of a petition. The crucial criterion for the validity of a PIL is a justified public interest (or general interest).

2.1 PUBLIC INTEREST LITIGATION IN FAVOR OF THE PARK

2.1.1 1995 PETITION OF BEAG VS SGNP

In the early 1990s SGNP was falling victim to major degradation. Despite the Park Managers' efforts to fight individual cases of illegal encroachment¹¹, they were unable to contain the process of erosion that was threatening the Park. A report commissioned by the WWF stated in 1995 that:

"Today the Park is in shambles, with its south-western border encroached by over 40,000 slum dwellers, the north-western and the northern boundaries scoured and pock-marked by 19 stone quarries, its northern block devastated by plundering woodcutters and poachers, the Yeour forests encroached by developers, goondas and other illegal builders from Thane and Mumbai, and the central hill-slopes ravaged by the expanding empires of tricksters and 'dhongeebabas' trying to build concrete structures illegally by fleecing gullible visitors" (Vaquier 2010, citing Econet report 1995).

Forest Department figures suggest that in 1995 there were between 78,000 and 86,000 huts in the Park, housing between 390,000 and 430,000 people, the vast majority of which were illegal slum dwellers (IPHRC, 2000).

It was in this context, BEAG resorted to filing a PIL in order to force the public authorities to protect the Park and to evict illegal encroachers.

¹¹ SGNP authorities filed 66 cases between 1990 and 1995; the forest department and the GoM carried out 82 demolitions between 1988 and 1995 (Vaquier 2010, citing Econet report 1995).

BOX 2.1: BOMBAY ENVIRONMENTAL ACTION GROUP (BEAG) AND THE CONSERVATION ACTION TRUST (CAT)

The BEAG is a local activist NGO fighting for nature conservation and involved in various issues with regard to environmental protection in Mumbai and beyond. Over the years its scope of activities has expanded from litigation to additional fields like nature education and public awareness campaigns. A leading figure in the BEAG and the driving force behind the PIL was Mr. Debi Goenka. Mr. Goenka became involved in nature conservation and the SGNP as a passionate bird watcher and neighbor to the SGNP. Over the years he became a high profile environmentalist who is well known throughout India for his fight on environmental issues.

In 2005, Debi Goenka founded the Conservation Action Trust (CAT) as a spin-off from BEAG. While BEAG now focuses primarily on heritage, CAT is centered on the protection of forest and wildlife. As the homepage states,

“The main purpose of CAT is to educate and enlighten decision makers and the public about the importance of forests for our survival. The role of forests in protecting the water security of the country is one of the major thrust areas of CAT. CAT is dedicated to provide assistance in the form of technical information, legal advice, aid and equipment to all those who are confronting environmental problems”
(<http://cat.org.in/index.php/about/>).

According to Bon et al. (2008), the conservation movement finds their main support in the middle and upper class of Mumbai. It must be noted that there is a wide variety of green NGOs fighting for the protection of SGNP (see Chapter 3).

On February 8th, 1995 BEAG filed a writ petition No. 305 of 1995 before the Bombay High Court against the Conservator of Forests (SGNP) and other parties. Invoking the Wildlife Protection Act (1972), Indian Forest Act (1977), and Forest Conservation Act (1980) the PIL sought the court to order the eviction of all types of illegal encroachers and the demolition of all illegal structures in SGNP within six months. Moreover, it demanded that encroachers should not be allowed to regularize their status and that no amenities should be provided to them.

The principal interim orders on BEAG's petition (between February and May 1997) represented a resounding victory for BEAG and provided a strong mandate for the Forest Department to evict illegal encroachers and to demolish of their illegal structures. The principal orders were¹²:

1. The Forest Department is to conduct a survey of the inhabitants of the Park to determine their legal status.
2. All illegal residents of the National Park should be evicted and their structures demolished.
3. All slum dwellers residing inside the National Park with proof of residence prior to 1995 qualify for free resettlement outside the Park. A later ruling specified that each eligible household had to pay a fine of Rs 7,000 (around €110 as of March 2011) to the Forest Department to qualify for resettlement.
4. BMC and all public service providers are directed to remove all types of public infrastructure and services including water, electricity, transport, and telecommunication from the Park area (except for authorized structures).
5. BMC is to cancel all permissions for commercial or industrial activities in the Park area, all illegal structures (commercial, schools, etc.) have to be demolished.
6. The Forest Department is to present a map with clear boundaries of the SGNP.
7. A boundary wall with watchtowers shall be constructed around the SGNP by the state government. (Later, in July 1999, this requirement was reduced to a wall with a length of about 22 km at strategic points.)

¹² Sources: Environmental Management Plan for Sanjay Gandhi National Park, Borivali (2002), IPHRC (2000), Vaquier (2010), Bombay High Court disclosures.

8. The staff of the National Park Division is to be increased by 50 persons.

Moreover the High Court constituted a High Level Monitoring Committee consisting of politicians and high ranking bureaucrats of many of the involved public authorities¹³ to oversee the implementation of the court orders and to prevent further encroachments. In its subsequent orders the High Court established several committees of politicians, civil servants and civil society representative to monitor and drive the implementation of its orders. These committees forced the relevant parties to cooperate and were held accountable by the High Court.¹⁴

2.1.2 IMPLICATIONS FOR PARK MANAGERS

From an institutional standpoint the High Court rulings represent a clear victory for the Forest Department and SGNP to further their mission of nature conservation. But, at the Park Manager level, the impacts are more differentiated: on the one hand the pro-conservation rulings are a resource to Forest and Park Managers in their relationships with “city actors”; on the other hand these rulings exposed the conservation record of the Forest Department and SGNP Management and brought to them the spotlight of public attention and bureaucratic scrutiny. The Park Management was forced to focus its activities on implementing the court orders. In consequence, its discretionary leeway with respect to these issues was reduced. Refraining from the tough approach to encroachers from within the Forest Department (due to competing priorities or interest, or moral qualms) was no longer possible. This point is illustrated by the following

¹³ In particular the members are (IPHRC, 2000): Collector, Mumbai Suburban District (Chairman); Deputy Municipal Commissioner, Zone IV; Deputy Municipal Commissioner, Zone VI; Deputy Commissioners of Police of the respective Zones; Deputy Director (Town Planning) SRA; Additional Collector, Encroachment; Controller of Slums and Additional Collector; Commandant, SRP; Deputy Conservator Forests (Wildlife); Deputy Conservator Forests, SGNP Secretary.

¹⁴ Further Committees include the Grievance Redressal Committee, the Committee for Afforestation (incl. BEAG) and various Monitoring Committees.

extract from the Conservator of Forest's affidavits testimony to the High Court, which expresses his appreciation for the social dimension of the encroachment problem. While this testimony must also be seen in the light of his need to justify prior behavior of the Forest Department, it is nonetheless plausible that such deliberations have played a role.

"The problem of encroachment on forest areas and the consequent deforestation is matter of grave complexity involving human, political, social and economic angles and cannot be looked at only from the limited point of view of removing such encroachments en masse, as suggested by the Petitioners in the present petition. [...] because of the complexities involved and the human aspect of encroachment, a large number of people cannot be uprooted overnight by use of force"(Affidavits testimony of the Conservator of Forests to the High Court).

Another implication of the High Court rulings is the increased need of the Forest Department to cooperate with outside actors to implement these orders. As the Forest Department lacks the resources and mandate to execute eviction orders and to demolish illegal structures, it is highly dependent on other parties and public authorities. The main dependencies include:

- BMC to cancel existing commercial licenses and stop providing basic amenities to illegal settlements
- Police forces to remove encroachers, to break resistance, and to maintain public order
- Public works and private contractors to build the boundary wall and to demolish illegal structures on SGNP area
- Public utility companies to cut basic infrastructure and service provision to slum pockets
- Slum Rehabilitation Authority (SRA) and Maharashtra Housing and Area Development Authority (MHADA) to provide resettlement options

- NHSS (a slum dwellers' welfare organization) to support a survey of the SGNP inhabitants and to manage the resettlement eligibility list

As a consequence, interestingly, the High Court rulings both strengthened the position of the Forest Department and nature conservation vis-à-vis other actors and interests, and, at the same time, increased its dependence on other actors. A lack of cooperation by third parties due to competing priorities and interests, also as a result of political influence, was often named as a main challenge by the Forest Department. However, numerous committees, which were established by High Court orders, fostered pragmatic cooperation between the various parties and allowed the High Court to intervene in case of inaction.

In summary, the High Court rulings substantially changed the balance of power and the dynamics of the city-park interface. They reorganized the managerial focus of the Forest Department and exposed it to greater public scrutiny. During our field work, interviews with influential environmental activists and pro-conservation citizen groups affirmed their strategy to closely monitor implementation efforts of the Park Management and to mobilize public reactions to push for conservation when necessary. A journalist maintained that media coverage of the slow progress of the boundary wall construction put pressure on the Park Management and resulted in additional efforts to advance related projects. While being assured of the legal backing of nature conservation, the Forest Department now faced the challenge of evicting up to 86,000 families and to coordinate the resettlement process for up to 33,000 of these families.

2.2 EVICTIONS, DEMOLITIONS, AND RESETTLEMENT

2.2.1 EVICTIONS AND DEMOLITIONS

A first wave of evictions took place between the filing of the PIL in 1995 and 1999 in reaction to an intermittent flow of interim court orders on the initial PIL and opposing petitions. In this period approximately 20,000 families were evicted and their huts demolished, mainly in the southwestern part of the SGNP (Vaquier, 2010). In this

process the High Court and the High Level Monitoring Committee provided close guidance to ensure the execution of their orders. Due to a lack of voluntary cooperation by public authorities, interim court orders often gave specific directions on operational details like the number of policemen and the equipment to be deployed by specific public agencies¹⁵. The reluctance of some public bodies, like BMC and the police, and conflicting political interests of elected representatives on ward-level, introduced frictions in the implementation of the High Court orders, but by and large progress was made by the Forest Department in concerting the eviction of illegal encroachers.

Additional court orders in 1999, specifying the resettlement conditions and reiterating the prior orders to demolish the approximately 60,000 remaining illegal structures, heralded the most violent phase of demolitions in 1999 and 2000 when local authorities targeted the largest slum pockets in the southwest and northwest of SGNP. Arguably both the scale of evictions and the increasing degree of slum dweller organization account for more violent resistance that resulted in many injured on both sides and at least four casualties among the slum dwellers (IPHRC 2000). This violence and a mobilization of public opinion represented a significant increase in the physical and political cost of demolition drives, and led to further High Court orders to guarantee an orderly execution of eviction orders preventing unnecessary violence and hardship for the slum dwellers.

Allegedly the evictions took often place without prior notification and without differentiation between ineligible slum dwellers and those who were entitled to a relocation option prior to eviction and demolition of their huts (IPHRC 2000, Vaquier 2010). In subsequent High Court rulings it was clarified that those slum dwellers who qualified for the resettlement option (proven residence prior to 1995, and payment of

¹⁵ For example the order dated May 7th, 1997 passed by Chief Justice M.B. Shab and Justice Mr. F.I. Rebello specifies that a JBC, 4 dumpers, a helicopter and at least one SPR battalion had to be made available for the process of demolition (IPHRC, 2000).

Rs 7,000 fine) were to be tolerated on forest land until the completion of their resettlement project. According to the 1997 High Court order, this was to occur within 18 months. As of our field visit in January 2011, 25,000 families were still waiting for the completion of their resettlement projects (see section 2.2.3).

2.2.2 FORMATION OF SLUM DWELLER RESISTANCE

In the face of the PIL rulings and the threat of large-scale evictions, slum dwellers organized their resistance. In doing so they had two, non-mutually exclusive main options. Either they could argue that they had the right to stay and to be rehabilitated in their current locations, or they could accept relocation and fight for favorable resettlement terms. Elected officials mobilized slum dwellers to oppose evictions (along the lines of the first option). Their strategy was to oppose resettlement as an option and focus their efforts on the regularization of currently illegal slum dwellers. While defending this position with idealistic and humanitarian arguments, it can be hypothesized that the threat of losing their respective vote banks also furthered this uncompromising position¹⁶ (excluding resettlement even under favorable resettlement conditions).

Most prominently, two local NGOs picked up the cause of slum dwellers facing the threat of eviction and filed opposing PILs in an effort to stop the implementation of the High Court orders: NHSS, Ghar Kakka Jagruti Parishad (GHJP).

¹⁶Slum pockets constitute vote-banks for local politicians, especially at ward level. Traditionally, amenities and basic infrastructure are exchanged for electoral support.

BOX 2.2: “BROWN NGOS” NIVARRA HAKK SURAKSHA SMITI (NHSS), GHAR KAKKA JAGRUTI PARISHAD (GHJP)

The slum dweller welfare NGO, **NHSS**, was created in 1987 by the famous Indian Bollywood actress Shabana Azmi and headed by architect PK Das. Being already engaged in the large slums in the southwestern parts of the Park, NHSS picked up the fight against demolitions of slums and evictions right after the first PIL orders. NHSS’s influential leadership team provides for direct access to high-level bureaucrats and politicians.

While initially confronting the Forest Department in its legitimacy to conduct evictions of encroachers on forest land, NHSS’s role gradually became less confronting and more constructive in fighting for favorable conditions of resettlement for slum dwellers. In this spirit NHSS cooperated with the Forest Department in conducting the eligibility survey among SGNP inhabitants and in searching suitable sites for resettlement. In doing so NHSS accepted the notion of eligible and ineligible encroachers and the inescapability of evictions given the clear High Court orders. This pragmatic stance differs markedly from the strategy of elected representatives to avoid any resettlements and to fight for the regularizations of slum pockets on alleged SGNP land. However, even within NHSS the strategy to cooperate with the public authorities to achieve favorable terms of resettlement was not without opposition.

GHJP is a similar, but more political NGO which had its main constituency in the south-western part of the National Park. It was cofounded and headed by the local social activist and politician Vidya Chauhan (Vaquier 2010). Vidya Chauhan’s strategy was to challenge the legitimacy of the 1975 land acquisitions by the Forest Department and to discourage potentially eligible slum dwellers in her area to pay the Rs. 7,000 fine to make their resettlement claim. When her legal claim of the illegal extension of SGNP was turned down by the courts, the way was cleared for the above mentioned large scale evictions, which led to an erosion of her power base. Probably for that reason GHJP seems to have lost its importance in the current stage of the conflict. During our fieldwork in January 2011 we found no evidence of current activities of GHJP.

The slum dwellers’ first line of defense was organized around two main arguments:

1. Land status: It is questionable whether slum settlements are in fact on proper forestland¹⁷.
2. Human rights: Even if the slum settlements in question are found to be on forest land, they should not be removed due to the overriding human right of shelter and the Maharashtra Slum Areas Act (1971).

The High Court and Supreme Court dismissed both arguments (with the exception of a few land status disputes that are still ongoing). These rulings destroyed the hope of slum dwellers to legally stop the eviction and demolitions process. Two responses are observable to this situation. First, slum dwellers maintained and strengthened their resistance to eviction. Thereby they increased physical and political the cost of demolition drives, and possibly slowed the eviction process. Second, the focus of their negotiations and legal activities shifted to the fight for beneficial resettlement conditions for those that are eligible.

Given the relatively small share of eligible families among the illegal encroachers (approximately 33,000 out of up to 86,000 families) it is surprising that the focus of pro slum dweller action shifted so quickly toward the resettlement conditions. Both the unambiguous legal interpretation by the courts and the weakening through of the slum dweller community through the first wave of evictions of ineligible families contributed to this result. Between 1995 and the eligibility survey 20,000 families had already been evicted. This left about 60,000 families inside SGNP of which about 33,000 were potentially eligible for resettlement.

Still, social and legal confrontations point toward the underlying legitimacy conflict between the “brown” (or social, or human rights) agenda on the one side, and the

¹⁷ This argument is based on irregularities in the execution of the 1975 Maharashtra Private Forest Acquisition Act and missing land registrations.

“green” (or environment) agenda on the other side. The development agenda constitutes a third axis of the legitimacy conflict. The court rulings in favor of the green agenda, based on their interpretation of current law, should not be mistaken for a majority consensus that green land use was more legitimate than brown land use or development. Indeed, there was and still is a vivid public debate with well known and vocal advocates on both sides. Based on this legitimacy conflict, Masselos and Patel (2003) question the long-term sustainability of the supremacy of the green agenda:

“Most of today’s leading environmental cases are against the interest of the majority people. These cases do not consider the issues of housing of the poor and the working class as an integral subject of environmental concern, thereby, aberrating the poor from environmental cause. The recent case of the brutal attack on over 400,000 slum dwellers residing for several years in the buffer zone of the Borivali National Park and the demolition of their houses without consideration for rehabilitation first has exposed not only the upper class interest of this environmental movement but has also made the environmental movement for the protection and conservation of the National Park at Borivali unsustainable”(Masselos and Patel, 2003).

2.2.3 RESETTLEMENT SCHEMES

From 1995 until 2008 court orders iteratively specified and modified the resettlement conditions offered to part of the slum dweller encroachers. In broad terms, the rulings distinguish between slum dwellers that could prove that they resided in the SGNP prior to January 1st, 1995 (by means of rationing cards or voting records), and those who could not provide such prove and were consequently considered to have entered the Park after this cut-off date. The latter category was considered ineligible for resettlement and evicted without compensation. The former category of encroachers

qualifies for free resettlement under the condition that they paid a Rs. 7,000 penalty to the Forest Department¹⁸. Initially 12,000 of the 33,000 eligible families bought this “resettlement option” by paying the fee on time¹⁹. The eligibility list is jointly managed by NHSS and the Forest Department. Forest Managers involved and NHSS representative both described this relationship as constructive and did not raise major complaints.

The Maharashtra Housing and Area Development Authority (MHADA), which was charged to provide to each eligible family a small parcel with access basic infrastructure, initially proposed resettlement to Sherdon, a remote area near Kalyan, outside Greater Mumbai and around 50km away from Borivali. As this resettlement scheme would have implied the loss of the local livelihoods or long and costly commuting, it was encountered with strong opposition of potentially eligible slum dwellers. Both NHSS and GHJP organized public protests in favor of adjacent resettlement (NHSS) or in situ rehabilitation (GHJP) and introduced corresponding petitions to the courts.

While the legal motions did not succeed, NHSS’ excellent connections to Mumbai’s economic and political elites proved more successful. NHSS managed to arrange an alternative resettlement scheme to a nearby area in Chandivali. In contrast to traditional resettlement schemes, eligible families would be located south of SGNP and thereby closer to the city centre. This location facilitates their existing economic links to the city centre and opens new economic opportunities in the neighboring wealthy Powei area. Under the agreed scheme the private real estate developer Summers would construct 25,000 housing units (including 12,000 for resettlements free of charge) in Chandivali in

¹⁸This penalty is considered an indemnification for the degradation of forestland through illegal encroachment and should be used by the Forest Department for afforestation.

¹⁹As Vaquier(2010) points out these families were effectively betting on a favorable outcome of the resettlement conflict. Most of them would not have moved to the remote parcels that were initially proposed by the MHADA.

exchange for Transferable Development Rights (TDR) that allow him to construct for profit elsewhere in the city.

In 2000 the High Court cleared the Chandivali resettlement project. According to Ramanath (2005),

“A shift in NHSS’s dominant strategies - from confrontation to cooperation with the state - began in November 2001, when the State Housing Minister invited NHSS to meet with a private developer” (291).

This turning point saw NHSS assume a direct role in shaping the resettlement project. PK Das would act as the lead architect, NHSS would monitor the construction process, and the Government of Maharashtra would allocate TDRs to Sumers and allow construction in Chandivali despite its status of a NDZ²⁰. This solution is remarkable in many respects: first, the structural elegance of avoiding public investments and public risks by paying a private contractor with TDRs; second, the leading role of a civil society organization (NHSS) and the private sector (Sumers), as well as the minimal involvement of public authorities; third, the triple role of NHSS in (1) acting as the advocate for slum dwellers, (2) serving as a contractor for the construction project (PK Das Architects), and (3) overseeing the construction work.

Construction started in 2005 and in 2007 resettled families occupied the first units. In 2007 Sumers and PK Das terminated their cooperation on the Chandivali project, as Sumers pushed for a more economic construction style that would meet the SRA’s minimum standards, while PK Das sought to incorporate additional features such as balconies and social facilities (schools, hospitals, open spaces) in the design. Chandivali’s remaining Phase I apartment blocks were constructed more economically under the

²⁰ Non Development Zones (NDZ) imply that construction is not permitted on this land. A change of this land status requires state level authorization.

supervision of a new architect. The proposed Phase II development will see construction of 23-story high-rise buildings and has raised concerns over the high maintenance costs that will result, and that may prove unsustainable for residents.

A High Court ruling in 2008 extended the payment period for the Rs. 7,000 fine to the Forest Department. As the initial payment period ended at a time when the remote Sherdon option was proposed, and the central Chandivali location is much more attractive and valuable²¹, an additional 13,000 families paid the fee to qualify for resettlement. Finally, 25,000 out of the total of 33,000 eligible families qualified for relocation. Of these 25,000 families around 8,000 have been relocated already to Chandivali while 17,000 are still residing inside SGNP, waiting for relocation. Many of those waiting for relocation have been temporarily relocated to the fringes of the Park (e.g. Kandivali).

2.3 RESULTS AND IMPACT OF PUBLIC INTEREST LITIGATION

The involvement of the High Court and Supreme Court through the legal process started by BEAG's PIL brought the city-park interactions to a new level. The High Court involvement forced a landmark decision that came out in favor of SGNP and nature conservation. Its orders provided new regulations and institutional structures to a complex and multi-faceted conflict. The High Court's decision gave a clear mandate for the Forest Department to evict illegal encroachers and detailed instructions to compel relevant authorities to take coordinated action.

The High Court orders opened a new era for the Park Management and its relation to other actors. The clear orders provided SGNP with a position of strength and additional resources to fight encroachments, but it also put them on the spot to achieve the results

²¹ Interviews with involved individuals suggest that the value of the relocations units exceed the Rs 7,000 fees by more than factor 100.

ordered by the court. As a consequence the management focus shifted toward evictions and demolitions of illegal structures. The increase of public attention and scrutiny reduced SGNP's autonomy in dealing with encroachers and forced them to achieve visible results. On the one hand, SGNP gained autonomy vis-à-vis the higher levels of the Forest Department, as it was now also accountable to the High Court and their committees. For most purposes, the High Court addressed directly the Park Director, as opposed to higher-ranking servants in the forest department. The court order to protect the Park director from the usual bureaucrat rotation scheme²² shows that this effect was not unintended. On the other hand, in implementing the court orders SGNP is highly dependent on the cooperation of other third parties. Given a lack of voluntary cooperation by other public authorities, negotiations between these entities and SGNP, have been replaced to a large extent by direct court orders and mandatory joint committees. The city-park conflict regularly opposes the Park to public authorities including the police, BMC, MMRDA that results in generally strained relationships.

Taking the conflict to a new level, the PIL also furthered the emergence of coordinated slum dweller organizations to fight for their interests. Most notably, NHSS and GHJP organized the collective interest of slum dwellers and allowed their representation in high-level conflicts and negotiations. After the failure of their first line of defense to rehabilitate slum dwellers in situ, encroachers were effectively divided into two categories: The ineligible group which was evicted without compensation and the eligible group which received or still hopes to receive a valuable, "free" resettlement. As of now, almost all ineligible encroachers have been evicted; while up to 25,000 families still remain on SGNP land waiting for resettlement²³. The cooperation between the SGNP

²²High-level bureaucrats, like the SGNP director, rotate functions in a two years cycle. This was seen as a threat to the implementation of the court orders since it introduces discontinuity and since it can be abused for political influence taking.

²³ Most of them have been relocated at the fringes. Some have been relocated to temporary forest areas at the border of the Park.

and NHSS and the creation of a high quality resettlement project, has increased the legitimacy of evictions and, arguably, has contributed to the containment of protests against evictions and demolitions.

2.4 SUMMARY

- The PIL resulted in strong legal momentum for SGNP by giving clear primacy to nature conservation over slum dwellers rights and development. The High Court involvement restructured the city-park conflict providing a focal point forcing fundamental decisions.
- While the legal conflict in the case of SGNP produced a clear ruling, the larger legitimacy conflict between the environmental, social, and development agenda continues.
- After initially violent confrontations the Forest Department succeeded in evicting about 60,000 encroacher families. About 25,000 other families are offered free resettlement by the GoM. This result was supported by an arrangement with NHSS to cooperate on the resettlement process.
- With the slum dweller evictions and resettlement being quite advanced, SGNP might be able to enlarge its managerial focus to additional topics.

3 AS OF JANUARY 2011

3.1 INTRODUCTION TO THE SGNP ACTOR SYSTEM

3.1.1 THE SGNP MANDATE FOR CONSERVATION

A series of land acquisitions and designations saw the continuing expansion of the SGNP up to the time of its final notification in 1996. Falling under the purview of numerous state and national legislative acts and with its official designation as a national park, SGNP has a firmly established mandate for nature conservation and for the protection of the forest, wildlife resources and biodiversity of the area.

Administrative control and, thus, primary responsibility for fulfilling this mandate remain with the Maharashtra State Department of Forests, specifically the Chief Conservator of Forests – Wildlife Division. But as the historical developments depicted in the first two chapters clearly illustrate, this mandate has been increasingly hard to fulfill in the face of growing pressures from Mumbai’s urban environment. Threats to conservation emanate from many sources and require both reactive and proactive response on the part of Park Management.

In addition to the legislative acts outlined in Chapter 1, government policies, organizational hierarchies and bureaucratic structures create *formal* institutions and regulations that govern public authorities and constrain private actors in respect of environmental objectives. However, *informal* institutions also serve to enable and constrain government entities and to shape intergovernmental interactions and external affairs. Cultural norms, relationships, and operating practices have a notable impact on intergovernmental and external relationships; they help to shape the observed strategies and resulting conservation outcomes.

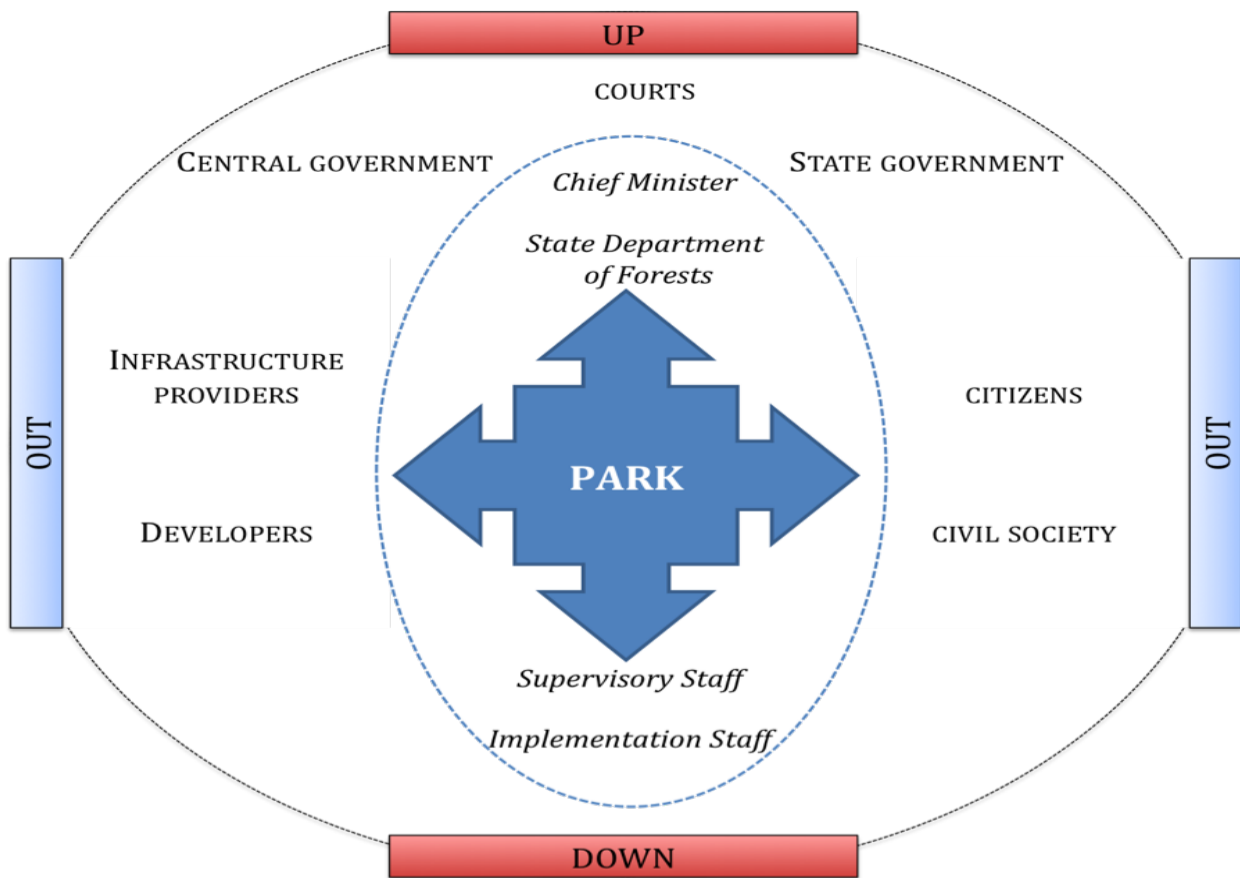
Conservation is a broad concept that encompasses a wide range of activities, which must be addressed in managing a national park. This is true of any national park but becomes

even more pronounced for the urban exception that is the SGNP. Given its location in the midst of the city of Mumbai, the SGNP faces additional pressures from its surrounding environment and must address many issues that are directly related to this urban setting.—The conservation mandate that on first glance appears clearly articulated and assigned quickly extends its reach to affect and involve a multitude of actors. The interests and objectives of these actors are sometimes aligned with the Park’s conservation agenda, however, conflicts often arise over competing and non-forest use of park lands. As was articulated for the case of the 1997 PIL in Chapter 2, the legitimacy conflicts surrounding SGNP create forces affecting the Park surround two overarching themes:

- Development vs. Conservation;
- “Brown” (or social, or human rights) vs. “Green” (or environment)

In the sections that follow, by describing some of the major issues and activities that threaten the conservation of SGNP today we will see some of these conflicting forces in the Park’s current environment. Our evaluation of SGNP’s present situation and the analysis that follows holds Park Management at the centre of a complex actor system, one that includes a multitude of individuals and organizations representing all sides of these conflicts and alliances. We chose to follow a sociological approach to organizational analysis that considered multiple levels of interaction within and between organizations, individuals, and groups in SGNP’s urban environment. This approach is grounded in recognition that organizations are necessarily connected to their surroundings and must be concerned with internal dynamics as well as with power relations and contextual factors in the external environment.

Fig. 3.1: The SGNP Actor System



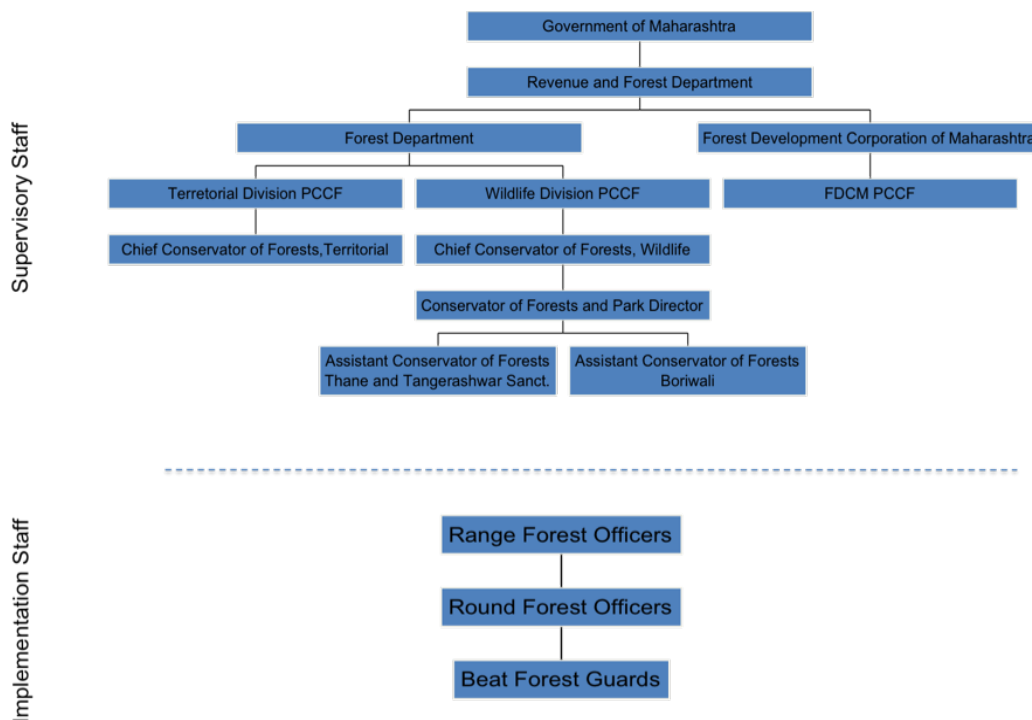
Organizations do not exist in a vacuum and cannot be seen as a mechanistic system. Instead, they must be understood as part of an organic and evolving system in a way that reflects the crosscutting nature of the issues they face and the inter-connectivities and inter-dependencies within and between internal components and their broader environment. This chapter presents a snapshot of the current picture of SGNP in its surrounding context (as of January 2011). It attempts to illustrate the relationships and interactions of SGNP with its internal and external environments. Drawing on interviews conducted and observations gathered over the course of our two-week fieldwork, we describe key opportunities and threats and primary management activities that characterize the management and conservation of the SGNP today.

3.1.2 SGNP ORGANIZATIONAL STRUCTURE AND OBJECTIVES

Sanjay Gandhi National Park falls under the administrative authority of the Maharashtra State Revenue and Forest Department. At the highest level, the Secretary of Forests reports to Maharashtra's Chief Minister and is supported by two Joint Secretaries. The Forest Department itself is divided into three branches: the territorial and wildlife divisions and the Forest Development Corporation of Maharashtra (FCDM), each headed by a Principal Chief Conservator of Forests (PCCF) and supported by an Additional Chief Conservator of Forests (ACCF). The Territorial Division is charged with the sustainable use of forest resources, while the Wildlife Division was established to provide dedicated management and protection of national parks and sanctuaries. The state of Maharashtra is divided into 15 circles of which 11 are Territorial Circles and 4 are Wildlife Circles. These circles are further separated into 57 administrative Divisions, including 14 Wildlife Divisions. Park Managers and divisional heads hold the rank of Conservator of Forests and report to Chief Conservators of Forests (CCF) as heads of wildlife and territorial circles. The SGNP is one of 13 national parks included in the Borivali Wildlife Circle; the Park Manager, reports to the circle's Chief Conservator of Forests. A senior official from the Department of Forests explained responsibilities in the hierarchical structure in terms of supervisory and operational functions as follows:

"The CCF's work is mainly about supervising and controlling. The Park directors are in charge of what is happening on the ground, like the financial aspects. The CCF's office looks at the way they manage the Park, if they implement the various projects as per the rules and procedures. The CCF reviews their work, the pace of their work, their demands for labor, if they properly reply before the courts. Park Management also prepares a management plan, the CCF scrutinizes the drafts and submits them to the hierarchy. The CCF's office provides support and guidance. As you know, in this country, powers are divided within the bureaucracy. The Park Managers have some powers, and the circle heads have some powers. Basically, their proposals are routed through the CCF."

Fig. 3.2 – SGNP Organizational Structure



Park Management attempt to influence conservation policies, particularly by documenting management activities and objectives in their Management Plans; however, they are ultimately subject to policy directives established at senior government levels and in the courts.

Two Assistant Conservators of Forests (ACF) report to the Park Manager, each responsible for half of the Park: one on the Borivali side and one covering Thane and the Tangareshwar Sanctuary. Implementation staff fill the roles of Range Officers, Round Officers, and Forest Guards. According to Park Management, 222 permanent staff were employed at SGNP as of January 2011. In addition to its permanent staff, the Park employs over 400 temporary and daily wageworkers for duties including gardening, painting, and other maintenance work.

In addition to the Park's core operating budget received from the state government (designated for specific activities and line items, such as replanting, fire fighting, wages, etc.), SGNP has a unique financial resource in its Public Leisure Account (PLA). Admission fees and revenues from the tiger and lion safari and other attractions are accumulated in the PLA, which creates a source of unrestricted funds, for use at Management's discretion in accordance with Management Plan initiatives. The PLA account is normally used to maintain the Park's tourism and recreational areas, often by engaging temporary workers. Other proposals may be made for use of the PLA funds but will require approvals from higher levels of the Forest Department and possibly the Central Government (for any change of land use).

The Park's overall conservation mandate is translated into management objectives and operational activities in the SGNP Management Plan (2001-2011). The MP is designed using guidelines produced by organizations such as the Wildlife Institute of India, translating these guidelines into an operational plan a management plan that can be implemented at SGNP. The Management Plan identifies core, recreational, and buffer zones, and specifies conservation objectives and operational activities for each of these areas.

BOX 3.1: SGNP MANAGEMENT OBJECTIVES

The 1999-2010 Management Plan translates conservation mandate into six objectives:

1. To conserve key species of the area.
2. To protect Catchments of Tulsi and Vihar Lakes.
3. To conserve mangrove Eco-system.
4. To remove encroachments and consolidate the external boundaries
5. To provide nature education to visitors
6. To manage wildlife tourism

(Source: SGNP Management Plan 2001-2011)

The conservation function, thus, involves a broad set of practices and wide ranging activities and initiatives. At least formally, the Management Plan is the point of reference for the bureaucratic hierarchy within the Forest Department. Interviewees from supervisory staff in the Wildlife and Territorial Divisions to the senior state officials referenced the Management Plan as a source of formal authority and responsibility – and a basis of evaluation – for Park Managers.

3.1.3 SGNP'S EXTERNAL ENVIRONMENT

As shown in the up-down axis of figure 3.1 and described in the previous section, the Forest Department represents only a slice of the picture that has developed in and around the SGNP. Beyond the inner circle of the SGNP Organization, many actors operate alongside and in close connection to the Park. Permeable boundaries between the Park and its surrounding environment allow interaction between all actors and in all directions across the actor system. These interactions and the forces they create stand to shape conservations policy and outcomes for SGNP.

Many organizations are concerned with the conservation (or non-conservation) of SGNP; these groups are external to the SGNP Organization but influential in shaping policy and operations in and around the Park. Several key groups are identified as follows:

- **STATE AND CENTRAL GOVERNMENTS** share authority over SGNP, with the Maharashtra State Revenue and Forest Department responsible for Park Management and the central Ministry of Environment Forests providing central oversight.
- **THE COURTS** are called on to pass judgments and issue orders based on environmental protection laws, but must respect of all other applicable state and central legislation.

- **DEVELOPERS** are in direct conflict with SGNP's conservation mandate as they seek to encroach on the Park to advance private investment interests.
- **INFRASTRUCTURE PROVIDERS** represent a form of passive as municipal authorities put forward proposals for utility and transportation corridors.
- **GENERAL PUBLIC** includes all different types of users and views in the "conservation vs. development" and "brown vs. green" debates that surround the Park.
- **CIVIL SOCIETY GROUPS** are formed with membership of the general public to support "green" and "brown" agendas and influence related public policies. Within these civil society movements, groups are active at multiple levels. Green NGOs, for example, include birdwatcher groups who are primarily consumers of park resources, educational groups that increase public awareness and provide volunteer support, and activist groups who defend the Park in political and legal circles.

APPLICATION OF FRAMEWORK TO ANALYZE CURRENT POSITION OF SGNP

Our research included confidential interviews with representatives from all subsystems and categories, with every effort made to include wide representation from all components of the actor system. Using an actor-based approach to organizational analysis, our research allowed us to identify myriad influences acting in concert with one another to shape outcomes in across multiple issue area. Some actors are involved and affected by multiple issues while others have a single point of interaction. Park-city relationships and asymmetries are explored in greater detail in the following chapter, however, an examination of several prominent issues highlights key relationships and

forces that surround the Park in its current context and reveals a series of connections interdependencies, and channels of interaction that operate across the actor system.²⁴

In the analysis of major issues facing SGNP that follows, Park Management is taken to be the central actor, with a focus placed on the key relationships between the Park Management and other individuals and organizations. These actors interact in defining policies and institutional structures that shape interactions across the actor system and the operational activities through which the various interests and objectives are pursued. To fulfill its objectives, Park Management has resources and faces constraints that stem from its organizational design (e.g. budget, staff, equipment) and its institutional setting (e.g. court orders) and the vast array of actors who try to influence the Park's management policies and operations. These actors, in turn, have their own objectives, resources, and constraints and, together, the many actors form a complex and evolving system that must be sufficiently understood to assess the modalities of Park Management and the Park's relationship with its external environment.

Our background research and fieldwork uncovered several key issues of current importance for the conservation of SGNP; these issues allow us to observe and analyze the features and dynamics of actor-system and resulting conservation outcomes. Each one is addressed in turn:

- Slum encroachment and resettlement
- Construction of the boundary wall
- Tribal populations within the Park

²⁴Our study included the SGNP organization internally, but did not attempt to do so for other organizations interacting with the Park. While we recognize the importance of internal factors, such in-depth analysis was beyond the scope of this report.

- Human-wildlife conflicts
- Education and tourism activities

3.2 SLUM ENCROACHMENT

3.2.1 HUMAN INHABITATION: A TOP PRIORITY

In its 1997 ruling, the High Court showed unequivocal support for the conservation of Sanjay Gandhi National Park, issuing clear orders for the removal of slum encroachments within park boundaries. A subsequent decision dated July 1999 (Petition No. 305/95) addressed the issue of relocation, calling for the peaceful relocation of encroachers to commence by February 2000. Demolitions began immediately after the 1997 decision, but the requirement to rehabilitate large numbers of eligible encroachers was destined to become a much longer-term issue. The relocation challenge was identified in the 2001 Management Plan, which states that: “practical difficulties are being faced in relocating the encroachments made before the date 1. 1. 1995” (SGNP Management Plan, 2001; 30). Indeed, the removal of over 600,000 individuals and entire communities that had developed over a period of almost 50 years would be no small task. The slum encroachments that have plagued the SGNP for decades present a multi-faceted issue that can be viewed in terms of two overarching activities: prevention and removal.

The problem of slum encroachments was clearly identified as a priority area at all levels within the SGNP organization, notified as such in interviews with senior departmental officials from the Department of Forests and Forest Guards alike. The view of Park officials on this issue was clear, with one stating explicitly that:

“there should be no more encroachment in the Park”

and that the Park must:

“be cleared of all human inhabitation and interference”.

3.2.2 REMOVING SLUM ENCROACHMENTS

The 1997 P.I.L. ruling marked an important shift among players in the SGNP actor system with respect to slum encroachments in the Park. With the High Court Order clearly establishing a requirement for demolition, the focus shifted from the question of *if* slum encroachments in the Park should be removed to *how, where* and, importantly, *when* they would be resettled. Today, the removal of slum encroachments remains one of the most challenging issues for Park Management.

The process of removing slum encroachments is a complex one that involves a series of activities and actors. The process begins with the identification of suitable building sites and securing required lands; second, it requires construction of high-density residential buildings; and third, newly constructed buildings must be connected to municipal services including water and electricity. Once completed, available spaces are allocated among the thousands of eligible families; finally, community services such as schools must be made available to these relocated families.

The Park is ultimately responsible for the removal of slum encroachments but, as illustrated in Chapter 2, depends heavily on other actors to complete resettlement projects. The Slum Rehabilitation Authority (SRA) is the planning authority for development projects, municipal corporations are responsible for providing municipal services and NHSS continues to play an oversight role, representing slum dwellers' interests and monitoring the overall rehabilitation process. As just one piece of a major citywide issue, the SGNP slum resettlement requires public policy and political support for progress. As one slum dweller advocate explained:

“At the top it is a policy issue. Whole rehabilitation process is not high on the priority list for the government.”

To bring all parties together in a formal manner, the High Court appointed the Chief Minister of Maharashtra as head of the Monitoring Committee, whose membership includes the Forest Department and various state departments and agencies involved in

the rehabilitation process. Members of the Monitoring Committee report to the Chief Minister, who is required to file affidavits with the High Court to provide progress update on implementation of the High Court Orders. The mere existence of such a high-level committee highlights the complexity involved in slum rehabilitation; the Department of Forests on its own simply has neither the resources nor the authority to remove encroachments and rehabilitate encroachers.

“The Forest Department Coordinates with SRA which actually constructs the buildings. We monitor the progress and the pace. This is monitored even at the level of the Chief Secretary. He can direct the secretaries of other departments – housing, police, forests, etc.”

SITE IDENTIFICATION AND LAND AVAILABILITY

The need to find suitable land for resettlement projects was consistently identified as the biggest roadblock in the SGNP’s slum removal process. A 1995 Housing Policy to provide rehabilitation to slum dwellers on the *existing* site does not apply in the case of untenable lands, which include ecologically sensitive areas such as SGNP, dangerous areas (e.g. threatened by landslides) or land designated for alternative use according to land reservation policies. Approximately 15 to 25 percent of Mumbai’s informal settlers stay on untenable land, which creates competing claims for new resettlement sites. The Housing Department normally follows the principle that authorities benefiting from the redevelopment are expected to bear the costs of slum rehabilitation. These requirements are easily incorporated in total project costs for infrastructure or private developments but are not so easily addressed in situations where “society” is the beneficiary. With neither the general public nor the benefiting authority (i.e. Department of Forests) contributing to resettlement costs, it becomes even harder to secure land for redevelopment purposes.

Interviewees consistently referred to Mumbai’s powerful land lobby and a builder-politician nexus that often requires political influence and approvals to secure land for

resettlement purposes. The Chandivali resettlement site, for example, required special approval given its status as a No Development Zone.

BUILDINGS

The Slum Rehabilitation Scheme managed by the Slum Rehabilitation Authority assigns a central role to developers and builders; the scheme is designed to attract private investment in housing for the poor by offering development incentives. However, the SRA schemes are criticized for allowing redevelopment projects to become market-driven rather than needs-based. With a slump in Mumbai's real estate market in 2004-2005, for example, developers were unable to sell TDRs in the open market and, thus, there was little incentive for construction. Activist organizations such as NivaraHakh are especially critical of this approach to social housing, insisting that the private sector cannot undertake such projects and that the state should assume direct responsibility for social development.

“From 2004 to 2005 there was very little construction because there was a market down turn. Sumer Corporation didn't want to construct because how would he get the money? They couldn't sell TDR given the economic condition”.

A related debate regarding SRS surrounds the type of development projects that are constructed under the scheme. Private developers are expected to meet minimum building standards established by the SRA but, with the focus on short-term profits, have no incentive to consider maintenance requirements or other social infrastructure needs. A lengthy consultation and design process may be involved before all parties agree and project approval is granted.

MUNICIPAL SERVICES

If the availability of land and design of slum rehabilitation schemes represent long-term, structural problems hindering the resettlement process, it was clear that the most immediate constraint and indeed the most urgent need of slum dwellers is access to the

most basic necessity: water. The Bombay Municipal Corporation is the authority responsible for providing municipal services to the Chandivali resettlement site and other within its boundaries. The low priority given to slum resettlement projects in the city's overall development can be seen in the stark contrast between Chandivali and its high-end residential neighbors in Powai. While water was cut by an average of 15% across the city in 2009, Chandivali saw a dramatic 90% reduction. Despite the close proximity of Powai lake and the SGNP's Tulsi lake, the Chandivali rehabilitation site has been denied adequate water supply since occupants first arrived in 2007.

BOX 3.2: WATER SHORTAGES IN CHANDIVALI RESETTLEMENT

Approximately 180 litres per person per day is the normal water consumption in Mumbai; the BMC accepts 90 litres (approximately 30 minutes of continuous supply) as the minimum level required for human settlement. In the first phase of the Chandivali resettlement, the BMC was providing 45 litres per person per day to the colony. The Municipal Corporation filed an affidavit to the Bombay high court committing to increase the water supply to 90 litres per person per day effective December 2008. (Times News Network).

But by the Fall of 2009, the BMC had almost completely stopped the water supply to the colony and the 8,000 resettled families were left to queue for water tankers provided by the BMC. The resettlement process came to a halt and fully constructed buildings were left empty; the remaining 4,000 families from phase I could not be rehabilitated because of the water shortage (Times News Network, 2010). A change in BMC policy saw the end of water tanker services in February 2011 and left residents with as little as 10 liters of piped water per day; the Bombay High Court ordered the BMC to increase water supply to the building in a March 2011 ruling.

The Forest Department abdicates any responsibility to provide water access to Chandivali, rejecting the notion that a pipeline from the Park's lakes should be used to solve the water problem and expedite the resettlement process. Forest officials are quick to point out that the BMC is the responsible authority and insist that other water sources are available to meet current needs without infringing on the Park.

“New dams are coming up in the adjoining areas, and the requirements are being fulfilled by making some arrangements...it is in the process and they will get the water.”

RESETTLEMENT ALLOCATIONS

Allocation of available resettlement housing involves two distinct steps. First, the SGNP must compete with claims from other slums resettlement projects and with politicians who have a vested interest in securing the properties for the benefit of their constituents rather than for the SGNP rehabilitation as intended. As one interviewee explained:

“Municipal Corporators play a sort of role of serving narrow interest, a particular community and in a particular area. There is often a clash of interests in deciding where to allocate resources.”

Political bargaining often ends up in the courts and further slows the resettlement process. A school built in the Chandivali resettlement, for example, has been built and left vacant for over two years as a local politician tried to claim it to serve his own interests and not Chandivali at the expense of Chandivali residents. An NHSS activist explained the organization’s role in overcoming this impasse:

“We threatened to physically overtake school and start classes ourselves. Within 4 days the documents were signed; minister denied ever trying to stop it. This was a major victory.”

Second, resettlement flats must be allocated among SGNP families that are grouped in Phase I and Phase II lists based on eligibility and payment dates. Park officials determine eligibility and maintain the resettlement lists, which contain the names and status of families awaiting resettlement. Having paid a fine of Rs 7,000 to the Forest Department and now falling under close monitoring and control, residents of the SGNP slums depend on the Forest Department. For them, Park Managers hold the key to their

relocation; the Park may exploit this vulnerability introducing unnecessary requirements or making false promises. Despite their control over slum dwellers, Park Management has relatively little power and few resources to influence the politically and economically costly resettlement process.

ADVOCACY AND INFLUENCE

The 1997 PIL ruling marked an important shift among players in the SGNP actor system. With the High Court Order clearly establishing a requirement for demolition, the focus shifted from the question of *if* slum encroachments in the Park should be removed to *how, where* and, importantly, *when* they would be resettled.

As highlighted in Chapter 2 (Box 2.2.), brown NGOs have played an important advocacy role throughout the PIL and slum resettlement process. Our interviews held a particular focus on NHSS's role as a direct participant in the Phase I Chandivali development project and a member of the High Level Monitoring Committee.

As a prominent organization with over 20 years of history and highly regarded leadership, NHSS is an influential actor with the ability to pressure government organizations to implement the High Court's resettlement orders. NHSS also has the resources to take legal action in the Courts, build public opinion through the media, and organize protest movements among slum dwellers. In the legal battle to restore water to Chandivali, for example, NHSS presented video footage of women and young girls carrying buckets of water on their heads to the top of seven-story buildings in an emotional appeal to judges. At an implementation level, such interventions serve to expedite the resettlement process and support the Park's objective of removing slum encroachments.

Beyond its role in implementing the High Court Order for SGNP's slum resettlement, however, NHSS plays a much broader role as a political actor that seeks to influence social policy for the benefit of slum dwellers across the city. In this sense, NHSS acts as a social architect that aims shape housing projects and indeed entire rehabilitation

communities. . NHSS officials showed strong opposition to market-based SRA schemes and to the proposed 23-storey Phase II resettlement project in particular.

“Rehabilitation deals with physical planning, planning norms, standards, policies, social amenities like education health care and employment opportunities in the area, women and children’s rights, open spaces. All of this constitutes the broader issues of housing. NHSS dealt with this with a participatory framework.”

In its efforts to expedite the Chandivali resettlement process, NHSS serves the interests of both slum dwellers and the Park. But its relationship with the latter is ambivalent. While helping to resettle families, NHSS is also its own interests which are closely aligned with the Chandivali project. Given its involvement in the project’s design, NHSS has a vested interest in the success of Phase I to showcase a slum rehabilitation model could be replicated across the city. NHSS officials oppose the 23-storey buildings that have been approved for Phase II, arguing that this type of development simply creates “vertical slums”. Any action to oppose future resettlement projects – either through legal action or by lobbying politicians and the SRA to increase minimum standards – stand to delay the ongoing resettlement of families in SGNP and may actually work against the Park’s interest to remove all encroachments as soon as possible.

Green NGOs – BEAG in particular – were the key actors that prompted action on the Park’s encroachment problem, but with High Court orders now in place to ensure removal, they have taken a rather secondary role on this issue. Green NGOs side with the Park in advocating for the earliest possible removal of encroachments and use the courts to pressure implementing bodies and spur action from high-level government authorities.

3.2.3 PREVENTING NEW ENCROACHMENTS

With slum resettlement projects largely in the hands of other government departments and private developers, Park Managers are more focused on monitoring the slum

pockets that remain inside park boundaries and preventing new encroachments from forming.

Park Staff continue to patrol existing structures and dismantle new ones. Related activities consume a large portion of staff time as vehicles are not widely available and daily patrols are most often carried out by foot. Park staff including Forest Officers and Forests Guards echo Management's views in identifying encroachment as the biggest problem in the Park. The time spent fighting encroachment limits their ability to perform other duties that are arguably more directly linked to nature conservation, such as fighting fires, illegal cutting, and poaching. Park staff pointed to a need for additional staff and equipment (e.g. surveillance cameras and patrol vehicles) in order to respond more effectively to the encroachment threat. One Range Forest Officer estimated that 65 percent of his time is spent fighting encroachments, explaining that:

"It is my primary duty to remove the encroacher. They are constructing; we are destroying. This is our routine".

Park staff are often faced with intimidation or even physical assault when carrying out demolitions of illegal structures. Given these threats, park staff sometimes call on local police to provide protection when carrying out demolitions; interviewees spoke a good relationship with the police but complained of the slow response time that made it difficult to rely on police for protection.

"Sometimes we take the protection of the police but sometimes it takes long. It takes 8 to 10 days to get the police. We ask for protection and it takes a long time for them to come."

As a direct consequence of the High Court orders, a boundary wall is being constructed to help secure the Park boundaries and prevent further encroachment. The Public Works Department has constructed approximately 20km at strategic points to date, however, it has been criticized for its slow progress. According to one interviewee:

“The construction of the wall is done by public works which is extremely inefficient, slow and unreliable.”

For Park Managers, the wall remains a top priority that must be identified as such in the forthcoming Management Plan with resources identified for additional budgetary and staff provisions. Park Managers and some Green NGOs see the wall as a key piece of infrastructure required to combat encroachment, arguing that the wall must be built:

“[...] so that there shall be no litigation of the boundary disputes. This will automatically bring down the encroachment level. It is along the periphery so that a seal is created.”

Fig. 3.3 - Part of the Wall on the Thane side of the Park



Extending the wall beyond 22km may prove difficult without the backing of a High Court order to do so. According to one interviewee:

“BMC and public works do not want to have the wall and there is no political action to oblige them. On the contrary, pressure is exerted to stop public bodies to implement the high court orders. “

Other interviewees saw the wall as a tool to help fight encroachment but admitted that could not solve the problem entirely. They explained the pointed to examples where the wall was damaged or disputed

“The wall is being damaged. They cleared some hole, and then will some more holes.”

“The wall will minimize the problem, but the high court order is very difficult to construct. There is objection to the boundaries.”

“Building a wall will not stop the encroachers. It will minimize the problem.”

As discussed in relation to the human-wildlife conflict below in section 1.4, the Forest also presents the wall as a measure to protect neighboring communities from the leopard threat, which adds legitimacy to the Park’s construction activities.

3.3 TRIBAL COMMUNITIES

3.3.1 THE HUMAN INHABITATION EXCEPTION

Park Management’s desire to rid the Park of “all human inhabitation and interference” is clear. The 1997 High Court orders ensure that the major source of human inhabitation – slum encroachments – will be removed, however the Park’s tribal populations present a much more precarious issue for Management. Tribal populations fall under the authority of the Maharashtra State Tribal Affairs Department and are protected under the 5th Schedule of the Indian Constitution, as well as under the 2006 Recognition of Forest Rights Act.

Box 3.3: Legal Protection of Tribal Populations

Indian Constitution, 5th Schedule

- Tribal land cannot be transferred to a non-tribal entity

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

- Applies to persons that live on forest lands and depend on the forest for their livelihoods. Individuals must be satisfy these eligibility criteria for a period dating back 75 years (“Other Traditional Forest Dweller”) or be members of a scheduled tribe residing in the areas that the tribe is scheduled (“Dwelling Scheduled Tribe”).

- Gives rights to the land that they have been cultivating (as of December 13, 2005); rights to use forest resources including grazing areas, herbs, and medicinal plants but excluding timber; and rights to protect and conserve community forest resources and wildlife (previously under the sole discretion of the Forest Department).

Park Managers consider tribal communities a threat to forest conservation, particularly because of fire hazards and illegal cutting, distilling liquor illegally, and harvesting of forest resources. Tribal advocates, on the other hand insist that, given their long history and connection to the land, tribal populations respect and defend the forest. Tribal communities also provide a source of labor to the Park, working as daily wage laborers for gardening, maintenance. But while the impact of tribal populations on the Park's conservation continues to be debated, the Park has little ability to control these residents, given their protection under the Recognition of Forest Rights Act. Park Officials may issue fines and report violations but ultimately rely on other branches of government to take action on tribal affairs issues. As one Park Manager explained:

"I am not in charge of the tribal communities. I don't do anything. Even if they cause a problem I go to the law. Committee of tribal affairs I report to them, but that ministry is not under my control."

Legal proceedings can be used as a response to certain problems caused by tribal populations, but the Park cannot expect to find a legal solution that will delimitate tribal inhabitation as it did slum encroachments. Instead, the Park must work toward a voluntary resettlement process, which requires direct engagement and careful negotiation.

Tribal *padas* were once dispersed throughout the Park, including in the core zone, but are now scattered around the buffer zone. Tribal villagers repeatedly identified their inability to access water, electricity, health services, and other community services as their greatest challenge. A commitment to provide such basic amenities lies at the heart

of Park Management's current proposals to consolidate and relocate all tribal *padas* to the fringes of the Park. Park Management has been working to relocate tribal settlements for several years but have faced great difficulties in this process. First, it has proven difficult to differentiate between tribal settlers and slum dwellers, many of whom have been living in the Park for their entire lives. Second, there is a lack of cohesion between the 14 tribal *padas* located within SGNP boundaries. Except for festivals and other special occasions, interviewees reported very little interaction between *padas* and pointed to certain conflicts that exist between *padas*. Park Managers tend to aggregate tribal populations in referring to them as a single cohesive groups, however divisions were evident in one interviewee's explanation his *pada's* involvement with Committed Community Development Trust (CCDT), a tribal welfare NGO:

"Most people from Nava pada support the organization, and less people from here do because they select one village as head. The lady that heads it isn't a part of us. She doesn't want us to go there. I helped in another pada to get certificates and ration and legal documents. The people from here are not cooperative."

Tribal settlers are often illiterate, lack proper documentation of their tribal heritage, and are unaware of their rights, which leaves them vulnerable to manipulation by politicians and other vested interests.

"Our forefathers were illiterate and these officials took their documents and took their kindness and the original documents. They trust anyone, and they were fooled."

With such a deep-rooted mistrust between tribal villagers and Forest Officials, creates tension between the two groups, making it difficult for the Forest Department to gain buy-in from tribal persons for proposed relocation schemes.

3.4 MAN-WILDLIFE CONFLICT

3.4.1 PUBLIC OPINIONMAKER

Nature conservation and wildlife protection becomes a very controversial issue when it comes in direct conflict with human safety and puts human lives at risk.

As the SGNP and city of Mumbai have grown closer and closer to one another, so too have their respective human and wildlife populations. Leopards began wandering into neighboring communities in search of food and found domestic and stray dogs as easy prey.

The human-wildlife conflict is a very sensational issue that receives extensive media coverage. It has a great impact on public perceptions of the Park, raising the question of where the state's priorities should lie: in protecting its citizens or in protecting its animal populations? The salience of the human-wildlife conflict in the public's eyes and the prominence of the human vs. animal debate vary with the number of incidents and extent of media coverage.

The human-wildlife threat gained prominence in the early 2000s as the number of leopard attacks grew. In 2001, 30 leopard attacks resulted in 19 deaths and a leopard study committee was created to look into the problem. The committee issued recommendations that focused on education and awareness building in tribal villages and slum encroachments within the Park.²⁵

²⁵Based on the recommendations, the BNHS began to deliver education projects in 2005; the program was delivered to all padas and nagars, educating 25,000 people in total.

3.4.2 CONSERVATION CONCESSION, IMAGE ENHANCEMENT

To respond to the leopard conflict – and associated image problems – the Park sacrificed some of its conservation agenda and began trapping “problem” leopards; currently there are 29 leopards held in captivity. While Forest Officials insist it is necessary to capture these animals to protect (and, thus, appease) the local community, they also face criticism from environmental groups over the animals’ health and conditions in captivity. It is widely questioned whether these are in fact the leopards that were involved in human attacks, as it identifies the leopard after-the-fact. According to one interviewee, the decision to begin trapping leopards was a rather hasty one:

“At that time something had to be done...trapping was really a panic reaction”

Thus, while it is argued that the leopards are captured to protect humans, both the decision to trap and the tightly controlled captivity that follows can both be seen as attempts to protect Park’s image with local residents and environmentalists alike. A National Geographic film crew was in the Park shooting a documentary on the leopard conflict; they explained how access to the caged leopards was denied. Obviously, such coverage in influential international media would present a very bad image for the Park.

“We have to go through them [the Park Management] to get all of the necessary permits and approvals. They don’t exactly approve our message, but they will stop us from shooting certain things if they don’t want them shown. We weren’t allowed to see the leopards in the cages. Everyone knows they exist but they won’t let us in to see them.”

3.4.3 MANAGEMENT GREY ZONE

The leopard problem illustrates the ecosystem’s non-respect of administrative boundaries and has implications for park management and conservation, particularly in interactions between Territorial and Wildlife Division and with the surrounding communities. The leopard threat generates fear in surrounding communities and causes residents to become angry with the Park for its failure to contain the problem within its

own boundaries. Within the Department of Forests, the Park's boundary creates an administrative division: the notified area within the Park falls under the purview of the Wildlife Division while areas outside the Park fall under territorial jurisdiction. Park Staff pointed to a communication gap that exists between the two divisions, describing an incident in which the Territorial Division staff trapped some leopards who had wandered into their area, without obtaining proper authorization from the Chief Wildlife Warden.

3.5 EDUCATION AND TOURISM

3.5.1 LEGITIMATE USE – AN ONGOING DEBATE

The use of the Park for education, tourism, and other recreational uses has been a subject of debate between Park Managers, environmental and other user groups, and local citizens alike. The controversy over rights to use the Park and the legitimacy of various uses was evident during our fieldwork period. The Park is a valued resource to many groups, offering fresh air, calm surroundings and abundant wildlife, flora, and fauna; however it is also a resource to be conserved. Various groups showed conflicting in their views of how and if such activities can take place in the Park while respecting the conservation mandate.

3.5.2 THE GATEKEEPER'S MULTIPLE ROLES

Through its land use designations and operating policies, the Park acts as a *regulator*, controlling access to areas and resources within the Park. Managers and Senior Forest Officials establish the formal rules and procedures and issue permits to users that grant access restricted areas of the Park; Park Staff (i.e. Forest Guards, Round Officers, etc.) are charged with enforcement as they patrol their respective areas and may evict and/or issue fines to unauthorized users. Land designations within the Park are intended to protect the majority of the Forest from human interference, and establish an area that permits public access for recreational use. According to one Forest Official access to the Park must be differentiated based on the invasiveness of user groups:

“There are two types of interactions that take place in the Park. One is bird watchers and the like, who respect the place, who know how to behave. For them, we have and we can have trails, so they can carry out their activity. The other is encroachers, picnickers, all those who come to make use of the Park, and who affect the Park’s flora and fauna. These people, they should not be allowed inside the core zone of the Park. This is why we have differentiated the areas.”

The Park’s limited-access “Core Zone” covers approximately 77 sq. km; and requires a special permit from the Forest Department to enter. The Krishnagiri Upvan area, on the other hand, is a multiple use zone intended for recreational purposes that covers an area of almost 6 sq. km. The Park interacts with visitors as directly as an *operator* of recreation and tourism facilities, most notably the popular lion and tiger safari. The Park extracts revenue from users by issuing permits to access restricted areas and collecting admission fees from all visitors who enter the Park. Park entry fees represent a major source of revenues for SGNP and represent a unique resource for the Park. It is interesting to note, however, that the favors reduced visitation to the Park, even as visitors provide important financial resources.

The Park also acts as an *information provider* by maintaining nature information and interpretive centers on both the Borivali and Thane sides of the Park. These centers seek to educate visitors on the conservation values of the Park and on the wildlife that is found within the Park. The centers include informative displays on the wildlife found within the Park and, at the Borivali Nature Information Centre (NIC), forest staff arrange education tours of the Park for school groups and other visitor upon request. Though not explicitly stated, Park Managers act as *image-makers*, in trying to influence public perceptions of the Park. Image-related concerns are especially evident in the Park’s relationship with the media but remain a consideration in all interactions with external stakeholders. As the gatekeepers between the Park and City, Park Managers must balance the multiple roles outlined here in interacting with myriad user groups.

3.5.3 A MULTITUDE OF USERS

Formally, there is a clear delineation between restricted and public access areas of the Park. However, the land-use designations and other park rules mentioned above are not applied in a mechanistic manner and informal practices tend to govern decision-making and enforcement activities. As a regulator, the Park controls many resources deemed valuable by external user groups (e.g. core zone permits, guest houses, access to caged animals, etc.); at the same time, however, it relies on external groups to fulfill the needs and objectives associated with its other roles and its overall conservation mandate (e.g. provide volunteers, political influence, build public support, etc.). Thus, the Park can be seen to implement unique strategies in its interaction with each user group, granting access and permitting use of park resource so as to manage its relationships to achieve the [optimal / desired] outcomes. Conflicts among users arise out of this differential treatment and reflect their respective views of what constitutes “legitimate” use of the Park.

RECREATIONAL VISITORS

Given its location in an urban centre, the SGNP is a major attraction for recreational users, including morning walkers and picnickers, tourists, young couples. Tourism offerings including the Lion and Tiger Safari, and Kanheri caves attract a high volume of visitors each year. The Park offers an escape of sorts from the bustling city, attracting many day users and picnickers. These visitors are a major source of revenue for the Park; entrance fees are accumulated in the PLA account

Fig. 3.4 – Kanheri Caves



and may be used by Park Managers for purposes consistent with the approved Management Plan.

The PLA account is primarily used to maintain the recreational area. An annual pass is also available at a nominal fee to local residents who wish to access the Park and walking trails in the early morning hours (5:30am to 7:30am). Many tourists, picnickers, and morning walkers wander into restricted areas of the Park and remain in the Park beyond the hours permitted, with forest officials often turning a blind eye to such minor disturbances. For many young couples, the Park offers a secluded place to visit and they often enter into restricted areas. Because of the associated social taboos that stand to create an image problem for the Park, their presence is less tolerated by forest officials. According to several sources, these recreational user groups would be used by forest officials to extract small bribes when caught in restricted areas.

NATURE LOVERS

Environmental groups and conservationists tend to share the most extreme views regarding legitimate use of the Park, insisting that the Park remains off-limits, especially in the core zone, and can be used only for conservation and environmental protection purposes. For nature lovers and environmentalists, the only legitimate uses of the Park are those that directly contribute to the protection of wildlife and other forest resources. Nature lovers view almost all users as a threat to the Park, especially recreational user groups, because they disturb the wildlife and litter in the Park. One interviewee even grouped threats from recreational use with those from industrial activities, arguing that if the Park is not protected, “factories, Roads, picnickers and tourism, all this would take it over”.

“[Morning walkers] also become a problem to the Park. They disturb animals and throw their litter away. This is bad for the Park. If no morning walkers came the Park, the Park would be better”

Environmental groups show a great range in their size, resources, the scope or their activities and reach of their influence. Environmental groups remain quite divided in their operations and show little cooperation within this group of actors. Several interviewees explained a sort of rivalry that exists between environmental groups as each group sees itself as the Park's primary defender. Together, these groups represent many dedicated individuals who are dedicated to the Park and, collectively, defend and protect it from outside threats.

The variation in the Park's relationships with environmental groups mirrors the variation within this group of actors. The relationships reflect the Park's dependency on resources available within these groups that contribute to its operational activities and advocacy efforts. The BEAG and CAT maintain strong relationships as the Park's primary ally, largely due to the personal relationship that has developed with Debi Goenka. These groups have fought for the conservation of SGNP and have political and legal influence in protecting the Park. In the 1997 PIL and several court cases since, Debi Goenka has fought for the Park and not against it. Mr. Goenka holds a very close relationship with the current Park Manager; we were even invited to dinner with the two men to discuss issues surrounding the Park. CAT continues to fight for the Park by creating political and legal pressure against agencies charged with implementing the 1997 High Court Orders

The specialized knowledge and expertise held in Green NGOs can be seen as both a resource and a threat to Park Managers. These groups possess a wealth of knowledge about conservation related issues and are in position to share this knowledge with the public and with Park Officials to generate public awareness and improve conservation management. However, with this knowledge environmental NGOs and activists are also in a position to evaluate management activities and expose problems within the Park. Some environmental groups, including the Bombay Natural History Society (BNHS), have been critical of the Park, for instance in for instance of the flawed and outdated methods used to count animals or the poor health of animals held in captivity.

Dissenting voices are often kept at a distance and denied access to the Park's for research and other purposes.

Environmental groups provide approximately 150 volunteers to the Park each year to assist in conservation activities, most notably during the festival and fire-fighting seasons. NGOs also perform functions within the Park that the Park does not, delivering educational programs and guided tours, for example. But while many small NGOs may contribute human resources and expertise (i.e. volunteers), they remain a lower priority for the Park because they lack the financial resources and political influence to be seen as a significant player in its fight against outside pressures. These groups may rely on the Park for data collection purposes or as a source of revenue (e.g. educational tours) but often experience lengthy delays in permit processing and approvals and are frustrated by the lack of enforcement when it comes to violations made by what they consider illegitimate recreational users. As one interviewee put it:

"All the others [picnickers, morning walkers] come here and spoil the Park and have no restrictions. We who want to do some serious work have all kinds of restrictions and fees to pay. We volunteer and help. But we have to go through such a long process to get permission to do anything [as bird watchers, tour guides]. But at the same time they [Forest Officials] turn a blind eye to those who come and abuse the Park. Let them play dumb when caught in off limit areas. Meanwhile, we have to pay Rs. 250 to gain access to core area. What about the people who enter for free and spoil park? That is not fair. We are actually supporting the Park, we are the ones who pick up the trash of the others and we have to pay."

VIP GUESTS

A final user group that is worth mentioning includes many VIPs, politicians, and senior officials who are regularly granted access to the core zone and guesthouse located therein. Such privileges are granted as exception to park policies to build relationships with influential individuals who may support the Park on bigger issues, such as slum

encroachment and redevelopment, new initiatives (e.g. leopard safari), or land acquisitions and defend the Park against development pressures.

3.6 SUMMARY

The SGNP is much more than a formally designated and protected landmass that is subject to hierarchical (top-down) management structures within clearly defined administrative and territorial boundaries. The fragmented structures outlined above (and discussed in greater detail in Chapter 4) tend to present a mechanistic approach to park management, but the current issues described in this chapter highlight a very different reality. Like any organization, the SGNP's organization shows strong connections to its surrounding environment; its conservation objectives are inherently linked to the other individuals and organizations that make up the SGNP actor system. Evidence of this interdependence can be seen in each of the major issues discussed in Chapter 3, summarized as follows:

- **SLUM ENCROACHMENT** – In the past, external actors, particularly political groups could be seen to slow the progress by convincing slum dwellers to “hold out for a better deal”. Political influence remains key to implementing the High Court’s orders, as implementing agencies must secure land for rehabilitation, negotiate resettlement schemes (market-based or otherwise), connecting municipal services, and constructing the boundary wall. The Park is heavily dependent on other government agencies and the private sector to carry out these projects, and receives continuing support from the Courts who monitor overall progress and issue orders on specific operational issues (e.g. timelines, water connections, etc.)
- **TRIBAL COMMUNITIES** – Tribal issues fall under the authority of the Tribal Affairs Department and interactions with these communities are subject to rights and protection granted by the Recognition of Forest Rights Act (2006). The key difference between tribal villages and slum encroachment is the need for

voluntary relocation; the Park cannot rely on the courts to move tribal villages and must work to achieve a negotiated settlement. With the tribal population split into a number of distinct *padas*, and, given the long history of mistrust and vulnerability, and political opportunism, such coordination on issues of tribal affairs.

- **HUMAN-WILDLIFE CONFLICTS** –The human-wildlife conflict is a precarious one for the Park because of its impact on the Park’s image. Journalists can have a significant impact on public perceptions of the Park, thus the Park has an interest in nurturing these relationships and controlling the image that is exposed in the media.
- **EDUCATION AND RECREATION** –The Park depends on resources from other actors to protect the Park and deliver programs and services that contribute to its conservation mandate. Green NGOs such as BEAG hold significant influence in political circles and have the resources to pursue legal case to defend the Park, while others provide a volunteer base to participate in park initiatives and help to build awareness of the ecological value of the Park.

4 FINDINGS

4.1 INTRODUCTION

Grounded in our understanding of SGNP's development within a growing Mumbai, and drawing on direct observation of the Park in its current metropolitan context, our findings expose four main themes that define the city-park conflict and thereby impact on Park Management.

- **Fragmentation within the Actor System:** The Park operates in a highly fragmented context. This is true with regard to public administration, the different land types united in SGNP, and SGNP's societal context. This fragmentation creates constraints and resources, challenges and opportunities for the Park and is a salient feature of the Park's context.
- **Asymmetric Relationships between the Park and the City:** Park and city do not interact on an equal footing. Various differences in the organization and interests of park and city players introduce systematic asymmetries which explain much of the observed behavior and need to be accounted for going forward. (E.g. Many actors stated, "for the Park all victories are temporary while losses are permanent".)
- **Defensive Strategy of the Park Management:** The Park Management is faced with the challenge of conserving the Park against the pressure from the growing city. This immediate imperative for the Park Management contributes to a focus on defensive or protective activities in the current activities of the Park.
- **Multiple Values of SGNP:** Value or benefits from the Park to individuals or society motivate people to engage for the Park and to protect it against other land uses. The drivers of this value, or the uses that create it, however, comprise a wide spectrum from pure conservation to more active uses. Harnessing this value and its multiple drivers in favor of the Park is a strategic challenge for Park Managers beyond the operational challenge to fight encroachment.

We explore each of these themes in greater detail in the subsections that follow and discuss their relevance for park-city relationship. A particular focus is given to the final subsection, which considers the multiple values of the SGNP for different users and uses. The value of the Park, to individual users, stems from different functions, which can be grouped into a few categories. The analysis of these categories carries over as the main framework to the following chapters. Seeing the trade-offs between these uses, their constituencies, their political muscles, and the synergetic or conflicting relationships between them, put SGNP's strategy into a different light and allow deducting some hopefully interesting insights and recommendations.

4.2 FRAGMENTATION WITHIN SGNP

Over the years, the SGNP has grown through a series of land acquisitions and designations that brought together a patchwork of protected lands that, together, make up the Park's 104 sq. km surface area. To further complicate this patchwork of protected lands, there are many different authorities operating in the Park (e.g. Forest Department, Archeological Service, BMC, etc.), each responsible for managing some aspect of the Park and pursuing their own – and sometimes competing – objectives. Administrative divisions within the Park (e.g. core, recreational, buffer zones) and the Forest Department's organizational structure add further complexity. The Park falls into three municipal corporations and many municipal wards; many politicians are, thus, interested in the vote banks and development projects attached to the Park. While Park Managers insist that financial resources are not a major constraint for the Park, given its PLA Account, one senior official with the MMRDA contrasted the Parks' complex decision-making and approval procedures with those in place at the MMRDA.²⁶

²⁶With approximately 500 employees, the MMRDA is a relatively small organization that deals only with capital projects. With the Chief Minister of Maharashtra as its Chair, it has high-level political influence and is a powerful player in Mumbai's development agenda.

“The Park Manager is unable to get money through his channels even though it is there. For me it is very easy to get money. Because we have good procedures and only one corporator....There are so many people to agree. For the Forest Department it is a political thing. They need to ask all the corporators. For us it is just one person – the minister. ”

Such fragmented structures make it very difficult to implement conservation initiatives and coordinate with the surrounding environment for the benefit of the entire ecosystem. As an urban planner and environmental consultant explained:

“The fragmented organization structure within makes it complicated... we needed to develop an implementation plan for these recommendations but each implementation body had its own internal guidelines that made joint delivery and implementation difficult...Each officer is only concerned with his edge. As planners we look at the whole park, not fragmented by wards, municipalities, etc.”

As a national park, SGNP is on India’s concurrent list of public services, with control shared between both the state and central governments: the state retains managerial control with oversight from the central government. Any change of use to non-forest use of forestland requires permission of the central government, thus, the central government has the capacity to block major projects. Further, the state level division of the Forest Department into Territorial and Wildlife Divisions turns the Park’s boundary into an administrative one, with the Wildlife Division responsible for the Park itself and the Territorial Division concerned with surrounding areas. Such administrative divisions complicate ecosystem management when, as illustrated by the leopard problem discussed in the last chapter, wildlife fails to respect park boundaries. A senior Forest official distinguished between the two divisions as follows:

“Our area is clearly demarcated, so we don’t really interact. The staff is separate, the funds are separate, so we don’t look after each other’s problems. For transfers,

recruitments, in is under the Territorial CCF. They provide the staff support. But all administrative purposes are under us.”

As this quote suggests, however, there is a clear overlap between the two divisions in the important area of staffing. This essential resource falls under the authority of the Territorial CCF, which restricts Park Management’s ability to hire and allocate staff in accordance with stated priorities.²⁷ As a senior official in the Territorial Division explained:

“Control of the staff including posting, transfers, and pay lies with territorial division. Territorial vacancies may be filled up first, have priority over wildlife. Staff does not fall under separate authorities.”

Approximately 50 legislative acts, including the Indian Forest Act and Forest Conservation Act discussed in Chapter 1, provide the legal basis upon which the Park has been able to defend itself against external threats, but such legislation does not overrule other laws in India or the State of Maharashtra. The Park must be concerned with laws that have an impact on its operational activities, most notably those regarding tribal and slum dwellers’ rights.

Fragmentation is also evident in the Park’s external environment and, indeed, throughout the SGNP actor system. As depicted in figure 3.1, the system is composed of many organizations and subsystems (e.g. categories of actors, or subsets of actors that interact on a single issue) that evolve over time. Given SGNP’s location in Mumbai’s urban context, the system continues to shift and expand as more and more interested and affected parties become involved. The divergent views of the Park and its role in conserving and protecting the area reflect varied interpretations of what constitutes

²⁷The PLA account provides a degree of autonomy to park management who are able to circumvent the staffing dilemma by hiring temporary and daily wage workers who work at Management’s discretion, primarily for in maintenance activities.

legitimate use of the Park. There is an obvious dividing line between environment and development aims, but even within these two broad positions, wide-ranging viewpoints reveal both moderate and extreme positions in this debate.

MAIN IMPLICATIONS

- The SGNP operating environment is characterized by a high degree of fragmentation, with many organizations and individuals involved with the Park and interested in its valuable resources.
- At the same time, however, strong interdependencies evident in this environment (as discussed in Chapter 3). Park Management must consider the system's heterogeneity as well as the usefulness of other actors as sources of complementary human and financial resources and political influence in developing the operational plans and strategies implemented to achieve stated objectives.
- Park Managers hold the ability to *regulate* and, importantly, to *negotiate* with all interested parties. Environmental characteristics present resources and constraints, opportunities and challenges for Park Management in its future strategies and operations.

4.3 ASYMMETRIES

The Park-city coexistence is characterized by a fundamental asymmetry in the conflict between park and city interests. The nature of the conflict and the organization of interests oppose park and city on an unequal footing and restrict the Park's strategic leeway. This section synthesizes the findings along four dimensions of asymmetry and connects them to the observed behavior.

Inter-temporal asymmetries

From an inter-temporal perspective the stakes involved differ markedly for the city and the Park. The vast majority of park actors stressed that any loss of parkland to urban structures is permanent while victories are only temporary. Once parkland is lost to urban development, biodiversity is practically irreversibly lost. A retransformation from construction land into forestland is very costly and the land remains degraded for a long time. The Park is confronted with the challenge to defend forestland against formal and informal attacks. Any lost fights lead to permanent losses of biodiversity while any victories are likely to be challenged again.

Conservationists translate this asymmetry of stakes into the necessity to assume a defensive and uncompromising stance against different all forms of encroachment. As one conservationist put it in our interviews

“There is no balance between the Park and the city. It is either or. Either you conserve the land or you have the city expanding into it. That is the choice to be made. Conservation needs to come first. Land that is lost for conservation is lost forever. It will be a constant battle. There is no sense of finity. What has been protected today can be lost tomorrow.”

HETEROGENEITY WITHIN THE SGNP ACTOR SYSTEM

Another critical difference between city and park actors is their different degree of heterogeneity. Park actors (Forest Department, Park Managers, supporter groups) are rather cohesive (or homogeneous) when compared to the city actors. Despite a variety of sometimes conflicting views and interests, park actors promote similar concepts of nature conservation which gives the Park supporters a homogeneous core and allows them join forces against development interests. Park supporters take the Park as the focal point of their activities, and relate to each other and to outside actors mainly through the Park or park-related issues.

City actors, on the other hand, are an extremely heterogeneous set of actors consisting of competing developers, politicians at various levels, bureaucrats from various departments, slum encroachers with varied eligibility status, and many more. There is no aggregation of to single city interest with regard to the Park. In addition, many city actors consider themselves only marginally involved in park-issues, while their real attention is focused on other priority areas. This tendency is reinforced by a fragmented series of administrative silos. Thus, most relevant city players do not perceive themselves as either *city* or *park* actors. For the Park, this heterogeneity introduces higher complexity in managing relationships and interactions with city actors; however, it also holds the potential for a more coordinated approach.

ABILITY TO COMMIT

Closely related to the different degrees of heterogeneity between city actors and park actors is their different ability to make credible commitments, i.e. to make deals and to comply with them.

Within its conservation mandate as defined by laws, rules and regulations, the Park Management could agree on arrangements with city actors to deal with their conflicting interests. The same is true for the public administration on the city side. The private development interest, however, is not organized in a way that allows for credible and binding agreements. Instead, a large number of actors (slum dwellers, industrials, real estate developers, etc.) take decisions based on their understanding of private returns on investment. There is no organizational umbrella that aggregates these private interests to be able to make long term agreements with the Forest Department and to enforce them vis-à-vis its members. This is one reason, which impedes the Park from settling the land rivalry with a compromise.

New actors who are not bound by prior compromises would appear and expect to be settled on similar terms. This would unleash a constant process of territorial erosion of

the Park. To the extent that this threat prevails, the Park will feel tempted to adopt a categorical approach to deter current and potential encroachers.

DISTRIBUTED SOCIAL VALUE VERSUS INTERNALIZED PRIVATE VALUE

A final and critical asymmetry between park and city exists with respect to the type of benefits derived from the competing land uses. Urban development creates mostly private value for developers or encroachers²⁸, whereas conservation can be seen as a public good that creates social benefits to a wide group of beneficiaries. As a consequence, nature conservation suffers from the “tragedy of the commons” (Hardin, 1968), whereby individuals who are motivated by the prospect of private profits gradually deplete a shared, finite resource, even if it is neither in the majority’s interest nor economically efficient. One of the reasons for this tragedy is the collective action problem to organize the latent interest of widely distributed beneficiaries from nature conservation against the concentrated private interests of prospective developers.

This asymmetry places the Park, as the keeper of a public good, in a difficult position against direct private interests. In the absence of the supportive legislation and the courts’ commitment to push for the implementation of favorable conservation orders, the Park would face a need to activate the latent support among parts of Mumbai’s population to defend this public good.

MAIN IMPLICATIONS

- The nature of the conflict and organizational features of the actor system lead to a highly asymmetric conflict between city and park.

²⁸While there is a public interest in housing, the benefits created remain mostly private i.e. exclusive to the tenants and rivalrous in the sense that a house can only host a certain number of people.

- Defeats for the Park are permanent, as they result of irreversible losses of biodiversity, whereas victories are only temporary.
- The Park is facing a loosely organized group of opponents which are motivated by individual and private cost-benefit logics.
- Nature conservation creates social value to a distributed group of beneficiaries and suffers therefore from the “tragedy of the commons”.
- This asymmetry gives rise to a situation in which the Park can hardly concede anything and needs to assume a categorical stance vis-à-vis the city. The Park needs to deter current and prospective encroachers in order to avoid a constant process of erosion.
- Structural modifications to the nature of the conflict would be needed that create win-win situations from city-park cooperation. The structural factors favoring an uncooperative behavior are not insurmountable. Alternative framings can alleviate such factors.

4.4 DEFENSE STRATEGY

The city-park interface as well as the history of the Park has led Park Management to implement a *defensive strategy* to protect and conserve the Park. Using different mechanisms to defend the eco-system and the forestland is not unique to the Park Management of SGNP. In fact forest officials throughout Africa also used this “protectionist conservation method” to separate humans and nature. Under this method, Park Management tends to emphasize policing activities, such as the fencing, fines, and forced evictions (Honey, 2008)

LEGISLATIVE AND JUDICIARY DEFENSE STRATEGY

Since the 1920s, Park Management has used legislation and judicial bodies to acquire land, protect its territory and displace people from forestland. This use of legislation

and High Court decisions are central mechanisms in what we have labeled the Park's *defensive strategy*. In Chapter 1, there is evidence of the Forest authorities' use of national environmental legislation to enlarge the protected area from a mere 10 sq. km to 103 sq. km. These legislations allowed the Forest authorities to obtain land already inhabited and create SGNP. Chapter 2 introduces the next level of defense through the use of judiciary law to protect the Park.

As one Park Manager put it, *"High courts, we need not use it. It is their fundamental duties."* Additionally as was stated by different environmentalists the courts are a strategy for the Park to exist: *"The Park is protected only due to courts."* As we have seen in the first three chapters of this report, the Courts have been crucial in SGNP's efforts to expand and protect itself from illegal encroachers and other external threats. The role of the High Courts and their ruling in protecting the Park from being "besieged" is critical for the Park Management to ensure encroachers are removed and conservation of nature.

OPERATIONAL DEFENSE STRATEGY

All levels of SGNP Management reveal a defensive strategy that is promoted as the best means of protecting the Park. At the highest level, according to one of the head Officers for the Park stated the main priorities for the Park managers are:

"1. To protect the Park; 2. Control the encroachment and the unauthorized entry; 3. [Control] Anti-poaching...The prevention program is to stop infringement, finish that and prosecute them. If there is encroachment, it is to remove them."

The wall around the periphery of the Park mentioned in Chapter 3 is a key example of the Park Management's desire to focus its resources on an unfinished wall although encroaching is still occurring. This is a physical action the Park Management with help of the High Courts has been able to begin in order to create defined borders around the Park. This is in hopes of stopping encroachers and other actors such as developers trying to take SGNP land.

Park Management also implements a view of themselves as police officers within the Park; one explained: *“I am the police chief for this entire area, and they are not allowed to enter without permission of mine.”* More than rangers protecting an ecosystem, this quote shows that forest officials act as law enforcers, controlling human activity in the Park.

Officers throughout the ranks of the Forest Department were clear to emphasize that the majority of staff focus on defensive strategies. As described in relation to the slum encroachments presented in Chapter 3, Officers reported spending most of their time “protecting” the Park from encroachers and other trespassers. An Officer stated that 65% of the time is spent on encroachers. They also spend time in the Courts, pursuing legal action against trespassers and for other violations that occur within the Park. A high level Park Management official stated:

“I am in charge of protection, cultivation and management of forest. I go to the jungle to see who is cutting the trees and to protect the forests for its management. I also have to go to High Court. Yesterday, I went to high court and spent 2 hours going and 2 hours coming back. There are many legal problems and many court cases.”

Even after evicting slum dwellers and persecuting them, Forest Officers maintain a vigilant watch as many trespassers will return and threats continue from new arrivals. The day that we arrived for a tour of the Park we were told:

“No cars available because of a demolition drive. There are newly constructed huts and tarpaulin sheets by the North side. They are saying that they have the right, but there is no provision in forest law. We are demolishing them. We have police force. I can call the Thane local police inspector and talk to them.”

Park Officials focus on an *operational defense strategy* that ensures that the main agenda item of the Park Management is to remove present human intervention.

Even in future plans, the Park Management is spending resources on GPS technology not for the evaluation of the flora and fauna as other national parks might find it beneficial, but as a Park Official made explicit,

“We think of using GPS technology (satellite imagery) to identify new encroachments. With satellites, we could immediately spot new constructions, and take action to remove them.”

The GPS system that is hoped to be the next step in technology development for the Park is but another form of the surveillance not for the promotion of the SGNP ecosystem and its animals but for the surveillance of periphery territory constantly being encroached.

The operational defensive strategy for the Park Management is to implement strategies that will continue to prevent human intervention and further degradation of the environment. Therefore given the context of SGNP within Mumbai and the urban pressures, it is understandable the actions of the Park Managers to implement such strategies. These actions have proven to work as the number of encroachments has decreased. However, to continue protecting the boundaries of the Park and the environment, Park Managers have to look beyond these strategies.

“ISOLATIONIST” DEFENSE STRATEGY

According to Park Management, there is little interaction with other actors and stakeholders. When asked about the interactions between the actors who were once involved in NIC, a high-level Park Official stated, *“The people [referring to the actors mentioned in helping the NIC succeed] little help. There is not much help.”* From many interviews, it seems as though the Park Management believe they stand alone in its fight against urban developers and other actors who want a piece of the SGNP. Park Management portrays this vision of being isolated from all actors involved in SGNP, even its environmental allies. A high-level official stated:

“There is no interaction with them [NGOs]. They have groups. They bring groups but NIC doesn’t do anything. They pay the fees and come in. Those include EcoFolks,

CAT, and BNHS. They don't do anything. They come as participants in the activities of the Park."

NGOS and other actors also share the same sentiment about the Park Management being isolated. Smaller NGOs trying to implement different projects for the Park have been met with resistance. *"They [Park Management] are very uncooperative.... They say it doesn't permit for private parties to do such things. But our happiness is to develop the forest."*

Further evidence of the Park's defensive strategy is documented in the SGNP Management Plan (2001-2011), which includes a clear focus on activities aimed at defending the Park, more than promoting the environment or developing the Park. Moreover, the Management Plan fails to mention any outside actors with which it will engage in order to implement operational plans and achieve its goals and objectives.

CAUSES OF DEFENSIVE STRATEGY

In general terms, the defensive strategy is built on favorable court orders and mechanisms that protect the Park from those who want to "besiege" the Park and intrude on the activities of Park Management. Related strategies stem from multiple causes. The first two sections provide evidence of the defensive strategy in that the fragmented actor system (4.2) and lack of cooperation is an easy mechanism that allows the Park Management not to interact with others and maintain the defensive strategy. The asymmetry of wins and losses (4.3) constrains the actions of the Park Management since their losses against such actors as city developers has proven long-term and a threat to the goal of the Park Management to conserve and protect this "green oasis".

As mentioned in Chapter 3, although Park Managers state there is no financial difficulty, from interviews it is apparent that there is a lack of resources to implement the right strategies of protection. The number of staff able to do the various activities set out, *"Not many working on the ground level. We need more working on the ground level."*

Therefore, support from the Courts aids the Park Management's need to conserve the Park.

Moreover, external pressures seem to play the largest role in the Park Management decision to implement a "protectionist conservation method". There exists pressures from real estate developers or urban development institutions like the MMRDA that are interested in the land of SGNP to either build around the fringes of the Park or to dig through the Park to install water pipes. In the understanding of the Park Management these institutions do not have interest in protecting or conserving the Park. Therefore, the pressure for the Park Management is to continue using the courts as well as the wall to define the boundaries to protect the existence of SGNP.

The media reports have shined light on the negative aspects of the Park Management, which has caused a strain between them, NGOs and journalists. One journalist was quoted: *"The FD was very upset and asked me why I publish these stories when it damages the image and cause of the Park."* The media creates pressure on SGNP and its Park Management, *"They [NGOs] are constantly creating a lot of pressure. This goes along with a boom in media coverage though 24h television etc."* Therefore, to remain isolated might lessen the negative publicity that the Park Management and its actions might attract.

As was mentioned in Chapter 2, politicians and local elected officials have an influential role as well. Pressures from elected officials cause the Park Management to create an isolationist and more defensive strategy to protect itself from further intrusion. A leading environmentalist group summed up the nature of the cause of the defensive strategy:

"Politicians instigate people against forest department to get the vote bank (slums). In one case went throwing stones at forest officials. How can the forest officials deal with that?"

These reasons are important in understanding the role the Park Management has taken. The *defense strategy* of the Park facilitates the actions of the Park Management to

protect and conserve the Park in the short term. In order to separate the main causes of degradation for the Park, human intervention and encroachers, the Park Management must use these tactics and maintain as little interaction with actors that do not “help” them. Emphasis on the “protectionist conservation method” is understandable for the objective of keeping encroachers and violators away.

MAIN IMPLICATIONS

- The Park Managers at all levels of the hierarchy are focused on a defensive strategy through legislative and judiciary powers, operational activities of Park Management plans and even the vision of the Park as stated in its management plan.
- Historical data demonstrates good reason for defending park in this manner (relationship and actions of other actors). The legislative, judiciary, and operational defensive strategies are understandable given the causes for which the Park must take these actions.
- However, encroachers and illegal trespassers are a recurring issue and the Park has limited resources. The Park Management takes a no compromise stance on forestland as was shown in 4.2 and 4.3. Nevertheless, this has proven to be detrimental to their objective as losses for the Park are permanent.
- Moreover, the Park Management and the isolation of the Park from other actors involved in SGNP can be a source of support. The Park Management does not mention NGOs or tribal people as sources of support in helping them meet their objectives of protecting the Park. However, the reality is that the Park Management does interact with different actors in order to provide a service that otherwise the Park would not be able to execute.

4.5 THE VALUE OF SGNP

SGNP represents a story of a society that has invested massive economic, social and political costs to preserve park resources. We wondered why protected areas are worth preserving? What underpins the value of Protected Areas and Sanjay Gandhi national Park in particular? To investigate these questions, we listened carefully to the views of the relevant actors in the field during our fieldwork experience and consulted relevant scientific literature (including a contingent valuation study produced for the SGNP in 1995) to conclude that the value delivered by the Park, and its value attributes, are foremost uncertain and highly subjective.

Science still fails to understand ecosystems fully. People benefit from the Park in a myriad of ways and the value perceived varies widely across users and uses. It is our understanding that the subjective nature of value could be become a gigantic opportunity for the forest managers. Indeed, it could be exploited to grow the social value of SGNP by framing and shaping the perceptions enabling an increasing number of individuals to consistently derive higher levels satisfaction out of knowing about the existence of the Park.

4.5.1 SCIENCE VIEWS ON THE VALUE OF PROTECTED AREAS

Social scientists have much discussed about the environmental costs of development and the optimum tradeoff between these two. At the heart of the problem lies what Lord Stern (2006:1) described as “*the greatest and widest-ranging market failure ever seen*”. Our economic systems fail to take into account the cost of natural capital²⁹ and the

²⁹ According to the Millennium Ecosystem Assessment (MA 2003), natural capital is one of four types of capital that also include manufactured capital (machines, tools, buildings, and infrastructure), human capital (mental and physical health, education, motivation and work skills) and social capital (stocks of social trust, norms and networks that people can draw upon to solve common problems and create social cohesion).

ecosystem services consumed by production activities. The latter results in over consumption, depletion of natural resources and an inefficient allocation of resources.

Economists have been aware of the system's shortcoming for sometime. In order to overcome aforementioned pitfalls, social sciences have resorted to policy tools such as regulation, pigouvian taxes, cap-and-trade mechanisms, and the creation of protected areas. These policy instruments effectively increase the cost of using environmental resources by imposing quotas, artificial prices and combinations of the two. Protected areas are the most extreme form of regulation, effectively limiting the utilization and consumption of natural capital to a minimum.

As opposed to prices generated by competitive markets, prices set government policies are perceived as being inefficient. At prices higher than they hypothetical market price, consumption falls below the optimal level and vice versa. At the same time, most natural markets fail to exist because these goods non-excludable (i.e. access to consumption cannot be restricted). In light of the above, much effort has been invested in developing tools and new approaches increase visibility of nature efficient prices, which, in turn, would allow humankind to efficiently tradeoff development and conservation.

TOTAL ECONOMIC VALUE APPROACH

The Total Economic Value Approach (TEV) seems to be well established and is used extensively to appraise protected areas around the world. TEV looks beyond the direct uses of the Park. Under the framework, value is composed of the use values as well as the non-use or passive use value (IUCN, 1998: 11).

The **use value** of a protected area is three-fold. It includes not only the direct use value of activities such as tourism, recreation and sustainable extraction of firewood. It also takes into account the value of the option to exploit idle resources in the future. Secondly, it takes into account the value of the ecosystem services including carbon storage, provision of clean water, climate regulation and other. Thirdly, in the case of

SGNP, the option value represents the potential economic value derived of alternative uses of the land in the future (IUCN, 1998: 11).

Use value is simply calculated taking into consideration the revenues that result of each of the direct use activities; e.g. tickets and merchandising revenues left by tourists. Valuing ecosystem services is rather complex. It requires a thorough understanding of the intertwined biological relationships between which to-date are largely not understood. As a consequence, ecosystem-related use values are often widely dispersed and thus go unmeasured by markets. These are appraised with, sometimes, complex techniques involving surveys like hedonistic pricing to capture values that are not fully reflected by the markets (Gowdy, 1997: 26).

Passive-use value of a protected areas or the bay of a river relates to the satisfaction individuals derive from their mere existence, even if they never intend to make active use of it (Arrow et al. 1993). Economists classify passive values into existing and bequest value. The former is a result of the *utility* individuals derives from knowing that the Park is a reality and is being well kept. Bequest value reflects the satisfaction of knowing that the protected area will be available for the next generation (IUCN 1998: 11).

CONTINGENT VALUATION METHOD

The contingent valuation method has been widely utilized to estimate the passive value of natural resources. It essentially consists of estimating individuals average willingness-to-pay (or willingness-to-accept charges) for the maintenance of certain public good. It was been widely utilized to size the environmental damage in accidents including the Exxon Valdez oil spill. Contingent valuation received the mild endorsement of renowned economists including Nobel Laureates Arrow and Solow in the Report of the National Oceanic Atmospheric Administration Panel on Contingent Valuation (1994): "The Panel concludes that CV studies can produce estimates reliable enough to

be the starting point of a judicial process of damage assessment, including lost passive-use values.” Contingent Valuation methods have also been highly criticized as being ill-informed and inaccurate on environmental issues³⁰.

There is “limited amount of time for the presentation and digestion of the contingent valuation”. They therefore suggest that “surveys are unlikely to be accurate predictors of informed opinions had respondents had more information and time for reflection, including learning of the opinions of the others” The paper concludes stating “contingent valuation is a deeply flawed methodology for measuring nonuse values”. “The absence of direct market parallels affects both the ability to judge the quality of contingent valuation responses and the ability to calibrate responses for usable numbers. It is precisely the lack of experience in both markets for environmental commodities and the consequences of such decisions that makes contingent valuation so hard to answer and the responses so difficult to get”.

4.5.2 SGNP CONTINGENT VALUATION

In 1995, the Indira Gandhi Foundation commissioned a contingent valuation of the Borivali National Park. Unfortunately, we were unable to access to the complete report. Nonetheless the summary report published in by the Journal Ecological Economics in 1997 was available to us. We synthesize it in the following section.

After surveying about almost 500 residents in Mumbai, the Hadker et al. (1997) concludes that households were – on average – willing to pay Rs. 7.5 per month resulting in a contingent value of Rs. 1.04 billion (USD 31 billion); i.e. Rs. 104 (USD 0.31) per sq. meter. The accuracy of Hadker’s tag price lies on the precision of the

³⁰ The methodology has also been strongly criticized by Nobel Laureate, Peter Diamond in a paper written with Jerry Hausman “Contingent Valuation: Is any number better than no number?” In their article, Diamond and Hausman (1994: 60, 62).

controversial contingent valuation. Nonetheless, the resulting statistics convey rich quantitative details related to the users and value attributes of the Park.

VALUE OF THE PARK

The report entails information about the direct users of the Park.

“About 22% of the sample had not visited BNP. Of those who had, 261 (52.8%) had visited once or twice so far, while 122 (24.7%) were frequent visitors”.

Interestingly, Only 50 (10.1%) claimed that they were 'not concerned' with the situation of the Park as by then. It is of worth that *“household characteristics (income, family size, mean age)”* of the sample were *“very close”* to *“economic and demographic aspects of Bombay's population as of 1990”* (Hadker et al. 1997: 110).

VALUE ATTRIBUTES

The study sheds light on the value attributes of the Park:

“The most popular reason for visiting and preservation was the quietude and aesthetic beauty of BNP which 425 (86%) valued; 123 (24.9%) valued the fact that BNP protected water bodies that supplied Bombay with drinking water; 208 (42.1%) valued BNP's natural flora and fauna; 68 (13.8%) valued its uniqueness; 111 (22.5%) remarked on its use as a get-away from Bombay city for the future generation; 103 (20.9%) valued its historic and educational importance while 37 (7.5%) valued BNP because it was a frequently visited nature reserve for other visitors.” Moreover, *“only 17.8 (3.4%) and 71 (14.4%) felt that the value of BNP was the same with or without panthers”* (Hadker et al. 1997: 110-111).

Beyond the highly controversial contingent value, the Hadker et al (1997) shed light on the drivers that explain for the variations in the declared willingness-to-pay since they overcome the calibration problem (Diamond and Hausman, 1994: 54). The study finds that (i) income, (ii) overall environmental friendliness, (iii) membership in an

environmental organization, (iv) concerns about the status of the Park and, (iv) the overall appreciation for SGNP attributes (e.g. sights, wildlife, water bodies) are significant in identifying those respondents with higher values for the protected areas.

Hadker et al. (1997:112) constructed a Green indicator “to capture those that demonstrated environmentalist inclinations”. Interestingly enough, the sample’s green points averaged 1.83, on a scale of 0 to 5, whereas 68% “felt that they should indeed have to pay now, to invest in the environment for the benefit of future generations.” Thus, improving the green score there may present an opportunity to build support for the Park through increased public awareness.

Last but not least, it sets forth evidence in connection use and non-use (passive-use) value: “On the question regarding the motivation behind respondents' willingness to pay, about 21.6% of respondents wanted to pay for present use”; “More than 19% [...] to help the 'cause of the environment'”; “7% [...] preserving BNP for the benefit of future generation” (Hadker et al. 1997: 111). Surprisingly, distance from the Park correlated positively suggesting that those living further appreciate it more.

4.5.3 VOICES IN THE POLICY FIELD

As we interviewed Park Managers, Government Officials, green NGO leaders and some users of the Park, we consistently asked them about the value of the Park. As we analyzed their answers we realized the answers were far from straight forward. Overall, interviewees perceived value in the ecosystem services³¹, recreational space and tourism offering, nature research and education activities. Not surprisingly, no one made reference to the contingent valuation produced by Hadker et al. (1997) that

³¹ Biodiversity, provides us many benefits- called ecosystem services – from food, fuel and fibers, to services such as freshwater cycling and carbon capture and storage by forests, to crop pollination by bees, leisure and cultural values.

resulted in a total value of RS. 1,033 million (circa USD31 million at the time). An amount that probably fell short of the real estate value of SGNP.

VISITORS TO THE PARK would consistently highlight it's the recreational and touristic attributes, saying things like *"It is a good place to pass the time and the family enjoys it"* or by describing their favorite aspects of the Park, for example the *"greenery, natural climate, less noise..."*

PARK MANAGERS AND LEADERS OF ENVIRONMENTAL NGOS would, in general, stress the relevance of the ecosystem services (e.g. *"the lungs of the city"*), the Park as an educational asset (e.g. *"It is a learning point, a learning place which the city is lacking"*). They would all make reference to the SGNP touristic and recreational value. They would however play it down: *"Everyone uses the Park for recreation but none appreciate its true value in terms of conservation, biodiversity, etc."* These views are consistent with their *"intrusive"* perspective of tourism. Many, if not most, on the green end of the spectrum consider *"the Park is not to be used"* it is for a place for nature to develop, *"for association of trees"*. In essence, *"It's about conservation of biodiversity what ever it is."*

In one way or another, all NGOs made reference to ecosystem services approach convey tackle the value question. The variance in the non-profit sector can be explained by their varying focus. Education-related NGOs put the spotlight in education

"Everyone uses the Park for recreation but none appreciate its true value in terms of conservation, biodiversity, etc. There needs to be a greater focus on education to for this".

Whereas, in the eyes of public awareness organizations, *"It's the life line of the city of Mumbai. If you take this away, eventually Mumbai will crumble"*.

STATE OF MAHARASHTRA OFFICIALS, without exception, also referred to tourism in the Park, but often described it in terms of its potential value rather than its present value.

“If the forest is developed as a tourist asset (safaris, etc.), we could then identify complementary development projects in the area. Surrounding areas could have support activities”.

The Park was frequently labeled the “*lungs of Mumbai*” by most Forest officials; one of the government officers made a very interesting point, arguing that SGNP’s urban location increases its overall value. *“We also give it importance because of its uniqueness. SGNP has its own importance and value because it is in the midst of a megapolis”.* From an economic perspective, it makes sense that water caught, oxygen produced, recreational and visiting attractions become more valuable within a context of relative scarcity; i.e. large and growing number of users in front of the same park.

Interviewees frequently cited ecological values of SGNP, referring to *“the catchment for three water bodies. This is a very important factor!”* and positive remarks like *“There are lots of animals: leopards, deer...”* The most articulated response came from a Senior Forest Department Manager. In his eyes, “

The Park is definitely an asset for the city. It supplies water to 12 million people; it provides forest area; it conserves nature. It also manufactures oxygen, reduces pollution, regulates the local temperature... And the Park has an entertainment value. We have about 1,2 million visitors a year”.

On a similar note, the leader of a green NGO asserted,

“My point is that that the Park is first of all water supply for the city of Mumbai. Also it collects rain and moderates the city’s climate. Everything around this is conservation. The Park has more flower and butterflies species than the entire UK. This has a value of its own beyond functional services to the city”.

Box 4.1 Estimating the Value of Water Provided by SGNP

According to Engineers at the Water Department of BMC, water provision and distribution costs

are about Rs. 10 per 1000 liters (i.e. EUR 0.15 per 1000 liters). Its retail price is roughly Rs. 3.5 and wholesale price ranges between Rs. 15 and Rs. 35 per 1000 liters. Furthermore, the same source informed that Vehar and Tulsi lakes provide 110 and 18 million liters per day respectively.

To estimate a value proxy, let's assume the marginal cost of water were Rs. 35 and let's consider the actual cost of sourcing, filtering and shipping water from SGNP lakes is zero. Then, we can derive SGNP water represents an income of Rs. 467 million per annum (~EUR 7 million). If a real discount rate of 4 percent were applicable, such a perpetual stream of income would be worth RS. 11.6 billion (~EUR 180 million). The latter translates into a value of Rs. 113 per sq. meter of the Park (~EUR 2 per sq. meter).

Business Standard online edition as of March 30, 2011 reports:

"The Lodhi group of real estate developers today emerged the highest bidder to acquire a 22.5-acre plot in Wadala, central Mumbai, for Rs. 4,053 crore. In an auction conducted by Mumbai Metropolitan Region Development Authority (MMRDA), Lodha quoted Rs. 81,818 per sq. m." Said number translates into ~EUR 1260 per sq. meter.

It is worth noting that the price resulting from the MMRDA auction exceeds the water value of the Park estimated above by 630 times.

We were surprised to find that informed actors place water provision at the forefront of their value assessments. In fact, the Vihar and Tulsi lakes account for less than 5 percent of the water supply in Mumbai. Its relative size was described as "meager" at the BMC Water Department and will decrease as water supply continues to grow

Interestingly enough nobody mentioned the draining role of the Park during the 2005 floods,

"The Sanjay Gandhi National Park in Borivli acted as a natural sponge. Mumbai was, and is still, unique among any megacity in the world in possessing a 104-sq.km sanctuary, almost a quarter of the city, in its heartland" (Bhagat et al. 2009).

4.5.4 REMARKS

Remarkably, passive or non-use value went undetected by the all actors interviewed in the policy field. Maybe their intangible nature made them invisible to Park Managers, government officers and heads of environment NGOs. Conversely, Hadker et al. (1997) also renders sound evidence supporting the case for intangible value. Almost 25 percent of the surveyed declared to go regularly whereas only 10 percent claimed not to be concerned with the degraded status of the Park as of 1995. The highly subjective nature of the nonuse value pocket adds to the complexity; contingent valuation finds that those with high green score subjectively more willing to support the Park and its cause.

In our views, the intangible value of the SGNP represents a major opportunity for the Forest Department and for NGOs that support the Park. First and foremost because this value is population driven. Intangible value grows with the population of Mumbai and it could potentially reach beyond. Non-use value is what actually differentiates urban protected areas for others. Second, it allows for citizens to derive satisfaction without physical interference nature. Third, its subjective nature allows for the Park actors to create value through acting upon perceptions. Fourth, its growth potential is seemingly unlimited.

In fact, Michael Porter (1985: 138-139) in his seminal work “Competitive Advantage” explains that incomplete knowledge of buyers can become an opportunity to buttress a sustainable value creating advantage. Clients can be educated to value it. Besides, Porter claims that in a context of uncertainty clients use “*signals of value*” to judge or infer their perception of value. *Signals of value* include information, professionalism, attractiveness of facilities and advertising to judge or infer the value delivered by a good, product or service. Signals of value are as important as actual value in industries trading intangible and subjective forms of value.

On a similar tone, Peter Drucker (1985: 58-59) envisions the incongruities between perceived and actual customer value and expectations as an opportunity for innovation. He illustrates his point with an anecdote. After visiting the US in 1956 Khrushchev said:

“Russians will never want to own automobiles; cheap taxis make much more sense”. Drucker explains that the former Russian President failed to understand that perceived value of the car reached beyond the transportation services it supplied. Cars were related to freedom, status among other values. He also explains, *“Behind the incongruity between actual and perceived reality, there always lies an element of intellectual arrogance, intellectual rigor and dogmatism”*. Often producers complain about customers “irrationality” or their “inability to perceive quality”.

MAIN IMPLICATIONS

- So far, the value of Natural Capital seems to be three fold. The total economic value is composed of the direct value use, the indirect use value that stems of ecosystem services and non-use value.
- Our interviews reveal that Park-related actors including Park Management clearly understand the use value. Non-use or passive use values were not mentioned once.
- The non-use value of natural capital and thus SGNP is highly subjective. The data collected in the field, the contingent valuation produced in 1995 and the scientific debate consistently support our finding.
- People’s income, views of nature preservation, their concerns, appreciation, connection to the SGNP are the variables that best explain individual’s willingness to commit financial resources and their time in favor of SGNP.
- In our view, creating non-use value is a gigantic opportunity for the Park Management. Nonuse value is population driven and people can derive satisfaction without interfering with wildlife and nature thus without affecting natural capital.

4.6 SUMMARY

- The SGNP operating environment is characterized by a high degree of fragmentation, with many organizations and individuals involved with the Park and interested in its valuable resources. However, strong interdependencies are evident in this environment (as discussed in Chapter 3).
- Park Management must consider the system's heterogeneity as well as the usefulness of other actors as sources of complementary human and financial resources and political influence in developing the operational plans and strategies implemented to achieve stated objectives. Park Managers hold the ability to *regulate* and, importantly, to *negotiate* with all interested parties.
- The nature of the conflict and organizational features of the actor system lead to a highly asymmetric conflict between city and park. This asymmetry gives rise to a situation in which the Park can hardly concede anything and needs to assume a categorical stance vis-à-vis the city. The Park needs to deter current and prospective encroachers in order to avoid a constant process of erosion.
- Structural modifications to the nature of the conflict would be needed that create win-win situations from city-park cooperation. The structural factors favoring an uncooperative behavior are not insurmountable. Alternative framings can alleviate such factors.
- The Park Managers at all levels of the hierarchy are focused on a defensive strategy to ensure the protection of the Park given the evident lack of resources for the PM. Historical data demonstrates good reason for defending park in this manner (relationship and actions of other actors).
- The legislative and isolationist defensive strategies provide protection from the different pressures. However, encroachers and illegal trespassers are a recurring issue. Moreover, groups that could be potential supporters for Park Management

could be harnessed for benefit of the Park. Park Management should take a step back and rethink if the defensive and isolationist strategy will allow it to continue to protect and conserve the Park.

- So far, the value of Natural Capital seems to be three fold. The total economic value is composed of the direct value use, the indirect use value that stems of ecosystem services and non-use value.
- Our interviews reveal that Park-related actors including Park Management clearly understand the use value. Non-use or passive use values were not mentioned once.
- In our view, creating non-use value is a gigantic opportunity for the Park Management. Nonuse value is population driven and people can derive satisfaction without interfering with wildlife and nature thus without affecting natural capital.

5 STRATEGIC REVIEW

This chapter builds on the facts laid out in the first three chapters along with the key findings in the preceding chapter. It sets out the Park Management's strategy, reviews it and suggests some adjustments.

5.1 THE STRATEGY OF THE PARK

When analyzing the policy field, it is important to take a step back, take a long term perspective and think of two driving forces that are operating in the background. These forces have shaped the theatre of operations through their interactions with the actors and the institutions. Indeed, the whole story of the SGNP can be regarded as the product urbanization clashing with the rise of environmental concerns.

Urbanization is largely responsible for putting the pressures on the Park and creating incentives that call for land exploitation rather than nature preservation. On the other side, environmental concerns have created protected areas, fueled environmental legislation and green NGOs. All three: key elements in the case of the SGNP.

Encroachment starts when the Park grows and internalizes illegal settlers that, until then, were living outside the Park. The process of urban development shaped the incentives for encroachment to soar as the Mumbai grew north around the Park.

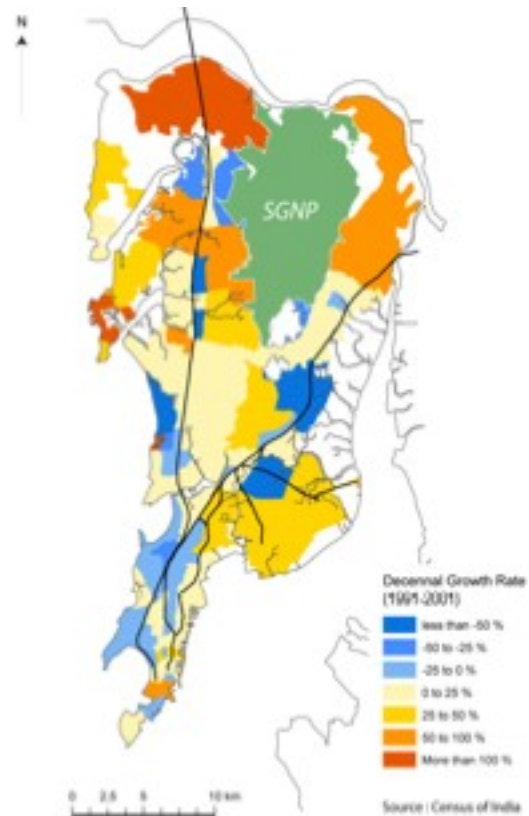
As encroachment grew it became more and more difficult for the Park Management to address. Before the High court ruling in 1997, hundreds of thousands of people had illegally settled inside the Park. Encroachers were at risk of being evicted. Many, if not most, didn't have anywhere else to go. Staying was the only option they had. Besides, the risk looked bearable. Several had been there since the Park had acquired the land in the late seventies. At the time people in Mumbai probably thought that its very scale

protected encroachment from being removed. Besides, the risk decreased as encroachment grew which it did pretty fast.

Local politicians always facing very short-termed incentives had to choose which side to favor: (i) the legal side of the spectrum with the Park or (ii) the illegal side of the spectrum with increasing numbers of constituents and thus votes. In the eyes of politicians, the slums were regarded as voting banks and thus advocated for some sort of regularization, which could include granting dwellers property rights. Not surprisingly, land-hungry real estate developers offered financial support to politicians taking such a stance (Setup, 2008: 26). Conversely, politicians willing to remove illegal encroachment faced the risk of losing votes and received no financial support for taking such a stance. Politicians know that there is significant public exposure risk in taking such a position; they faced the risk of being linked with stories about evictions, demolitions, violence and, eventually, deaths as unfortunately was the case (Setup, 2008: 17).

The problem clearly exceeded the Park Management's capacities and resources. We don't know about the strategy of the Park before BEAG's PIL, but we assume that the Forest Department probably concentrated efforts on (i) blame shifting as we read in the PILs, (ii) putting roadblocks to avert new encroachers and (iii) around protecting the most nature-sensitive zones.

Fig. 5.1 - Population Growth Rates in Mumbai, (Bon et al., 2008)



To counter urbanization, ever growing environmental concerns produced sound pro-environment legislation, green NGOs and social support. Drawing on green legislation, BEAG filed a PIL that forced the High Court to intervene. The rulings of 1997 were a game changer. Since then, chiefly as a consequence of the High Court's involvement, (i) industrial activities in SGNP including quarrying have terminated and (ii) encroachment has been controlled and significantly reduced. Settlers that had arrived after 1995 were not eligible for rehabilitation and thus were evicted. Circa 30 thousand families were eligible for rehabilitation. As of January 2011, about 8 thousand families had already been rehabilitated in Chandivali. The other eligible families are expecting rehabilitation to take place in the next five years. The timing is not clear but we found no one in the field that would dare to think that the rehabilitation process should not proceed as planned.

The High Court has also ordered the construction of a wall around the perimeter of the Park, that will set the limits of SGNP straight and settle once and for all the land disputes fuzzy administrative procedures of the land acquisition act. The wall should reduce the flows of people, animals and waste between the Park and its urban surroundings. It is therefore a tool for the Park Management to ensure the territorial control of the Park.

Since the PIL, the Park Management has made of territorial control thus fighting /preventing encroachment their priority number one. It is considered a condition necessary for protection. Whenever we asked Park Managers about their objectives, encroachment always came first:

"My priority here is to protect the land from encroacher, wildlife monitoring, predator /prey balance and habitat improvement/activity".

The main challenges in the eyes of the Park Management are:

"(1.) Construct the wall all along the pavement so that there shall be no litigation of the boundary disputes. This will automatically bring down the encroachment level. It is along the Periphery so that a seal is created. The aim all along the periphery is

to prepare the wall. (2.) And keeping the vigilance of any unauthorized entries (3.) and the third increase prey base so automatically the predator prey relationship has to be balanced.”

Its current strategy follows the same pattern as BEAG’s PIL of 1995. First, an NGO accuses the Park Management of not complying with civil servant duties. Second, Park Management shifts the blame on to government for not providing sufficient resources and support. Third, the HC summons other government agencies and obligates them to provide for the Park with housing facilities, walls, police to manage the eviction process, financial resources and other.

Interview notes of an interview with a Park Manager recorded:

“Debi Goenka made a petition that I was not doing my work, and I am accountable. For removing encroachment, I am representing the state. I am not a person of the Park. I am in charge of the Park as a state government. So, he made a statement against state”

“High courts, we need not use it. It is their fundamental duties. Someone will make complaint, and I don’t have to use the high court. That’s a good strategy. What? That a friend will complain to court. [Laughing in the room]”, told us one of the Park Managers interviewed.

As a consequence, over the last decade, the Park Management and CAT have stretched and deepened the rulings demanding the HC to get involved and follow through the implementation process. The Court has been a key actor since 1997. It has forced BMC to bear the costs of the rehabilitation and the construction of the wall. Also, the HC has also determined the map of the wall and has coerced the government of Maharashtra to upscale the resources at the disposal of the Park.

Not surprisingly, the Park Management has a very strong and positive relationship with CAT. Its boss, Debi Goenka, seemed very much involved in the definition of the strategy. Also, the Park Management treasures some good relationships with other, albeit not all,

green NGOs. It has no relationship with real estate developers and little if any with other government agencies including MMRDA. It surprised us to find that most people we met in government told us that they had no business with the Park. It was especially surprising to that from the Tourism Development Corporation and the BMC, which is responsible for the lakes located inside the Park.

The Park complemented its legal achievements concentrating its efforts censing and policing the slums to avert newcomers. Forest officers would come twice a week to the slums and in case they found a new settlement they would immediately initiate procedures to demolish the new construction.

In essence, with the HC rulings and the policing efforts of the Park, effectively raise the costs of encroachment, which has become less attractive to potential dwellers and real estate developers. The evictions of all post-1995 dwellers and the undergoing rehabilitation process killed any hope for property rights that could have existed in the past. Remember dwellers were granted access to utilities despite their lack of property rights! And, due to policing efforts of the Park Management, potential newcomers know their constructions will be demolished within days of their arrival.

The strategy has paid good dividends over the last years. The Park Management has moved from a “helpless” position to effectively being in control of the territory and delivering sound results in terms of encroachment reduction. The wall has allowed the Park management to once and for all set straight the land record, which has been fuzzy since the untidy land acquisitions that took place in 1974 and 1975.

However, the legal arguments have limits. First, the Rights Act of 2006 entitles tribal forest dwelling that have for centuries lived in the forests of India to use the land. Second, there are legal procedures that allow for the “encroachment” of infrastructure across the Park. In 2004 there BMC built a main water pipeline across the Park. There are some high voltage transmission lines going across the core area of the Park and more are projected for the future. Third, Bandhup, the largest water treatment plant, in

India discharges in the Vihar Lake. Fourth, the wildlife animal conflict produced deaths and forced Park Management to lock-up leopards despite its wildlife preservation mandate. Fifth, still 2 million people visit the Park every year and interfere with nature.

Limits to the legal strategy have forced the Park to resort to supplementary strategies. As of January 2011, they were initiating negotiations with the *adivasi*. The Forest Department Officials were convinced of the need to find a way to encircle the tribes so that their occupation would not extend as the population grew. As far as we were told, the Park Management is thinking of giving them houses on the fringes of the Park and, eventually, giving them a job with the Forest Department.

In connection with infrastructure, the Park Management knows the longer and costlier it results of developers to get the rights of way approved, the less attractive infrastructure “encroachments” become. Such was the case of the main water pipeline built by BMC in 2004. It took years for the BMC to clear the way and the access was conditional to bearing the high costs of putting the pipes 6 meters underground.

5.2 PARK'S STRATEGY REVIEW

Forest officers are entrusted by with resources and an overall conservation mandate. In the eyes of Park Managers, their role is to administrate the resources in their power to fulfill their overall conservation mandate composed of pieces of legislation and other including the Management Plan. It is this mandate that caters legitimacy the their roles, actions and decisions.

In fact, this is how a Park Manager described his role:

“I am an Indian government. I am here on deputation and service conditions are governed by the government of India. I have to deliver my services without fear, without bias or without a reservations and I must see the interest of the country. This is why I have constitutional and state government support. To avoid the personal political and that interfere with my duties.”

As a consequence, it makes sense for Park Managers to prioritize eradicating encroachment considering the matter has been under the spotlight for so long. Settlements are a material and visible legal breach. And, controlling the area is a condition necessary to manage park. Besides, the Park Management didn't have much of a choice since it was summoned by the HC after the BEAG filed the PIL against it.

The legal /judicial strategy also makes a lot of sense since it capitalizes on Park Management's assets to overcome its shortcomings. It leverages sound pro-environment legislation with the power of the HC to overcome its weak bargaining position in front of economic-driven development agents as a consequence of the asymmetries singled out in chapter 4. A Court decision has the force of public law and thus it affects all the actors in the policy field. Moreover, judicial rulings are permanent as the structures erected by urban developers. Thereby, fending off future attempts to give alternative use to the land of the Park.

In addition, High Court's involvement has not only legitimized the efforts of the Park but has also served as a shelter for the officials of the forest department throughout the evictions. Had the Courts not been so involved, the Forest Department and the Park Management would have come out of the process with a violent record and some bloodstains in its hands. Both, the violent record and the stains were cleaned-up by the High Court as required.

Finally, SGNP's legal strategy is also resource efficient. Unlike bargaining, it allows in most cases the Park Managers to make no compromises. The HC asks for no compensation of favors. Furthermore, the strategy requires neither building nor growing nor sustaining large support coalitions, which often demand for some sort of payback. This is how the Park Manager can succeed with a very narrow portfolio of good relationships.

Park Managers know their mandate stretches beyond encroachment. They are aware of the limitations of their main strategic legal stream. They understand legal strategy is

strong as long as there is a breach to the law. To address such limitations, the Park deploys alternative strategies. During our field trip, we have listened to the Park Managers talking about ongoing negotiations with of tribal communities. We have also seen power lines cutting across the Park and almost 20 leopards in their cages.

The reasons above explain the tremendous success of the legal defensive strategy fighting encroachment. As of January 2011, it seemed that terminating encroachment was simply a question of time. All the stakeholders shared the same view of the next steps and were comfortable with it. As developers built at the expense of the government, encroachers and Park Managers anxiously waited for relocation. It seemed that the major disputes relative shoring the rehabilitation costs and with respect to the location, size and quality of the facilities were settled.

In our view the strategy fails to deal with the driving force behind the process: the growing urbanization and the ever-increasing need of land. Besides, as the encroachment fades away, the strength of the legal strategy vanishes since the HC will not be able to intervene. It happens that High Court support is issue-dependent. It is also important to bear in mind that to date, HC also provided the Park Management with legitimacy. Once the HC is no longer involved, where will the SGNP managers source legitimacy?

Besides, as the process moves forward and the future becomes more visible to everyone, we dared to wonder, what's next for the Park Management once encroachment is eliminated? Will the Park Management be able to change and adapt to a different context after so many years fighting encroachment? Will the Park be able to set out an appealing objective once the common threat /enemy has disappeared? Once encroachment is eliminated, how will performance of success be measured?

5.3 MOVING FORWARD

The strategy we have reviewed was forged to address encroachment: the most important threat Park Managers had to deal with over the last decades. But as

encroachment decreases, the wall is being built and the Parkland becomes increasingly under the control of the Park Management, it might be the opportunity to look into the future and think of ways of supplementing the strategy. In that sense, we think that our findings in connection to value as opportunity to set an appealing objective and legitimize its actions and doings.

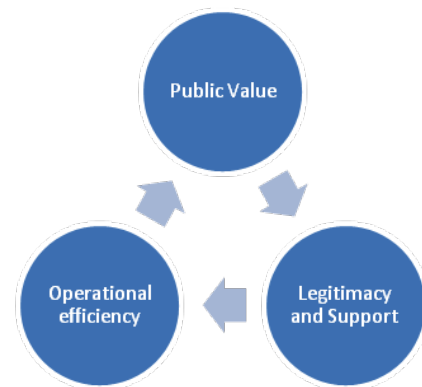
We suggest progressively shifting the objective from protecting the Park to building a support infrastructure for the Park in a context of rampant urbanization and scarce land. It needs to address the big challenge: make the case for the Park in front of the public. The Park Management need to grow the satisfaction citizens derives of SGNP, its wildlife and biodiversity. We suggest the Park focuses its efforts on creating and growing value. The goal is to make citizens of Mumbai and India proud of the Sanjay Gandhi National Park.

It is of worth to note that convincing increasing proportion of the growing population of Mumbai effectively deals with the root cause of the clash: urbanization. If the majority of the people of Mumbai were proud of their park, the increasing number of people should translate into increasing support for the Park and not a growing threat as nowadays. The strategy we are suggesting centers around convincing by building on their perceived value of nature, wildlife, biodiversity and the Park. By doing so, people's positive regard for the Park and its preservation will legitimate SGNP and the Park Management.

To that end, the Park Management needs a subtle mindset change. It has to think of itself as a steward of a public good that delivers value to society. It should aim at maximizing the satisfaction citizens derive of the SGNP by facilitating its consumption /enjoyment in all the ways possible. It is of worth to note that stewards or public goods are there to preserve the Park but not for preservation itself but to avoid that direct use of some does not affect the quantity and quality of public good available to the others.

Concretely, we suggest the Park Management allocates its efforts and resources to create value or, the same, to maximize the satisfaction the citizens of Mumbai derive from the Park. As we have reviewed in Chapter 4, there are different sources of satisfaction /value to tap on: use-value and non-use value. Different mixes of these values can be delivered through products and services produced. Hence, the strategy requires the Park Management to present the public with a portfolio of value delivering products /services. Options to be considered include use-value such as eco-tourism, education, recreation, ecosystem services and others. But most importantly, Park Management should maximize the non-use value of the Park by making citizens of Mumbai proud of the biodiversity reserve.

Fig. 5.2- Public Value Cycle. Mark Moore (1995)



According to Mark Moore of Harvard the public value cycle commences with the authorizers that entrust the Park Management with legitimacy through a mandate and resources including the Park. The public management exploits the resources at its disposal to present the public with a set of proposal that have the ability or not to create collective satisfaction or public value. The more value is delivered to the public the more support the authorizers should grant to the public managers.

5.4 SUMMARY

- The forces shaping the conflict: urbanization and increasing environmental awareness.
- The chapter sets out the current strategy of the Park that aims at fighting encroachment/ controlling the territory. The strategy's strength stems of it's the HC ruling and the sound environmental legislation supporting the case of the Park

- The strategy makes sense. The involvement of the judicial power allows the Park Management to overcome the asymmetries set out in the previous chapter.
- Strategy becomes weaker as encroachment decreases. It fails to address urbanization as a driving force shaping the policy field.
- Suggest a new perspective: the public value framework to exploit the opportunity of non-use value highlighted in the findings.

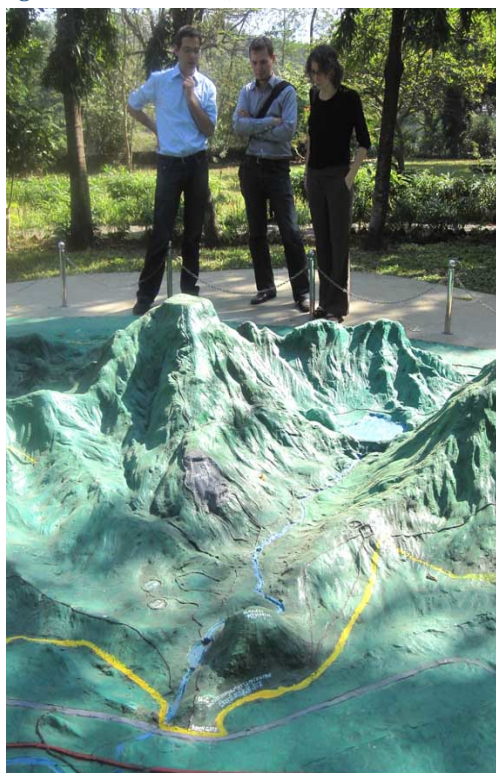
6 INDICATIVE RECOMMENDATIONS

6.1 FOOD FOR THOUGHT FROM OUR FIELDWORK EXPERIENCE

The previous chapter proposes to complement the ongoing defensive legalistic strategy with a value-based approach. The approach aims at articulating the two-driving forces so that these can coexist and clash no more. Indeed it calls for using the Park to create value, to deliver increasing amounts satisfaction so that increasing proportion of the ever-growing population of Mumbai perceives the Park as an asset to the city and becomes an advocate for the Park.

The value-based approach requires the Park Management to allocate the resources at its disposal to maximize the satisfaction Mumbai derives of SGNP. Therefore, the Park Management should think of its value proposal to the citizens of Mumbai and invest time structuring products, services with the ability to distribute use and non-use values, to the different peoples of Mumbai. Each product/service will consume resources thus entail costs and each will deliver a different mix of values. These products will consist of a portfolio embodying the value proposal of the Park. Since products and/or services compete for scarce resources, compiling the portfolio is about prioritizing and making compromises to find the product mix that has the ability to deliver the most value with the same resources while continuing to focus on nature conservation.

Fig. 6.1 - Model of SGNP, Outside NIC



It is important to notice the difference between value-based approach and that of today. Currently, the Park Management operates like a classic public agency. It has a mandate composed of laws, regulations and the management plan. Its duty is to comply and fulfill its mandate. Since encroachment is illegal, the Park Management fights it. Under the new approach the Park Management fights encroachment to deliver non-use value. Almost 90 percent of the people in Mumbai (ie. c. 16 million citizens) want to know that the Park exists and that it remains as pristine as possible. (see Chapter 4.4) Many of them would find satisfaction in knowing that future generations enjoy the Park.

Once encroachment is eliminated, a value-driven Park Management seeks to maximize the non-use value delivered by nurturing the natural capital of the Park and communicating these improvements as effectively as possible so that non-users derive satisfaction. Conversely, under a mandate-driven perspective such a choice will remain improbable.

DISCLAIMER. As follows, the remainder of this sixth chapter sets out some practical recommendations. These recommendations are purely indicative and their purpose is just to illustrate with a few examples how this new approach to nature conservation in an urban context can help to think about strategy and resources allocation. It is very important to understand these few recommendations are set as follows to show how the framework can be translated into actions. In our eyes, it would be pretentious to make strong recommendations after having spent only two weeks in the Park and having no Park Management experience. However, we were able to accumulate some knowledge of the actor's positions and points of view in hopes of presenting a rethinking of the strategy.

6.2 RECOMMENDATION 1 – RETHINK YOUR PORTFOLIO

Under the new framework, production is about combining resources into value delivery devices: the products. The Park has to serve a large pool of clients that include Mumbai citizens in the first place and, why not, India's citizens. After all, the Park is a national

public good. With this in mind and with the help of the value-based framework, we can think of the SGNP product portfolio at the present time in the table below.

Our first recommendation is to ask the Park to produce a table similar to the one below and assign scoring. As follows, it should think about other mixes that can extract more value for the same amount of resources.

Table 6.1 Current product /service portfolio

Product /Service	Value	Cost	Notes
NON-USE VALUE			
Fighting encroachment	+++++	++++	It delivers non-use value (existence and bequest value), thus reaches 90 percent of the Mumbai. Costs include legal advisors, efforts concerning the wall and policing activities.
Natural capital preservation	?	++	Access is limited to the core areas of the Park. Trees are being planted every year. Besides the Park Management is vigilant of the prey /predator balance.
Fund raising	?	?	As far as we understand the Park Management is not involved in any fundraising activities
Public Affairs and Communication	?	?	
USE VALUE			
Recreation services	++	+++++	About 10 sq. km of the Park were made available for visitor. Natural capital in this area has been significantly eroded. About 2 million visitors come to the Park a year and interfere with nature. Besides, this requires personnel, cleaning, and maintenance of the basic facilities including toilets.

Tourism	?	+	Kanheri Caves and the Lion Safari are facilities available for tourists. Bird-watching and forest trails are also available.
Education services	+	++	The NIC assists visitors A Forest Ranger is in charge of school visits during the week
Research services	?	-	BHNS along with other NGOs do produce some research.

Note Please note grades and rankings are indicative. The purpose of the take is just to show how the framework becomes decision-making tool.

The exercise can be complemented with a bottom-up approach that requires the Park Management to think about the different products/services, which can deliver value more effectively.

We are setting out some indicative ideas, which *again* intend to illustrate how this different perspective works rather than focusing exclusively on the best value proposal for the Park.

6.2.1 RECREATIONAL / ENTERTAINMENT SEGMENT

The recreational segment is a problematic user group for the Park. It contains users that are interested in the Park not necessarily for its natural value, but more for entertainment offers that are created around it. These offers include the safari, morning walking, boat rentals, the possibility to picnic in a quiet place, playing grounds, etc. They represent a source of revenue and support for the Park, but also introduce a cost to the management through their disturbing impact on nature and the need to supervise them to contain their impact. Currently 10 sq. km are dedicated to such uses.

Our field experience and analysis gave us the understanding that the Park Management is doing a great job in supervising visitors and containing the impact of the above-mentioned activities to the dedicated tourism zone. It is naturally difficult to prevent visitors and morning walkers from unauthorized entries into the core zone, but it seems to us that the Park Management achieves very good results in this dimension, given the constraints it faces. An even better containment of tourism activities would mean either to reduce the entertainment activities or the space dedicated to them (rebalancing), or to increase supervision through better equipment or more manpower. The Park Management seems to manage this aspect very consciously, taking into account the resource constraints it has to deal with.

We abstain from any recommendations in this area as there is little value these could add. The real question with regard to the entertainment segment is the question of the adequate scale and scope. A solid case should be made around the benefits and costs of this segment for the Park, but we do not see it as an immediate priority to increase or decrease the tourism zone and the entertainment offers.

6.2.2 ECO-TOURISM SEGMENT

The management plan of 2001 strongly recommends promotion of eco-tourism. However, according to our knowledge, the Park seems not to be interested in such activities. Over the last ten years, despite the little affluence of tourism the offer has been strengthened. Such an observation is consistent with the message we received from the Park Management.

“Eco-tourism is not my priority as such because of the different reasons. My priority here is to protect the land from encroacher, wildlife monitoring, predator /prey balance and habitat improvement/activity.”

According to the Park Managers: *“Park cannot be used. Nature can learn. The Park is for association of trees, nature, education of nature for the Mumbai city.”*

If use of the Park should be restricted as much as possible, and each visitor interfering with nature implied a loss of natural capital should the Park Managers not consider priorities with respect to recreational and tourism use?

In our view tourism should be prioritized over recreation because it has more revenue potential given that we think that a tourist coming for the first or second time to the Park derives more satisfaction and is willing to pay more for a quality experience per visit than a neighbor that visits the Park weekly. Instead the Park promotes entertainment seekers with cheap gate tickets and a set of facilities including boating and games for the children. However this does not mean that the Park should be closed for entertainment users. We just simply encourage the Park to promote tourism without increasing the number of visitors by discouraging entertainment visitors. How much? That is the question we have for the Park.

Box 6.1: Tourism Ideas Collected During our Fieldwork Experience

Many were aware of the potential:

“There could be potential for related tourism activities in the surrounding areas but this is contingent on the forest first being developed as tourism asset”.

“We should have a night safari like in Singapore”

“Yes, it is quite difficult to work with the Park.(...) You can renovate within the recreation/ tourism zone under the Forest Conservation Act. We want to wok within these limits to improve the tourism offerings in this area of the Park.”

“To have regulated tourism it would be well to identify how many tourists are allowed. Lots of people are going in and the eco-system is under pressure. If the number of people increases, then it can create a problem.”

6.2.3 PASSIVE SUPPORTER SEGMENT

There are two main imperatives in order to increase the support from the passive supporter segment. First, initiatives should be designed to maintain and strengthen their positive attitude vis-à-vis SGNP. This activity should also aim at transforming parts of them into more active supporters. Second, the Park Management should explore ways to visualize this passive support in the public debate and to transform it into political weight. Thinking along these lines, led us to two recommendations for your consideration:

1. COMMUNICATE VALUE

In order to reinforce the value perception among the passive supporter segment (as for the other segments), SGNP needs to underline its relevance with regard to the various value drivers (or functions of the Park that drive its public value). It is important to note that the group of passive supporters is very diverse and therefore responds to a wide set of different “value drivers”. Among these drivers are: preservation biodiversity, water sink / flood mitigation, dust control / air quality improvement, preservation of natural heritage, wildlife habitat, quiet urban retreat, etc. The Park Management should actively disseminate information, stories, and studies that illustrate how the Park creates value from these different perspectives. As channels of dissemination the Park could leverage radio, internet, and print media by sharing press releases that make these points. Moreover, as developed below, the Park should consider setting up its own website as a communication platform. These efforts will help to maintain the supporter base and to win more individuals to take a more active stand. The key to success of this initiative is to create visible connections to the drivers of public value that motivate public support. While these connections are obvious to the Park Management and anyone who takes the time to think about them, it SGNP does currently not necessarily receives the attention and credit that it merits.

2. VISUALIZE POLITICAL SUPPORT

In order to better utilize the large silent supporter base the Park needs to find ways to visualize and quantify their support. This needs to be low effort for the silent supporter base, as a low involvement level (or willingness to dedicate time) with regard to the Park is one of their defining characteristics. A low effort way for silent supporters to demonstrate their support would be to connect via an easily accessible website and social media (such as twitter or facebook) with the Park. Supporters could stay in touch with the Park without any commitment to remain engaged. This would however allow establishing loose links to some of the silent supporters and to channel information to them. The related idea of “friends of the Park association” is developed in further detail in recommendation 6.3.5. In contrast to the friends of the Park association which requires a more active involvement, this recommendation is geared towards a less involved audience.

6.2.4 EDUCATIONAL SEGMENT

To continue rethinking the user of the Park and how to increase the value for a national park, the educational segment must be addressed. To create long-term support for SGNP and rethinking the defense of the Park, Park Management should continue developing and expanding educational activities. As one expert described, “*Education (schools) serve long-term purposes, communities are immediate damage control.*” Youth are the next generation of a community, of Mumbai, they can serve as allies for the continued protection of the Park.

As Chapter 3 discussed, SGNP already acts as an information provider by maintaining nature information centers on the Borivali and Thane sides of the Park. They educate visitors on the conservation values of the Park as well on the wildlife that is found within the Park. To hone in on the value these visitors bring and spread to others,

“Education is required, and you need a field laboratory and that is what Borivali is for Mumbai and can take it as an opportunity. It all depends on what is going into the Park and the Park Management.”

3. ENGAGE SCHOOLS THROUGHOUT THE MMR WITH QUALITY ECO-PROGRAM

SGNP is a laboratory for many teachers and students at ALL educational levels. Mumbaikars not only have text books and the theory to learn about ecosystems, but they also have the opportunity to gain hands on learning at SGNP. Park Management stated,

“The Park is for association of trees, nature, education of nature for the Mumbai city. This is for schools and colleges and researchers so they can come and study. So, the knowledge could be dispersed to public. This is the public use. This park is not for the pleasure. It is a learning point, a learning place. A learning place within the city which is lacking.”

As we learned from the Nature Information Center, schools are the primary users of the NIC and are only contacted if they are within a certain pool of schools. Continue the work that is being done to engage in creating partnerships with schools in MMR and the NIC through science curriculum on sustainable environments. Emphasizing building more relationships with schools to give students and teachers the opportunity to learn and understand the value of SGNP at least three times throughout their academic career, they would learn about the value of SGNP as a national park and nature sanctuary as well as the need to protect it. This would lead to the next generation of nature lovers and protectors of SGNP as opposed to having citizens growing up with no value for the Park.

Thus, it would be in the interest of protecting the Park and teaching future nature lovers and environmentalists that schools throughout MMR be contacted and/or brought to SGNP. To increase the visibility of the Park throughout MMR is critical to

building value. Creating a pro-park campaign which engages schools, colleges and universities through the dissemination of valuable information about the Park by SGNP, can create more contentious citizens.

As Park Management stated, *“Government has given the environmental science curriculum, and the students come to gain information from NIC. We are giving educators more”*. However, the pool of schools is limited and Park Management needs to be engaged in schools to increase the value for the Park. As one park official stated, it is *“For the better of wildlife and the environment, it is very helpful.”*

4. DEVELOP STRONGER EDUCATIONAL TOOLS

In engaging more students and continuing to receive eco-friendly visitors, currently, we see three areas for development to ensure learning is being developed and value is being added for SGNP. The Park Management echoed this idea as well.

“Enhancing the Information centre with modern tools and new model of learning. Change the methodology and visitors to the field and show them and explain them birds, trees, what is each utility so you give the education in the field and not in the classroom and I believe the ideas of conservation, climate change, and the role of human forest [can be learned] in the forests.”

A. TRAIN STAFF TO SERVE AS GUIDES FOR SCHOOLS AS WELL TOURISTS

Park Management engage with schools and tourists although as we learned from one park staff, schools or NGO groups have their own guides; most only visit the recreational area. However, to develop protection, an understanding and love of nature this can be expanded in order to have schools and eco-tourists learn about the biodiversity of SGNP.

Park staff can be trained to be in the capacity to guide and share knowledge of the Park not only in the recreational area but also on park trails. This would allow for the right learning to occur, the right information to be shared and the right message of the Park to be conveyed to all visitors of the Park. It is in the forest that students and tourists can learn about the value in protecting.

B. ENGAGE WITH NGOS TO GAIN FURTHER EXPERTISE

The Park Management as well as NIC had key partnerships with NGOs which served to build the educational tools of SGNP. Currently, there are no formal partnerships with NGOs although SGNP may benefit from engaging with them in more formal avenues in order to build on the portfolio and the value of the Park.

From visits to the NIC and the information in the Thane information center, there is a lack of up to date expertise. To help build awareness for SGNP, knowledge and expertise held in Green NGOs can be a great asset to the Park.

To convey the message of protection and support for SGNP, these groups possess the strong educational tools needed to engage educational tourism and add to the value of SGNP. In order to engage and build the educational capacity of SGNP Recommendation 6.3.6 develops this further..

C. MODERNIZE TOURISM ZONE TO DEVELOP ECO-TOURISM.

The SGNP information centers have informative displays on the wildlife. However, there is a need to develop better infrastructure to focus on the eco-tourism that is needed and desired for SGNP. *“We have to do more of beautification with some education. Education must be there.”*

This entails a development of not only the information center and the information being given, but how it is being disseminated. Key Information signs that detail what tourists can see throughout their learning walk of SGNP

as well as teaching them the right ways to behave while around the Park. We want to develop educated visitors “*where the people of Mumbai get a feeling that this belongs to us and we must maintain*”.

One possible solution to begin putting these different pieces together can be a Young Ranger Society, which partners the schools and the Park together to begin engaging both students and the community about the Park. National parks, such as the National Park Youth Council in Los Angeles already partners with national parks in the area to develop learning programs based on the proposal of youth and the needs of their communities. (<http://www.troutco.com/lacp/programs.html>) This can be a valuable step for SGNP developing both use and nonuse value for future young park rangers/conservationists, their families and community members.

6.3 RECOMMENDATION 2 - PARK ADVOCACY AND MOBILISATION PROGRAM

As developed in Chapters 4 and 5, one of the big challenges of the Park in its fight for nature conservation is the fragmentation of its supporter base. As a source of public value, the Park creates shared value to a large group of disparate and distributed individuals. In contrast to the concentrated private value for encroachers or other adversaries, potential supporters of the Park face a powerful collective action problem which leaves a great latent demand for nature protection untapped. These individuals value the existence of the Park due to a wide variety of reasons (e.g. biodiversity, natural heritage, ecosystem services) but remain silent, as there is no obvious and convenient way for them to support the Park. Hence this group lacks a vocal expression and articulation of their view and does not add to the political clout of the Park.

On the flipside, this asymmetry constitutes the opportunity for the Park is to provide a platform to bridge the “engagement gap” and to translate the idle potential from silent supporters into tangible political support. The following paragraphs propose a pragmatic, staged approach to close this gap and to close the lines of the Park’s

supporter base. Recommendations are formulated as realistic measures for your consideration and are ordered in the suggested order of priority.

5. CREATE FRIENDS OF THE PARK ASSOCIATION

A reasonable step to capitalize on the silent, latent support for the Park could be the creation of a “Friends of SGNP” association. Institutionalizing such an association does not require large investments or working time commitments and could prove very impactful in providing a convenient and visible way for latent supporters to get involved. More importantly, it would be a great entry point to achieve a greater degree of mobilization around issues of importance for the SGNP. Targeted communication by means of online newsletter, specialized discussion groups, etc. would allow the Park Management to draw the attention of its supporters to important issues and to mobilize active support where necessary. From an operational point of view, small membership fees could make this association a financially self-supporting activity. After some initial investments (possibly donor-funded) to set up the association (homepage, marketing material, etc.), one operator, periodic content feed from the Park Management and the “green community” are sufficient to maintain this platform. It would be worthwhile to explore cooperation potential with Sanctuary Asia, BNHS and other organizations that create relevant content and have experience in the domain of community engagement and editing.

The large number of such associations among national parks and cultural institutions across the globe, suggests that there is indeed a great potential in such initiatives and that there is no need to develop the concept from the scratch. E.g. the Singapore National Park could be a good source of inspiration and examples (<http://www.nparks.gov.sg/cms/>) with newsletters, a volunteering section, and a sponsoring and donations area.

The beauty about this initiative is that it is a low cost and potentially high impact project. Very limited investments are needed in terms of financial and human

resources; experiences from other institutions can be leveraged; the platform can be scaled up over time, and promises to be self-financing via sponsorships and membership fees.

6. ASSUME STRATEGIC LEADERSHIP OVER GREEN NGO ACTIVITIES

Our fieldwork and analysis left us with the impression that the landscape of organizations that support the SGNP is quite fragmented (see Chapter 4). While it is understood that *“They [green NGOs] don’t need to sing along together”* as long as they *“collectively they protect the Park”*, as one interviewee put it, there is potential to strengthen the Park’s position by taking leadership in offering a greater degree of voluntary coordination between green NGOs. The idea is to provide a forum for likeminded green NGO’s to exchange, identify room for cooperation, and to collectively better provide services that are needed for the Park and the cause of nature conservation. The role of the Park Management would be to provide thought leadership in offering a vision for the Park, to flag current issues, to communicate demand for support, and to integrate feedback from the green NGO community. There are some rivalries between NGOs, but there is also a great sense of dedication to the Park which should be sufficient to convene the relevant actors and to initiate a greater degree of cooperation.

Our initial thinking with regards to a realistic setup combines a dedicated counterpart for NGO coordination in the Park Management, a bi-monthly or quarterly meeting with delegates of likeminded green NGOs, and possibly working groups on specific issues. We believe that a dedicated counterpart in the Park Management, possibly reporting directly to the Park Director, is necessary to push a more strategic approach in engaging green NGOs and in coordinating their actions where needed and desired. This person could be initially in charge of both this *“strategic leadership initiative”* (recommendation 6.3.6) and the *“friends of the Park initiative”* (recommendation 6.3.5) to capitalize on synergies between both initiatives.

7. RAMP-UP ADVOCACY AND COMMUNITY ENGAGEMENT PROGRAM

As a third priority, we suggest to take the outreach and engagement effort to the next level. In line with the value logic and the “portfolio approach” which are developed above, we propose to ramp up the advocacy and engagement efforts to target specifically each segment (or product line). Efforts in each segment should be led and coordinated by the Park while grouping interested and relevant parties around them. For example, the “education team” could join a dedicated Park Manager with counterparts of relevant NGOs, other public authorities, representatives of the business community, and select individuals.

While the final objective of this inclusive and participatory outreach initiative is to create public support, there are meaningful direct co-benefits to the Park Management. First, the cooperation with interested and relevant stakeholders increases the operational capacity of the managers on the ground. Some of the efforts can be outsourced to voluntary partners. E.g. outreach programs to schools can be executed by volunteers while coordinated by the Park Management. Second, this form of organization offers a platform for meaningful engagement for supporting organizations and individuals. Such engagement of stakeholders strengthens their bond with the Park, further anchors the Park in the hearts and minds of the Mumbaikars, and can only increase the legitimacy of SGNP in its urban context. In addition, the Park can learn from the feedback of its supporters. Third, a broad and specialized organization of supporters constitutes a source of political weight that improves the position of the Park in its urban context.

These efforts need some resources to take-off, but we believe they would be well invested as they have the potential to unlock a large wave of support and to change the long-term game for the Park. Again, the scalability of the approach and absence of capital investments makes it a low risk activity that would be easily reversible in case of failure. For these reasons, we believe the Park should

consider moving decidedly to tap this potential, as this would increase the Park's operational capacities and its position in the overarching conflict with the forces of development and urbanization.

6.4 RECOMMENDATION 3 - VISION SGNP 2030

We see the actions of today as something necessary for the existence of the Park although to imagine a future SGNP we propose a rethinking of this strategy. As this year has meant the end of the 2001-2011 Management Plan, we suggest the Park Management imagine a Mumbai 2030 where Mumbaikars enjoy a “green oasis” through participatory governance, inclusiveness of all different actors, advanced educational activities and an increased biodiversity.

To get to that stage an evolution of thought has to be demonstrated on the part of the Park Management. We understand the pressures of SGNP at the end of the 20th century and the reasons for the Park Management creating the goals for Management Plan 2001-2011, but for the next ten-year plan, we must move on and focus on developing the vision of SGNP 2030.

Mumbai ranks below average among other Asian cities in various environmental factors, such as air pollution, water quality, environmental governance, etc. (Seimens, Green City Index, 2010) Moreover, of 215 cities, Mumbai ranks 148 in the world in terms of quality of living. (Mercer, 2009) For the future, there will be a continued increase in challenges faced by the MMR as the challenges begin spreading north.

However, the difference between Mumbai and other world cities is that it has one of the largest national parks within city limits. It is up to the Park Management to make SGNP the center of the future of Mumbai 2030. We have suggested ways that Park Management can begin to make steps to increasing the support, value and the desire to maintain SGNP as a national park among all. However, we urge Park Management to implement a vision of SGNP 2030. The Park Management should begin making all

Mumbaikars and Indians think as one told us, *“Lucky to have pristine natural forest in the centre of the city.”*

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8 ACRONYMS

ABBREVIATION	FULL TITLE
ACCF	Additional Chief Conservator of Forests
ACF	Additional Conservator of Forests
BEAG	Bombay Environmental Action Group
BMC	Brihan Mumbai Municipal Corporation (earlier: Bombay Municipal Corporation)
BNHS	Bombay Natural History Society
CAT	Conservation Action Trust
CCDT	Committed Community Development Trust
CCF	Chief Conservator of Forests
CF	Conservator of Forests
FDCM	Forest Development Corporation of Maharashtra
GHJP	Ghar Kakka Jagruti Parishad

GoM	Government of Maharashtra
HC	High Court
MHADA	Maharashtra Housing and Area Development Authority
MMR	Mumbai Metropolitan Region
MMRDA	Mumbai Metropolitan Region Development Authority
NIC	Nature Information Centre
NDZ	Non Development Zone
NHSS	Nivara Hakk Suraksha Samiti
PCCF	Principal Chief Conservator of Forests
PIL	Public Interest Litigation
PLA	Public Leisure Account
Rs.	Indian Rupees
SC	Supreme Court
SGNP	Sanjay Gandhi National Park

SRA	Slum Rehabilitation Authority
SRS	Slum Redevelopment Scheme
TDR	Transferable Development Rights
TEV	Total Economic Value Approach
WWF	World Wide Fund For Nature