— WATERFRONT PARK DESIGN FOR SUSTAINABLE TOURISM IN MICHES, THE DOMINICAN REPUBLIC

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ABSTRACT

Hidden away in the pristine landscape on the northeast shore of the Dominican Republic, the remote village of Miches is on the verge of shifting its economic resource base from traditional fishing into what could become an international model for sustainable tourism. The aim of this thesis was to produce a vision of a waterfront park near the center of the village; demonstrating concept-based landscape design that reflects the goals of sustainable development originating from the local incentive structure.

A composite landscape analysis and design concept both served to inform and guide the design work, which was executed through model building, hand drawings, and production of a visual presentation in the format of an architectural competition entry.

The design concept, *All invited,* signifies the distinction between the development that is about to take place in Miches and the otherwise common all-inclusive resorts, where tourists are set apart from the local community and spend most of their time within the fenced-off premises of the hotel. *All invited* also captures the typical Dominican hospitality, and mirrors the aspirations of turning Miches into a safe and welcoming place for visitors.

The result is a public park design that is equally inviting local residents as it is to tourists, and where the unique qualities of the site are emphasized without being exploited. The design also safeguards important coastal ecosystems, from the shoreland out into the ocean. A realization of the proposal as part of a citywide urban strategy would help preserve the natural wealth of Miches, to the enjoyment of generations to come.

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RESUMEN EN ESPAÑOL

Esta tesis se basa en un estudio de campo realizado en 2012 en la República Dominicana. El viaje fue financiado por una beca de Sida, un departamento del Ministerio Sueco de Asuntos Exteriores, cuyo propósito es dar a los estudiantes la experiencia empírica de cuestiones de desarollo en un contexto global, y permitir a las universidades a formar relaciones internacionales en el país que los estudiantes están visitando.

FONDO

El pequeño pueblo de pescadores Miches, la República Dominicana, ahora está al borde de una transformación fundamental de lo que se espera que sea un modelo global del turismo sostenible.

El municipio fue fundado en 1808 por el general Eugenio Miches y hasta ahora ha alimentado de una combinación de agricultura y pescado. El suelo pobre en nutrientes combinado con métodos de agricultura obsoletos y la contaminación se está erosionando la base de recursos naturales, y los rendimientos son cada vez más escasos. Por eso, una investigación del gobierno se hizo en los años 90 para investigar si el turismo sostenible podría asumir el papel como el mayor fuente de ingresos. La investigación determinó que las condiciones están buenas, gracias sobre todo a la magnífica naturaleza que rodea a Miches. Entonces una ambición política fue establecida para implementar los planes.

La iniciativa marca el inicio de una colaboración internacional para el desarrollo entre la población local y varias organizaciones nacionales y extranjeras, como la Universidad de Columbia en Nueva York. La cooperación abarca muchos proyectos diferentes en por ejemplo saneamiento del agua, apoyo a las inversiones en ecoturismo, y la transición hacia la pesca sostenible. Además, para garantizar un desarrollo sostenible se requiere aumento de la infraestructura urbana y servicios comunitarios como atención de salud, la sistema judicial y el nivel general de la educación.

El principal inversionista en el región esta el Ministerio de Turismo y el Grupo Cisneros; un conglomerado brasileño que ha comprado grandes extensiones de tierra en el municipio por un complejo turístico de lujo. En relación con esto, la compañía también se ha comprometido a apoyar el desarrollo de Miches como parte de su programa de responsabilidad social corporativa (RSC). Según mis entrevistados, el consenso general es que Miches será listo para dar cabida a grandes multitudes de turistas en alrededor del año 2030.

Papel del arquitecto del paisaje en el desarrollo turístico

Como la mayoría de otras ciudades, Miches agregó por motivos económicos distintos de carácter turístico, y el paisaje está formado por un uso de la tierra agraria. Una transición total al turismo como la industría principal inevitablemente tendrá un gran impacto en el paisaje. Por eso, un gran parte del reto por el arquitecto del paisaje es preservar y reforzar la singularidad del lugar para incrementar lo atractivo de la región como destino turístico. En un contexto donde una elevada proporción del asentamiento es informal, hay una necesidad especial de los habilidades del arquitecto del paisaje para asegurar que el desarrollo se avanza en un direccíon beneficioso y aceptable por la población local.

Por los destinos insulares como la República Dominicana, el paisaje constituye la base del turismo y es muy importante desde el punto de vista de marketing. También se requiere un paisaje saludable para proporcionar los turistas una experiencia que hace honor a la reputación. El turismo es considerado como una industria "suave" , pero sin embargo conlleva efectos negativos en el medio ambiente, así como un gran consumidor de recursos, energía y agua. Muchas veces, el turismo también genera problemas relacionados con el crecimiento, como la expansión urbana descontrolada (*urban sprawl*). Por lo tanto, a fin de garantizar una situación económico sostenible basado en el turismo se requiere que los recursos naturales se gestionan adecuadamente y que sean protegidos de los efectos adversos que provienen de un aumento del número de visitantes.

El concepto de turismo sostenible también incluye las dimensiones sociales y culturales. La Organización Mundial del Turismo (OMT), afiliado a las Naciones Unidas, enfatiza la capacidad de los países pobres para utilizar el turismo como medio para lograr los Objetivos de Desarrollo del Milenio. La OMT está trabajando desde una perspectiva global, hasta que los gobiernos en todo el mundo implementan una strategia de turismo sostenible. En particular hace hincapié en el función del turismo en el mantenimiento de la paz y el entendimiento entre las naciones. El paisaje es importante en este aspecto como el punto de encuentro entre turistas y locales, y de ahí se necesita el arquitecto del paisaje para diseñar espacios públicos que sean en conformidad con ciertas normas de infraestructura, la estética y la experiencia de seguridad que en conjunto crean lugares prósperos.

OBJETÍVO

El objetivo de esta tesis fue que generar una visión de un parque frente al mar que ayuda a promover desarrollo turístico sostenible en Miches, República Dominicana. El área que elegí es todavía sin desarollo, a pesar de su ubicación urbana, y la intención era que proporcionar un proyecto que podría ser incluido en los documentos de planificación de la región.

Figure 3: A vista de pájaro. El lugar tiene una forma triangular y abarca aproximadamente 6 hectáreas. *Imagen cortesía de Oliver Oliva, © 2011. Usado con permiso.*

El trabajo también se incluye un análisis de las condiciones sociales, políticas y económicas que prevalecen, además de un análisis del paisaje.

Problemas de diseño

El turismo sostenible requiere espacios públicas que aprovechan la identidad del destino, que fortalezca los valores que lo hacen único y básicamente constituye su atractivo para los turistas. Además, debe ser programado para recibir más personas con algo distintas preferencias, ofreciendo actividades y experiencias relacionadas con la ubicación específica. En el caso de turismo de sol y mar sobre todo se deben proteger las zonas costeros ecológicamente sensibles.

Como resultado, el programa del proyecto se centra en las siguientes preguntas:

- ¿Cómo podría la integración social entre los residentes locales y turistas ser realizado a través diseño del paisaje?
- ¿Cómo se puede proyectar el parque a fín de reforzar Miches imagen de un destino turístico?
- ¿Cómo pueden las partes ecológicamente sensibles de este sitio estar protegidos, mientras que apoyando al desarrollo del turismo?
- ¿Cómo puede un entorno de parque urbano en esta ubicación ser diseñado para atraer a los turistas de vacaciones?

y, por fín,

- ¿Qué condiciones imperantes afecta el uso del espacio público en Miches, y cómo pueden ser utilizados en el diseño?

Delineación

La propuesta se basa en estudios de antecedentes, entrevistas y un análisis del paisaje realizado durante un estudio de campo de dos meses. El área del proyecto fue seleccionado en colaboración con dos

arquitectos que han participado en el desarrollo del plan maestro de la ciudad y la zonificación del malecón de Miches. La selección del sitio se basa en su ubicación estratégica entre los edificios existentes y previstas, así como la proximidad a Playa Arriba. El sitio es triangular y abarca aproximadamente 6 hectáreas de terreno natural casi virgen, rodeada de agua en dos lados (río La Yeguada y el Atlántico) y está definido por un camino de tierra existente en el tercero. Ya que la tarea fue el de presentar una visión, dibujos técnicos no están incluidos. Por lo tanto, el proyecto debe someterse a otras etapas antes de cualquier implementación.

MÉTODOS

El método incluye un análisis del paisaje, la preparación de programas y conceptos, y finalmente la preparación de las ilustraciones.

Análisis del Paisaje

El análisis consistió en parte del paisaje de una evaluación del carácter del paisaje en el que se analizaron diversos aspectos a lo largo de una serie de categorías, y en parte de un análisis DAFO que resume los aspectos clave del diseño.

Proceso de Diseño

El proceso de diseño se basa en una teoría pragmática, inspirada por las teorías de Kathryn Moore en *Overlooking the visual: Demystifying the art of design*. El enfoque de Moore es diferente a los que estaba acostumbrado en el pasado, tales como el método del Inventario - Análisis - Diseño (SAD) convencional, derivado de la tradición filosófica racionalista de Ian McHarg . La razón principal por la que en vez elegí el enfoque pragmático de Moore fue porque sentí que iba a convertirse en una herramienta útil para superar algunas de las dificultades asociadas con el trabajo en un contexto extranjero. Según Moore, uno no debe tratar de comportarse "objetivamente neutral" por el análisis del paisaje. En su lugar, se debe adoptar un enfoque crítico sobre la base de los conocimientos previos y hacer juicios de valor basado en la propia perspectiva. Con esto, yo podría cambiar mi punto de vista externo y mi papel de turista en mi favor, y también dejar que el análisis del paisaje está conformado por mi concepto. De esa manera podría centrarme en las cosas que eran de importancia real para la tarea de diseño y ahorrar tiempo valioso en el campo.

Por encima de todo, la teoría pragmática se ocupa de mirar el paisaje en su conjunto, en particular en lo que respecta al desarrollo sostenible. De acuerdo con el enfoque de Moore, un mayor enfoque fue el aspecto visual de la sostenibilidad, ya que tiene un papel importante en si el proyecto será apreciado y protegido por los usuarios o no. Una gran parte del proceso de diseño giraba en torno a la elaboración de un concepto y las aplicaciones de diseño. El concepto puede describirse como una idea básica tal como se expresa en

Figure 4: ***Plano de planta.*** *El resultado es un diseño de un parque público que es igualmente atractivo por los residentes locales como a los turistas, y en donde las cualidades únicas del sitio se enfatizan sin ser explotados. El diseño protege los ecosistemas costeros importantes, desde la tierra y fuera en el océano. Una realización de la propuesta como parte de una estrategia urbana de toda la ciudad ayudaría a preservar la riqueza natural de Miches y asegurar el futuro del turismo en la región.*

estatura física, y puede ser utilizado como un ayuda por discernir las ideas que encajan en el diseño y los que deben ser dejados de lado. El concepto fue nombrado para el *All invited* — "Todos invitados" — que estaba destinado a expresar una contradicción con el modelo de todo incluido convencional. El concepto se pide, entre otras cosas, que una parte clave de la interpretación se centra en la creación de lugares de encuentro para la integración social entre los turistas y lugareños, algo que en mi opinión falta no sólo en Miches sino en destinos parecidos en general.

El proceso del diseño comenzó con el modelado tridimensional de arena dúctil, y se utiliza como una manera rapida de examinar y modificar las relaciones espaciales dentro del sitio. Esto dio lugar a un modelo de concepto, que después se utiliza como base para el proceso de dibujar con lápiz y papel.

Debido a que era una etapa tan temprana del proceso y no había ningún cliente para el proyecto, así que decidí abordar el problema de una manera que se asemeja a un concurso de arquitectura . Las propuestas destinadas a competiciones depende en gran medida de la calidad de las ilustraciones que se utilizan , tanto para explicar las ideas y de convencer al cliente potencial para invertir.

RESULTADOS

El resultado se divide en dos partes: en primer lugar, la descripción de contexto y los resultados del análisis del paisaje bajo Minor Field Study, y en segundo el proyecto del parque.

Descripción del contexto

En las naciones insulares en general, así como en la República Dominicana, el mar simboliza ambos límites y fugas, planteando amenazas tanto en términos de las tormentas y los invasores extranjeros, así como las oportunidades como los recursos alimentarios y calles para viajar. En Miches, el mar es vista principalmente como un lugar de trabajo y no un lugar para la indulgencia, mientras que el río es mucho más querido por la población local.

Programa

El plan maestro de Miches y El Seibo, se determinó que el número de visitantes se mantienen bajos, y que la industria del turismo debe integrarse en la sociedad. El proyecto responde a esto por demostrando un parque que sobre todo sirve como un espacio público para los residentes de la ciudad, pero también incluye funciones que están

destinados a garantizar necesidades de los turistas extranjeros. La mayor parte del turismo que ya se centra en la aventura y actividades al aire libre, pero la ciudad debería ofrecer acceso al mar y las playas soleadas también.

El lugar es una extensión de los planes existentes para el desarrollo del malecón de Miches, y propuso que el hospital planificada se mueve más arriba. Esto ayuda a proteger edificios contra la futura subida del nivel del mar, mientras se crea un borde suave hacia los hábitats acuáticos sensibles. Entonces la selección del lugar puede considerarse como un paso hacia una mayor sostenibilidad.

El diseño se basa en una idea política de la igualdad humana y la importancia de proteger el espacio público como un lugar para la integración social y el ejercicio de los derechos democráticos. Con el fin de evitar una situación similar a la de otras partes del país, donde los hoteles todo incluido crean comunidades segregadas, hay que diseñar condiciones para la integración. El resultado es un parque que expresa esto, tanto en el detalle y en el cuadro grande.

DISCUSIÓN

A continuación se presenta una discusión si el propósito del ensayo se han cumplido, la importancia del resultado de una perspectiva más amplia, y quales conclusiones se pueden extraer del proyecto.

La relación del proyecto con la pregunta original

Además de las funciones básicas, tales como la asistencia salud, la electricidad y el abastecimiento de agua también necesitan una red de espacios públicos funcionales construidas para prepararse para la recepción de turistas. Con la llegada de la inversión en la región también se calculó la población se duplicará en los próximos 20 años y la mayor parte de esta expansión se llevará a cabo en una zona actualmente casi sin desarrollar al este del río La Yeguada .

Dado que la ciudad está en la falta de espacios verdes accesibles por todos el nuevo parque será una parte muy importante de la infraestructura, no sólo para los nuevos edificios en el lado este, sino que la ciudad en su conjunto. La zona, con sus seis hectáreas está suficientemente grandes para funcionar como un parque urbano, con varias espacios donde muchos actividades diferentes pueden tener lugar simultáneamente. También tiene el potencial de servir como un catalizador económico, viendo que los parques por lo general elevaron el valor de la tierra alrededor. También ayudan a fortalecer la marca de la ciudad y aumentar su atractivo para los turistas.

Sensibilidad hacia el contexto prevaleciente

La intervención extranjera y la cooperación internacional para el desarrollo siempre ha sido objeto de debate crítico. La República Dominicana es también uno de los países cuya población indígena fue exterminada por completo como consecuencia de la colonización de 1400, y el país tiene una larga historia de invasiones y de interferencia desde el extranjero, particularmente de los Estados Unidos y Haití. Percibí a mí mismo un constante pesimismo durante mi estancia y la corrupción con frecuencia se le dio como una fuente de desesperanza y resignación entre todas las clases sociales.

En este contexto postcolonial se puede argumentar que una propuesta de diseño por un espacio público tan importante como es un parque urbano debería salir de la estructura de incentivos local, o por lo menos contar con la participación ciudadana.

Estas objeciones son sin duda legítima, pero no es aplicable en este caso, ya que no se produce con el fin de materializarse. Por el contrario, la propuesta podría servir como base para las futuras discusiones sobre el desarrollo de la ciudad, en consulta con los accionistas y residentes. Asimismo, la propuesta representa una extensión de un proyecto existente para el malecón, elaborado por una empresa Dominicana (ReCua y INTEC) y producido después de un proceso de ocho años centrado en alcanzar un grado de influencia ciudadana tan alto como sea posible. Según el arquitecto responsable Marcos Barinas, se necesita tiempo para ganar la confianza de la población local cuando la cultura dominicana implica un cierto escepticismo sobre las fuerzas externas con buenas intenciones, en particular en los lugares un poco aislados.

CONCLUSIÓN

No todas las regiones tienen las bases de recursos naturales y culturales necesarias para establecer el turismo. Miches sin embargo, tiene el potencial de convertirse en una marca muy valuable por la República Dominicana y uno de los pioneros mundial en el campo del turismo sostenible. Miches también ofrece una oportunidad de oro para explorar formas de organizar la ciudad de la manera más sostenible.

A pesar de la ambición de proporcionar un proyecto que podría ser incluido en los documentos de planificación, el objetivo fue sobre todo académica. Entonces la tarea de hacer un proyecto en este lugar ha cumplido su propio propósito como un estudio en la aplicación práctica del concepto de turismo sostenible. Una posible realización de la propuesta como parte de una estrategia urbana global ayudaría a preservar la riqueza natural de Miches para las generaciones venideras.

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BAKGRUND

Den ensligt belägna fiskebyn Miches i Dominikanska Republiken står på randen till en genomgripande omvandling till vad som spås att bli ett globalt föredöme i fråga om hållbar turism.

Kommunen grundades år 1808 av General Eugénio Miches och har fram till nu livnärt sig på en kombination av jordbruk och fiske. Den näringsfattiga marken i kombination med föråldrade jordbruksmetoder och bekämpningsmedel håller dock på att utarma den naturliga resursbasen och skördarna ger allt mindre avkastning.

En statlig utredning gjordes på mitten av 90-talet för att undersöka om hållbar turism skulle kunna ta över som inkomstkälla. Utredningen fastställde att förutsättningar för turismutveckling var goda, främst tack vare den storslagna natur som omger Miches. Ett politiskt beslut med ambitionen att förverkliga planerna fattades. Initiativet utgjorde startskottet för ett internationellt samarbete mellan lokalbefolkningen och ett flertal både inhemska och utländska organisationer, däribland Columbia University i New York. Samarbetet omfattar många olika projekt rörande till exempel vattenförsörjning, småskalig ekoturism samt övergång till hållbara fiskemetoder. För att kunna säkerställa en långsiktigt hållbar utveckling kommer det därutöver att krävas fortlöpande investeringar för att bygga upp vitala samhällsfunktioner såsom sjukvård, infrastruktur och ett fungerande rättsväsende samt en höjning av den generella utbildningsnivån.

Huvudsakliga investerare i regionen är det statliga Dominikanska Turistministeriet och Cisneros Group; ett brasilianskt konglomerat som köpt upp stora landarealer inom kommunen för att bygga en exklusiv hotellanläggning. Cisneros Group har även åtagit sig att stödja utvecklingen i Miches som en del av företagets program för samhällsansvar, (CSR). Den allmänna uppfattningen och målet är att Miches kommer vara ett fungerande stödsamhälle redo att ta emot större mängder av turister tidigast omkring år 2030.

Landskapsarkitektens roll i hållbar turistutveckling

Den näring som en region livnär sig på formar markanvändningen och därmed landskapets karaktär. Spirande turistorter kan därför komma att förändras kraftigt på kort tid, särskilt på mindre orter som Miches där turismen kan ta över helt som huvudsaklig inkomstkälla. En stor del av landskapsarkitektens utmaning består därför i att bevara och lyfta fram det unika för att öka regionens attraktionskraft som turistort. Då en hög andel av bebyggelsen är informell finns det dessutom ett extra stort behov av landskapsarktiektens kompetens för att säkerställa att utvecklingen går i en riktning som är både gynnsam och acceptabel för lokalbefolkningens del.

För ödestinationer som Dominikanska Republiken utgör landskapet själva basen för turismen och är mycket viktigt ur marknadsföringssynpunkt. Ett fungerande och hälsosamt landskap krävs också för att kunna ge semesterfirare en upplevelse som lever upp till marknadsföringen. Turism räknas som en "mjuk" industri men medför likväl negativa effekter för miljön; dels i form av ökad energi- och vattenåtgång, och dels tillväxtrelaterade problem som till exempel okontrollerad bebyggelsespridning *(urban sprawl)*. För att kunna säkerställa en långsiktigt hållbar ekonomisk utveckling baserad på turism krävs därför att naturresurserna förvaltas på ett bra sätt och skyddas från de förväntade negativa effekterna som kommer till följd av ett ökat antal besökare.

Begreppet hållbar turism innefattar inte bara miljömässiga utan också sociala och kulturella dimensioner. Den FN-anknutna Världsturismorganisationen (UNWTO) framhåller möjligheten för fattiga länder att använda turism som ett medel för att uppnå Millenniemålen. Organisationen arbetar för att få regeringar världen över att implementera ett ramverk för ansvarsfull och hållbar utveckling av turism ur ett globalt perspektiv, och understryker särskilt turismens roll i fredsbyggande syfte och för ökad förståelse nationer emellan. Landskapet bör därför leva upp till en viss standard gällande infrastruktur, estetik och trygghetsupplevelse som tillsammans skapar fungerande mötesplatser. Landskapsarkitekten fyller en viktig funktion även i denna strävan, i egenskap av utformare av de platser där möten mellan turister och lokalbefolkning äger rum.

SYFTE

Syftet med uppsatsen var att ta fram en vision för en ny vattennära stadspark som hjälper till att främja hållbar turismutveckling i Miches, Dominikanska republiken. I arbetet med visionen ingick även en analys av rådande sociala, politiska och ekonomiska förutsättningar samt ett designkoncept för att vägleda gestaltningen.

Det område jag valde är trots sitt stadsnära läge ännu oexploaterat. Avsikten med examensarbetet var att åstadkomma ett detaljerat gestaltningsförslag för platsen som skulle kunna tas upp i vad som motsvarar stadens översiktsplan.

Figure 5: ***Fågelperspektiv.*** *Platsen har en triangulär form och omfattar cirka 6 hektar. Bildkälla: Oliver Oliva, © 2011. Använd med tillstånd.*

Designproblem

Hållbar turism kräver offentliga rum som är identitetsskapande och därigenom stärker ortens attraktionskraft. Samtidigt ska det vara planerat för ett ökat antal besökare. Då projektområdet är strategiskt beläget för turism så finns risk för att exploateringstrycket går före behovet att skydda ekologiskt viktiga kustmiljöer.

Med detta i åtanke var gestaltningsprogrammet inriktat på att besvara följande frågor:

- Hur kan de ekologiskt känsliga delarna av platsen skyddas och samtidigt understödja turismutvecklingen?
- Hur kan social integration mellan lokala invånare och turister främjas genom parkens gestaltning?
- Hur kan parken utformas för att stärka Miches säljbarhet som turistort?
- På vilket sätt kan en urban parkmiljö utformas för att tilltala semesterfirande turister?

samt

- Vilka är de rådande förutsättningarna i Miches?

Trots ambitionen att få förslaget att upptas i översiktsplanen så var syftet i första hand akademiskt, och gestaltningsövningen fyllde därmed ett eget ändamål som en studie i hur man konkret kan tillämpa idén om hållbar turism inom en plats.

Avgränsning

Förslaget baseras på bakgrundsstudier, intervjuer och landskapsanalyser gjorda under en två månaders fältstudie. Projektområdet valdes ut i samråd med två andra arkitekter som varit involverade i att ta fram gällande planeringsdokument respektive den fördjupade

detaljplanen för Miches strandlinje. Områdesvalet föll sig av dess strategiska läge mittemellan befintlig och planerad bebyggelse samt det vattennära läget. Platsen är triangulär och omfattar ungefär sex hektar av så gott som orörd naturmark, omgiven av vatten på två sidor (floden La Yeguada respektive Atlanten) och avgränsad av en befintlig grusväg på den tredje. Då arbetet gick ut på att presentera en vision så inkluderar arbetet inga tekniska ritningar och skulle därför behöva genomgå ytterligare stadier av projektering innan en eventuell realisering.

METOD

I metoden ingick en sammansatt landskapsanalys, utarbetande av program och koncept samt illustrationer.

Landskapsanalys

Landskapsanalysen bestod dels av en Landscape Character Assessment i vilken olika aspekter analyserades utefter ett antal kategorier, och dels av en SWOT-analys som summerade de viktigaste aspekterna för designen.

Designprocess

Designprocessen vilade på en pragmatisk teorigrund inspirerad av Kathryn Moore's teorier i *Overlooking the visual: Demystifying the art of design.* Moore's synsätt skiljer sig från de jag var van vid sedan tidigare, som till exempel den konventionella *Inventering-Analys-Design*-metoden som härrör ur Ian McHarg's rationalistiska idétradition. Den främsta anledningen till att jag istället valde Moore's pragmatiska angreppssätt var för att jag anade att det skulle komma att bli ett användbart verktyg för att övervinna några av de svårigheter som är förknippade med att arbeta i ett främmande sammanhang. Enligt Moore varken måste eller bör man försöka förhålla sig "objektivt neutral" till platsen vid landskapsanalys, utan istället anlägga ett kritiskt förhållningssätt baserat på ens tidigare kunskaper samt göra värdeomdömen utifrån ens eget perspektiv. I och med detta kunde jag vända min roll som utomstående och turist till en fördel istället för att försöka bortse från det, och även låta landskapsanalysen formas av mitt koncept. På så sätt kunde jag fokusera på de saker som var av verklig betydelse för gestaltningsuppgiften och spara värdefull tid ute i fält.

Framför allt så handlar det pragmatiska synsättet om att se på landskapet som en helhet, och det särskilt när det kommer till hållbar utveckling. I enlighet med Moore's synsätt så lades stort fokus på den visuella aspekten av hållbarhet, då denna spelar stor roll för huruvida projektet kommer att uppskattas och värnas av brukarna. En stor del av designprocessen kretsade därför kring utarbetandet av ett koncept samt designprogram. Konceptet kan beskrivas som en grundläggande idé som uttrycks genom gestaltningen. Det kan

Figure 6: ***Gestaltningsplan.*** *Resultatet är en park gestaltad för att vara lika inbjudande för närboende som turister, och där platsens unika kvaliteter betonas utan att exploateras. Designen säkerställer även skyddandet av viktiga kustekosystem, från land ut i havet. Ett förverkligande av förslaget som en del av en stadsövergripande strategi skulle bidra till att bevara den naturliga rikedomen i Miches och säkerställa regionens status som turistort i ett längre perspektiv.*

användas som ett ramverk och hjälpa till att urskilja vilka idéer som får plats i gestaltningen och vilka som bör lämnas utanför. Konceptet döptes till *All invited* — "Alla inbjudna"— vilket var tänkt att uttrycka ett motsatsförhållande mot den konventionella all-inclusive-modellen. Konceptet anmodade bland annat att en central del av gestaltningen skulle vara inriktad på att skapa mötesplatser för social integration turister och lokalbefolkning emellan, något som enligt min uppfattning fattas inte bara i Miches utan överhuvudtaget i Dominikanska Republiken.

Skissprocessen inleddes med tredimensionellt modellering i formbar sand, och användes som ett sätt att undersöka och förändra rumsliga relationer inom platsen. Detta resulterade i en konceptmodell, som sedan användes som utgångspunkt för den fortsatta skissprocessen med penna och papper.

Eftersom det var ett så tidigt skede i processen och det inte fanns någon kund för projektet så valde jag att ta itu med problemet på ett sätt som liknar en arkitekttävling. Förslag som är avsedda för tävlingar är starkt beroende av kvaliteten på de illustrationer som används, både i syfte att förklara idéer och som ett sätt att övertyga den potentiella beställaren att investera.

RESULTAT

Resultatet är uppdelat i två delar; dels kontextbeskrivning och resultatet av landskapsanalysen under rubriken Minor Field Study, och dels själva gestaltningsförslaget.

Kontextbeskrivning

Efter att tidigare ha varit en diktatur är Dominkanska Republiken en demokrati men stora inkomstskillnader och hög korruption utgör alltjämt hinder för landets utveckling.

Gestaltningsprogram

I översiktsplanen för Miches är det fastställt att besökarantalet ska hållas nere samt att turistnäringen ska vara integrerad i samhället. Gestaltningsförslaget svarar mot detta genom att visa på en park som främst av allt fungerar som ett offentligt rum för stadens invånare, men som samtidigt inbegriper funktioner som är tänkta att se till framför allt utländska turisters behov. Huvuddelen av turismen är redan idag inriktad på äventyrs- och friluftsaktiviteter, men i staden ska turisterna även erbjudas tillgång till havsbad och soliga stränder.

Platsen utgör en förlängning av befintliga planer för utveck-

lingen av Miches strandlinje. Förslaget innebär att det planerade sjukhuset flyttas från projektområdet, längre inåt land. På så vis skyddas byggnaderna mot den kommande havsnivåstigningen samtidigt som en mjuk kant skapas mot de känsliga vattenmiljöerna, och platsvalet kan därför i sig ses som ett steg mot ökad hållbarhet.

Gestaltningen bygger på en politisk idé om människors lika värde och vikten av att värna om det offentliga rummet som en plats för social integration och utövande av demokratiska rättigheter. För att kunna undvika en situation liknande den i andra delar av landet, där all-inclusive hotell skapar segregerade samhällen utan att vinsterna kommer lokalbefolkningen till del, så måste förutsättningar för integration skapas.

DISKUSSION

Nedan diskuteras huruvida uppsatsens syfte har uppfyllts, resultatets betydelse sett ur ett större perspektiv samt vilka slutsatser som kan dras från arbetet.

Förslagets relation till frågeställningen

Förutom basala samhällsfunktioner som sjukvård, el- och vattentillgång behöver även ett nätverk av fungerande offentliga rum byggas upp för att förbereda mottagandet av turister. I och med de planerade investeringarna i regionen beräknas invånarantalet att fördubblas över de kommande tjugo åren. Större delen av denna expansion kommer att ske på ett för närvarande nästan oexploaterat område öster om floden La Yeguada.

Då staden för närvarande totalt saknar tillgängliga grönområden så skulle den nya parken att utgöra en mycket viktig del av infrastrukturen, inte bara för den nya bebyggelsen på den östra sidan utan för staden som helhet. Området är med sina sex hektar tillräckligt stort för att kunna fungera som en stadspark, det vill säga en park där flera olika aktiviteter kan pågå samtidigt. Den har även potential att fungerar som en ekonomisk katalysator, då parker i allmänhet höjer värdet på marken runtomkring. Välfungerande parker bidrar även till att stärka stadens varumärke och ökar dess attraktionsvärde för turister.

Förslagets lyhördhet gentemot rådande kontext

Utländska interventioner och internationellt utvecklingssamarbete har alltid varit föremål för kritisk debatt. Dominikanska Republiken är ett av de länder vars ursprungsbefolkning utplånades helt och hållet till följd av 1400-talets spanska kolonisering. Landet har därtill en lång historia av invasioner och politisk inblandning från framförallt USA och Haiti. Sett mot denna postkoloniala kontext kan man invända att ett gestaltningsförslag för ett såpass viktigt offentligt rum som en stadspark måste komma ur den egna incitamentstrukturen eller åtminstone involvera medborgardeltagande. Dessa invändningar är förvisso legitima men inte applicerbara på det här arbetet då det inte utarbetades i syfte att realiseras. Tvärtom kan förslaget tjäna som ett underlag för framtida diskussioner kring stadens utveckling i samråd med intresenter och invånare. Förslaget utgör dessutom en förlängning av ett befintligt gestaltningsprogram för Miches strandlinje, utarbetat av en inhemsk arkitektbyrå och som kommit till stånd efter en åtta år lång process inriktad på att nå en så hög grad av medborgarpåverkan som möjligt. Enligt ansvarige arkitekt Marcos Barinas tar det tid att vinna lokalbefolkningens förtroende då den dominikanska kulturen innefattar en viss skepsis mot välmenande yttre krafter, och det särskilt på mer isolerade orter. Jag uppfattade själv en genomgående pessimism under min vistelse och korruption angavs ofta som en källa till uppgivenhet och resignation oavsett klasstillhörighet.

SLUTSATS

Inte alla regioner har de naturliga och kulturella resurser som krävs för att kunna etablera turism. Miches däremot har alla möjligheter att bli en riktig signaturplats för Dominikanska Republiken och en föregångare inom området hållbar turism. Miches erbjuder dessutom ett gyllene tillfälle att utforska hur man kan organisera en stad på det mest hållbara sättet.

Ett förverkligande av förslaget som en del av en övergripande urban strategi skulle hjälpa till att bevara den naturliga rikedomen i Miches, till glädje för generationer framöver.

PREFACE

The subject for this thesis was determined a couple of years in advance, when I was on exchange in Edinburgh, UK. Our main project was to create a vision for the reclamation of an old landfill located on the shoreline of Inverness, a coastal town in the Scottish Highlands. I found working with the boundary area between land and water very inspiring, mainly because developments in these environments have a profound impact on marine ecology. I therefore reckoned that a case on coastal tourism development would pose an enjoyable challenge for my final year project.

The exchange period also encouraged me to seek more international experience, why I decided to apply for a scholarship awarded by the Swedish International Development Cooperation Agency (Sida). The scholarship gives Swedish university students an opportunity to conduct a so called Minor Field Study, MFS, and go on site in a developing country to gather material for a graduation project. Sida's aim is to provide students with empirical experience of development issues abroad, and also to encourage international cooperation with the hosting countries. I initiated the application process soon upon homecoming from Edinburgh in 2011, and a few months later I received notice that I had been granted the scholarship. The eight weeks of field work turned out to be a great experience for me, both personally and professionally, and I heartily recommend other students to take the opportunity of doing a Minor Field Study as well.

This thesis was made possible by my dear friend Estela Bett, to whom I am deeply grateful for among other things putting me in contact with Carla Quiñones, urban planner at the Ministry of Tourism in Santo Domingo. Ms. Quiñones generously agreed to be my supervisor in field and suggested Miches as the location for my project. As it happens, Miches is strongly reminiscent of Inverness, both of them being traditional fishing communities in a similar landscape setting; from the meandering river and hilly backdrop to their respective ocean bays which are even protected by the same international legislation. In many other ways, however, the two are literally worlds apart where they reside on their respective side of the Atlantic.

In conclusion of this preface, my personal ambition was to contribute to the development of Miches by presenting a vision of a park space that would not only function as part of a citywide sustainable development strategy, but also embody political values of democracy and equality in line with the community's own aspirations. That to me is what landscape architecture is really about.

Sari Lindvall
Uppsala 2013

INTRODUCTION

- BACKGROUND
- PROJECT OVERVIEW

BACKGROUND

The tourism industry is beginning to regain its strength after the global financial crisis, and the United Nations World Tourism Organization, UNWTO, is estimating a 4% continued annual growth (World Tourism Organization 2012: 6)- a trend that is bound to cause some significant changes to landscapes across the globe. Tourism is a potent driving force and as it increases, so does its impact on landscape character, social systems and consumption patterns (Sustainable Tourism 2011).

Seeing as most communities originated from economic reasons other than tourism, the current state of the landscape is likely to have been shaped through generations of processing of natural resources (Gunn 1997: passim). In fact, the majority of the environments we perceive as "pristine" are in some way beeing processed and hence in reality man-made, cultural landscapes— and if the land use changes it will likely alter the landscape's visual character as well. The effects are especially palpable in remote microregions where the tourism sector has the potential of taking over entirely by turning into the main source of income (Gunn, 1997: 4). Additionally, when tourism development takes place in traditional production and/or non-industrialized landscapes, it raises the requirements on adequate urban planning to avoid catastrophic effects (Gunn 1997: 4). Modifications of supporting infrastructure, accessibility and recreational value all contribute to further the landscape changing process (Gunn 1997: 4-ff).

What is more, tourism not only changes the landscape, but our collective longing to explore foreign environments is one of the main driving forces behind tourism as a phenomenon (Gunn 1997: 6). Landscapes therefore often constitute a vital selling point within the marketing of tourism destinations, whether in the capacity of beautiful natural surroundings or an entirely man-made environment, such as a medieval town center (Sörling 2004: passim).

In summary, tourism development both affects and depends on the landscape in which it takes place, why landscape architects and planners are needed in order to guide the development in the most acceptable way to the hosting communities and, hence, play a crucial role in its progression towards sustainability (Gunn 1997: passim).

> *"The desk is a dangerous place from which to view the world."*
>
> - John Le Carré

WHAT IS 'SUSTAINABLE TOURISM'?

Tourism, defined in short as *"travel for not more than one consecutive year for leisure, business or other purposes"* (UNWTO 1995: 10), constitutes an unusually incoherent field, involving many different governmental agencies and parts of other sectors scattered across the world.

For the purpose of this thesis, an effort was made to establish an overview of concepts related to leisure oriented tourism, and to examine how the industry can contribute to building a sustainable future for the destinations in question.

Challenges Facing Leisure Tourism Today

Tourism is among the largest export sectors in the world, and it is estimated that there will be a solid 1.8 billion international tourist arrivals each year by 2030 (UNWTO 2012: 9). Just as with any market, the driving forces are demand and supply of a certain product, which in the case of tourism is comprised by an assured experience in connection to a certain place (Gunn 1997: 11). This basic premise gives rise to a sometimes strained guest-host relationship, where interests and agendas are in stark contrast against each other, and makes up a basis for potential conflicts between tourists and the local population (Gunn 1997: 4-ff). This inherent challenge to tourism is excacerbated by social segregation, epitomized in completely secluded all-inclusive resorts.

Another challenge to leisure tourism is in terms of unpredictable market fluctuations. Since travelling for leisure is voluntary, all sectors depending on it are sensetive to changes in travel preferences on the demand side of tourism (Gunn 2002: 40). An added issue is that the bulk of the money people spend as tourists never actually reaches the community of their destination, but is instead distributed among airline companies and multinational hotel chains headquartered elsewhere (Worldchanging, 2011:57).

Tourism With the Capacity to Prevail

The World Tourism Organization, UNWTO in short, is the UN agency responsible for the promotion of responsible, sustainable and universally accessible tourism. In capacity of the leading global institution within the field of tourism, UNWTO has defined sustainable tourism as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (World Tourism Organization 2013). The UNWTO claims that even though tourism is directly responsible for 5% of global GDP and 30% of the world's services, the sector's potential to stimulate

economic growth and promote development is often underestimated by political leaders (World Tourism Organization 2012: 10). The organization's main task is to promote tourism as an instrument in achieving the MDGs, and encourages all governments to implement the Global Code of Ethics for Tourism to minimize possible negative impacts of the industry (World Tourism Organization 2012: passim)

Another important organization is the Global Sustainable Tourism Council, GSTC, who recently developed a set of criteria presenting "the minimum, not the maximum, which businesses and destinations should achieve to approach social, environmental, cultural, and economic sustainability" (GSTC 2013). The GSTC Criteria are especially designed to be adaptable to local conditions and are organized into four topics; *Sustainable management, Socioeconomic impacts, Cultural impacts,* and *Environmental impacts* (GSTC 2013). The latter include consumption of resources, pollution reduction, and conservation of biodiversity and landscapes.

Finally, an inherent of the sustainable tourism concept is also that it should maintain a high level of tourist satisfaction and raise the visitors' awareness of sustainability issues in the hosting area (Gunn 2002: 14-ff).

Ecotourism

Studies show that today's tourists are becoming increasingly aware about sustainability issues concerning the places they visit (Worldchanging 2011: 58-59), a fact reflected in the rising popularity of the term "ecotourism". Ecotourism is not to be confused with sustainable tourism, as it refers to travel restricted to natural areas only (Worldchanging 2011: 59). The label is frequently used as a sales pitch by travel agents and hotels throughout the globe to the point where it has become a sort of adjectival tourism, on par with for example "culinary tourism" (Worldchanging 2011:57). Both the term and some ecotourism resorts in themselves have rendered some controversy over the last few years, with critics questioning the construct's validity and putting special emphasis on the problem with false advertising; a problem that could be countered by the means of a globally encompassing certification system (Worldchanging 2011:57-59).

COASTAL TOURISM DEVELOPMENT

Most tourists travelling for the purpose of leisure are primarily looking to enjoy the outdoor environment, i.e. the landscape, along with the typical "3s": Sun, Sea, and Sand (Hamed 2003: 63). According to a survey made on European travel preferences, 63% prefer the coast as compared to 25% favoring mountains, 25% preferring cities and 23% the countryside (INRA EUROPE 1998). The high demand of coastal environments leads to added pressure for exploitation, to such an extent that tourism is now identified as one of the most important activities in these areas (UNEP 2009: 4). The pressure is intensified by the fact that the coastline is limited in size to only a narrow strip along the ocean, effectively making it a scarce resource. This narrow strip along with the shallow waters are home to over 90 percent of all marine species, making them some of the most productive and biologically diverse areas on the planet (WWF 2013).

Unfortunately, the same natural prerequisites that make coastal environments so attractive are also what renders them particularly vulnerable to growth related issues, such as urban sprawl, linear urbanization and waste production (UNEP 2009: 3-13). Tourism itself, while counting as a soft industry, is a huge consumer of natural resources used to supply the facilities with necessities such as food, water and energy. It therefore poses a sizeable threat to coastal environments, where potable water is often in short supply and where the growing food demands easily leads to overfishing (UNEP 2009: 14). The main impacts on marine ecology brought by terrestrial developments consists of untreated sewage discharge and pollution emitted by the excursion boats, tourist yachts and cruise ships that follow (WWF 2013). In addition to the direct negative effects caused by tourism, the coastline also faces a threat from global climate change in terms of flood risks and increasing numbers of severe storms (UNEP 2009: 18).

From a landscape perspective, the coast can be divided into four ribbons parallel to the beach, each ascribed with special characteristics and design needs (Gunn 1997: 81);

1. ***Neritic.*** The neritic zone extends from the continental shelf to the beach. The shallow waters often contain sandbars and coral reefs, both of which are extremely sensitive and equally important environments as they maintain much of the marine biodiversity. This is also where most of the cruising, sailing and underwater activities take place.
2. ***Beach.*** The beach is the intermediate zone between land and water and supports a major part of tourism activities; sunbathing, beach sports, sandcastle-building, bird watching, etc. The visual aspect is dominated by the vastness of the sea and the spatiality is influenced by water fluctuations.
3. ***Shore land.*** The shore land stretches upwards behind the beach and has visual linkage to the sea but the tourism activities here are not as dependent on good weather conditions as those on the beach. The shore land is often where hotels and other beach-related service businesses are situated.
4. ***Vicinage.*** Further up the coastal backland the vegetation cover grows denser and the coastal scenery is often more or less hidden. The vicinity to the sea is more important than visual linkage, and property value in developed areas is generally high.

The traditional way of developing waterfronts has been to draw highways along the shore in order to fulfill the need for access. This development pattern restricts the use of the limited coastal asset, as it tends to result in massive construction walling off the ocean view from the hinterland. A more desirable pattern is achieved by placing the highways further up and planning buildings in envelopes, thus allowing for open waterfront in between buildings (Gunn 1997: 81).

Regrettably, current tourism planning in coastal areas commonly takes the environment in account only in a sense of "trying to minimize effects given the available budget" (UNEP 2009: 3), which not only leads to immediate negative ecological impacts, but also threatens the basis for tourism in the long term, namely the variety of the landscape, the visual quality, the biodiversity and the ecosystem services (UNEP 2009: 3). This is a common course of events in developing countries, where foreign operators can make considerable profits while depleting the natural resource base and destroying the environment (WWF 2013).

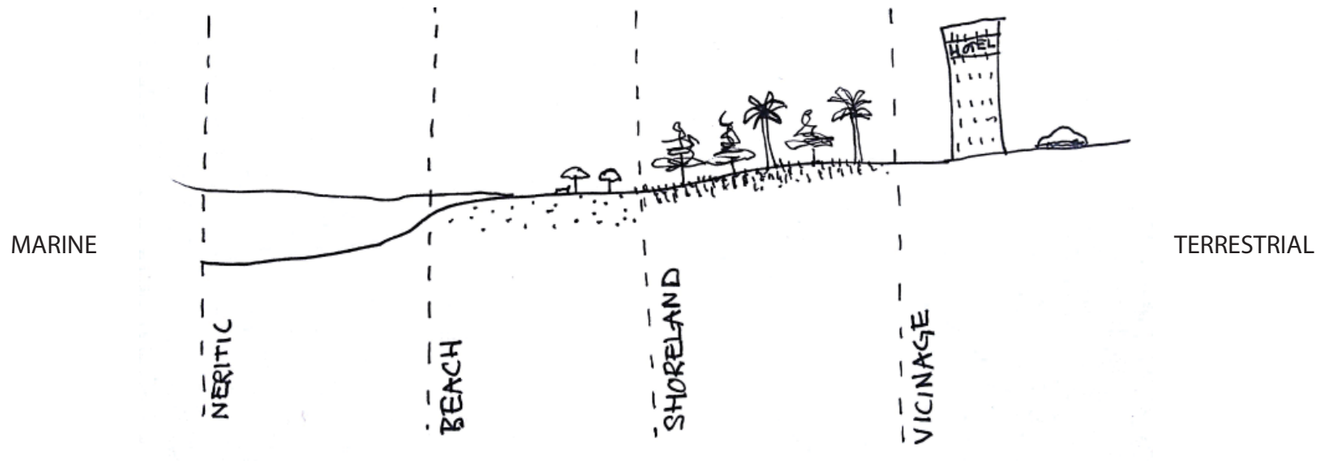


Figure 7: ***Intermediate ribbon zones.*** *The ribbon zones between land and water vary in size depending on the specific conditions of the area; the beach zone, for example, is sometimes extremely narrow, or the continental shelf could steep directly into the ocean leaving no beach or neritic zones at all. The shoreland is defined by visual linkage to the beach and is where most tourist facilities occur, while the vicinage is defined in terms of spatial proximity and accessibility to the coastline and often carries very high land value.* Source: Gunn (1997: 81).

One of the strategies developed as a response to the growing need for the protection of these environments is Integrated Coastal Zone Management, or ICZM. The ICZM approach is used to create a constructive dialogue between agencies, governmental representatives and different marine and terrestrial sectors to help resolve issues where responsibilities overlap (UNEP, 2009: 119). An integrated approach is a crucial requirement when managing complex systems with the aim of implementing both the environmental, social and economic objectives of sustainable development (UNEP 2009: 119).

In conclusion, coastal communities hoping to ensure their longevity as tourism destinations face a challenge to develop schemes that will neither compromise the benefits for people, nor the marine ecosystems.

THE ROLE OF LANDSCAPE ARCHITECTURE IN TOURISM

As previously stated, there are many ways in which landscape related issues and tourism are entwined. Because tourism is such an all-encompassing industry, the reality is that most urban landscapes are affected by it to some degree, depending on the scale and history of the development (Sörling 2004: 8). A completely different tourism occurs around specific locations or micro-regions, many of which are found in coastal areas (Sörling 2004: 8). These are often recognizable as archetypal tourist landscapes, whose identities are strongly characterized by their history as established tourist destinations (Sörling, 2004: 10).

The micro-region resort scale is nearly always diminutive, with proportions adapted for everyday use and seldom exceeding the radius of a horse ride or canoe trip (Sörling 2004: 12). For this type of resort, it is vital to maintain a utopian, carefree image, signaling a free zone from demands on productivity and instead devoted to recreational activities (Sörling 2004: 12). Destinations with a high degree of tourism therefore typically include various sports fields, park areas, playgrounds, swimming pools, marina facilities and, of course, beaches (Hamed 2003: 45-57).

In order to be viable, the destination zone must include the primary components of a) attraction complex, b) support community c) transportation and access, and d) linkage between communities and attractions (see figure) (Gunn 2002: 222). The support community is perhaps the most essential element, offering many tourism functions such as transportation terminals, shopping, entertainment, food services, lodging and civic amenities (Gunn 2002: passim). Well-designed public parks serve as natural focal points within the support community, catering to permanent residents as well as transient tourists on the road other destinations (Hamed 2003: 54).

When designing tourist landscapes, it is important to take into account the differences in terms of mindset and tenure between tourists and local residents (Gunn 2002: passim). While there are

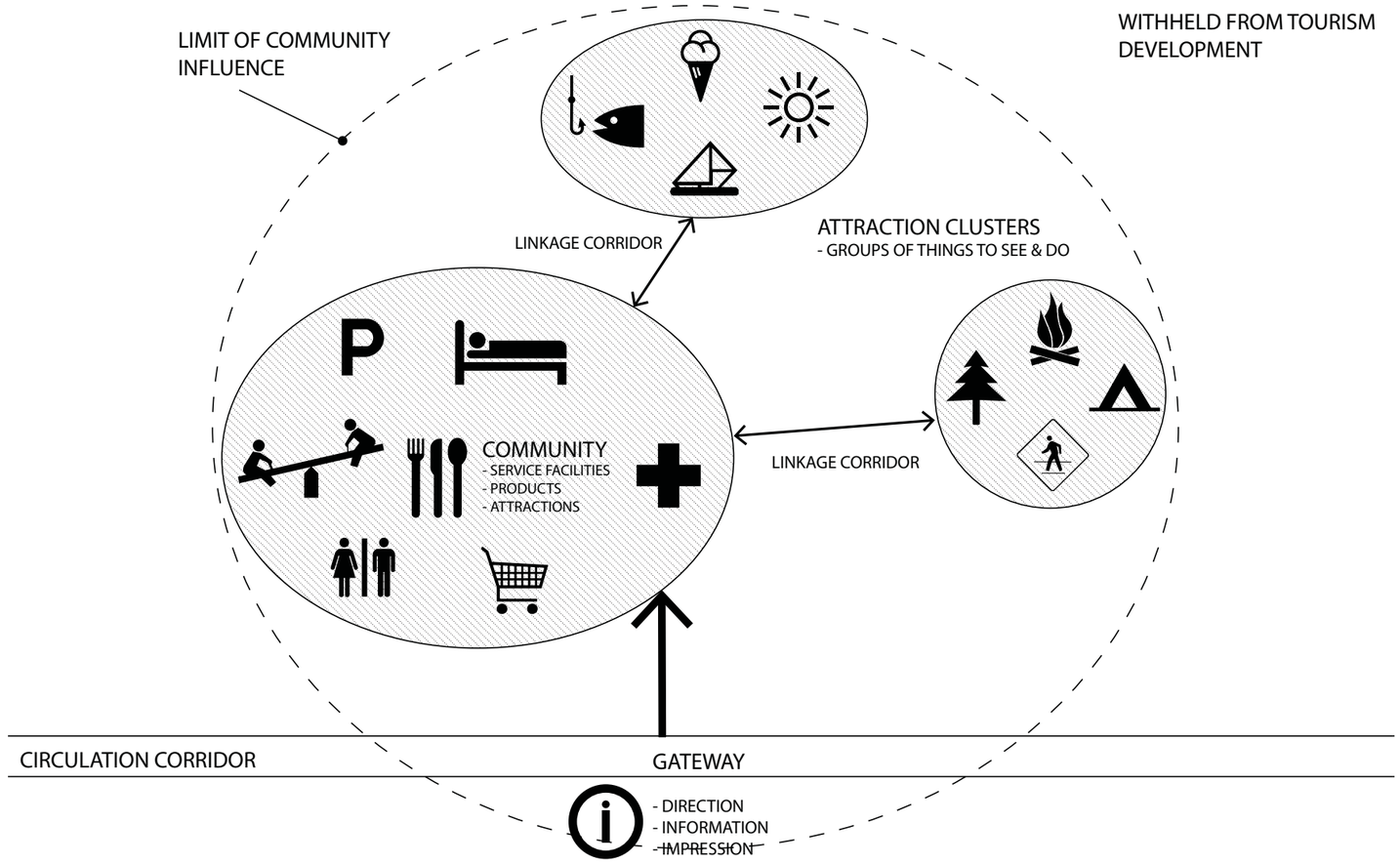


Figure 8: ***Spatial distribution.*** *Diagram of spatial distribution within a micro-region and/or tourist destination with support community. Free interpretation of imagery on page 222 in Tourism Planning, Gunn 2002.*

naturally lots of thing of common interest for residents and tourists- the appearance, cleanliness and safety of the public space for example- things like preference for sun and shade or food establishments may vary (Gunn 2002: passim). Moreover, familiar landscapes tend to be perceived as mundane while the unfamiliar are deemed "exotic", obscuring the full potential of the landscape to those who live in it every day (Sörling 2004: 12). An important key in this context is *conceptualization*; a method pioneered by Claude-Francois Denecourt in the 1860s (Sörling 2004: 12). Denecourt was the owner of several restaurants in the Fontainebleau forest outside Paris, and to attract costumers he "invented" sights around the landscape by simply putting up signage describing the points of interest he had identified out of imagination. Denecourts success indicates that even the blandest of landscapes can contain something of interest for people from the outside, and because tourists as a group carry an insatiable need for attractions his method is constantly repeated within the supply side of tourism (Sörling 2004: 12).

Conceptualization is also important from a marketing standpoint as it deals with the self-referential narrative of the site, mainly formed by maps, nautical charts and advertising photos (Sörling 2004: 12). The importance of this narrative is demonstrated in the fact that interior and exterior architecture are often extremely well-coordinated in tourist destinations (Sörling 2004: 13). It is therefore crucial that the design schemes seizes upon and highlights the indigenous qualities of the site in order to enhance its marketability (Gunn 1997: passim).

Landscape architects are tasked with designing the outdoor environment and have a unique, holistic approach towards sustainable development, adding spatial and visual aspects to the social, economic and environmental factors usually included in the sustainability concept (Schwartz 2012: 278-285). The public environment make up the context of our daily life, and the quality of it not only indicates the wellbeing of a society but also has the potential to act as catalysts for social and economic reform, as seen in for example Bogotà (Urbanized 2011).

On the other hand, a lot of studies have been made on so called

hedonic value, or the added property value attributed to nearby park space; Central Park in New York being the most prominent example (Schwartz 2011). The increase in property value could lead to gentrification and eventually segregation, why tourism development should be seen as a democratic and social question as much as a spatial design issue (Sörling 2004: 13). Well thought-out strategies for the physical organization of tourism development are needed in order to enhance visitor satisfaction alongside community integration and assured resource protection (Gunn 2002: 40).

The main issue for landscape architects engaged in sustainable tourism development is figuring out how to best protect the natural resources, while still allowing visitor numbers to increase (Gunn 1997: 80). It is actually at the site scale that the idea of sustainabe toursm has its greatest application, since this is where it moves from policy to action (Gunn 2002: 371).

PROJECT OVERVIEW

This thesis was based on a Minor Field Study conducted from February to March 2012 in the Dominican Republic. The study was funded by a grant from the Swedish International Development Cooperation Agency (Sida), whose purpose is to prepare students to work in a global context by giving them the opportunity to go on site in a developing country to gather material for their dissertation or thesis. In this case, the site is made up by a small piece of land on the shores of Miches, a secluded fishing village in the Dominican Republic.

Miches is located in one of the poorest and least developed regions of the country and suffers from a number of associated problems, such as inadequate infrastucture, sanitation issues, and a large percentage of the inhabitants residing in informal settlements. The situation has worsened over the years due to a combination of outdated agriculutral practices, overfishing, and environmental degradation that have come to seriously threaten the natural resource base, and thereby the continued livelihood for people as well.

However, thanks to ongoing investments in sustainable tourism development, the outlook for the village is becoming much brighter. The transformation process has been under way since the mid-90's and in 2005 the Seibo province was named a Millenium Village by the Dominican government, setting the political ambition to utilize tourism as a means to reach the MDGs. In 2012 the Dominican Ministry of Tourism released a planning document for the region wherein Miches is supposed to function as a support community, setting the overall direction towards a low-density, high-end kind of tourism in order to keep within the carrying capacity of the area (Quiñones, 2012).

The transformation is expected to proceed over the next twenty or maybe even thirty years, and a vital part of it involves urban renewal and upgrading of public spaces. The site for this thesis forms an extension of existing plans for the waterfront of Miches and was chosen following the advice of architect Marcos Barinas, who has been involved in the project over the course of several years. According to Barinas, there was a demand for more detailed plans of that particular area. The site selection was reaffirmed by my supervisor in field Carla Quiñones, architect and urban planner at the

Figure 9: ***The site (marked in grey) covers approximately 6 ha.*** *The area in red marks the limit of the design proposal developed by Re:Cua/INTEC. Scale 1:10 000.*

Dominican Ministry of Tourism, who also has designed the urban master plan for the tourism development in Miches and surroundings.

AIM

The aim of this thesis was to show how a public waterfront park can be designed in a way that supports sustainable tourism based on the specific circumstances prevalent in Miches, the Dominican Republic, with the added ambition of producing a landscape design scheme that could be assumed as a detailed zoning part of the urban master plan.

PROBLEM DEFINITION

As indicated in the background description, sustainable tourism development requires public spaces that seizes upon and enhances local identity in order to raise the location's marketability, especially when it comes to microregions such as Miches.

Public spaces must also be designed to allow for increased visitor numbers while simultaneously protecting sensitive environments; something that is particularly important in the case of waterfront development. From this follows the main design issue, namely how to shield valuable ecosystems present within the site while still enabling it to function as a recreational landscape for residents and tourists alike.

Furthermore, an inherent part of the sustainable tourism concept is that the landscape changes it brings should be beneficial to the local community, why a detailed analysis of the current social, political and economic conditions as well as the physical shape of the landscape was needed.

Hence, the design process was geared at investigating the following issues:

- How could social integration between local residents and tourists be supported through landscape design?
- How could the park space be designed in order strengthen Miches' marketability for tourism?
- How can an urban park environment in this location be designed to appeal to vacationing tourists?
- What prevailing conditions affects the usage of public space in Miches?
- What cultural, social, and/or political features distinguishes local preferences when it comes to public environments, and how can these be utilized within the design?
- Is there a way to use the tourism development in order to protect the environment on a site scale basis?

LIMITATION

As the purpose of this project was mainly academic and meant to demonstrate a vision of the possibilities for the site following the modus of an architectural competition, it does not include technical drawings or a budget plan. It would therefore have to undergo further stages of projection prior to an eventual realization.

The landscape survey and analysis were carried out during a two-month long field study and focused primarily on public space out of a tourist's perspective.

Literature was chosen based on its relevance to the subject of tourism development within the field of landscape architecture, with special focus on coastal zone development.

METHODS

- WORK PROCEDURE
- MINOR FIELD STUDY
- DESIGN PROCESS

WORK PROCEDURE

To structure the work procedure, a schedule was made in Microsoft Excel. The schedule included a rough timeframe on what was to be done prior to, during and after the field study and was continuously updated throughout the process. The schedule also included regular appointments with my supervisor Professor Ulla Myhr.

The first work stage was initiated during the application process for the MFS scholarship, several months before the onset of the degree course. It involved the establishment of a primary project description, setting up appointments with contacts in the field and travel preparations, including for example the arrangement of a stop-over in New York for the meeting with Professor Don Melnick.

The requirements for the MFS-scholarship dictated that the field trip should last a minimum of eight weeks which were scheduled to February through April 2012, preceded by two weeks of preparatory literature studies. The basis for the landscape analysis was performed in Miches and completed upon homecoming. The major part of the work consisted of developing the design vision, and the sketching process went on continuously from the landscape survey up until the visualization phase. The last stage of the process was directed at finalizing the report and preparing for the oral examination.

MINOR FIELD STUDY

The Minor Field Study included literature studies and interviews as well as field observations, and was aimed at gaining general knowledge of partly coastal tourism development and partly the social, economic, political and physical context of the site.

LITERATURE STUDIES

An initial literature search was made to provide an overview of the state of knowledge within the subject of landscape architecture in relation to sustainable tourism development before departure. The literature studies also served to inform the interview preparations, providing the knowledge base and apprehension needed to pose relevant questions to each interviewee.

To obtain a wide search range several engines were employed, above alll the SLU Library database, Libris, and Epsilon. Google and Google Scholar were used to supplement the primary search engines. Various combinations of selected keywords[1] were used to narrow the search results, and the engines' filtering functions were applied to enhance the topicality, accuracy and relevance match of the searches.

1 "Landscape Architecture"; Coast OR Maritime OR Seaward; Tourism; Sustainable.*

The garnered result comprised several works by Professor Emeritus Clare A. Gunn, noted precursor within the field of landscape architecture and planning in relation to tourism. The works *Vacationscape* and *Tourism Planning* were chosen because they provide comprehensive coverage of the subject as well as basic principles and examples of environmentally sustainable tourism development.

Another source with special focus on coastal tourism development was a manual published by The Red Sea Sustainable Tourism Initiative (RSSTI). The manual is intended to guide stakeholders and landscape architects through the process of developing sound resort projects along the Red Sea coast in specific, but the guidelines are applicable for most coastal environments.

Another important source was the published version of Worldchanging, originally an online, open-source community created by Architecture for Humanity. One of the book's chapters is entirely dedicated to tourism and provides architects with a brief but holistic overview of the subject, mainly taken from a landscape perspective, and thereby served as a solid starting point for the rest of the background studies.

For more in-depth briefing and verification on the subject of sustainable tourism, the reference selection was limited to authorative sources; primarily a manual on Integrated Coastal Zone Management (ICZM) provided by the UN Environment Programme and information available from the UNWTO homepage.

Finally, an article in the Swedish magazine Arkitektur by Professor Sverker Sörling gave an interesting historical overview of the development of touristic landscape, as well as some relevant concepts to keep in mind when designing them.

INTERVIEWS

A number of interviews were made during the field study in order to examine the prerequisites for the project. Since landscape architects normally form part of a multidisciplinary team I considered it important to seize upon the experience of other practitioners involved in the development of Miches, instead of relying solely on written sources and field observations.

Approach

A *formal interview* can be defined as a means to describe an objective reality, where the interview ideally serves as a conduit for the transfer of knowledge between the interviewer and respondent (Gustavsson 2010: 237- ff). To be successful, the interviewer must avoid affecting the truth by so called "interview effects" (Gustavsson 2010: 250). It is also necessary to make sure that the received data is independent of the context it comes in (reliability) and, in particular, to what extent they are true (validity) (Gustavsson 2010: 237- ff). Other sources therefore need to be consulted in order to verify the truth value of the formal interview (Gustavsson 2010: 238).

The informal interview, or *talk*, has the defined aim to gather subjective knowledge, based on the assumed premise that there exists a subjective reality which is accessible through learning people's personal feelings, opinions and the like (Gustavsson 2010: 238). By necessity, talks are less structured and formal than interviews and require more of the interviewer, who must submit the confidence that is a condition for the talk to take place (Gustavsson 2010: 238-ff). Further, the respondent must be allowed to use their own way to describe their reality and not be of the assumption that there is a fixed query sequence (Gustavsson 2010: 238-ff).

Contrary to how it may appear, the two forms are not mutually exclusive, but a synthesis between them often emerges naturally in many interview situations (Gustavsson 2010: 239). I deliberately adopted a synthesized form before the interviews with the different stakeholders and officials involved in the project, as I was interested in their professional view on the potential development of Miches but also wanted to allow the interview to be able to flow somewhat freely.

One hurdle for the interviews was in terms of language, as neither English or Spanish is my maternal language. I countered the misunderstandings that occured by asking new questions that were as close to the original as possible. I also verified the objective parts of the collected material by cross-checking them with other respondents and written sources to eliminate any eventual errors due to language difficulties.

A voice recorder app was used during the interviews where the respondent consented. The disadvantage of a voice recorder is that it may cause the respondent to behave unnaturally, and transcribing the material is also very timeconsuming. On the other hand, it also frees the interviewer from taking notes, thereby making the interview more casual and efficient during the course of it, which I deemed to be more important in this particular case.

Respondents

The selection of respondents was based on recommendations from my supervisor in field, Carla Quiñones at the Ministry of Tourism, and mainly included individuals who are highly positioned within their respective organization. All of them possess expert knowledge concerning diverse aspects to do with the current state in Miches and/or the developmental process. In addition to the predetermined expert interviews, spontaneous talks while in the field informed the analysis with insights from a user perspective.

The first respondent was Professor Don Melnick, PhD, director of the Center for Environment, Economy, and Society, CEES, at Columbia University, and the meeting took place in his office in New York. Professor Melnick received his doctorate in physical anthropology and maintains a scientific research career focusing on molecular genetics (Columbia Univesity 2012). In addition to his work

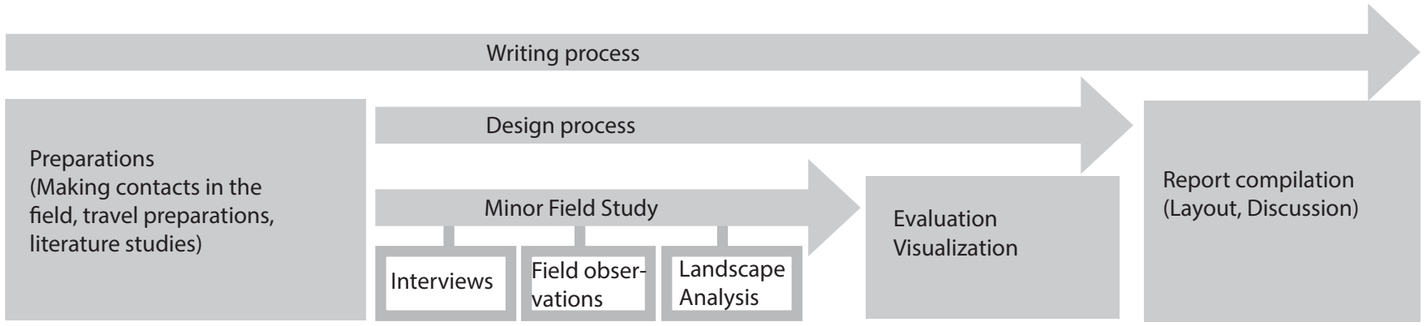


Figure 10: ***Work procedure.*** *By necessity, the work procedure started months in advance prior to the onset of the degree course.*

published in numerous technical journals and books, he has advised several heads of state and recently held the position of co-Chair of the U.N. Millennium Task Force on Environmental Sustainability (Columbia University 2012).

During our meeting, Professor Melnick recommended that I should talk with Henry Fernandez, who by coincidence had just come back to New York after having lived in Miches for five years, and happened to be at his office down the hall in the same building. Mr. Fernandez kindly agreed to an interview immediately following the one with Professor Melnick and turned out to become one of my most important contacts overall. Mr. Fernandez held a position as Program Coordinator together with Darien Clary at the ESSEG program located in Miches. ESSEG, an abbreviation for Environmentally and Socially Sustainable Economic Growth, is a centerpiece of CEES through which it brings scientific and other expertise to local stakeholders in community based programs around the world (Columbia University 2012). During their time in Miches, Fernandez and Clary worked with local community members, government agencies, and NGOs to design a sustainable fishing program for the Miches area and secure funding from USAID (Columbia University 2012). Darien Clary also investigated the feasibility of ecotourism based on marine mammals in partnership with Wildlife Trust (Clary 2012).

The first interview in Santo Domingo was with Sofia Perazzo, CSR Project Manager at the Cisneros Group, who at the time headed Fundación Tropicalia. The meeting took place in a café, and due to the interfering noise no voice recorder was used.

The next interview in Santo Domingo was with Duty D. Greene, PhD, Chief Economist and Team Leader of the Economic Growth & Environment Programs at the USAID seated in Santo Domingo. Professor Greene was responsible for the financial funding of the CEES sustainable fishing project. As the interview took place at the American Embassy in Santo Domingo, safety prescriptions prevented me from bringing a voice recorder into the premise. I was, however, allowed to bring with me note material and used those as means of documentation.

During my time in Miches, it came to my attention that there was a Peace Corps volunteer working on a two-year assignment to initiate a community based ecotourism project east of Miches. The volunteers name was Evan Poirson, and a brief meeting was arranged during one of his visits at the Columbia team's apartment in Miches.

Finally, the last of my respondents was architect Marcos Barinas Uribe, Coordinator of the Master of Sustainable Design School of Graduate Studies at Universidad Iberoamericana (UNIBE) and company owner of Red Caribeña de Urbanismo y Arquitectura (ReCUA). According to their website, ReCUA offers professional services in the area of architecture, landscape architecture and urban design throughout the Caribbean, and one of their projects include the renewal of the Malecón in Miches (see appendices 1 and 2 at the end of document). The interview took place at Barinas office in Santo Domingo and provided a professional insight to the working context for architects in Miches.

Figure 11: ***Respondents Darien Clary (first from left) and Henry Fernandez (third from left) at the Water for People conference in Santo Domingo 2009.*** *In February of 2009, ESSEG staff helped to form committees in two Miches communities and to prepare them for a competition arranged by Water for People held in April the same year. The committees were received two prizes for a total of $7,000 (US), which were spent to replace the old water pump that used to deliver river water to 504 residents until it broke down six years prior to the event. Columbia University (2012) [Photograph; Miches water committess win award at Water for People Conference in the Dominican Republic] At: http://cees.columbia.edu/node/151/ (Accessed on 24.06.12). Used with permission.*

FIELD OBSERVATIONS

The first site visit to Miches took place on February 12th 2012, which was before the project area had been determined. The purpose of the visit was to gain an intitial firsthand impression of the town and see how the existing public spaces are used and function, in order to identify whether a change or addition to the urban fabric could be motivated and, if so, where that development would be best situated.

During the visit, I lodged at a hotel at Playa Arriba, only a few tens of meters away from what was to be the project site. However, I was advised not to move outside the premises unaccompanied as assaults apparently occur rather frequently along the road that passes by the site. The first stay only lasted a few days, during which time I made an initial survey on the communications and current public spaces within the town center. The survey was conducted through photo documentation and note taking as well as quick, informal conversations with neighbourhood residents while walking down the streets. Focus was put on investigating the outcome of the recent paving of the street grid— in particular accessibility for pedestrians, wheelchairs, and baby strollers— as well as the popularity and social function of the main public spaces. I also employed my outside view to identify places that felt welcoming for me as a tourist and whether I found something to be missing.

My next stay in Miches lasted longer, and instead of the hotel I was accommodated in the home of Dr. Francilin Vargas. Having her and her sister Griselin Vargas as companions opened opportunities for making more in-depth landscape analyses, as their prescense allowed me to go further away from the immediate town center, and also safely stay for slightly longer periods of time on the spots I was examining. At this point I had determined that the area on the east side of the estuary would be a strategically favorable situation for a future waterfront park, and was able to make a brief analysis from the edges of the site. Photographs were taken along the wateredge, from the outside looking in and reverse, towards distant views, on existing vegetation and current land usage (a coco palm plantation and a small, deteriorated open air dance floor of which my guide had never even heard, but as I afterwards learned had been constructed only two years prior). Notes were taken on microclimate and I also went for a swim within line of sight from Hotel Coco Loco in order to evaluate the bathing conditions.

The methods used during the rest of the on-site analyses are detailed further underneath the following headlines, and the results are woven into the context description.

Site Visits to Other Resorts in the Country

During the field study I visited a couple of other tourist destinations in order to gather empirical experience of contemporary Dominican resorts. The sites visited were the small town Boca Chica a few kilometers away from Santo Domingo and an all-inclusive resort Bayahibe in La Romana district. I performed a cursory analysis of the landscape's main features and how they catered to tourists' needs.

In Boca Chica, particular emphasis was placed on the function of the public space and the buildings relationship to the waterfront. In Bayahibe, focus was concentrated on the use of plant material and the landscape functions necessary for the resort to act as a tourist playground. I then compared the use and appearance of the beachfront within the all-inclusive resort to a public beach in Santo Domingo. I also went on a whale watching tour starting from Samaná on the other side of the bay to learn more of the potential marine basis for tourism in Miches.

Figure 12: ***Aerial view of the center of Miches.*** *The town is small enough to be surveyed in its entirety on foot. The site is the triangular area by the rivermouth (highlighted in red), and the mountaintop visible in the background is Loma Redonda, adjacent to Laguna Limón and Laguna Rednda in El Cedro. Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism © 2011. Used with permission.*

LANDSCAPE ANALYSIS

The landscape analysis was performed partly on site during the Minor Field Study, and partly through cartographic studies. The purpose was to find and highlight what is important about the landscape for this specific project. As the park is supposed to function for both tourists and locals, the analysis was directed both at finding the landscape attractions from a tourist's point of view and the current use of public environments. Land use, landscape characteristics, topography, natural habitats and future development plans were also taken into consideration. The tools for the analysis were photography, overlay tracing and notes.

Landscape Character Assessment, LCA

A Landscape Character Assessment was done in order to investigate in what way the park could contribute to support tourism, meanwhile raising the overall quality of life in Miches.

Landscapes are the settings for our lives— the human habitat— and is both formed by and affects the relationship between people and place. As such, it holds many values; economic value, providing the setting for economic activity and often a central factor in attracting business and tourism; social and community value, as an important part of people's lives, contributing to our sense of identity and well-being; environmental value, as a home for wildlife and a cultural record of society's use of the land (Swanwick 2002: 3). It is therefore crucial to assess the character of the landscape when considering development, in order to assure that the change is for the better (Swanwick 2002: 3). The English Countryside Agency and the Scottish Natural Heritage joined forces to produce a technique called Landscape Character Assessment, LCA, which provides guidance for people involved in the development of landscapes to pinpoint what makes a place distinctive. The purpose of the LCA technique is to inform land management decisions that will help the economy, as well as achieve high quality development that enhances and sustains the environment (Swanwick 2002: passim).

The LCA technique provides a framework that is useful for professionals tasked to pin-point the features that give a locality its sense of place, and also to present the results in a structured way. LCA comprises a first stage of characterization followed by judgment making. The characterization stage involves a description of the landscape based on desk and field studies, dividing it into areas of common character and defining key issues (Swanwick 2002: 8-ff). The judgment making stage involves land management decisions which ultimately lie with society, but their decisions will be better informed if they are based on information assembled through the Landscape Character Assessment (Swanwick 2002: 61-ff).

The LCA guidance document includes a comprehensive list of aspects that ought to be included, such as geology, hydrological conditions, soils, ecology, settlement patterns, scenic characters, land use, etc. Out of these, I have chosen to focus on aspects which I deemed to be of importance for this specific project, using the design concept to guide the decision making.

One aspect that was emphasized was the chromatic character of Miches. One of the town's most striking characteristics is the bright, highly saturated layers of paint covering facades and nearly all other landscape elements. Carla Quiñones believes that this particular characteristic could become a prominent part of the conceptualization that will position Miches in a national and international context. I therefore saw it fit to incorporate the color scheme into the design, why an analysis of the color temperatures, nuances and combinations used in the landscape was made. Photos of facades and elements from across town were used to create a color palette assessing the chromatic character of Miches. The colors were picked out from the photographs using Adobe Photoshop, after using the same software to enhance the images in order to better correspond to reality.

The other aspects were topography, geological/hydrological conditions, land use, infrastructure, and recreational values; all of which I deemed to be of importance for the forthcoming tourism development, either in terms of potentials or obstacles, with special consideration taken to features that may be conceptualized within the park design. These aspects were assessed through information gathering (interviews, literature studies), studies of aerial photographs and map overlays.

SWOT Analysis

SWOT analysis, acronym for *Strenghts, Weaknesses, Opportunities*, and *Threats*, is a structured planning method accredited to Albert Humphrey, convention leader at the Stanford Research Institiute in the 1960s and 1970s. The method is nowadays widely used for different kinds of projects and business ventures, mainly in the financial sector (Wikpedia 2013). A SWOT is often performed before deciding upon objectives for the project or business venture in question, but the result may also be used to evaluate and adjust previous goals (Wikipedia 2013).

For this thesis, the method was used to summarize the internal and external factors that may have the most significant effect on the feasibility of a public park on the site. The SWOT was presented in tabular form and was structured as follows:

- ***Strenghts***: inherent characteristics such as location, surrounding landscape, geological/hydrological circumstances, visual aspects, climate, and/or other factors that make the site favorable relative to others with regards to establishing a well-functioning waterfront park;
- ***Weaknesses***: inherent characteristics regarding environmental sensitivity, personal safety, and/or other factors that constitute challenges for park establishment on the site and its long term feasibility;
- ***Opportunities***: external elements of the future development surrounding the site recognized as potential advantages that could be exploited to ensure long-evity and success for the park;
- ***Threats***: external factors that constitutes potential threats to the long-evity and/or success of a park space in this location.

The results of the SWOT was used to evaluate whether a park in this location could be attainable, and served to inform the development of the design brief and guide the design on how to best achieve the desired outcome.

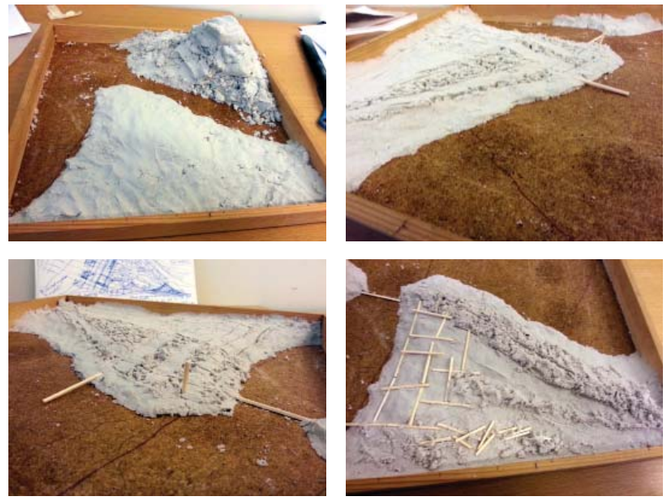


Figure 13: ***Model building.*** *A large-scale model sculpted in shapeable sand was an important tool during the design process.*

DESIGN PROCESS

The design process was aimed at answering the problem definition and spanned from the first field observation through the concluding visualization phase.

THEORETICAL APPROACH

The theoretical approach towards the design process was derived from *Overlooking the visual: Demystifying the art of design* by Professor Kathryn Moore. For reasons expanded upon under the following headings, Moore's approach differs somewhat from the conventional methods I was used to from previous assignments. I anticipated that it would be a useful tool to overcome some of the difficulties that are associated with working in a foreign context, seeing as it recognizes the designer as an indispensible part of that context, who is allowed to make value judgements instead trying to obtain a stance of 'neutral objectivity'. In other words, the approach enabled me to put my role as a foreigner and outside perspective to good use as a base for making value judgements, as opposed to try to disregard them. Doing this also helped me navigate the vast amounts of information that was garnered throughout the process, and keep focus on what was actually perceived.

Above all, however, Moore's theories revolve around advocating the visual aspect of landscapes as part of sustainable development. This is what motivated me to make a design proposal to begin with, and constituted the foundation for the design brief development.

Challenging the Logical/ Sensory Divide

In *Overlooking the visual* (2010), landscape architect Kathryn Moore argues that traditional design theory and education needs to be 'demystified' and freed from the belief that there are different types of reasoning— commonly known as the logical/sensory divide— and propones a new pedagogical strategy where visual skill is seen as a critical component of artistic sensibility (Moore 2010: passim). Within landscape architecture, rationalist methods made popular by pioneers like, for example, Ian McHarg have helped establish a legitimate role for the profession (Moore 2010: 76- ff). However, rationalist methods such as the linear 'survey, analysis, design' (SAD) methodology rely on the notion of 'objective neutrality', which leads to the view that there is only one legitimate way of analyzing, and moreover that there are universal truths to be found if the analysis is done properly (Moore 2010: 76). In landscape design courses, the survey and analysis of a site are therefore often conducted in groups, usually following a checklist of physical facts that are thought to be the only true and valid components of a site survey (Moore 2010: 71- ff). The rationalist analysis is defended as a way to counterbalance the whimsically subjective aspects of design; finding inspiration, a concept, transforming of ideas into form and so on (Moore 2010: 71- ff).

However, as Moore argues, there can be no final analysis based on absolute knowledge (Moore 2010: 70). Surveying and analyzing are processes of perceiving and making value judgments informed by knowledge. In other words, the analysis is neither subjective nor objective, but interpretative, and "not about what we take from the world but what we make of it" (Moore 2010: 89). Hence, from a pragmatic point of view, factual statements of the physical state of the landscape are not necessarily important, but what matters are the consequences they bring (Moore 2010: 88-89). Moore goes on to arguing that recognizing the conceptual dimension of the site survey liberates it from its purely physical constraints, and instead becomes an integrated part of the design process (Moore 2010: 88-89). That way, the research undertaken for the survey may have a bearing on the design brief and concept development, which also in turn play a role in shaping the survey. This locates the designer, not as a cool observer of a world 'out there', but as an indispensable part of that world (Moore 2010: 89).

To do away with the logical/sensory divide also affects what is seen as the other part of the spectrum, namely the design process. Moore suggests that, instead of referring the design enterprise to the 'metaphorical and mythical realm', it should be seen as a skill that can be taught, learned and cultivated (Moore 2010: 46). This is relevant to how the role of the designer is percieved, as it implies that designing is not whimsical or a purely intuitive process, but in fact constitutes professional labor (Moore 2010: 46-ff). Moreover, it implies that design skill is not just an innate ability, but requires an understanding of personal responses as well as the significance of the social and political context of what we see (Moore 2010: 46).

Advocating a Holistic View of the Sustainable Landscape

The aesthetic discourse within landscape architecture often revolves around beauty, taste, genius and is therefore associated with privilege and wealth (Moore 2010: 46). Moore contends that this, along with the theoretical logic/sensory divide, is what lies behind the fact that visual qualities tend to be particularly overlooked when it comes to sustainable development (Moore 2010: passim). Ensuring aesthetic quality is seen as optional and usually the first thing that is forsaken when resources are scarce (Moore 2010: 46). This is true for many projects in Western society and likely even more so in developing countries such as the Dominican Republic.

Moore further contends that another false and equally damaging dichotomy is that put up between nature versus culture (Moore 2010: 197- ff). Treating the "natural environment" as separate from the cultural ditto prevents a holistic view of sustainable development— something that we as a professional community should be applying ourselves into changing, not least as our unique perspective on the landscape is what distinguishes us from others concerned with it (Moore 2010: 198). As Moore puts it:

> *"Reducing nature to natural systems and the like gives the impression that it can simply be detatched from strategic and spatial decision making. Easy to marginalise, it is left out of the frame, hard to justify, difficult to substantiate, compromised on after the event rather than considered from the start." (Moore 2010: 201)*

Moore goes on to argue that the visual aspect of the landscape should be seen as an indispensible part of the concept, seeing as all landscape projects have to do with spatial change and therefore inevitably affect it (Moore 2010: 197- ff). While employing the pragmatic approach may require letting go of some previously held beliefs, taking a holistic view helps to overcome the underestimation of the landscapes' spatial value, as well as to legitimize arguments about design expertise (Moore 2010: 197- ff).

A related subject to sustainable development is that of community participation. Moore advocates a stance that falls somewhere in the middle between what some would argue to be a top-down approach and a situation where the landscape architect more or less functions as a "social facilitator"; making the point that designing is not a democratic activity (Moore 2010: 198-199). The pragmatic approach is about finding an appropriate process, and thus requires the ability to differentiate between what is a productive communal discourse that may serve well in forming the design brief, and what is abandoning professional responsibility (Moore 2010: 199).

INFLUENCES

As conceptualization of the landscape is an important part of the marketing and self-image of tourist destinations, I decided to turn to a few prominent conceptualists for direction on how to create landscape architecture that has a strong sense of place and marketability potential. I focused on the way their underlying design concept is demonstrated in their works.

During the stopover in New York, I took the opportunity to visit three of the projects I had studied for inspiration, namely the Brooklyn Bridge Park, the Highline Park, and the 9/11 Memorial Site. To my opinion, all of the items below are exceptional examples of a fundamental design idea, or concept, which has been materialized through the landscape medium.

Martha Schwartz + Partners, Cornice Beach, Abu Dhabi

Martha Schwartz was the first to declare that a landscape "could be about anything" (Avant Gardeners 2010: 33), and is today recognized as a leading protagonist of landscape conceptualism (Avant Gardeners 2010: 256). Schwartz designs are characterized by a strong sense of humor as much as the bold shapes and colors that have become precedent for many conceptualist landscape architects. Schwartz believes that contemporary society is 'color-phobic', and her use of brightly artificial colors sets her apart from designers working in a Modernistic vein (Avant Gardeners 2010: 256- ff). Schwartz also believes that landscape design is about taming the chaos of nature and that large-scale pattern is way of achieveing that (Avant Gardeners 2010: 257).

The Corniche Beach is located on the North West end of Abu Dhabi Island and comprises a total of over 4 kilometeres lenght of promenade, park and sandy beach (MSP 2012). Martha Schwartz + Partners was tasked with turning the beach into a landmark of the

Figure 14: ***Corniche Beach.*** *Martha Schwartz + Partners, © 2012. [Illustration: Aerial view of the Corniche Beach project in Abu Dhabi] At: http://www.marthaschwartz.com/projects/civic_institutional_adcb.php/ (Accessed on 12.03.12). Used with permission.*

city and a sustainable model for generations to come (MSP 2012). Schwartz describes the key challenge was to organize the beach so that it provides flexibility for seasonal use, multiple options for occupation and accomodation of a heavily programmed mix of different both private and public services (Schwartz, 2012). Part of MSP's design concept was also to maximise the visual connections back into the city and out towards the sea (Schwartz, 2012).

The design uses a meandering pattern weaving its way down the length of the beach; orchestrating a multiplicity of spaces that take users on a journey of exploration through a landscape of shaded vantage points to sea and city (Schwartz, 2012).

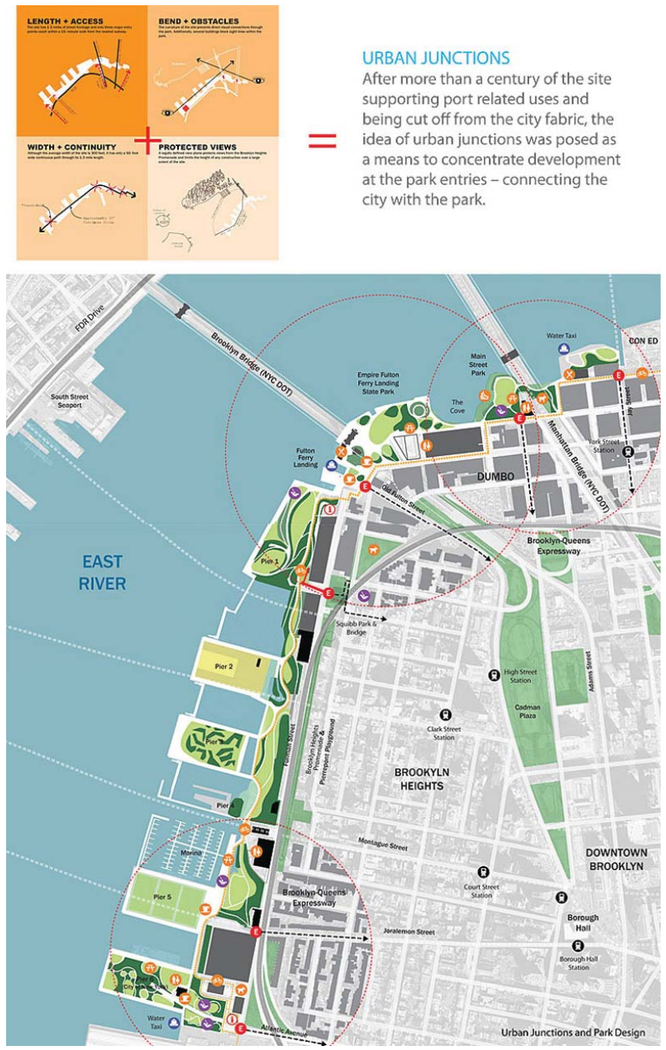


Figure 15: ***Design plan of the Brooklyn Bridge Park.*** *The three urban junction points are circled in red. Mikael Van Valkenburgh Associates Inc.,© 2010. [Illustration: Plan of the Brooklyn Bridge Park] At: http://www.mvvainc.com/project.php?id=86 (Accessed on 12.03.12). Used with permission.*

Figure 16: ***9/11 Memorial Site.*** *New York, 2012*

Michael Van Valkenburgh, Brooklyn Bridge Park, NY

The Brooklyn Bridge Park covers eighty-five acres running from Manhattan Bridge to the foot of Atlantic Avenue, and constitutes a threshold between the river and the city (MVVAINC 2012). According to Van Valkenburgh's website, the design was guided by a concept called "post-industrial nature", and was aimed at preserving the industrial character of the waterfront while introducing self-sustaining ecosystems and recreational possibilites (MVVAINC 2012). The main challenge was to create public access to the long, narrow site, which was possible in just three locations, and was achieved by turning them into urban junctions that connects the site to the surrounding neighbourhoods, and hence fostering liveliness and safety within the park (MVVAINC 2012).

The park design includes a variety of salvaged materials and repurposed marine infrastructure that has turned the man-made landscape into a site where ecologies can thrive and evolve in a heavily urban setting (MVVAINC 2012).

Peter Walker and Michael Arad, 9/11 Memorial Site, NY

The design concept of the 9/11 memorial site submitted to the Memorial Jury by Peter Walker and Michael Arad was called "Reflecting Absence". The design proposes a space that resonantes with the feelings of loss and absence that were generated by the destruction of the World Trade Center on September 11, 2001 (The National September 11 Memorial & Museum 2012). The Jury chose the proposal with the motivation that "of all the designs submitted, 'Reflecting Absence' most eloquently fulfilled the daunting but absolutely necessary demands of the momorial site" (The National September 11 Memorial & Museum 2012).

Two large voides containing recessed pools are set within the footprints of the Twin Towers, fed by cascades of water that trickle down each square of the pool walls and down into the endless cavity at the center; open and visible reminders of what is absent (The

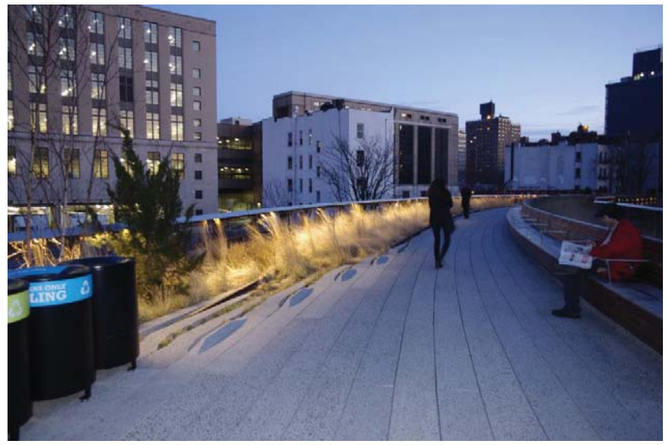


Figure 17: ***The High Line Park.*** *New York, 2012*

National September 11 Memorial & Museum 2012). Surrounding the pools are bronze parapets with all the names of the lives lost in the destruction.

The memorial plaza is designed to be a meditating space and is shaded by linear rows of oak trees, whose traditional affirmation of life and annual cycle of rebirth deepens the experience of the memorial. The park is integrated into the fabric of the city and encourages use of New Yorkers on a daily basis.

James Corner/Field Operations, High Line Park, NY

NYC's High Line is a project that exempleifies adaptive re-use of a structure that has reached the end of its useful life. The abandoned, elevted train track was turned into a public park that has redefined New York experience, offering never-before seen views of the city's landscape (Inhabitat 2012). Lead designer James Corner took inspiration from the post-industrial railroad character of the site and sought to create a distinct juxtaposition by placing this green ribbon against the stoic grid of Manhattan (Inhabitat 2012). Every detail, from paths to seating down to lighting and water features are aimed at constructing a generous, safe and secure space. James Corner says that the intention was to create an impression of a secret, magic garden in the sky (Inhabitat 2012).

The overall visual idea was to comb the paving and plantings together so that the edges between path and garden are left without clear definition (Inhabitat 2012). Sustainability issues were taking into account through the use of recycable material and up to 90 percent of rainwater that falls within the site is collected for irrigation. The greenery also provide shade and an ambient cooling effect that lessens the heat-island incidence brought by hard materials surrounding the site (Inhabitat 2012). All plant material is stress tolerant and was carefully chosen to survive the harshness of minimal soil depth, afflicted by drastic temperature fluctuations and issues of providing them with adequate water and nutrients (Corner, 2012).

DESIGN BRIEF DEVELOPMENT

Organizers of architectural competitions normally provide the competitors with a design brief, usually containing a list of requirements and objectives to which the proposals should respond. A brief may also be developed by architects or designers themselves, as a tool for communication and/or guidance within the design process that complements the concept. For this project, the design brief was developed partly in collaboration with Architect Marcos Barinas and Urban Planner Carla Quiñones, who figured as the equivalent of the organizer or client, and under the auspices of my supervisor Professor Ulla Myhr. Views expressed by the respondents were also taken into consideration during the brief development.

I used the brief to summarize overarching objectives, context considerations, and program requirements. The brief also stipulated the kind of design language that I found to be appropriate for the site.

CONCEPT

The concept is a response to the design brief and encapsulates the fundamental idea that is the foundation for and expressed through the design scheme. The concept aids the design process by providing a framework for decision making and is, ideally, an effective instrument when it comes to communicating ideas with stakeholders.

The concept's name was *All invited*- an antonym of the all-inclusive resort. As described in the introduction, all-inclusive resorts often constitute a certain kind of gated communities, separating tourists from the supporting community in order to ensure safety. However, gated all-inclusive resorts also entail social segregation and tend to exceed the carrying capacity of the environment. Moreover, gated resorts contradict the sustainablity concept by excluding the local community from decisionmaking processes and withholding profits that are essentially extracted from the natural resource base that infact belongs to them. In conclusion, if tourism development is to be sustainable, it has to be on the terms of the hosting community.

All invited implies the latter scenario, by indicating a place where everyone is welcome and where integration between visitors and residents is not only possible, but encouraged. *All invited* thereby encapsulates the idea behind the sustainable tourism development that is about to take place in Miches.

In addition, *All invited* was inspired by and intended to reflect the abundant hospitality that is so typically Dominican.

Design problem

The general assumption that there is a difference in preferences and tenure between tourists and residents was an important starting point for the concept development. The site is bordered by water on two sides, the Atlantic Ocean and La Yeguada River, which were interpreted in the design concept as representations of the two categories. For the typical tourist, the ocean evokes associations of leisure while local fishermen see it as their everyday workplace, and when residents may seek out shade, tourists are looking for a spot to sunbathe. The two sides therefore in some ways represent opposites, but as the idea was to create a park that encourages integration, the design must provide spatial as well as visual connection between them. Spaces that are perceived as being arranged solely for tourists will be at risk of total abandonment by local residents, and hence fail at providing a genuine town experience for visitors. On the same token, the spaces must be arranged in a manner that is welcoming to non-residents by providing services that are directed to them specifically. In conclusion, the all-inviting park space must serve as a city park for locals and simultaneously accommodate facilities for beach-oriented tourism.

Further, *All invited* is a concept that stresses the social and cultural aspects of sustainability. As stated in the classic work *The Death and Life of Great American Cities* authored by Jane Jacobs, it is people who confer use on parks and make them successes- or else withhold use and doom them to rejection and failure (Jacobs 1961: 116). Jacobs goes on to emphasize the importance of a mixture of uses around the park in order to provide a natural flow of users who enter and leave the park at different times, thus ensuring social control that help prevent crime and vandalism from taking place within it. However, as Jacobs points out, there is one important exception to the rule that it takes a wide functional mixture of uses to populate a park through the day- people with total leisure, who lack even the responsibilities of home; i.e. people who for some reason are outside of society and, of course, leisure-oriented tourists. These two groups differ in that leisure-oriented tourists have the luxury of choice, while people with little or no money at their disposal tend to move into already weakened areas that are not sought out by the wealthy (Jacobs 1961: 127). Therefore, the main design problem entailed by a concept that stresses social inclusion and integration within a touristic environment is how to make people with fewer resources feel welcome, while still maintaining high aesthetic quality.

VISUALIZATION

The vision development was based on the landscape analysis and elaborated through paper tracing and model building, and followed the modus of an architectural contest. Design proposals intended for contests heavily depend on illustrations, which are vital to both explaining the ideas as well as pitching them. A major part of the vision development was therefore devoted to illustration work.

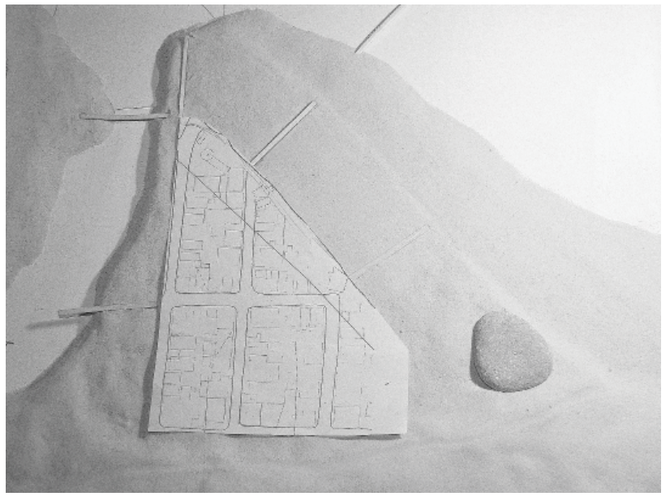


Figure 18: ***Concept model.*** *The model was sculpted to scale and modelled to correspond to topographical requisites. A piece of the town plan was cut out and placed within the site as a guideline for the design language. A small pebble found on the beach was placed within the frame and inspired the shape of a built structure in the east part of the park. Small sticks represents the general direction of the pier structures that would allow access to and from the sea.*

Model Building

A model was sculpted in model sand at a scale of 1:4000 and used to explore ideas and the topographical conditions of the site. The material is easy to work with, making it ideal for rapid concept studies. A 3D-model also helps to understand scale and the spatial implications by design. Taking pictures during the sculpting process enabled me to erase and redo without fear of losing any ideas.

The ideas were further developed through series of quick drawings, and the result of the sketching process was then scanned into the computer and transferred into an AutoCad drawing.

Digital Drawings

The digital visualizations that mediate the design vision were created through a combination of Autodesk, Rhinoceros 3D and Adobe CS software. Perspective views are more intuitive and easier to understand than plans, and therefore constitute a central part of the design panels.

RESULTS PART I: MINOR FIELD STUDY

- OPERATIONAL CONTEXT
- LCA
- SITE ANALYSIS
- FUTURE DEVELOPMENT
- PLACE SYNTAX- ANALYSIS
- SWOT- ANALYSIS

OPERATIONAL CONTEXT

All landscape projects take place within a given temporal context, consisting partly of site related matters (soil conditions, vegetation types, etc.) and partly by social, cultural and economic aspects, which together help form the political values that are tangible within the landscape. The idea of what it takes to be sustainable is partly cultural, why the operational context must be taken into account in order to create feasible landscape designs (Schwartz, Oct 14th 2011).

THE DOMINICAN REPUBLIC- A BRIEF PRESENTATION

The Dominican Republic is situated in the Caribbean and shares the island of Hispaniola as well as the colonial past with neighboring Haiti.

Historic background

The capital, Santo Domingo, was founded around the spot where Columbus first arrived during his discovery journey in the 1400s (Bonniers Världshistoria, p189). The city's Zona Colonial used to be the heart of the Spanish empire's original seat in the New World and features some of the Western Hemisphere's first museums and monasteries (Clammer et al. 2011:42). Hispaniola had already been occupied for over 5,000 years by a tribe of Native Americans called Tainos, but only a few decades after the arrival of the European conquistadores the original population had disappeared entirely, thus sharing the fate of the other West-Indian peoples (Diamond, 2005, p. 333). The western part of the island fell into the hands of the French, who founded Haiti (Diamond, 2005, p. 334).

The two countries have since followed completely different paths; while the development in Haiti has gone from a nation of wealth to being the weakest economy outside of Africa, the Dominican Republic has risen and is now the richer of the two (Diamond, 2005, p.336). Both countries have been subject to multiple waves of foreign invaders, but the relationship with Haiti has shaped the Dominican identity and self-understanding more than anything else (Clammer et al. 2011:216). Today, Haitians migrate over the border to take on jobs rejected by the Dominicans themselves, lured by relatively higher salaries but at the risk of violence and discrimination (Clammer et al. 2011:218). The migration rate of Haitians nearly corresponds to that of young Dominicans leaving the country to seek a better life elsewhere, mainly in the United States (Sjöberg, 2012).

Modern Economic and Political Situation

The country is rated as an emerging economy and has a democratic polity (IMF, 2010). However, centuries of political instability has caused the usual disadvantages shared by many former European colonies, such as corruption, economic inequality, public health problems and low agricultural productivity (Diamond, p.337. Aside from the corruption, the biggest concerns facing the nation are social segregation and unequal revenues, as nearly half of the population live below the poverty line and the wealthiest 10 per cent are in control of 40 per cent of the country's economic assets (Clammer et al. 2011:43).

According to architect Marcos Barinas, nearly seventy percent of the development in Santo Domingo is informal, and in smaller cities the same number approximates a hundred (Barinas, 2012). This causes a cascade of negative effects such as segregation, urban sprawl and deficient infrastructure. Another issue is the chronic energy shortage, which in combination with the antiquated power grid causes frequent blackouts. Resorts and richer areas therefore rely on separate systems or private generators to ensure their energy supply. (Quiñones, 2012). Nevertheless, there is a well-extended telecommunication network covering almost the entire nation and I noticed that wifi-hotspots are abundant, even in remote places.

Tourism industry

The tourism sector accounts for one in seven jobs as the Republic is one of the leading tourist destinations in Latin America, topped only by Mexico and Brazil (Clammer et al. 2011:42). The country's attraction resides in its uniquely diverse natural patrimony, including deserts as well as lush jungle and four of the five highest peaks in the Caribbean (Clammer et al. 2011:42). The coastline is equally diverse, with fields of coral and myriads of tropical fish making the

Figure 19: ***El Malecón (seawall) in Santo Domingo.*** *The seawall is one of the largest traffic arteries through the city and offers scenic vistas of the sea. This is where the most luxurious hotels, restaurants and casinos are concentrated, but the beachfront is too polluted for bathing. It is still however ideal for kite flying, one of the most popular activities among the young, as well as an important social space for the city residents. This is also the setting for the National Parade in February each year.*

warm Caribbean waters on the southern coast ideal for snorkeling, while the cooler, less transparent waters facing the Atlantic provide a much more varied and unique underwater profile suitable for more challenging dives (Clammer et al. 2011:42). The tourism prospects are favorable all year round due to the relatively stable temperatures, but the high season runs from December to February. Large resorts are found in for example Punta Cana in the east, Puerto Plata in the north and La Romana and Pedernales in the southern parts of the country.

THE MICHES STORY

Miches is a traditional fishing village founded in 1808 by General Eugenio Miches, and is located on the northern coast of the country, overlooking Samaná bay. The pirates who once roamed the bay have long since been replaced by tourists on the pursuit of whale watching, as this infinitesimal part of the Atlantic is home to thousands of migrating humpback whales (Clammer et al. 2011:41). The whales return every year to breed, why the bay is legislated as a Marine Protected Area, MPA, forming part of an international network of preserves established to protect them and other species (Bedall, 2012). Even though the whales make up an enormous attraction value, the tour boats' moorings are mainly situated on the other side of the bay while Miches is as yet spared from outside interference.

Miches is the center of one of the two municipalities that make up the El Seibo province, currently one of the poorest and least developed in the nation (Oficina Nacional de Estadística, 2008:10). The municipality also contains two minor municipal districts, El Cedro and La Gina, and has a total of 20,000 inhabitants. Socioeconomic levels are lower than the national average as 47.7% are classified as poor and 20.9% as indigent, leaving only 31.4% identified as "non-poor" (Oficina Nacional de Estadística, 2008:9). In addition, 60% of the population has completed only primary education or less (Oficina Nacional de Estadística, 2008:9). According to USAID representative Duty Greene, Miches is notorious within the country as a major smuggling link of illegal drugs and human trafficking, and the community is lacking the civic functions needed to take corrective action (Greene, 2012).

As clarified by Professor Melnick, the local community is well aware of the problems but need support in order to begin to counter them (Melnick, 2007):

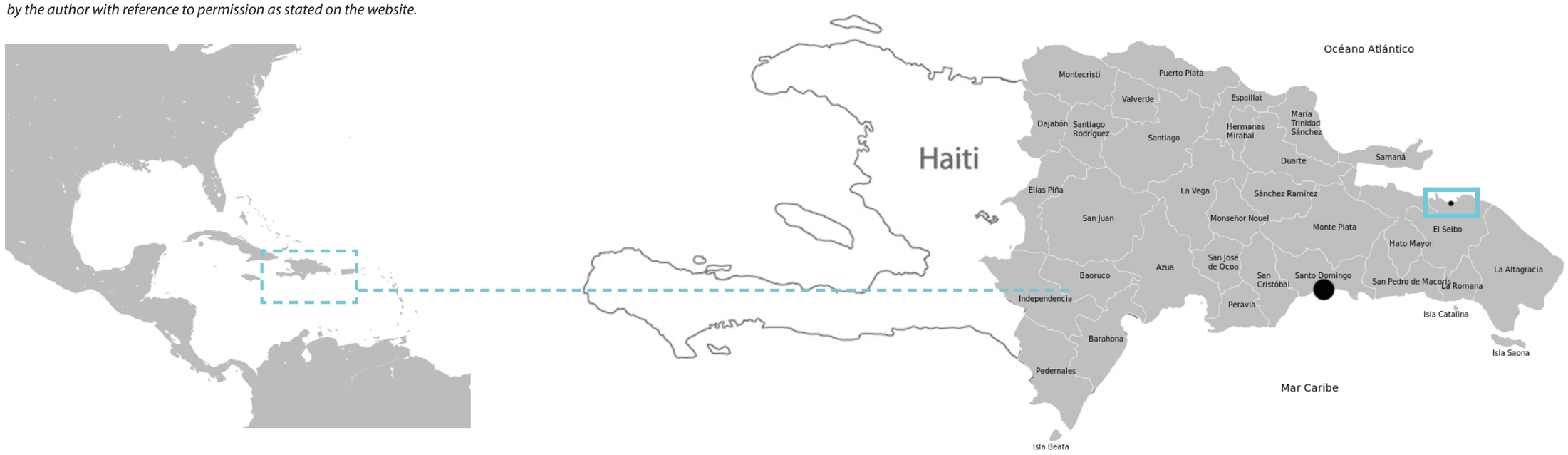
> *"The village is set in beautiful surroundings underpinned by an enormous natural wealth, but the people living there currently have no way of transferring the potential of the landscape into improved living conditions for themselves. Moreover, the people's livelihood, health and future are threatened by environmental degradation, as agricultural runoffs combined with outdated fishing methods and untreated sewage discharge are destroying the marine resource base. Following a specific needs assessment ordered by President Leonel Fernandez and executed by the Presidential Commission on Sustainable Development [COPDES] in the mid-90s, a political ambition was set to turn the Miches region into a destination for sustainable tourism. COPDES created a platform enabling the people to express their needs and priorities, and eventually a partnership was formed between them, the commission and the UN task force on sustainable development."*
>
> *(Melnick, 2007)*

In 1997, the non-profit organization CONATURA-Miches (English translation: "*Committee for Tourism Development and Conservation of Natural Resources in Miches*") was founded by an association of stakeholders in El Cedro (CONATURA-Miches 2012). The shared objective of the different parties was to keep the forthcoming tourism development within the carrying capacity of the area and to "share the wealth without selling out" (Melnick, 2007).

During our meeting in New York, Professor Melnick explained that what he considers to be particularly important in the case of Miches is to avoid was a scenario exemplified in other parts of the country, where big international hotel chains have erected their grand all-inclusive complexes with hundreds or even thousands of beds (Melnick, 2012). In the words of Professor Melnick; "that kind of development would not only grossly overtax the environment but also change the power dynamic in favor of the developer, meanwhile significantly reducing the locals' influence over their own region" (Melnick, 2007). Professor Melnick further explained that, in order to accomplish a development that does not equal decline in environment or the hosting community, it must be done to scale (Melnick, 2007).

Figure 20: Hispaniolas position in the Caribbean and Miches, El Seibo in the Dominican Republic. *© Copyright Bruce Jones Design Inc. 2009. [Map data: World Mercator Projection Map] At: http://www.maps-fordesign.com/ (Accessed on 12.03.12). Royalty free image. Used and edited by the author with reference to permission as stated on the website.*

Figure 21: Hispaniola. *© Copyright Vagabondleon 2010. [Map data: Mapa de provincias de la República Dominicana] At: http://commons.wikimedia.org/wiki/File:Mapa_Republica_Dominicana.tif/ (Accessed on 12.03.12). Licensed under the Creative Commons Attribution 3.0 Unported license. Used and edited by the author with reference to permission as stated on the website.*



Turning Miches Into a Support Community for Tourism

As the landscape surrounding Miches carries the potential to sustain high-end tourism and thus allowing for lower tourist volumes and a smaller ecological footprint, it has been decided that the development should be kept at a low density (Quiñones, 2012). The CONATURA encourages the hotels to make use of locally sourced foods and products as it would stimulate the economy and lessen the environmental effects even further (CONATURA-Miches, 2012).

One of the main investors within the region is the Cisneros Group Inc., an international conglomerate headed by the Venezuelan entrepreneur Gustavo Cisneros. In 2007, the Cisneros Group created Fundación Tropicalia as part of a project to carry out the Corporate Social Responsibility program (Cisneros, 2010). Tropicalia is a tourism real estate project aimed at designing and implementing programs to promote social, environmental and economic well-being throughout the Miches municipality in a way that is in compliance with the MDGs (Cisneros, 2010). The planned result of the investments was to generate 3,000 jobs in the short-term, 6,000 medium-term and 14,000 long-term positions for local citizens (Perazzo, 2012). The project of turning Miches into a functioning support community will require radical enhancements of the healthcare system, infrastructure and civic functions as well as an improved public space, in order to create an environment where integration between locals and tourists is possible and safe (Perazzo, 2012). The first stages were initiated in 2008 and were mainly directed at fostering organic agriculture and refurbishing school buildings in cooperation with the USAID, but the rest of the changes will come into force gradually within a timeframe spanning over at least 20 years into the future (Greene, 2012).

Following the investments made by Fundación Tropicalia the President signed a contract with the investors, committing himself to pave the streets of Miches in order to make the town look more presentable. The paving was completed in 2011 and a few school buildings were renovated as part of the project (Perazzo, 2012).

Other institutions and non-profit organizations have also contributed to the development of Miches, including the Peace Corps, Engineers Without Borders and several universities; Universidad de Sevilla (Spain), University of South Florida (USA), Columbia University (USA) and the domestic INTEC (Instituto Tecnológico de Santo Domingo).

Architect Marcos Barinas holds a position at Universidad Iberoamericano (UNIBE) in Santo Domingo and has developed a design plan in collaboration with INTEC for the beach promenade of Miches. A special effort was made to integrate community participation in order to consolidate the project- a process that started in 2004 and was still ongoing at the time of writing. During our meeting, Barinas explained that winning the trust of the local people takes time, but that community participation was a crucial part of the process in order for the development to be on their terms (Barinas, 2012). INTEC has also collaborated with the University of Seville on a project to integrate tourists into the very homes of people by assisting homeowners to build rental rooms on their property. The project's aim is to make the tourist feel at home, with the owners tending to and providing services for their visitors (Barinas, 2012).

The water cistern that caters to Miches is driven by gravity, why the people living above it are compelled to collect rainwater for their daily needs. For that reason, Engineers Without Borders at the USF is currently engaged in a project called "Water for Miches" with the aim of providing clean water to the residents of Miramar, a community of about five hundred people living up in the hills.

The Columbia University got involved in 2007 with the ambition of assisting in the tourism development process, but later refocused onto implementing sustainable fishing methods (Fernandez, 2012). The Columbia team has also been collaborating with a volunteer from the Peace Corps, Evan Poirson, to establish a small, community based kind of ecotourism in Laguna Limón to the east of Miches. The Peace Corps has prepared the foundation for a kayak project and efforts are being made to balance the logistics and safety issues required to get the project up and running (Poirson, 2012).

Professor Melnick contends that the combined efforts of both local and foreign partners to develop the region to benefit the people is what makes the Miches story unusual, and why it has the potential of becoming an international role model for how to create environmentally sustainable growth on the base of tourism (Melnick, Feb 1st 2012).

Cultural Analysis

In island nations overall as well as in the Dominican Republic, the sea symbolizes both limits and escapes, posing both threats in terms of storms and foreign invadors, but also opportunities in terms of food resources and fairways for travel (Clammer et al. 2011:42). According to Professor Melnick, the sea is primarily seen as a workplace and not a place for indulgence, whereas the river is held a lot dearer by the local population in Miches (Melnick, Feb 1st 2012). Interviews with locals were made to pinpoint the areas that are esteemed highly among the residents, and during them the respondants confirmed that the river is favored before the ocean as a bathing place, adding that the ocean is seen as a bit threatening. I was told that there is a popular bathing spot some hundred meters upstream from the town center, where the water is presumed to be somewhat cleaner than by the outflow and the ocean. The local fondness of the river is also expressed physically in the town structure, which is mainly facing inwards. Even the major square, only a few steps away from the waterfront, is lacking spatial and visual contact with the sea.

People in Miches are more religious than the national average, and approximately 99.7% are Catholic (Oficina Nacional de Estadística, 2008:10). Everyday cultural venues are the church and its adjoining square, cockfighting arenas and not least a grand baseball field on the east side of town. The lifestyle is overall very relaxed compared to the bigger cities, but loud music blasts in small dance halls during the evenings. The agrarian livelihood is contrasted by a consumerist culture, to my view seemingly influenced by the United States. The most popular children's activity is kite-flying, which takes place down at the beach between the piers. Young boys play basketball at the sports field by the church square until well after sunset.

Current Tourism Development

There are a couple of small hotels run by a group of Swiss people, hotel La Loma located on a hill top overlooking Miches, and hotel Coco Loco by the eastbound beach Playa Arriba. Coco Loco also has a restaurant and a large dance floor that attracts locals. The most popular beach for hotel guests today is the renowned Playa Esmeralda, a few kilometers further east along the coast, which is most easily accessible by horse.

Tourists are not well integrated into the community but tend to keep to themselves within the premises of the respective hotels.

The DR in Figures

Capital/ largest city:	**Santo Domingo**
Official language:	**Spanish**
Independence (from USA):	**July 12, 1924**
Area:	**48,442 km²**
Population (2010):	**9,5 million**
Density:	**193.6/km²**
Currency:	**Peso (DOP)**
Gini coefficient* (2005):	**49,9 (high)**
HDI** (2012):	**▲ 0,689 (medium)**
GDP (PPP)***	
- Total:	**$93,383**
- Per capita:	**$9,286**
GDP (nominal)***	
- Total:	**$56,700 billion**
- Per capita:	**$5,638**
Ethnicity	
- Mulatto:	**73%**
- White:	**16%**
- Black:	**11%**
Religion	
- Roman Catholic	**68.9%**
- Evangelical:	**18.2%**
- No religion:	**10.6%**
- Other:	**2.3%**

* The Gini coefficient measures the inequality among values of a frequency distribution, in this case levels of income
** Human Development Index
***2011 estimate

Source: wikipedia.org

Figure 22: ***Private beach.*** *La Romana, Dominican Republic, 2012*

Figure 23: ***Typical scenery at an all inclusive resort.*** *La Romana, Dominican Republic 2012*

Figure 25: ***Public beach in Santo Domingo.*** *Photo courtesy of Ulla Myhr, Swedish University of Agricultural Sciences, © 2012. Used with permission.*

Imagery from site visits in Boca Chica, Santo Domingo and Bayahibe. Public space is often lacking maintenance and most public beaches in city centers are severly polluted with solid waste, as seen in the bottom right picture. Resorts beaches on the other hand are kept clean and sprinkled with commercial sand to prevent erosion due to the intense usage. The plant material within resorts also appear to have been chosen mainly to enforce the tropical concept that attracts tourists, while local people tend to choose the shade beneath almond trees over palms.

Figure 24: ***Children playing with garbage at the beach below the seawall.*** *Santo Domingo, Dominican Republic 2012*

Figure 26: ***Semi-private beach****. Boca Chica, Dominican Republic 2012*

LCA

The scope of the Landscape Character Assessment, LCA, was to investigate in what way the park could contribute to raise the quality of life in Miches. The assessment was done with a holistic approach towards Miches and the surrounding area, within in which the town is supposed to function as a support community. Special consideration was taken to find features that may be conceptualized when promoting Miches as a tourist destination and also to pinpoint eventual challenges or obstacles for forthcoming development.

TOPOGRAPHY

Hispaniola was formed by a volcanic eruption millions of years ago, but there are no volcanos to be found on the island today. The El Seibo region is hilly and a large part of the planned tourism development will be located to the mountain areas, which are rich of points of interest for trekkers (Quiñones, 2012). Hidden in the the dense jungle of the mountains are steep waterfalls, and geologically intriguing formations make up landmarks in the agricultural landscape that opens up between the hills.

The current road from Santo Domingo to Miches that runs through the mountains is of poor quality and dangerous, but the winding ride is also extremely scenic. Glimpses of Miches, which is located on the coastal lowland, are visible from ledges several kilometers away.

Bedrock, Soils, and Hydrology

The red soils indicate the kind of ferrous bedrock that is typical for hot and humid tropical regions. Tropical soils are generally nutrient-poor and easily leached out, why they can only be cultivated intensely for a few years.

Karst topography is found in many places along the coast of Hispaniola, a landscape formed by the dissolution of soluble rocks such as limestone (Clary, 2012). The geological morphology is characterized by sinkholes, caves and underground drainage systems and is sensitive to fluctuations in groundwater levels. The unstable bedrock has also caused some of the most notable tourist attractions in the Dominican Republic, such as Los Tres Ojos, a spectacular open air cave in Santo Domingo and the National Park of Los Haitises a few kilometers west of Miches.

The center of town is situated by the river mouth of La Yeguada. La Yeguada meanders it way through the landscape and provides natural irrigation for the surrounding fields. The river used to be clear and safe for swimming but is now brown with toxic sediments, which are poured out in the bay and carried westward by the ocean current (Clary, 2012). Sunfeathered sand dunes ocassionally obstructs the outflow during lowtides, forming a ford and connecting the two sides of the river (Clary, 2012).

LAND USE

The diversity of the region surrounding Miches supports many different land uses. The area mainly sustains on fishery and agriculture.

Agriculture, Fishery and Forestry

Production landscapes are primarily found mainly uphill but also in the coastal area, and are made up by pastures, rice fields and coco plantations (Bzomowski, 2011). The vegetation cover in the highlands has been subject to deforestation following the development of beef and dairy cattle farming, while the lowlands remain more densly forrested (Bzomowski, 2011). The continously receding layer of forest in the highlands presents a classic tradeoff between the environment and economy, as the deforestation affects the water quality and fishery negatively (Bzomowski, 2011).

The production landscapes are characterized by loose boundaries and fluidity between different levels, densities, and varieties of pasture and forest. The forestry includes everything from clearcut forests to ones that are only lightly managed for timber, whilst the pasture fields may include anything between an overgrown hayfield to one that is overgrazed and severely eroded (Bzomowski, 2011:27).

Protected Areas

Throughout the nation, the coastline is protected by law to ensure public accessibility (Quiñones, 2012), but in practice a lot of them form part of private properties or resorts, often fiercely protected by armed guards.

There are several nature reserves in and around the area; the two National Parks of Saltos de la Jalda and the aforementioned Los Haitises; the respective Wildlife Reserves of Laguna Redonda, Laguna Limón and Mangroves of La Gina; and the Marine Protected Area of Samaná Bay. Laguna Limón is a freshwater lake while Laguna Redonda is connected to the ocean by a river channel (Clary, 2012). The brackish water of Laguna Redonda makes it a very special and particularly sensitive biotope that sustains completely different species than in Laguna Limón (Clary, 2012).

The Samaná Bay is an important sanctuary for humpback whales which make up an outstanding attraction value. The bay also contains small islands, coral formations, and is home to dolphins, sea turtles and the West Indian manatee (Clary, 2012). The Nature Conservancy, USAID and University of Rhode Island are working with local conservation groups such as Centro para la Conservacion y el Eco-desarrollo de la Bahia de Samana (CEBSE) to create community involvement and foster open discussions with stakeholders to ensure that the requirements are implemented (Greene, 2012).

INFRASTRUCTURE

As of today, there are no zoning laws in Miches and most if not all buildings are informal (Barinas, 2012). Small villages are scattered around the pastoral landscapes uphill and the population in the lowlands is of low-density as well. An estimated ten percent of the population live in extreme poverty, and most villages consists of tin or wooden sheds with tin roofs (Oficina Nacional de Estadística, 2008). The majority of those living in the urban area generally have better living conditions in concrete houses with tap water, electricity and internet access. Little shops are incorporated into people's homes and scattered around town, but except for the odd telecom provider there are no established shopping or service venues.

Accessibility and Traffic

As of today, Miches is an end-of-the-road destination due to the poor road network connecting it to other towns. The streets in the center of town are strucutred in a strict grid pattern which tells of the influences of the US, while informal settlements sprawl up the hills along irregular dirt trails. There is no distinct main street as the town streets all have about the same width and hierarchical level. Following investments made by Fundación Tropicalia the President signed a contract with the investors, committing to pave the streets of Miches in order to make the town look more presentable. The paving was completed in 2011. There are no traffic lights but deep trenches along the streets and through intersections function both to lead away water and to keep down traffic speed.

The car is a powerful symbol of status and wealth, a fact that is both expressed and reinforced by the car-focused city plans. Getting around is especially troublesome for tourists due to the lack of a comprehensible public transportation system. In Santo Domingo, a modern subway system is under development but a large part of the population still rely on *guaguas*, privately owned mini-buses in varying conditions, for their daily commuting. There are a couple of stops for regional guaguas with more or less regular departures at the center square of Miches.

As in the rest of the country, the sidewalks are narrow and motorists prioritized before pedestrians. In Miches, mopeds dominate the streets but the traffic is far lighter than in the bigger cities, which gives it a comparatively calm atmosphere.

Electricity, Safety, and Social Functions

The electricity network is somewhat antiquated and remains from the Trujillo era. Black-outs occur frequently and sometimes last for days on end. Street lighting is sparse and the evenings are preferrably spent indoors. The houses are gated with safety bars, but the social control that comes with such a small community provides some security in spite of the deficient police force. Teams of military forces patrol the surrounding area and occasionally put up road blocks in search for drugs, but do not provide any security for the community.

Stray dogs prowl the streets and have interbred to form a local breed of yellowish dogs. They are mostly harmless, but the country is one of the worst affected by cases of rabies. The healthcare system is substandard, provided by only a few private practices, and the nearest hospital is about six hours away.

Figure 27: ***Los Tres Ojos.*** *Santo Domingo, 2012*

Figure 28: ***Los Tres Ojos.*** *Santo Domingo, 2012*

Figure 29: ***Los Haitises National Park, Sabana de la Mar.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

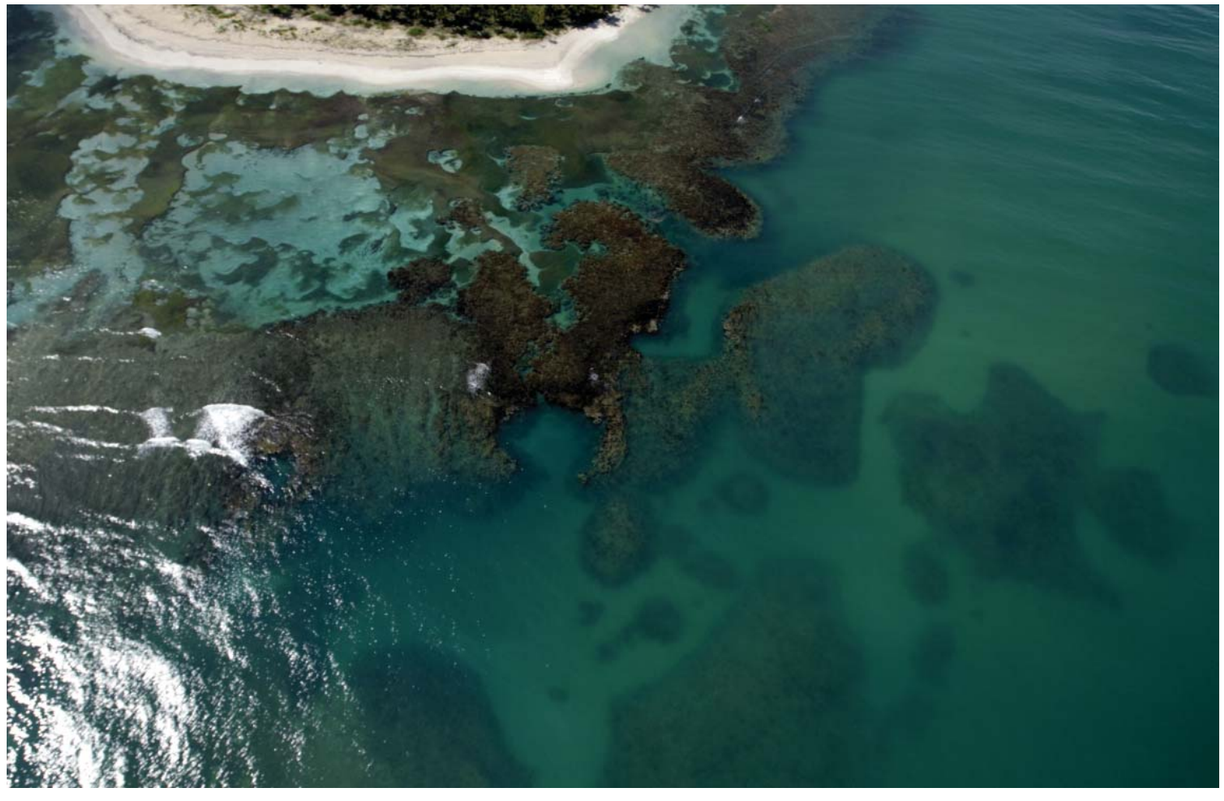


Figure 30: ***Coral reefs emerging through the surface off the coast in the Miches region.*** *Photo courtesy of Anali Rivas, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 31: ***Mangroves of La Gina.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 32: ***Meandering river.*** *Photo courtesy of Oliver Oliva, © 2011. Used with permission.*

Figure 33: ***Waterfront in El Seibo.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 34: ***Forestry in El Seibo.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 35: ***Eastern part of Playa Arriba.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 36: ***Coral reefs off Playa Esmeralda.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 37: ***Agricultural landscape of El Seibo.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 38: ***Beach front upclose.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

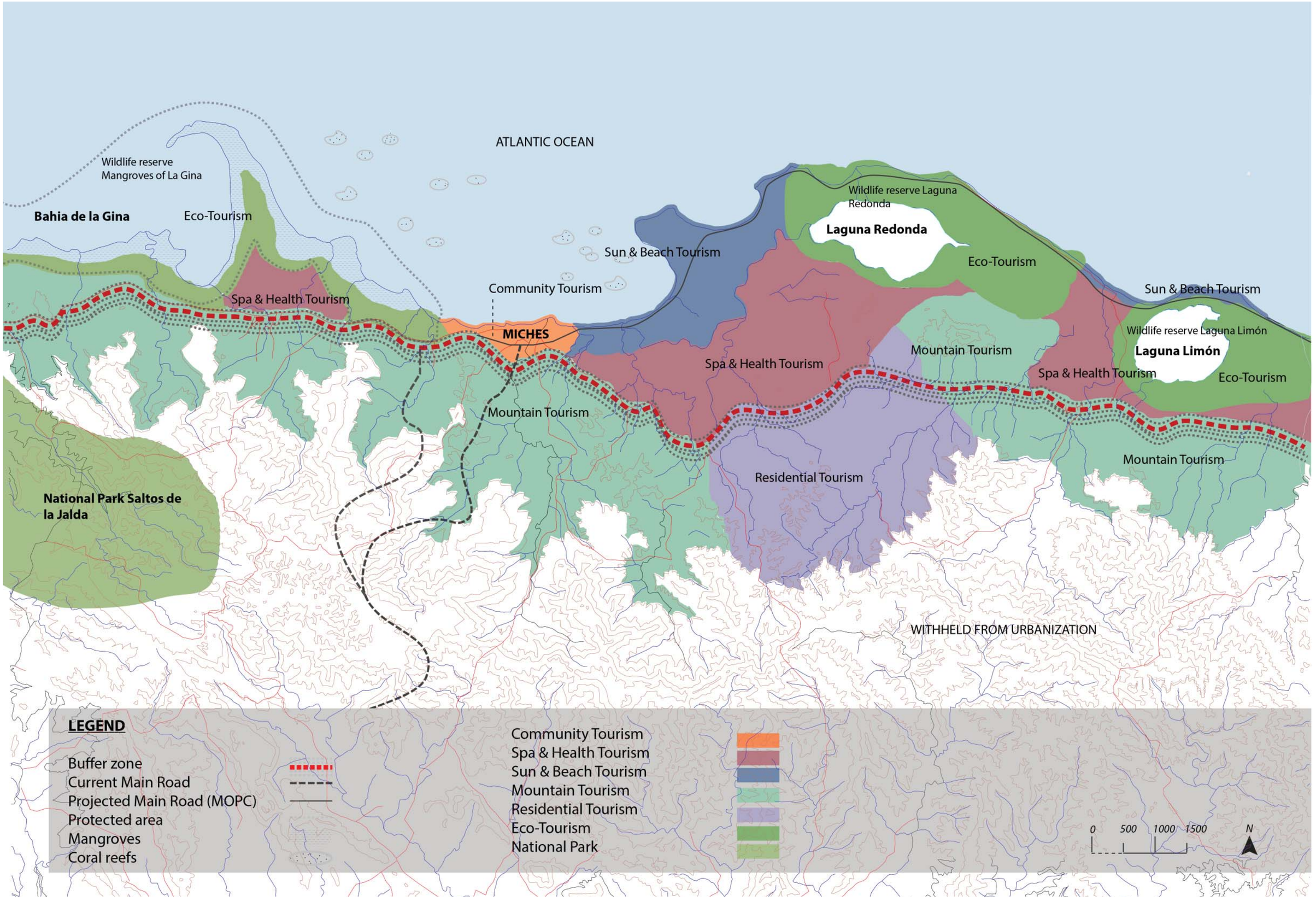


Figure 39: ***Sustainable toruism development plan for the El Seibo region.*** *Image source: Carla Quiñones, Dominican Ministry of Tourism © 2012. Original material modified with permission.*

Water and Waste Management

A new water tank and community pumps were installed in 2009 following the ESSEG initiative (Clary, 2012). The gravity-fed tank that supplies water for Miches is somewhat unreliable, and showers are made cold with slow running water. The informal community recently established uphill from the water tank cannot be supplied by it. Instead, the water is taken directly from the river and hand carried several hundred meters uphill by the women and children, or otherwise collected from rainfall in open buckets. The water managment still needs improving in order for bathrooms and clothes-washing to function properly and to prevent pathogens from spreading (Clary, 2012).

The waste disposal is another problem, as people have little choice but to dump their trash and waste water into the street trenches, from where it is transported out into the waters. Solid wastes accumulate on the west bank due to the undercurents, and the river that used to be clear and safe for swimming is now opaque and unsanitary.

Green Structure

Swathes of mangrove swamps are found along the coast and the pristine beaches are lined by indigenous palm trees. Almond trees are also a common feature along the coast, shading the ground with large foilage and wide branches. Bougainvilleas in bright bloom grow spontaneously in bushland, impediments and gardens alike.

The greenery of the town center is mostly concentrated within the blocks, while the sidewalks are only sparesly dotted by trees and bushes that provide some, but not sufficient, shade. Women therefore often carry parasols, which protects against both glaring sun and sudden rain showers.

Public Space

As of today, there are two landscaped places within the public realm of Miches. The primary one is the aforementioned central plaza by the church, the heart of the community, and the other is a small pocket park at the corner of a cross-road. Both suffer from the same drawbacks as public space does all around the country, with lack of accessibility being the most pressing issues.

The main square is paved with a rolled concrete flooring and shaded by trees in raised planting surfaces. The square is surrounded by streets and circulated by quite a bit of traffic. A playground was erected adjacent to the square as part of the paving project in 2010, but was already partially destroyed at the time of observation, a mere two years later. Instead, children's play mainly takes place on the streets, seemingly unattended. Beside the playground is a multipurpose sports court, also part of the paving project but in markedly better shape. During my observations, I did not see anyone use the pocket park at any occasion. In contrast, the multipurpose court was in constant use.

Figure 40: ***On the road to Miches.*** *El Seibo, 2012*

Street furniture is heavy and made out of brightly painted concrete, which has the advantage of being sturdy and resistant against storms and sabotage. On the other hand, the hard surfaces are rather uncomfortable and the concrete also accumulates heat during the day, why they are mostly left unoccupied and people tend to choose secondary seating (walls, stairs, etc.) wherever there is shade instead. The line between private and public can be a little difficult for an unaffiliated stranger to discern, as people habitually claim parts of the street outside their house by simply putting out furniture. Approximately 95% of the buildings are lower than two storeys, and the proximity to street level facilitates the aquistation.

Most city shores in the Republic are lined by a *malecón*, a landscape typology of broad esplanade with vehicular traffic and pedestrian lanes upon seawalls; the city's façade and protection against the ocean. The malecón is usually calculated for a given wave height to harbor wave action. Traditional malecóns around the world served mercantile uses but have often become major traffic conduits over time (Barinas, 2012). A partially finished boardwalk comes to an abrupt end at some distance from the river mouth, where a boat mooring patrolled by armed guards is situated. The boardwalk resides on concrete pier structures built in the 1970s, preventing erosion but also accumulating solid waste between them.

Climate

The climate in Miches is agreeable, with frequent but short rainshowers and a light ocean breeze that alleviate the heat. Temperatures are steady throughout the year, and vary only slightly between 20 to 30 degrees Celsius. Hurricanes do pose a threat during the high-season, but the statistical chance of experiencing a hurricane while in the Dominican Republic is insignificant, and Miches has been completely spared so far.

Figure 42: ***Waterfall.*** *El Seibo, 2012*

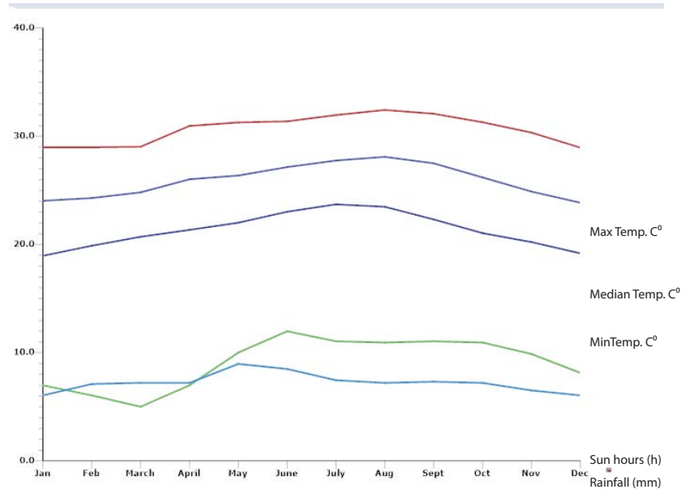


Figure 41: ***Climate graph. The weather in the Dominican Republic is generally stable over the year, with limited seasonal change.*** *Graph created by the author based upon data retrieved from: http://www.miches.climatemps.com/ [Graphics: Miches Climate Graph in Metric Units] At: http://www.miches.climatemps.com/graph.php/ (Accessed on 06.10.12). © Copyright climatemps.com, 2012-2013*

Figure 43: ***Green infrastructure.*** *The current situation does not include any green park spaces.*

Figure 44: ***Church.*** *Miches, 2012*

Figure 45: ***Water cistern.*** *Miches, 2012*

Figure 46: ***Power grid.*** *Miches, 2012*

Figure 47: ***Public space.*** *Miches, 2012*

Figure 48: ***Informal settlements in the hills.*** *Miches, 2012*

Figure 49: ***Miches waterfront.*** *Image courtesy of Carla Quiñones, © 2011. Used with permission.*

Figure 50: ***Bungalows in the premises of Hotel Coco Loco.*** *Miches, 2012*

ARCHITECTURAL STYLES

The existing design styles for landscapes in the Dominican Republic overall are colored by its colonial past as much as influences from the United States, especially when it comes to the car-focused urban planning principles. Santo Domingo and other bigger cities have an American look, complete with the typical highrise buildings, fast-food-chains, and shopping malls. In smaller cities such as Miches, however, the buildings are often very simple concrete structures, reflecting poorer living conditions but also maintaining what I would associate with a more Caribbean appearance and rooted in the Taino as well as the African heritage, with palmleaf roofings and bright colors. Signage is, characteristically, often painted directly onto the walls.

When it comes to parks and gardens there is a vast difference between public and private. Private parks, for example within an all-inclusive resort or country club usually demonstrate a 'global gardenesque' style with vast lawn areas, palm trees, and ornamental plant species; a style that is linked to the European expeditions and recalls the memory of the country's colonial past (Ignatieva 2010: 122). Out of these elements, the perfectly trimmed lawn is perhaps the most important, and today still make up a powerful symbol of Western culture (Ignatieva 2010: 123). As a majority of the wealthier population in the Dominican Republic are of European ancestry, it would hence come as a natural conclusion that the lawns still to a large extent serve a general purpose as status symbols. Public parks, on the other hand, are lacking lawns completely according to my observations. Hard pavings as examplified by the town square of Miches are standard even in the wealthier parts of Santo Domingo, alternated only by bare ground.

CHROMATIC CHARACTER

The urban color spectrum is a vital aspect when it comes to create cultural and commercial images of the city. The chromatic character of the city is therefore of great importance when it comes to city branding; in particular for places aspiring to become tourist destinations (Donald & Gammack 2007: 120).

Colors have been shown to draw attention to, associate with, and evoke particular emotions affecting behavior (Donald & Gammack 2007: 115). For example, it is well known within the restaurant business that one's perceived appetite may vary with the color scheme of the décor. Color is a critical category in architecture as it embraces both physical and psychological aspects, and urban locations that draw repeatedly on a particular color palette create a stylistic structure for the visual experience of that place (Donald & Gammack 2007: 115). The lifestyle-related fashion preferences of the people may also confer underlying local qualities that can visually characterize a place, and the fact that regional preferences vary is well known by fashion industry buyers (Donald & Gammack 2007: 116) The variations have been shown to relate to climate, the political age of the state, and the ways in which wealth and social capital is measured and esteemed (Donald & Gammack 2007: 118). Colors have socially entrenched symbolic associations, and also imply meanings with affective value (happy, angry, calm…) that vary between cultures (Donald & Gammack 2007: 118). The particular lighting and atmospheric conditions also affect how different hues are perceived.

Colors disembodied as a descriptive category remain elusive, but can nonetheless be formally described and located in a color system (Donald & Gammack 2007: 118). Ambiguous linguistic interpretations can thereby be avoided and colors can be ensured to fit a consistent range of hues to retain the character of a certain area, as seen in many historic European cities (Donald & Gammack 2007: 118- ff). Uncontrolled color decoration, signage and bright lights imply a threat to areas of artistic and cultural value that are subject to urban renewal (Donald & Gammack 2007: 121- ff).

The Dominican Republic in general is characterized by a preference for bright, vivid colors especially in clothing, but the saturated palette is particularly striking in Miches as it covers nearly the entire townscape. In bright sunlight the park benches at the central square take on a glow of neon, and contrasting colors are combined on everything from facades to fences and even lamp posts. The color gamut is equally diverse as it is intense.

The chromatic character is also affected by the lack of quarries and hence locally sourced stone material, which is generally not used as construction material. The only exception is made up by lumps of sandstone, a material that is porous, rich in coral fossils and has limited utility for construction and therefore only used for barrier walls, bricked up between thick layers of concrete. Concrete surfaces are ideal for painting and murals, and make colors appear more intensely saturated than on wood.

Figure 51: ***Private residence.*** *Miches, 2012*

Figure 55: ***Blind alley leading down to the ocean.*** *Miches, 2012*

Figure 52: ***Boy in front of one of the new school buildings.*** *Miches, 2012*

Figure 56: ***Permanent beer tents next to the main square.*** *Miches, 2012*

Figure 53: ***Multi-sports field by the main square.*** *Miches, 2012*

Figure 57: ***Park furniture in neon pops against the neutral floor.*** *Miches, 2012*

Figure 54: ***Small shops are incorporated in the neighborhoods.*** *Miches, 2012*

Figure 58: ***Greenery reaching out from within the blocks.*** *Miches, 2012*

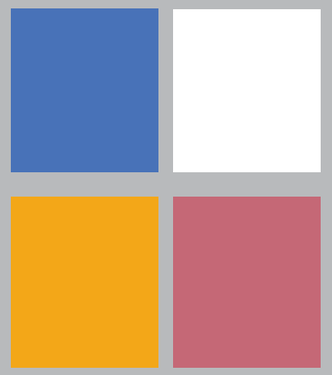


Figure 59: ***Hotel that does not cater to international tourists.*** *Miches, 2012*

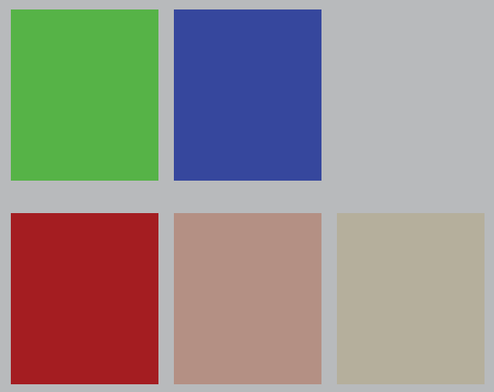


Figure 60: ***Farmacy and dentist's office.*** *Miches, 2012*

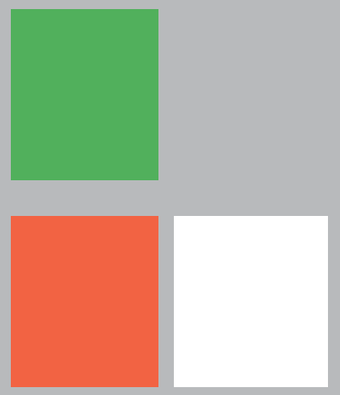


Figure 61: ***House with matching moped in front.*** *Miches, 2012*

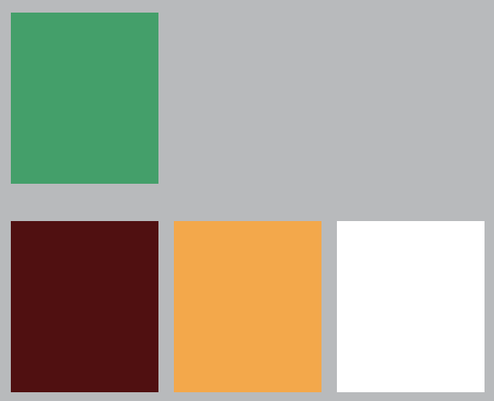


Figure 62: ***Houses carpented in wood are exeptions to the rule.*** *Miches, 2012*

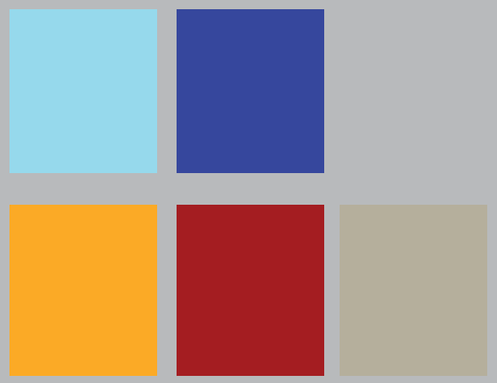


Figure 63: ***Short stretches of sidewalk are paved in glaze tile.*** *Miches, 2012*

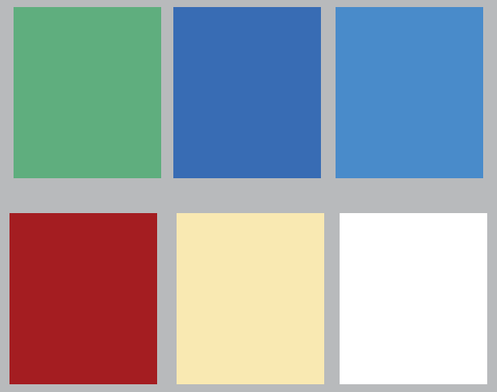


Figure 64: ***Police headquarters.*** *Miches, 2012*

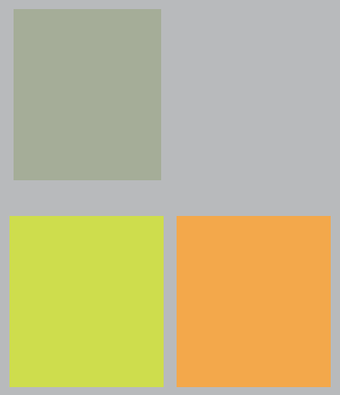
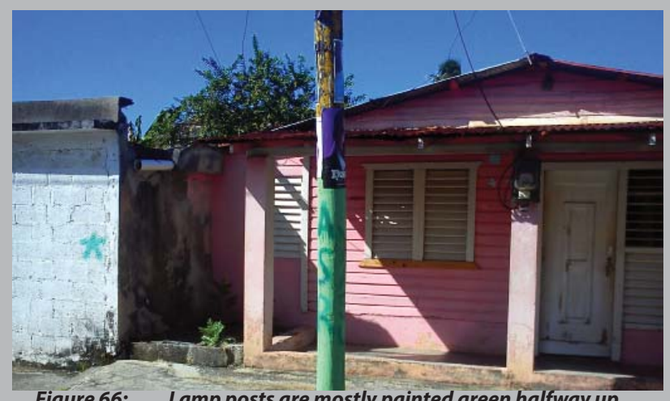


Figure 65: ***Dance hall in abricot yellow.*** *Miches, 2012*



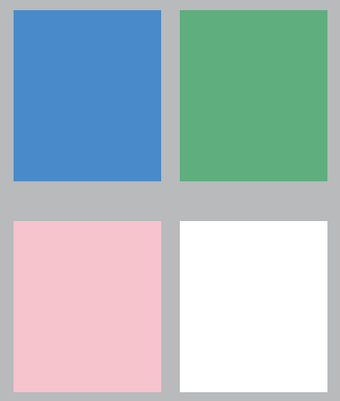


Figure 66: ***Lamp posts are mostly painted green halfway up.*** *Miches, 2012*

Blues

Reds

Greens

Yellows

Neutrals (mainly used for minor details and functional elements)

SITE ANALYSIS

The site is located by Playa Arriba, on the eastern side of the estuary of La Yeguada and forms an extension of the project area of Re:Cua and INTEC. Their design plan includes a bridge by the outflow of the river, which will connect the town center with the new development and allow for a continous movement along the shore.

The site has a triangular shape, bounded westwards by the river, eastwards by the sea and southwards by a dirt road.

Land Use and Services

Hotel Coco Loco resides a few tens of meters away from the site and is already receiving international tourists, mostly from Switzerland, Germany, and the Netherlands. The hotel provides accommodation in about a dozen fenced bungalows. At the bottom of the main building is a large dance floor, and on the second floor is a restaurant with free WiFi-connection as well as a nice view towards the beach.

There is also a small horse ranch more adjacent to the site, and horserides take place on a daily basis on the beach. Playa Arriba is also where the townspeople go to play casual games of the national sport baseball and for occasional dips in the ocean, but is mostly more or less left deserted due to safety and accessibility issues.

The current land use of the site is forestry, as it has been partially cleared to support a small palm plantation. A derelict dance pavilion made of woodwork is also situated near the beach. The site is marked as a protected area due to its proxmity to the ocean and the sensitive biotopes of the sanddunes.

Topography

The water edge towards the ocean is rather steep, but the height difference levels out by the sand dunes. The sand dunes rests upon a base of larger rocks which make navigation precarious during low-tides. When the water levels are the lowest the sunfeathered river sedimentation form a ford across the outflow.

A range of mangroves stretches along the riverside. The riverside is shaded, wind-protected and has a significantly higher air humidity than the rest of the site.

The road is lined by dug out ditches on both sides to lead away stormwater runoff.

The site is slightly more elevated than the other side of the river-mouth and is therefore at much lesser risk of floodings. The site overall is rather flat, resting on 2-3 meters above sea level.

Microclimate

The site has favourable conditions and is relatively windless thanks to the landmasses surrounding the bay. Calm waves form in the shallow water and the neritic zone stretches far out into the sea. Differences in ebb and flow amounts to only about a meter.

Visual Qualities

Palm trees sway over the white, pristine beach that stretches as far as the eye can reach. In the remoteness looms the mountain peak of Loma Redonda, situated between the lakes Laguna Limón and Laguna Redonda, both of which attract domestic visitors due to their unique characters.

Existing Vegetation

Apart from the small coco palm plantation most of the existing vegetation seems to be natural, and I therefore conclude that it is of native origin. A few specimens were identified through comparison to species in the Botanical Garden in Santo Domingo.

The riverside is lined by a mangrove swamp, which is an extremely important ecological environment for a range of endangered species. Samaná Bay is one of the largest areas of mangrove forests in Hispaniola, and is compromised by only three species; red mangrove (Rhisophora mangle), white button wood (Laguncularia racemosa), and white mangrove (Avicennia germinans, syn A. nitida) (FAO 2013). The three species are generally found mixed together, but pure stands are sometimes encountered (FAO 2013). The mangrove forest present within the site appear to be mixed and also contains palm trees- common on slightly higher ground that is only flooded at high tide such as this site (FAO 2013). Mangroves line the Yeguada river on both sides of the estuary, but while the western bank is packed with informal housing and littered by waste, the eastern bank seems nearly pristine.

Mangroves throughout the Dominican Republic are threatened by destruction as a consequence of the extensive development for the tourism industry (FAO 2013).

Figure 68: ***Coco palm plantations constitute the current land use of the site.*** *Miches, 2012*

Figure 69: ***View towards Loma Redonda.*** *Miches, 2012*

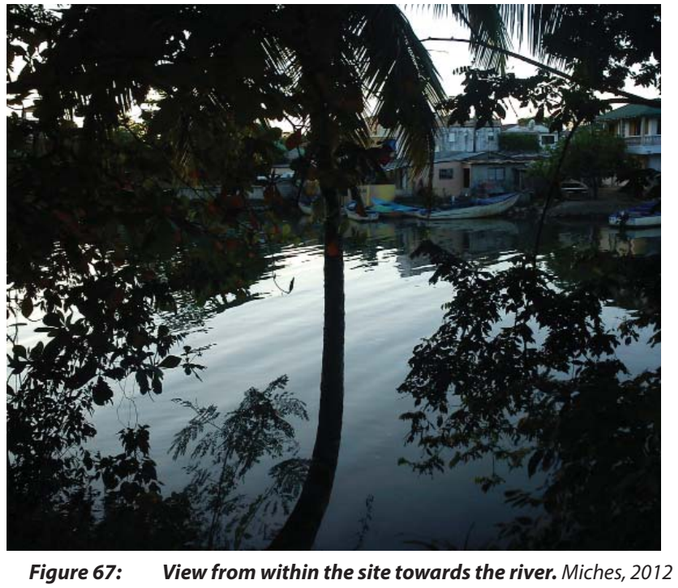


Figure 67: ***View from within the site towards the river.*** *Miches, 2012*

Figure 70: ***Aerial view with the site in center.*** *A large part of the site area lies within the beach zone. Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

Figure 72: ***View towards the site from the other side of the estuary.*** *Miches, 2012*

Figure 71: ***Aerial view of the site.*** *Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2012. Used with permission.*

Figure 73: ***View from sand dunes.*** *Miches, 2012*

FUTURE DEVELOPMENT

The new urban design plan developed by ReCua and INTEC has a dynamic form that contrasts with the present structure of the town. The plan takes a holistic approach towards the city center with the aim of turning Miches into a viable tourist destination.

The new development will be concentrated to the east side of the river and the street pattern is more fluent and dynamic that that of the town center. According to Project Manager Sofia Perazzo, it is estimted that the population of Miches will increase with 100%, adding up to 20,000 inhabitants within the municipality and about 4,000 in the town center, following the investments made by Fundación Tropicalia (Perazzo, 2012). The new high-end luxury resort will be located further east, towards Playa Esmeralda, and small scale hostels and room rentals will be incorporated mainly along the malecón.

The new highway stretches along the edge of town and two roundabouts constitute entry points, convenient for making a spontaneous stop in Miches on the way to other locations.

The design plan of the malecón (included in its entirety in the appendix chapter) has been remade since this draft, and my proposal suggests an alternative location for the new hospital.

The new development on the eastern side of the road has a more dynamic form and larger blocks, which in itself could contribute to increase connectivity. The urban design plan incorporates a green walkway network that connects the two sides of the river and would increase accessibility for pedestrians considerably.

At the time of writing a new highway from Bavaro/ Punta Cana was under construction, which will not only address the accessibility issue but also most likely bring new developments along with it (Melnick, 2012). The road is planned so that it does not surpass Miches, neither runs right through it. Instead it touches the outskirts of the town and redirects heavy traffic from the center of town, which opens for new possibilities when it comes to green infra-structure (Barinas, 2012).

Redesign of the Malecón of Miches

The redesign of the malecón of Miches is a project that seeks to revitalize the area by creating an area of tourism and commercial interests in the first block closest to the waterfront. The plan includes a volleyball court, restaurants, and a special entry point for members of the Fishermens Association, among other things.

Figure 74: ***Future development, scale 1:10 000.*** *Illustration courtesy of ReCua/INTEC © 2009. Used with permission.*

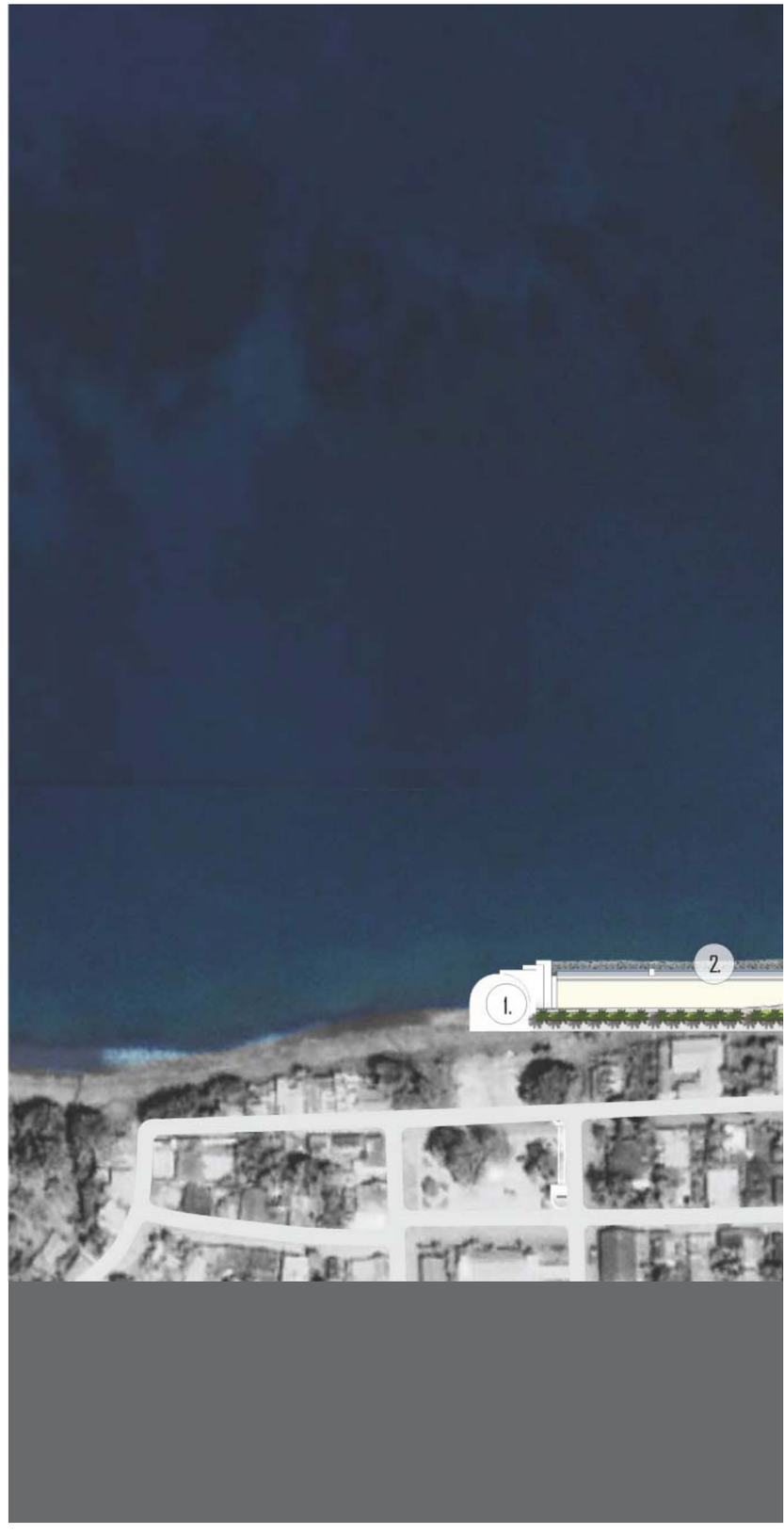


Figure 75: ***Sections.*** *The sections shows how the new development will be placed on top of the existing structures, thus creating a safe environment with a diversity of uses along the entire stretch of the walkway. Intellectual property of Re:Cua, Santo Domingo. Republished and translated with permission by Marcos Barinas. Original design panels are enclosed in their entirety in the Appendices chapter, pages 79-80.*

7. Recreative programming
8. Fishermen Association entry
9. Mangrove area/ Hotel
10. Parking area
11. Plaza
12. Restaurants/ Public use
13. Bridge
14. Aquatic park
15. Protected mangrove area
16. Information, commercial, and artisanal center
17. Cape- protected area

SCALE: 1:10 000

Figure 76: ***Future development of the waterfront of Miches.*** *Intellectual property of Re:Cua, Santo Domingo. Republished and translated with permission by Marcos Barinas. Original design panels are enclosed in their entirety in the Appendices chapter, pages 79-80.*

SWOT- ANALYSIS

The SWOT-analysis is a summary of the strenghts, weaknesses, opportunties and threats that are part of the prerequisites for the site.

Figure 77: The western bank is polluted with solid waste and debris due to the prevailing ocean current. *Miches, 2012*

Figure 78: Current bridge. *The pedestrian lane is very narrow and general accessibility is deficient. Miches, 2012*

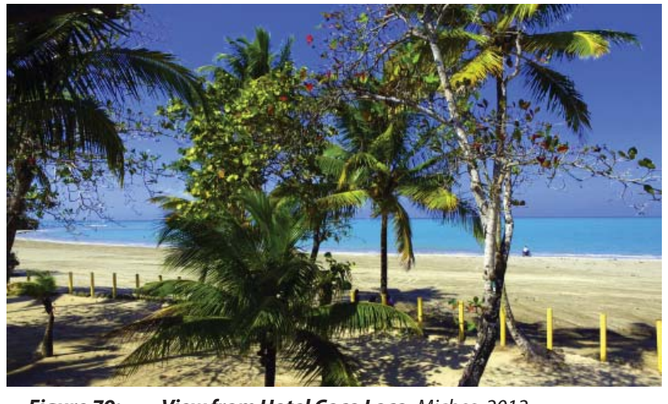


Figure 79: View from Hotel Coco Loco. *Miches, 2012*

STRENGHTS

- Strategically situated in the junction between the town center and the forthcoming development in the east side of town
- Location on the eastern bank, kept tidy and clear of debris by the prevailing ocean currents
- Proximity to long stretches of beautiful and pristine beaches
- More elevated than the area on the opposite side of the river mouth and hence at a lower risk of floodings
- Visual connectivity to surrounding landscapes across the bay
- Proximity to existing tourist services (Hotel Coco Loco, the horse ranch)
- Mangrove swamp: potential resource for tourist acivities and water management
- Good planting conditions due to frequent rains
- Two equally long borders facing the sea and the river respectively
- Relaxed, slow-paced lifestyle

OPPORTUNITIES

- Gradual build-up of infrastructure and civic amenities would contribute to increased safety and a positive image for the park
- High-end, low density tourism would bring a smaller ecological footprint to the sensitive ecosystems present within the site
- New bridge connecting the site to the town center, allowing for a continouos movement along the shore and increased access to Playa Arriba, while also connecting the site to the diversity of functions that are about to be put in place along the Malecón
- The planned tourist bus stop by the bridge would provide the park with a natural influx of visitors
- The site could serve as a neighbourhood park for the upcoming mixed-use development south of the area
- Homegrown and extermal NGOs engaged in development projects could provide the management resources needed to ensure long-term ecological health
- The continually rising awareness amongst the local community concerning environmental issues and the importance of sustainable solutions bodes well for the future of Miches

WEAKNESSES

- Ecologically sensitive biotopes (the wetland, sand dunes, coral reefs)
- Nutrient deficient soil that easily leaches out
- Hydrologically sensitive due to karst bedrock
- Currently unsafe and precarious for tourists due to crime rates and deficient police force
- In spite of being clear of debris, water quality may still be unhygienic due to the outflow of toxic sediments and waste from the river
- Street harrassment and gender inequalities discourage women and girls from using public space in the same way as their male counterparts
- Current political and socio-economic situation leads to a tendency of short-sighted thinking as well as a severe lack of means to care for the environment
- Maintenance of the public space in terms of pruning, reparations and waste management must be ensured through long-term planning, which is currently deficient in Miches
- The existing bridge is adapted for high-speed vehicles and is unsuitable for pedestrians

THREATS

- Storms and hurricanes
- Risk of sabotage and stealing of any materials used in the park due to lack of police surveillance
- Overfishing and silting of the coral reefs
- Uncontrolled tourism development could cause a situation similar to that in other locations around the bay, with unstable revenues and invasions of opportunistic exploiters
- Uncertified whale watching tour companies from across the bay that breach the regulations pose a serious threat to the natural resource base of Miches as well
- Corruption or changed political ambitions could alter the development plan and lead to the usual tourism development, causing over-exploitation and segregation as well as excluding local residents from decision making processes
- Changes to the world economy or travel preferences could affect tourist numbers
- Any development that is percieved as 'for tourists' risk causing the same segregation, gentrification, exclusion and problematic guest-host relationship as an all-inclusive resort

RESULTS PART II: DESIGN SCHEME

- DESIGN BRIEF
- VISION

DESIGN BRIEF

As the park is part of the larger project to transform Miches into a sustainable tourist destination, the design scheme should correspond to certain criteria that are included in the concept of sustainable tourism, such as high aesthetic quality, safety, accessibility, and solutions that promote ecological health. The site selection is in itself a measure taken towards sustainability as it creates a soft edge along the sea and moves the planned hospital further up from the shore, above the three meter level where it will be safe from eventual storms, floodings and the projected sea level rise. Part of the goal was also to heighten the expectations regarding public space in Miches and the El Seibo region, based on the view that aesthetics and visual appearance are equally disintegrable parts of developing sustainable living environments as any other, and that the public realm must serve a political agenda in capacity of the physical place where the will of the greater public is expressed.

The site is relatively large compared to the town as a whole and if it were to be turned into a public park it would therefore become a major part of the green infrastructure. The site is large enough (approx. six acres) to function as a city park in addition to hosting increased numbers of tourists.

Finally, the location on the waterfront along with the new bridge by the estuary also opens the opportunity for the site to become not only a forecourt to Playa Arriba, but the town's— and by association the region's— main entrance point from the sea. Therefore, the goal was also to produce an idea-based landscape design for a park that could become a landmark for the entire region through a strong, unique identity.

OBJECTIVES

The following ten items underpinned the goals for what the design should achieve:

1. ***Conceptualization***— to not only root the new landscape in the existing environment but to enforce the aspects that make Miches unique
2. ***Enhanced beach experience*** through supporting facilities
3. ***Programmed flexibility***— including free space that could serve a multitude of uses
4. ***Comfortable micro-climate***— shade is critical in allowing people to safely and comfortably spend long stretches of time in the park
5. ***Accessibility***— the park design should focus on creating accessibility for pedestrians instead of vehicles in order to form part of a citywide green walkway network. Another part of the accessibility aspect is to cater to visitors of all socioeconomic levels, why places that are free for anyone to use without payment are necessary. Walkways and access points to the water should also be paved and leaned in order to allow access for strollers and wheelchairs

Figure 80: ***Connectivity principle.*** *The design should increase connectivity between the town structure and the new development, as well as create visual corridors towards the sea and allow for a continous movement starting from the new bridge and along the shore. Photo courtesy of Oliver Oliva, Dominican Ministry of Tourism, © 2011. Used with permission.*

6. ***Raising visitor awareness***— the design should alert visitors to environmental aspects that are particular for the El Seibo region and highlight cultural heritage
7. ***Urban junction***— the park shoud constitute an urban junction between the town center and the new development that is about to take place on the east side of the river
8. ***Visual connectivity***— the design should include visual corridors that frame the ocean view from within the park and tie the new landscape to its urban context. The park should also offer a viewpoint towards the surrounding landscape
9. ***Water management***— a Sustainable Urban Drainage System (SUDS-scheme) should be incorporated in the design, so that the park forms part of a larger water treatment network that retains and filters stormwater runoff through a constructed wetland before discharge to the water systems. Unlike traditional urban sewage systems, SUDS can help protect or even improve ground water quality.[1] Waterfeatures should be fed by reused greywater from surrounding buildings in order to minimize freshwater outtake, with regards to the hydrologically sensitive karst bedrock. Blue Flag criteria for the beach zone must also be attained[2]
10. ***Shore protection, storm resiliance and erosion control***— the larger part of the park should be comprised by permeable surfaces and pavings ought to be kept to a minimum to avoid large amounts of storm water. Diversified plantations of mainly indigenous species that are resilient against strong winds help to retain land, and should be concentrated along the beachfront where the usage is likely to be most intense. By enforcing existing coral reefs with modern biorock techniques, the propagation of coral target species and habitat connection could be achieved. Enforcements would also heighten the total value of coral reefs for recreational purposes while at the same time protecting the shore by cushioning wave action.

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1 Wikipedia.org

2 The Blue Flag criteria are set up by he Foundation for Environmental Education (FEE) is a non-government, non-profit organisation promoting sustainable development through environmental education in 64 countries worldwide. The criteria crompises the following areas: (1) Environmental Education and Information, 2) Water Quality 3) Environmental Management 4) Safety and Services. The full list is available from http://www.blueflag.org/Menu/Criteria.

PROGRAMMING

A list of program requirements was developed as a response to the concept and design brief. The requirements were distributed in areas of varying degrees of programming, ranging from heavily programmed for determined uses to flexible spaces. The areas were further programmed for either active or passive activities (see illustration below).

Requirement specifications

The programming was based on a list of requirement specifications, which in turn was composed to correspond to the outlined objectives. Inspiration for the requirements were taken from the literature studies, interviews, and visits to other resorts performed during the Minor Field Study. The requirements are not only functional but also reflect the aesthetic expression of the park as well as the design concept.

The list was as follows, corresponding to objectives referred to by number in brackets:

- Ferry stop (2, 5)
- Lifeguard station (10)
- Cycle hire station (1, 5, 6, 7)
- Visitor information center (1, 6, 10)
- Family restaurant (2)
- Open-air café (2)
- Water sports center (2)
- Shaded playground area (1, 2, 4)
- Area of organized beach sports (2, 3)
- Outlook tower (8)
- Underwater park for snorkeling (2, 6, 10)
- Constructed wetland (9)
- Public barbecue area (1, 2)
- Canoe launch site (1)
- Hammocks in the shade (1, 2, 4)
- Floating jetty for mangrove access (1, 5, 10)

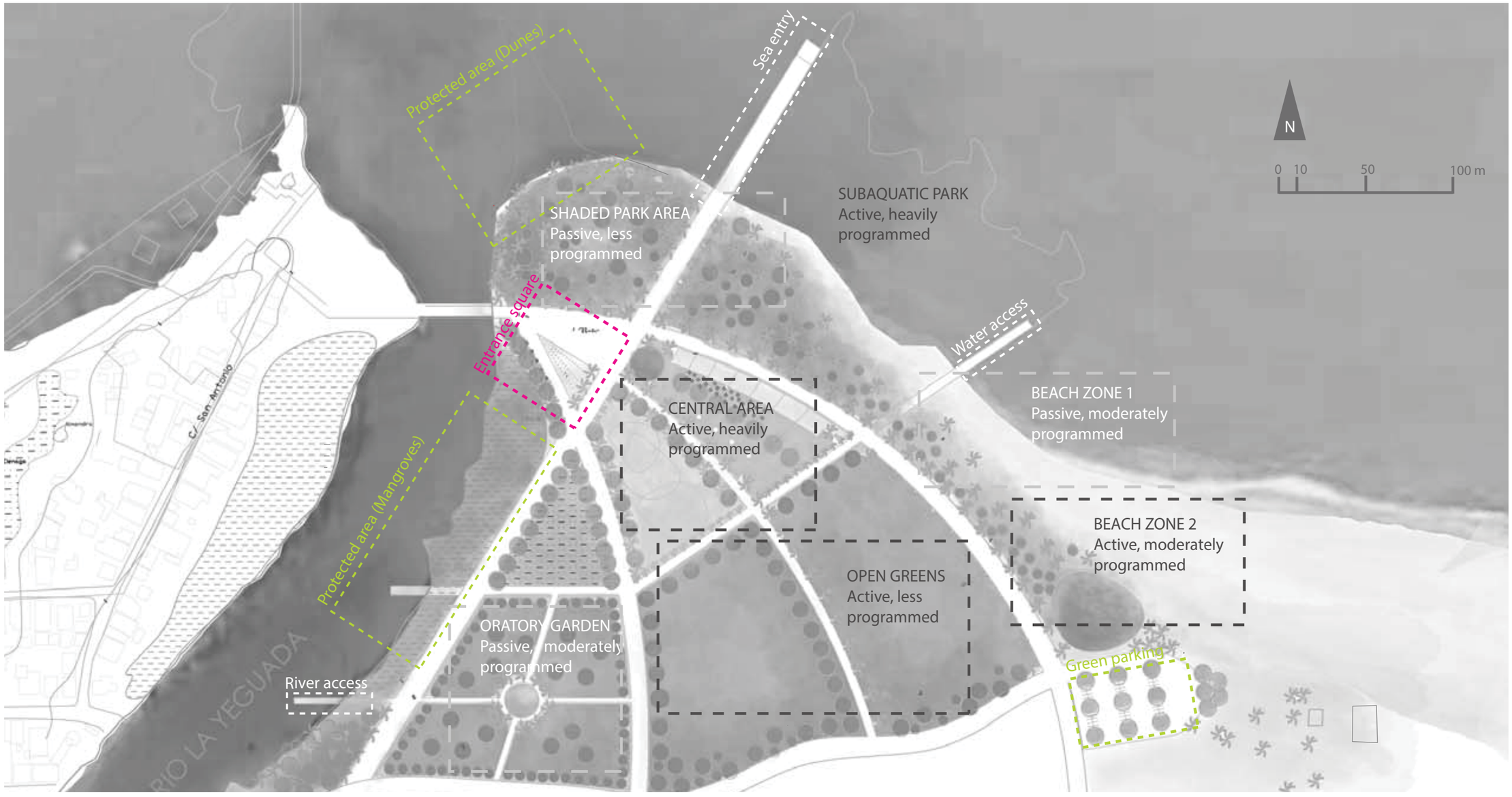


Figure 81: ***Program distribution.*** *Scale 1:4000. Map data: Bilder © 2012 Digital Globe © 2012 Geo Eye, U.S. Geological Survey, Kartdata © 2012 Google Earth. Used and modified with reference to Fair Use.*

VISION

The concept *All invited* denotes a vision of a park where everyone feels invited— residents and tourists alike— and which through an emphasis on visual qualities will instil a sense of pride and belonging among the local community.

DESIGN LANGUAGE

A coherent design language was developed in order to give the park a unique appearence that is consistent through all park elements. The design language describes choices for layout, materials, color scheme, shapes, patterns, and lighting scheme.

Layout

The design scheme seeked to express the view that urban public space must be understood as a piece of the city's infrastructure, and as integrated and essential to the quality of life in cities as the road network. An angular layout was applied in order to keep in line with the stringency of the street pattern that conveys the urban nature of Miches' town center. The angularity of the overall park layout merges the current, static town structure with the more dynamic shape of the forthcoming development on the east side of the river, and was intended to maximize visual and spatial connectivity to surrounding neighborhoods.

The most central element of the layout is the Crescent, a curved walkway describing an arc that runs across the park from one end to the other, with many of the park functions along its stretch. The shape of the walkway creates a direct connection between the new bridge and the planned buildings on the east side of the river.

The Crescent also separates the park into two parts; the shaded, leafy, ordered part facing the river, and the sunny, open and extensive part that stretches into the sea. In the design, these contrasting parts were meant to represent the dichotomy between residents and tourists and their differences in mindset and tenure. However, the intent was not to separate the two groups but rather to strenghten possibilites for integration through communal central spaces, such as the playground. The two parts were additionally meant to seem as inviting to both groups, and traditional tourism markers in the form of, for example, sunchair fees should be completely absent.

The edges of the area are already well defined by the sea and river borders, why the geometry was concentrated to the interior of the park. For ecological reasons, the water edges were left as close to their natural state as possible, thereby blurring the transition from park to natural landscape.

Color Scheme

The color scheme was drawn from the palette that was assembled during the landscape analysis and consists of bright, highly saturated primary colors. The color scheme's main purpose was to contribute to the conceptualization of Miches by enhancing an existing character, but also to aid organization within the site. Different colors are assigned to different technical elements to facilitate orientation and emphasize details— particularly informative signage. The buildings within the site share the same expression as the rest of the townscape, with signage painted directly onto the walls and little concern taken to color matching. The walls surrounding the chapel garden constitute canvases for local artists to create murals of the same kind that is found in the city center today. Brightly blooming plant material also make up important contributions to the color scheme.

Materials

Concrete is perhaps the most common construction material in the Dominican Republic overall, and has the advantage of being 100% recyclable. Concrete is also resistant against tropical vermins as opposed to for example wood, and can be moulded into almost any shape. Due to these conveniences the material constitute the basic component of pavings and built structures within the site, and could favorably be taken from demolition sites in the town center as recycled concrete is often better and more stable than new concrete due to cement residues.

Traditional palm leef roofing functions as a culture bearer that is not only extremely cost-efficient and locally sourced within the site, but also highly decorative.

Shapes

The shapes of the larger structures differ depending on where in the design scheme they are located. The side facing the river has a calmer, more orderly nature than the one facing the sea, where naturalistic elements compound loose arrangements that spill out onto the beach. The shape of the generous dance hall was inspired by a smoothly rounded pebble found on site.

The most important element on the river side is the *Jardín del Edén*, a partially foreclosed garden space centered by a circular oratory. The *Jardín del Edén*, or Garden of Eden, is meant to be a meditative space where local traditions are cultivated along with native plant species, forming a garden of knowledge and an enjoyable meeting place. The garden lends it shape from the colonial heritage of European monestary gardens, with four blocks centered by the oratory building.

Patterns

Patterns as decorative elements are used sparsely within the design, as most surfaces are made in uniform colors. Exceptions are the walkway leading out to the pier and the light roof structure that shade the playground.

The walkway pattern is inspired by Taino art and crafted in tiles embedded in the concrete surface. The pattern introduces newly arrived visitors to the historic heritage of the site.

Another exception is made up by a ceiling with a perforated pattern inspired by the sea fan; a flattened, branched colony of tiny polyps that are closely related to corals. The ceiling rests on a lightweight structure made of stainless steel and creates a play of shadows that recalls to being under water, and, more importantly, protects the children against harmful UV-radiation.

Lighting Scheme

A well thought out lighting scheme can increase the feeling of safety during the darker hours of the day. The LED luminaries that provide the ambient light are fitted to a wire grid, which in turn is mounted on tall masts. LED lamps have a higher initial cost than other lamps used for public environments, but in return offer longer service life and high energy efficiency. The energy efficiency of LED lamps allows them to be powered solely by solar panels. Such devices could conveniently be mounted at the top of the masts, away from shadow and beyond the reach of thieves. The LED luminaries can also be set to change color according to the amount of sunlight during the day, thereby adding a dynamic aspect to the park and reproduce the Caribbean color palette at night.

The free-standing, solar powered lighting scheme has significant advantages in that blackouts due to power failure are avoided, without entailing ongoing costs or affecting the environment.

DESIGN PANELS

ALL INVITED

All invited is the concept name of a park supporting sustainable tourism in Miches. The park is integrated into the fabric of the city and encourages use of Miches inhabitants on a daily basis. All invited is the vision of a place that makes use of the parks indigenous qualities to create a place that is inviting to everyone, regardless of their background.

MANGROVES. Miches is set in a unique environment with many highly ecologically valuable ecosystems. One of them is constituted by mangrove forest. Visitors are given an exclusive opportunity to experience a mangrove forest up close, thanks to floating jetties that makes it possible to visit the swamp in a safe way that does not disturb the natural flora and fauna.

CORALS. An underwater park that gives the visitor an opportunity to dive in and explore the richness of the Samaná Bay. A lifeguard tower close by oversees the constructed reef and a floating jetty allows for easy access. LED fixtures underneath the jetty adds a pleasant glow after dark. The reef has recessed LED light fixtures that creates an exciting underwater gleam.

VETIVER SYSTEM. The design proposal includes a constructed wetland, that is integrated into a Sustainable Urban Drainage System, SUDS. The main component of the wetland is the non-invasive grass Chrysopogon zizanioides, common name Vetiver, originating from India and used throughout the tropics and subtropics for green infrastructure.

HERITAGE. The entrance walkway as well as the plaza are paved in reddish tiles, whose coloring comes from the tropical soil, combined with light colored concrete to create flooring patterns that calls back to the historical heritage from the Tainos.

A

A'

-0,1

-2,0

-1,2

+1,0

+2,1

UNDERWATER PARK

-0,5

+0,5

PLAZA

+2,2

MANGROVES

HAMMOCKS

+0,5

+0,2

LOS CORALES

WETLAND

PLAY FIELD

PLAY FIELD

+2,5

THE PEBBLE

+2,5

+3,1

"JARDÍN DEL EDÉN"

P

RIO LA YEGUADA

Camino a la playa

C/ San Antonio

Almendra

Almendra

Cienaga

Mango

Mango

Almendra

RIVERSIDE

As the riverside of the park is lined by extremely valuable and likewise sensitive environments, it is left as close to its natural state as possible. Floating jetties make the mangrove swamp accessible without jeopardizing it, and a canoe launch provides access to the upstream of the river.

ORATORY GARDEN

The Oratory Garden is envisioned as an epitomization of the biblical paradise, a lush and contemplative space centered by a sacred building.

CONSTRUCTED WETLAND

Wetlands in general are extremely important to maintain for ecological reasons. They are often extremely diverse and in urban environments and help retain stormwater. Wetlands offer a unique environment that is also an attraction value for tourists, especially if made accessible. Signage provide information of the different species as well as the SUDS system.

SOFT PLAZA

Furnished with both fixed and moveable seating, the Soft Plaza is a place for both paying customers of the Open Air Café and publicly accessible park benches. The plaza is lined by a bench that is kept cool using grey water. The bench forms part of the SUDS scheme in capacity of water retainer. The bench is shaded by the tree line and offers a comfortable seating during hot days. Backrests are placed in both directions, so that one can sit facing the playground or the plaza.

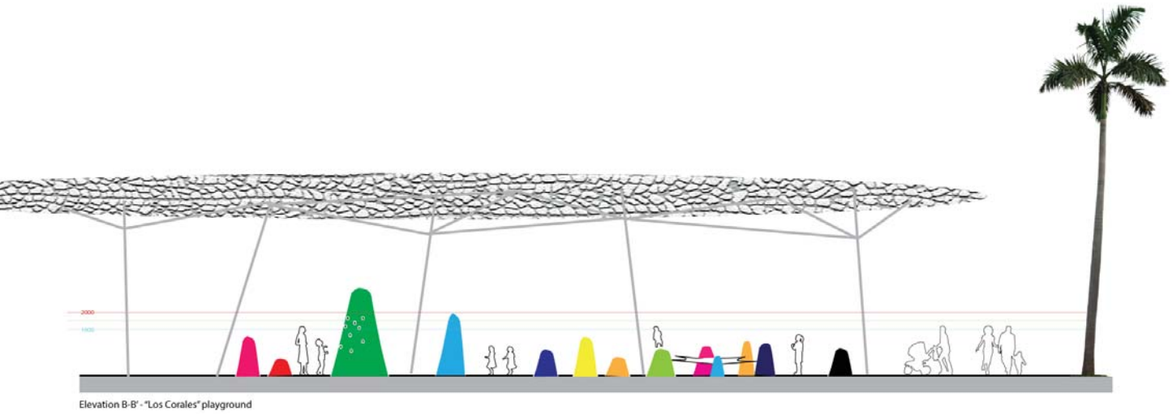
The buildings contain supporting facilities that will make draw people to the plaza, thereby turning it into an attractive venue for both locals and tourists. The facilities include a visitor information center, water sports center, and restaurants serving local specialities.

The plaza is paved with a permeable paving. The paving consists of a mixture of different kinds of reinforced grass and concrete modules.

GREENS

The classic green lawn is not a common park feature in the Dominican Republic, with the important exception of secluded countryclubs or hotel resorts. Put against this background, the lawns are not simply intended to appeal to tourists, but portray a statement of equality and openness in accordance with the overall direction of the development in Miches.

The greens offer free space for flexible uses and are the perfect place for children to throw their kites to the wind or go for a spontaneous game of *beisbal*. The turf consists of a more sustainable alternative to the perfectly trimmed monoculture carpets usually seen, as it is composed by a mix of tolerant, indigenous grasses and ground covers that does not require constant upkeep or chemicals in order to look presentable. Low-input lawns may have a few weedy type plants in them, but a variety of well-adapted grass species will keep the infestation to a minimum. The lawns make up an important part of the aesthetic experience of the park, adding a more rugged and untamed impression that invites the kind of usage they are intended for, such as clearing out a patch of dirt for the catcher area.



Elevation B-B' - "Los Corales" playground

"LOS CORALES" PLAYGROUND

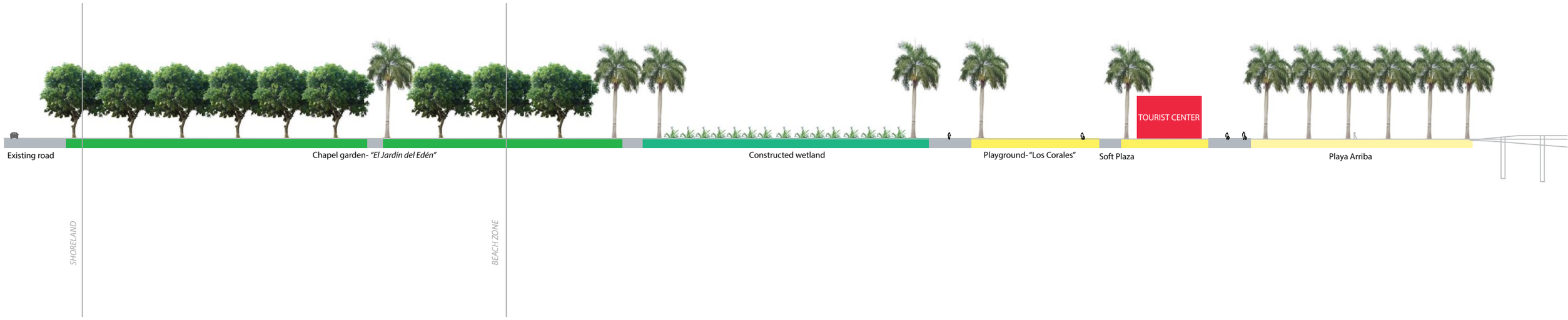
As Miches has a relatively young demographic, the design scheme was intended to put particular emphasis on creating accessible environments for children and adolescents. The playground is located in the central part of the park and has its own concept that goes by the name "Los Corales"- the Corals. Los Corales constitutes an ondulating play and climb landscape, composed by stylized concrete "corals" cast in situ, that shoot up out of the sand.

The playground consists of three different parts, each adapted for different age groups; 0-5 years, 5-10 years and 10 years and upwards. The part dedicated to younger children contains shapeable sand and low play sculptures, while the climbing and balancing grows more challenging in the second and third part.

The playground is the most advanced facility in the park and the design with the solid concrete blocks was meant to ensure its durability, making the investment worthwhile in the long run. Climbing and rocking equipment should have at least a 10 year warranty.

HAMMOCKS

Hammocks (hamacas), canoe (canoa), barbecue (barabacoa) are all derived from words of the Taino.



PIER AND OCEAN JETTY

The viewtower provides a second level within the park and constitutes an attraction that is visible from afar. The view point will bring people closer to the birds and the canopy and is complemented by information about what you see from the tower. The elevated view point offers never-before seen views of the surrounding landscape.

For visitors, the pier is the main entrance point from the sea. The floating jetty provides access to the underwater park (see below).

SUBAQUATIC PARK

The subaquatic park is made up by reinforcing structures that induces coral growth. The subaquatic park serves both educational and recreational purposes and helps the economy by protecting the shoreline. Moreover, the constructed reefs make up an important habitat reinforcement.

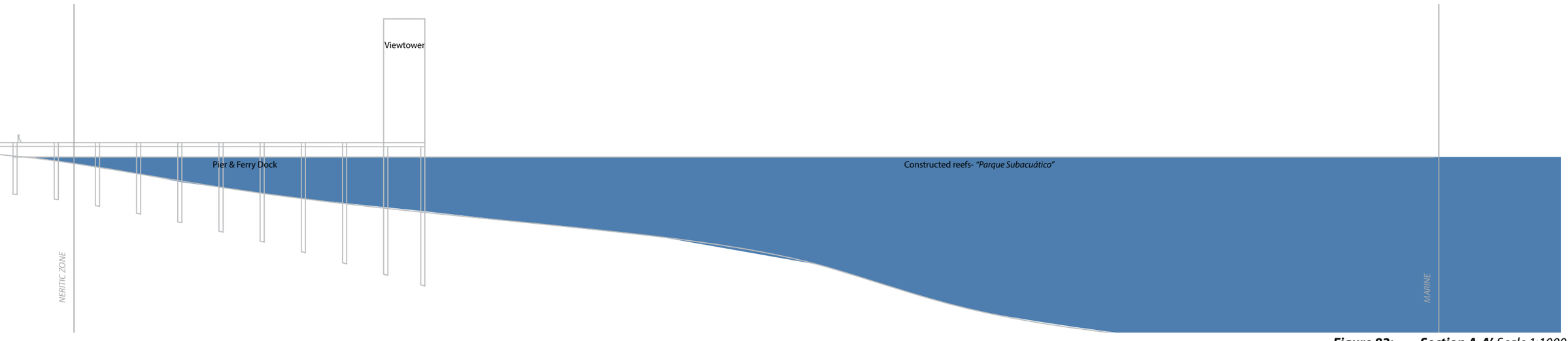


Figure 82: ***Section A-A'.*** *Scale 1:1000*

SELECTED PLANT MATERIAL

Prior to European settlement, the Caribbean was dominated by forested ecosystems and is considered a biodiversity hotspot (Wikipedia 2012). Species diversity is lower in Hispaniola than on the mainlands, but endemism is among the highest in the entire Caribbean region (Wikipedia 2012).

Up until the time of writing, no thorough investigations had been made upon the size and structure of the different plant species in the Dominican Republic (INTEC 2010: 45). The information presented below was retrieved and translated from the booklet *Arbolado de Santo Domingo, Especies Recomendadas* (INTEC 2010) where recommended plant species for landscape projects are listed based on material gathered from other countries, mainly the United States and Puerto Rico, but also from observation of the development of specimens in Santo Domingo. All heights are estimations and may vary depending on prevalent ground conditions. The plant material was selected according to the following criteria:

- Native/endemic origin
- Acclimatization to humid/semi-humid zone
- Ornamental value and/or shading canopy
- Requisites for growth in coastal areas (salt spray resilience)
- Biological value as nesting place and/or food source for animal species

The reason for choosing mainly native plants is that non-native (also called introduced species) may become invasive; i.e. have an adverse effect on the habitat to which it is introduced[1]. However, far from all introduced species are harmful, and some may in fact be beneficial. One such example included in this plant list is *Hibiscus rosa-sinensis*, a much appreciated food source for bees, butterflies and not least the hummingbirds that swarm in abundance around Miches.

Apart from being potential environmental threats, another argument against introduced species in the tropical, touristic landscape is that they contribute to a visual uniformity and homogenization across the world (Ignatieva 2013: 139). For that reason, care has been taken to only include introduced species that either contributes to the conceptualization of Miches or is of cultural significance to the Dominican Republic, such as the Bougainvillea spectabilis whose common name refers to the country's three founding fathers, something that outweighted the fact that it can have limited adverse effects on other species. However, it must be stated that both Bougainvillea and Hibiscus are among the most classical and important features of the same Victorian "tropical paradise" seen across all colonial nations (Ignatieva 2013: 144); a fact that undeniably lessens their placemaking effect despite the reference to Dominican heritage.

The potentially adverse effects of the Bougainvillea can be controlled through proper maintenance, why these specimens are restricted to within the Oratory Garden. See summary at the end of the list for use of each plant in the design scheme.

1 *The term 'invasive species' may be quite commonly known among the general public, but it is often critized within the scientific community for being imprecise. For further information on this, please visit http://en.wikipedia.org/wiki/Invasive_species*

Bougainvillea spectabilis

Family: Nyctaginaceae
Origin: Introduced
Common name in the DR: Trinitaria

Figure 85: ***Bougainvillea spectabilis.*** *Photograph taken in the Botanical Garden, Santo Domingo 2012*

The Trinitaria is an exceedingly ornamental plant that is much appreciated for its colorful foilage. The actual flower of the plant is generally white, and it is the brightly colored bracts surrounding that makes it spectacular.

Bougainvillea spectabilis is a thorny, woody vine growing from one to twelve metres tall, seen across the Dominican Republic pouring over walls and other plants. The thorns are black and covered with waxy substance. The leaves are alternate, 4–13 cm long and 2–6 cm broad. Each cluster of three flowers is surrounded by three or six bracts with the bright colours associated with the plant, including pink, magenta, purple, red, orange, white, and yellow.

Specimens that are planted closely may spontaneously form natural hybrids, and two or three bract colors have been observed to be present in the same individual. The common name Trinitaria refers to this and is said to represent the three founding fathers of the Dominican Republic.

Bucida buceras

Family: Combretaceae
Origin: Native
Common name in the DR: *Grigrí.*

Figure 83: ***Bucida buceras.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

Native plant originating from humid or semi-humid forests along the entire coastline of Hispaniola. Very tolerant; prospers even in poor soils conditions (compacted, dry, marshy) and in areas with limestone bedrock. Resilient against hurricanes, though extended branches might break. Does not tolerate shade. Used in parks as well as street environments for ornamental value and shade. The crown structure has an oval shape with long branches and fine, pale green foilage. The Grigrí develops small, greenish flowers that turn into black drupes and is a popular nesting place for birds. Recommendable for pruning. In optimal conditions the Grigrí can reach a height of up to 25 meters and a trunk diameter of more than a meter, and a crown of more than 12 meters.

Bunchosia glandulosa

Family: Malphigiaceae
Origin: Native
Common name in the DR: Cabrita.

Small, ornamental tree suitable for parks, plazas, residential streets, avenues, and confined spaces. Yellow flowers and orange fruits that serve as food for birds. One of the few species with drooping branches. Roots go deep and do not cause damage to the paving. Generally small tree or shrub reaching up to 8 meters. Fine foilage.

Figure 84: ***Bunchosia glandulosa.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

Calophyllum calaba
Family: Clusiaceae
Origin: Native
Common name in the DR: *Mara*.

Figure 86: ***Calophyllum calaba.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

The Mara grows naturally in humid forests with an annual precipitation of 1500-2000 mm but is also commonly found along streams and rivers. Tolerant tree used extensively for parks, plazas and residential walkways. The roots usually go deep and sowing frames are recommended to at least 6-8 meters in circumference. In limestone areas the roots extend somewhat more lateral and superficial. Heights span from 10 to 30 meters, and the trunk diameter varies between 0,5 to 1,5 meters. Does not tolerate shade.

The crown structure is round with a dense foilage made up by glossy, dark green leaves that sit opposite eachother. Flowers are small, white and fragrant while the fruit constitutes a round drupe much appreciated by bats. The Mara usually grows very old and specimens found in Parque Mirador in Santo Domingo has demonstrated resiliance against droughts and salt sprays.

Citharexylum fruticosum
Family: Verbenaceae
Origin: Native
Common name in the DR: *Penda* or *Péndula*.

The penda grows naturally humid forests, with an annual precipitation of 1000 to 2000 mm. It prospers in varying soils; dry, porous sandy conditions as well as dense and nutrient rich clay, and chalky soils on limestone bedrock. Tolerates drought and partial shade. Appropriate for parks, residential streets and gardens. The roots may in later age form small buttresses.

Figure 88: ***Penda.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

Generally a small, slow-growing tree but occasionally reaches heights of up to 10-15 meters. Irregular crown shape with a range spanning between 4-6 meters. Sparse foliage with simple, alternate, very bright leaves. Flowers small, white, melliferous, fragrant, and growing in spikes. The Penda's fruit- a round, reddish, fleshy drupe- are an important food source for many wild bird species. The wood is used to manufacture violins and guitars.

Coccoloba uvifera
Family: Polygonaceae
Origin: Native
Common name in the DR: Uva de Playa

Native plant of the Polygonaceae family that tend to colonize sandy, rocky soils in the seaside. Resists draughts, salt sprays, and hurricanes, why it is one of the best suited plants for coastal areas. Used mainly as a shade tree but also has an ornamental bark. Recommended for parks, plazas, streets, residential streets, coastline, and may also be pruned to form hedges. Does not tolerate shade. The tree crown has an extended, round shape that provides plenty of shade and has a diameter of around 10 meters. Generally grows with several trunks. Large, rounded leaves with red veins; thick and very ornamental. New leaves have a bronzed appearance. Small, green flowers in clusters that attract bees and butterflies. The fleshy fruits serve as food for birds and are also edible for humans.

Figure 89: ***Coccoloba uvifera.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

Cordia sebestena
Family: Boraginaceae
Origin: Native
Common name in the DR: Avellano or Capacito.

Figure 87: ***Cordia sebestena.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden ©2010. Used with permission.*

Native tree of the Boraginaceae family, growing naturally in semi-humid forests. Resists strong winds, salt and droughts. Used mainly as an ornamental tree as it blooms throughout the year, but the Avellano is also an excellent shade tree. Heights commonly range between 5-9 meters. Sometimes develops a multi-trunk, branching near the ground, why it may need management in order to develop straight, tall trunks. Recommended

for parks, plazas, streets, residential streets, under wiring, to separeate parking rows, or as separate specimens.

Globular crown of about 7 meters in diameter with dark green foliage and scarlet or orange flowers, depending on soil composition. The white fruit is edible for humans and the flowers attract hummingbirds.

Figure 93: ***Cordia sebestena.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden ©2010. Used with permission.*

Hibiscus rosa-sinensis

Family: Malvaceae
Origin: Introduced
Common name in the DR: La Cayena or Sangre de Cristo

La Cayena is a small tree that is planted for its showy flowers that attract butterflies, bees, and hummingbirds. Hibiscus Rosa-Sinensis is the national flower of Haiti and is an important national symbol of the Dominican Republic as well. La Cayena is used in the design to represent the origin of the many immigrants that populate the El Seibo region and as a symbol of the interconnectedness of the two nations. The leaves are lanceolate and alternate, often with a toothed margin. The flowers are large, trumpet-shaped, with five or more petals and color range from white to pink, red, orange, purple or yellow, and widths of 4–18 centimeters.

Figure 92: ***Hibiscus rosa-sinensis.*** *Santo Domingo, 2012.*

Roystonea hispaniolana

Family: Arecaceae
Origin: Native
Common name in the DR: Palma Real

Endemic palm tree with pinnate leaves. Usually found in humid areas. This majestic palm species can grow up to 30 meters tall and is suitable for parks, plazas, high-visibility areas, and gardens; however it should not substitute shade trees or be planted in overly confined planting beds, something that is often seen in street environments.

The Palma Real is one of the most common native palms in Santo Domingo and bear fruits that constitute an important food source for the national bird, Palm Chat (*Dulus dominicus*), which nests in the same palm.

Figure 90: ***Roystonea hispaniolana.*** *Palma Real specimens in the Botanical Garden, Santo Domingo.*

Sabal domingensis

Family: Arecaceae
Origin: Native
Common name: Palma Cana

Figure 91: ***Sabal domingensis.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

The Palma Cana, also known as Hispaniola palmetto or Dominican Palm, is native to Hispaniola and Cuba and usually found in dry to semi-humid areas. The natural distribution is within the central parts of the island, 100-1000 meters above sea level (Wikipedia), but planted specimens are found in various locations in the coastal zone, for example along the Malecón in Santo Domingo. Resilient against winds, salt sprays, and draughts. Palma Cana is a fan palm with sturdy, solitary stems which can be up to 60 centimeters in diameter and reach heights of up to 20 meters. The tree top is compounded by a couple of dozens of leaves, each with about 90 leaflets. The old leaves remain on the stem, providing habitat for birds and used for nest weaving by the Palm Cigua. The leaves are also useful to humans, and constitute a traditional roofing material.

Swietenia mahagoni

Family: Meliaceae
Origin: Native
Common name in the DR: Caoba

The Caoba, commonly known in English as the West Indies Mahogany, is a noble tree native to semi-humid and rain forests. Approximately 18 meters high with a wide, shading and deciduous canopy. Sheds leaves in late winter. Resistant to strong winds,

drought and urban conditions. The Caoba is used frequently throughout Santo Domingo and was declared national tree of the Dominican Republic by President Leonel Fernandez in 2011.

Figure 96: ***Swietenia mahagoni****. Photo Credit: Tropical Plant Pictures. Available from: http://plants.swtexture.com/ [Accessed 10 January 2013] Used with reference to free license as stated on the website.*

Figure 94: ***Tabebuia berterii.*** *Photo courtesy of Marianna Szabo, INTEC/Tropical Garden © 2010. Used with permission.*

Tabebuia berterii

Family: Bignoniaceae
Origin: Native
Common name in the DR: *Roblillo*, also known as *Cenizoso*.
Endemic species of the Bignoiaceae family, also an excellent ornamental tree for parks and street environments. The roblillo is adapted for both dry and humid conditions and tolerates all kinds of soils. Resilient against strong winds and draughts.

Tree with single, straight, trunk and short branches, forming a columnar and compact canopy compounded of leaves with 3-7 lanceolate leafs. Abundant of funnel-shaped, white or pale pink flowers, 3-4 centimeters length. Blooms in spring. The fruit is a brown capsule, elongated and containing winged seeds.

Grows up to 12 meteres in dry areas and 20 meters in humid climates. Roblillo saplings are used to produce "Charamicos", a kind of braided Christmas decoration.

Terminalia catappa

Family: Combretaceae
Origin: Introduced
Common name in the DR: Almendro

Tree of Indo-Malaysian origin, naturalized in the West Indies in the nineteenth century. The almendro is a large, deciduous tree that can reach heights of up to 25 meters. The roots are strong, making it resistant to strong winds and hurricanes. Tolerates salt sprays. Popular shade tree that grows naturally mainly along the coast.

Figure 95: ***Almendro.*** *Photo courtesy of Ulla Myhr, Swedish University of Agricultural Sciences © 2012. Used with permission.*

CONSTRUCTED WETLAND

The design proposal includes a constructed wetland, that is integrated into a Sustainable Urban Drainage System, SUDS. The main component of the wetland is the non-invasive grass Chrysopogon zizanioides, common name Vetiver, originating from India and used throughout the tropics and subtropics for green infrastructure (The Vetiver Network International 2013). The Vetiver Network International (TVNI) promotes what they call the Vetiver System, a concept based on the use of the plant for a wide range of applications including erosion control, agricultural improvement, slope protection, landscaping, disaster mitigation, wastewater treatment, land reclamation, poverty reduction, and even handicrafts (The Vetiver Network International 2013). What makes the grass special are the dense ground-level stems that retrain sediment flows combined with extremely sturdy roots that holds the soil in place, growing up to 3,6 meters deep in one year (The Vetiver Network International 2013). The species has been cultivated for centuries for essential oils, and by using infertile clones the risk of adverse environmental is eliminated.

The plant extracts nutrients from the groundwater and tolerates very high concentrations of toxins, why constructed wetlands built on the Vetiver System constitute efficient wastewater treatment and stormwater filtration facilities (The Vetiver Network International 2013). One of the many benefits of the Vetiver System is the low cost, normally requiring only about 1/20 of that of developing a usual drainage system, and in contrast to hard, grey infrastructure that deteriorates over time the Vetiver System quite literally grows stronger each year (The Vetiver Network International 2013).

The idea of the wetland is to display an affordable and feasible example of how to reduce the environmental impact on the watershed. The Vetiver System is extremely flexible and may be adapted to a small area in the hills or elongated bioswales across town, just as well as a greywater treatment facility in connection to the new hospital building. In short, implementation of a Vetiver System in Miches could be a way for local people to regain control of their own environment, while also making them less dependant on functioning pumping service provided by the government.

The grass grows to 0,5-4,0 meters tall and will therefore make up a significant visual contribution to the park. Another, less appearant aesthetic contribution provided by the Vetiver System would emerge over time, in the shape of a clear river and an ocean bay free from weeds caused by excessive nutrients in the watershed.

The functionalities of the wetland are complemented by signage, informing visitors of environmental issues that are specific for the region. The visitor center would also serve as a venue for people living in the watershed, to meet and learn about how to manage their own systems and follow the positive development first-hand.

SUBACUATIC PARK

The subaquatic park is mainly made up by reinforcing structures that induces coral growth. The subaquatic park serves both educational and recreational purposes and helps the economy by protecting the shoreline. Moreover, the constructed reefs make up an important habitat reinforcement.

The coral reinforcement structure is complemented by transplants of native species of sea grass. The first, shoal grass (Halodule beaudettei), occurs naturally in the low intertidal and subtidal zones along the Atlantic coast, from the United States down to South America. Shoal grass is an important part of the biota of mangrove swamps and coral reefs, and in shallow water it often forms extensive meadows (Seagrass Recovery, 2013). The second, Syringodium filiforme, commonly known as manatee grass, is found more locally in the Caribbean Sea and the Gulf of Mexico, and is as the name implies an important food source for manatees. It is also heavily grazed by parrotfish, sea urchins and surgeonfish in back reef areas. Sea grass is often referred to the "rainforest of the sea", in capacity of being the single most important ecosystem engineer of the world's oceans (Seagrass Recovery, 2013). The transplanted species are both native to the Dominican Republic and share the threat level of all sea grasses, posed by human interactions such as water quality degradation and propeller scarring. The prosperity of the transplantation therefore depends on the success of the Sustainable Urban Drainage System on land, as well as the overall development in Miches.

The subaquatic park is the logical extension of the one on land, a clear demonstration of that the perceived divide between life under and above water is merely an illusion. Rather than to just create an idealized underwater playground, the subaquatic park serves to give controlled access to the Marine Protected Area of the Samaná Bay, while also restoring habitats locally. The purpose is further to increase knowledge of coastal and marine species and how to protect them.

PLANT LIST SUMMARY

Latin name (Common name)	*Primary function*	*Origin*
Woody plants (trees, bushes)		
Bougainvillea spectabilis (trinitaria)	Ornamental value/Shade	Introduced
Bucida buceras (grigrí)	Ornamental value/Shade	Native
Bunchosia glandulosa (cabrita)	Ornamental value/Biodiversity	Native
Calophyllum calaba (mara)	Shade/Biodiversity	Native
Citharexylum fruticosum (penda)	Shade/Biodiversity	Native
Coccoloba uvifera (uva de playa)	Shade/Ornamental bark	Native
Cordia sebestena (avellano)	Ornamental value/Shade	Native
Hibiscus rosa-sinensis (La Cayena)	Decoration/Biodiversity	Introduced
Roystonea hispaniolana (palma real)	Direction	Native
Sabal domingensis (palma cana)	Roofing material	Native
Swietenia mahagoni (caoba)	Culture bearer (National tree)	Native
Tabebuia berterii (roblillo)	Ornamental value/Biodiversity	Endemic
Terminalia catappa (almendro)	Shade	Introduced
Herbaceous plants (grasses)		
Chrysopogon zizanioides (vetiver)	Water treatment/ Erosion control	Introduced
Sea grasses		
Halodule beaudettei (shoal grass)	Habitat formation/Biodiversity	Native
Syringodium filiforme (manatee grass)	Habitat formation/Biodiversity	Native
Pre-existing plants (estimations)[1]		
Avicennia germinans, syn A. nitida (mangrove)	Attraction value	Native
Coccothrinax argentea (fan palm)	Ornamental value/Biodiversity	Endemic
Cocos nucifera (coconut palm)	Food production	Introduced
Laguncularia racemosa (mangrove)	Attraction value	Native
Rhizophora mangle (mangrove)	Attraction value	Native
Sabal causiarum (Puerto Rican hat palm)	Biodiversity	Native
Terminalia catappa (almendro)	Shade	Introduced

1 A thorough investigation of existing plants must be made prior to a more detailed planting scheme. The listed species include those most readily observed and those of particularly high protection value.

DISCUSSION

- REFLECTIONS
- CONCLUSIONS
- RECOMMENDATIONS

REFLECTIONS

The results of this thesis consisted partly of the landscape analysis carried out during the Minor Field Study and partly of a landscape design scheme for a new urban park space in Miches, the Dominican Republic.

DESIGN RESULT

The design scheme describes a very atypical touristic environment, despite the fact that the landscape analysis and concept development were intentionally grounded in my outside view as a tourist. Like so many other tropical destinations, the Dominican Republic is largely marketed as a paradisic epitomization of the carefree dream-vacation resort; something that is not always experienced by the people who live there everyday. Very early on, therefore, the goal was set to create an environment that would be as much appreciated by the local population themselves as by foreigners, who after all might only come there once.

During the initial stages of the process the respective waterborders were treated as opposites, where the riverside got to represent the local population and the beachside a more touristic mindset. In the end, however, the distinction between the two was blurred and focus put on creating spaces for social integration instead.

Relation to Original Question

The aim of this thesis was to show how a public waterfront park can be designed in a way that supports sustainable tourism based on the specific circumstances prevalent in Miches, the Dominican Republic. The ambition was to produce a high-quality landscape design scheme that could be assumed as a detailed zoning part of the urban master plan, and in doing so, to raise the aspirations regarding public space in Miches.

The first response to the original question was in terms of finding a suitable location, which came as a result of the overall landscape analysis. The proposed site is in itself a measurement taken towards sustainability as the park would create a soft edge to the river and ocean bay respectively. The site proposal also means that the planned hospital will have to be moved upshore, which would locate it above the three meter level, where it should be safe from sea level rises within the forseeable future. When considering the size of the area it is important to keep in mind the long term perspective on the same token, as sea level rises may cause it to shrink considerably within just 50 years.

The second step taken towards responding to the original question was to delineate a design brief, including a set of objectives in compliance with the overall ambition of turning Miches into a sustainable tourist resort. The design was based on the view that aesthetics and visual appearance are equally disintegrable parts of developing sustainable living environments as any other, and that the public realm must serve a political agenda in capacity of the physical place where the will of the greater public is expressed. From that followed that the park should essentially function as a city park, differing only by being specifically programmed to also cater to beach-oriented tourism as well. In order for the site to become attractive there is also a lot to be done concerning safety. This issue is addressed through the lighting scheme and by specifying a Tourist Police Office of the kind found in other resorts, which combined with added social control brought by increased spatial and visual connectivity in and around the site should make it appear a lot safer than it does today.

Thirdly, the park was designed in keeping with the overall town structure as well as local design traditions, and using mainly native plant material. The placelessnes shared by many other tourist landscapes is countrered by drawing upon the chromatic character of Miches, which contributes to the potential of the park to become a symbol of pride for the locals and a favorite place in the hearts of the visitors. By bringing attraction value, the park also has the potential to serve as an economic catalyst and help to strengthen the city's branding as a tourist destination. Most of the existing tourism is already focused on adventure and outdoor activities, but the city should also offer access to the sea and beach-bound services.

The fourth way in which the design relates to the problem definition is the strong focus on ecological aspects, due to which the park would form an essential part of the new, environmentally friendly vision for the town. As the city is currently in almost complete absence of accessible green space, the park would constitute an important addition to the infrastructure and is large enough to host a diversity of users, bringing it to life around all hours. The success of the landscape design would ultimately be determined by the users of the park, whose estimation in turn is heavily depending on maintenance. On the other hand, if the park were to become successful, that would save an ecologically valuable land from being exploitation, hopefully for generations to come.

Lastly, the design scheme is detailed to about the same degree as the one made by ReCua/INTEC, and should therefore be able to fill a simliar function in the detailed zoning of Miches, provided that it is well recieved by decision makers and townspeople. Even though the park area is connected spatially to the Malecón, it would fill a different set of functions; while the Malecón makes up a part of the busy town grid, the park would provide an opportunity to experience the tranquility of Miches and the El Seibo region without loosing proximitiy to the urban core.

Responsiveness to Local Context

The local culture is expressed in many ways in the park, from the Taino inspired art integrated in the paving to the central barbeque area, but perhaps most prominently in the shape of the chapel garden. The Catholic religion is an important part of people's lives and a strong binding element for the community, and the chapel garden provides a sacred, meditative space for everyday use as well as special religious occassions and life events. The Oratory Garden is intentionally located by the river, close to heart of the townspeople, and near the suggested placement of the hospital building in order to ensure easy access for patients and their families. As the church is currently the most reliable civic institution, involving them by assigning parts of the maintenance to them could be a way to ensure continuance and anchor the park in the community.

Landscape architecture is not an established professional field in the Dominican Republic, and resources such as plant material descriptions are scarce. Particular emphasis was therefore put on describing plant material used in the design and showcase how primarily native species may perform as architectural elements.

In spite of the favourable weather conditions there is no park culture equivalent to that in Sweden and Europe. Spaces that fit my idea of an urban square due to the sealed surfaces and complete absence of tended lawns were usually marked as "park" (parque) on the map. A large percentage of the lawns in Santo Domingo are found within fenced, upscale establishments such as country clubs, the Botanical Garden or all-inclusive the resorts; but those are still not used as recreational space in the same way as in Sweden. In the drier parts of the country, this could at least partially be explained by the issue of maintenance, as deficient irrigation makes grass areas less resilient to wear and tear. However, in Miches the humid climate allows for large grassy areas without additional irrigation, as seen for example within the premises Hotel Coco Loco. The significance of the word "park" therefore seems to slightly differ in the Dominican Republic compared to in Sweden, which of course has an entirely different urban planning tradition. A possible explanation for this may be that the green lawn is a powerful symbol of Western culture, and that the typology probably still carries strong connotations of status and wealth. The lawns in the design, however, breaks this tradition by being intended for usage instead of being prohibited, and by containing biological diversity instead of making up one large monoculture. Lawns may be problematic seen in an international perspective— especially in places dealing with water shortages— but the humidity and frequent rainfalls in Miches make up favorable conditions for lawn establishment.

One of my acquaintances stated that corruption is an inevitable ramification of what he calls "typical Dominican opportunism" and hence insoluble. Whether this really is the case I had rather be left unsaid, but what is clear is that laws and regulations are difficult to enforce and foreign investors willing to pay appear to have more or less free hands to do what they want, to the misfortune of the environment and not least the people. The Dominicans themselves seem to be painfully aware of this, and my impression is that it is the main source of the general pessimism and the aforementioned skepticism towards outsiders; a conclusion that was paralleled in my travel guide:

> *"With a past filled by strong-man dictators and corrupt politicians, the average Dominican who has learned to live through hardships approaches the present with a healthy skepticism- why should things change now?" (Clammer, Grosberg & Raub 2011)*

I personally certainly do not have an answer for that, and I did experience a somewhat pessimistic and skeptic attitude towards me, coming as a foreigner, in spite of being well-intentioned. Above all, however, I think the corruption poses the biggest threat against public environments such as the proposed park, not just in Miches but in the Dominican Republic as a whole.

Comparison to Influences and Similiar Projects

Studying precedents within idea-based landscape design influenced my process by encouraging me to strive after expressing the concept in a very literal way. For example, the soft plaza is a space directed solely at creating a venue for social integration between locals and tourists. The adjoining playground is programmed for children of various ages and has strong visual connectivity to the plaza. Both the private and public furniture are moveable and have the same standard and comfort; a deliberate move to increase the sense of equality among the people that will come to populate the space.

The design bears some similarities to the Corniche Beach in Abu Dhabi in terms of location, but there are significant differences regarding the culural, political and economic context. A different lifestyle demands different facilities. The Corniche project is highly anchored in its culutural context and has many parts that correspond to historical and religious aspects. The same goes for the design scheme, and referencing to different sources logically entails differences in aesthetic expression.

The park is designed to fit seamlessly into the existing urban fabric and ameliorate the transition to the new part of town; not only in terms of the overall layout of the design plan but also of included features. The restaurants are not intended to be expensive stellar restaurants of the kind found in larger cities, but to serve simple and likewise delicious local specialities to tourists who are looking for a genuine Dominican experience. This may seem unrelated to the rest of the park, but it does impact the design. For comparison, the wellrenowned River Café by the Brooklyn Bridge is surrounded by a private garden that does not form part of the park space designed by Micheal Van Valkenburgh, which I think might be partly because that kind of venue generally requires a more private and foreclosed setting than humbler establishments. To my knowledge, exclusive restaurants also put higher demands on supporting infrastructure and locally sourced revenues, why I see it as an inept option for the location even though the forthcoming tourism development is thought to be of the high-end variety. The crux of the concept was to create a park that is inviting to people of all socio-economic levels, and the visitor's ability and/or willingness to spend money should not restrict their access to any part of the park.

The design scheme was also to some extent inspired by the other resorts visited during the field study, at least in terms of programming of tourist playgrounds. However, a critical stance was taken against the oftentimes poor solutions concerning both social and ecological aspects. For example, the park design differs in that it does not prescribe commercial sand to be deposited on the beach, but instead make use of plant material for soil stabilization and erosion control. The design scheme is also adapted to limited resources for maintenance and is largely composed by park areas that do not require constant care in order to look presentable. Further, if a place gives the impression of being disposed for tourists, there is a prominent risk that local residents will feel excluded and choose other places to spend their time.

METHODS DISCUSSION

Under the following headings the reliability of the chosen methods are discussed and potential sources of errors scrutinized.

MINOR FIELD STUDY

The Minor Field Study included literature studies, interviews, field observations and a landscape analysis.

Literature Studies

The background studies that preceeded the Minor Field Study were directed towards finding out whether the role of landscape architecture differs within the specific realm of sustainable tourism as compared to the usual practice. The matter is complicated by the fact that the field of tourism is a loose term describing an unusually incoherent and complex industry. The field of landscape architecture in tourism may appear to be quite niched, but there is an extensive body of work by among other Professor Emeritus Clare A. Gunn, who has written on the subject since the 1970s. I found Gunn's works to be a reliable source as the books are all well-renowned and have been republished in several editions. The published material was complemented with updated electronic resources.

Field Observations and Site Visits

Safety issues inhibited my movements throughout the field observations and posed a significant obstacle for site analysis. The analysis was also inhibited by the fact that the development plan of the Dominican Ministry of Tourism was classified at the time for the field study.

The visit to the Botanical Garden in Santo Domingo informed the design in terms of plant material choices, and public environments across the capital were studied to assess the use of plants as architectural elements.

Interviews

The study of the operational context was largely based upon the professional views of the interview respondents in order to get as close to the current situation as possible. The respondents all share extensive knowledge and expertise of the specific problems that are facing the Miches region.

The interview method was a combination of a structured interview and a talk, in order to give the respondents an idea of what I was aiming for but also to allow the interview to flow more freely. Reassuringly, most of the responses were pointing in the same direction as to the general prerequisites of the working context and also verified against written sources. A voice recorder application was used during most of the interviews to allow them to flow more naturally. One exception was the interview with Duty Greene at the USAID, as it took place within the premises of the American Embassy in Santo Domingo onto which no personal belongings were allowd. This was compensated by the fact that any ambiguities could be verified afterwards by email.

I had been planning to arrange a workshop and invite locals to offer their opinions and expectations on a future park space, but unfortunately the circumstances did not allow for it. Instead, I relied on the professional advice of architect Marcos Barinas, who together with his team had been working with the community to implement their waterfront design plan in over eight years at the time of the interview. A few qualitative interviews with local residents were also performed individually.

Landscape Analysis

Working in a foreign context can be precarious due to cultural, social and political differences that affect the usage and value that is assigned to public space. The landscape analysis was made from my perspective as a landscape architect and may lack aspects that could have crucial effect for the design outcome.

The Landscape Character Assessment method is widely used within the profession to structure and communicate the findings of the analysis. I adapted the method to fit with the concept and design brief.

DESIGN PROCESS

The pragmatic approach as advocated by Kathryn Moore provided a foundation for the choice of methods, both for the landscape analysis and the design process.

Implementing the Pragmatic Approach

First of all I implemented Moore's theories by adding a conceptual dimension to the survey, instead of just doing an inventory of existing physical preconditions, or try to unveil some mysterious, hidden meaning by 'consulting the genius loci' - a method that has never made much sense to me. Nor did I spend any energy trying to bridge an imagined gap between intuition and rationality which I do not believe to exist, but rather to pinpoint and describing what I actually perceived. A rough concept idea was used as a base upon which to make value judgements about what things were to be considered important and what things were not. That way, the research undertaken for the landscape analysis had a bearing on the design brief and concept development, which in turn played a role in shaping the analysis. In that sense the survey was integrated into the design process. The process was directed at problem solving in direct response to value judgements based on what was percieved.

> *"Fitting in with the context is fine, as long as the context is worth fitting in with"*
>
> - Kathryn Moore

The point Moore made on design not being a democratic activity really helped me to legitimize my role to myself, as the last thing I wanted to accomplish was the kind of top-down situation that I think easily becomes of Western volunteering in developing countries. In any case, the important thing about the design proposal is not so much the idea of the park per se, but the underlying concept which I hope could become a positive source of inspiration for the development in Miches.

In conclusion, Moore's theories helped me recognize the fact that design is about creating a vision about a desirable future, and that has a value of its own. To focus on aesthetic quality when the current communal still feels somewhat counterintuitive but, as both Moore and Schwartz argues, the visual aspect is an inherent part of the sustainable concept and neither can or should be ignored. What I strived to show was also that aesthetic quality and green technologies do not necessarily come with high costs, but may actually function as an economic catalyst.

Purpose of working with a design concept

The concept and objectives were used to set a direction for the design scheme and function as a framework when it comes to taking design desicions.

All Invited is a conceptualization of the currently ongoing efforts to develop Miches into a functioning support community for sustainable tourism within the El Seibo region. The concept emphasizes the social aspect of sustainability, based on the assumption that integration creates a more stable community and openness between people. The concept was used as a framework to guide the design scheme, in which it is expressed through the multitude of spaces for flexible use, as well as through common attraction points for residents and tourists. In case of an eventual further development of the design scheme, the concept could serve as an instrument to communicate ideas with different stakeholders.

The *All invited* concept summarizes what I find to be the core characteristic of sustainable tourism, namely environments that are welcoming to and addresses the needs of local residents as well as tourists. *All invited* is a concept that states a very political agenda, aimed at creating livable cities for people. The way I see it, it is our professional responsibility as landscape architects to emphasize the importance and value of public environments- not only for the quality of life of people but also economically as a main factor of the city's attraction value.

It is important to point out that while idea-based design is an effective tool in many ways, the value lies in the finished product, and the quality of the idea does not necessarily translate into qualitative design.

Model Building and Illustrations

The concept model had a huge influence on the design product as I found it to be an effective way for me to work with ideas. I have worked with models in many previous projects, but they would normally be built to illustrate a finished design scheme, whereas in this project the model was used in the early stage of the sketching process.

CONCLUSION

Not all regions have the natural and cultural resource foundations that are necessary to build tourism. Miches, however, has the opportunity to become a real signature place for the Dominican Republic and a forerunner within the field of sustainable tourism. The current undeveloped state offers a unique opportunity to organize the town in the most sustainable way, and thereby preserve the natural wealth of the landscape to the enjoyment for generations to come.

REFERENCES & APPENDICES

- LIST OF REFERENCES
- ABBREVIATIONS
- DEFINITION OF TERMS
- DESIGN PANELS RE:CUA/INTEC

LIST OF REFERENCES

B

Barinas, Marcos, 2012 (28 March): Interview, Santo Domingo, the Dominican Republic

Bedall, Kim, 2012 (25 February): Whale watching tour. Samaná Bay, the Dominican Republic.

Bzomowski, Steve, 2011: [online] Land Cover and Water Quality in the Laguna Redonda Watershed, Miches Basin, Dominican Republic: The Creation of a Geographic Information System (GIS). Master of Urban and Regional Planning Capstone Practicum Report. Blacksburg, Virginia, United States:Virginia Tech. Available: <http://ralphphall.files.wordpress.com/2011/08/bzomowski_capstone.pdf> [17 August 2012]

C

Clammer, Paul, Grosberg, Michael & Raub, Kevin, 2011.. Dominican Republic & Haiti. 5. ed. Footscray, Vic. [etc.]: Lonely Planet

Clary, Darien, 2012 (15 February): Interview, Miches, the Dominican Republic

Columbia University, 2012. Homepage. [Online] Available from: http://cees.columbia.edu/about-us [5 January 2012]

CONATURA-Miches, 2011. Homepage. [Online] Available from: http://miches.wordpress.com/ [17 August 2011]

D

Diamond, Jared (2006[2005]). Collapse: how societies choose to fail or survive. London: Penguin

Donald, Stephanie Hemelryk & Gammack, John G. (2007). Tourism and the branded city [Electronic resource]: film and identity on the Pacific Rim. Far1nham: Ashgate Publishing Ltd

F

Food and Agriculture Organization of the United Nations, FAO, 2013. Mangrove Management> Mangrove description - Dominican Republic. [Online] Available from: http://www.fao.org/forestry/mangrove/vegetation/en/dom/ [10 January 2013]

G

Global Sustainable Tourism Council, GSTC, 2013: The Global Sustainable Tourism Criteria. (April 25th 2013) http://www.gstcouncil.org/sustainable-tourism-gstc-criteria.html

Greene, Duty, 2012 (29th March): Interview, American Embassy in Santo Domingo, Dominican Republic

Gunn, Clare A (1997). Vacationscape: developing tourist areas. 3. ed. Washington, D.C.: Taylor & Francis

Gunn, Clare A. & Var, Turgut. (2002). Tourism planning: basics, concepts, cases. 4. ed. New York: Routledge

Gustavsson, Bengt (red.) (2004). Kunskapande metoder inom samhällsvetenskapen. 3., [rev.] uppl. Lund: Studentlitteratur

H

Hamed, Safei-Eldin (red.) (2003). Best practices for landscape architecture. Giza: Tourism Development Authority/Red Sea Sustainable Tourism Initiative

I

Ignatieva, Maria (2010). Urban biodiversity and design. Chichester, UK: Wiley-Blackwell

Ignatieva, Maria (2012). Applied urban ecology: a global framework. Chichester: Wiley-Blackwell

Inhabitat (2012). INTERVIEW: Architect James Corner On The Design of the High Line. [online]. Available from: http://inhabitat.com/interview-architect-james-corner-on-the-design-of-high-line/ [10 December 2012]

INRA EUROPE (1998), Facts and Figures on the European on Holidays (1997-1998): Executive Summary, A Eurobarometer survey carried out on behalf of the European Commission Directorate General XXIII (Enterprise policy, Distributive trades, Tourism and Co-operatives).

International Monetary Fund, IMF, (2013). Homepage [online]. Available from: http://www.imf.org/external/index.htm [10 January 2013]

INTEC (2010). Los Árboles de Santo Domingo. Especies recomendadas. Available from: http://es.scribd.com/doc/72253632/Arbolado-de-Sto-Dgo-Especies-Recomendadas [10 January 2013]

J

Jacobs, Jane (2011[1961]). The death and life of great American cities. 50th anniversary ed., 2011 Modern Library ed. New York: Modern Library

K

Koster, P. (2012). Overfishing basics. Available: http://overfishing.org/pages/what_is_overfishing.php. Last accessed 20th Aug 2012.

L

"List of trees of the Caribbean" (2012). Wikipedia, the Free Encyclopedia. [online] Available from: http://en.wikipedia.org/wiki/List_of_trees_of_the_Caribbean"Resort" [10 March 2012]

M

Martha Schwartz Partners, 2012: Abu Dhabi Corniche Beach Revitalization, UAE. Accessed 20 August 2012 <http://www.marthaschwartz.com/projects/civic_institutional_adcb.php#>

Melnick, Don, 2007 (May 28th): Video [online] Miches, Dominican Republic, ESEG-MDG Initiative - Part 01. Accessed 17 August 2012 <http://www.youtube.com/watch?feature=player_embedded&v=BY9tk1bJL_E>

Melnick, Don, 2007 (May 28th): Video [online] Miches, Dominican Republic, ESEG-MDG Initiative - Part 02. Accessed 17 August 2012 <http://www.youtube.com/watch?feature=player_embedded&v=aGAjcK-LTSc>

Michael Van Valkenburgh Associates Inc, MVVAINC 2012: Brooklyn Bridge Park, New York. Accessed 22 August 2012 <http://www.mvvainc.com/project.php?id=91&c=parks>

Moore, Kathryn (2009). Overlooking the visual: demystifying the art of design. New York, NY: Routledge

O

Oficina Nacional de Estadística, 2008: [online] El Seibo en Cifras- Perfil Sociodemográfico Provincial. Government of the Dominican Republic: Santo Domingo. Available: <http://www.one.gob.do/themes/one/dmdocuments/perfiles/Perfil_el_seibo.pdf> [17 August 2012]

Open house international.. (1983-). Eindhoven: Stichting Architecten Research

P

Perrazzo, Sofia, 2012 (February 10th): Interview, Santo Domingo, Dominican Republic

Poirson, Evan, 2012 (February 19th); Interview, Miches, Dominican Republic

Q

Quiñones, Carla, 2012 (February 19th): Interview (Santo Domingo, Dominican Republic)

R

"Resort" (2012). Wikipedia, the Free Encyclopedia. [online] Available from: http://en.wikipedia.org/wiki/Tourist#History [10 March 2012]

Richardson, Tim (2008). Avant gardeners: 50 visionaries of the contemporary landscape. London: Thames & Hudson

S

Schwartz, Martha, 2011 (14 October): Lecture, Arkitekturmuseet, Stockholm, Sweden

Schwartz, Martha (2012). Recycling Spaces: Curating Urban Evolution: The Work of Martha Schwartz Partners. London, UK: Thames & Hudson

Seagrass Recovery. Homepage [online] (17 July 2013). Available from: http://www.seagrassrecovery.com/ [17 July 2013]

Sjöberg, Emma (2012).(Electronic) Available: <http://mfskurs.programkontoret.se/> /Sök uppsats /Titel /How the desire to emigrate affects young people's daily life. A case study in the Dominican Republic. (2012-08-20)

Skovmand, Sven (2009). Bonniers världshistoria. Albert Bonniers Förlag

Steffen, Alex & Bluestone, Carissa (red.) (2011). Worldchanging: user's guide for the 21st century. 2. ed., rev. and updated. New York: Abrams

Sustaining Tourism. Homepage. [online] (17 August 2012). Available from: http://www.sustainabletourism.net/index.html [17 August 2012]

Swanwick, Carys (2002): [online] Landscape Character Assessment Guidance for England and Scotland: The Countryside Agency/ Scottish Natural Heritage. Available: <http://publications.naturalengland.org.uk/publication/2671754?category=31019> [28 September 2012]

Sörling, Sverker. 2004. Turistens tillrättalagda landskap. Arkitektur = The Swedish architectural review (KURSIV). (1959-). 5: 8-13.

T

The challenge of slums [Electronic resource] Global Report On Human Settlements, 2003. (2003). London: Earthscan Publications

"The Dominican Republic" (2012). Wikipedia, the Free Encyclopedia. [online] Available from: http://en.wikipedia.org/wiki/Tourist#History [10 March 2012]

The National September 11 Memorial & Museum. Homepage. [online] (17 August 2012). Available from: http://www.911memorial.org/ [17 August 2012]

"Tourism" (2012). Wikipedia, the Free Encyclopedia. [online] Available from: http://en.wikipedia.org/wiki/Tourist#History [10 March 2012]

U

United Nations Environment Programme, UNEP (2009) Sustainable Coastal Tourism- An integrated planning and management approach

Urbanized (2011). Documentary film by Gary Hustwit released on 26 October 2011.

"Urban sprawl" (2012). Wikipedia, the Free Encyclopedia. [online] Available from: http://en.wikipedia.org/wiki/Tourist#History [10 March 2012]

V

Vargas, Francilin, 2012 (25 February): Interview. Miches, the Dominican Republic

Vidga vyerna: planeringsmetoder för trygghet och jämställdhet. 1. uppl. (2010). Karlskrona: Boverket. Available from: http://www.boverket.se/Global/Webbokhandel/Dokument/2010/Vidga-vyerna.pdf [2013-06-09]

W

World Tourism Organization (1995). UNWTO technical manual: Collection of Tourism Expenditure Statistics. [online] Available from: http://pub.unwto.org/WebRoot/Store/Shops/Infoshop/Products/1034/1034-1.pdf [10 March 2012]

World Tourism Organization, UNWTO (2012). Annual Report 2011. [online]. UNWTO, Madrid. Available from: http://dtxtq4w60x-qpw.cloudfront.net/sites/all/files/pdf/annual_report_2011.pdf [2012-08-20]

World Wildlife Foundation. WWF, 2013

World Tourism Organization, UNWTO (2013) Homepage [online]. Available from: http://sdt.unwto.org/en/content/about-us-5 [10 January 2013]

ABBREVIATIONS

CAD	Computer Aided Design (software)
CEES	Center for Environment, Economy, and Society; the Columbia university (New York)
COPDES	Comision Presidencial sobre los Objetivos del milenio y el Desarollo Sostenibile
ESSEG	Environmentally and Socially Sustainable Economic Growth (Program at the Columbia University, NY)
GIS	Geographic Information System (software)
GSTC	Global Sustainable Tourism Council
HDI	Human Development Index
ICZM	Integrated Coastal Zone Management
IMF	International Monetary Fund
MFS	Minor Field Study (Scholarship Program through SIDA)
MDG	Millennium Developmental Goals
NGO	Non-Governmental Organization
ONE	Oficina Nacional de Estadistica
SIDA	Swedish International Development Corporation Agency
SLU	Swedish University of Agricultural Sciences
UN	United Nations
UNIBE	Universidad Iberoamericana (Santo Domingo)
UNEP	United Nations Environment Programme
UNWTO	World Tourism Organization
USAID	United States Agency for International Development

DEFINITION OF TERMS

Biodiversity

» The uncounted diversity of life at all levels- genes, species and ecosystems. Preventing loss of biodiversity is a precondition for sustainable development, especially in poor areas of low agricultural productivity (UNEP, 2012).

Ecosystem service

» Living organisms, interacting among themselves comprise ecosystems which play a fundamental role in providing food, medicines, fuel and breathable air among many other things. Ecosystem services are therefore essential for human life on earth. The five-year Millenium Ecosystem Assesment (MA) concluded in 2005 that ecosystem services are often undervalued at immeasurable costs to all of society (UNEP, 2012).

Informal settlements

» UN HABITAT defines *informal settlements* as unplanned human settlements characterized by informal or insecure property tenure and inadequate or non-participation in government resulting in lack of basic services, registration and infrastructure. Residents of informal settlements suffer from discrimination since they do not enjoy their rights to an adequate standard of living (The Challenge of Slums, 2003).

Landscape master plan

» In this thesis, the term *landscape master plan* refers to an illustrative document conceived by a landscape architect and demonstrating planned development within a project site. The master plan corresponds to an overall design concept, and from it detailed design drawings and technical specifications can be prepared prior to realization of the project.

Overfishing

» The term *overfishing* refers to a non-sustainable use of the oceans. The definition used for this thesis was "*the practice of commercial and non-commercial fishing catching so many adult fish that it exceeds the carrying capacity of a fishery, eventually leading to an overall degradation of the system until the population is extinct*" (Koster, 2012).

Resort

» The term *resort* refers in this thesis to a place where the economic resources comes from accomodation of tourists mainly travelling for recreational purposes. Resorts are places, towns or sometimes commercial establishment operated by a single company (Wikipedia, 2012).

Urban sprawl

» Urban sprawl is a multifaceted concept referring to the spreading outwards of a city to its outskirts to low-density and auto-dependent development on rural land with high segregation of uses (Wikipedia, 2012).

INTERVIEW QUESTIONS

Below follows a list of the most important questions that were asked during the qualitative interviews as well as spontaneous interviews with local residents:

1. What do you think of the public spaces in Miches?
2. What changes would you like to see regarding public space?
3. Where do you take visitors for a nice pastime?
4. What in your opinion is the nicest part of Miches?
5. Do you like to swim, and if so, where do you go to do that?

Professor Don Melnick, PhD, Principal Columbia University:

6. What is your view regarding the development of Miches?
7. What do you consider to be the prime obstacles for sustainable development in this particular context?

Henry Fernandez, Project Manager ESSEG/Columbia University:

8. Why was the scope for the project changed from tourism development to sustainable fishing?

Duty Greene, PhD, Manager USAID:

9. In what way has the USAID been involved in the development of Miches?
10. What is your view on what constitutes the main problem concerning environmental protection wihtin the region?

Evan Poirson, Peace Corps Volunteer:

11. Do you think there is potential for a cayak project in the central part of Miches? What are the prime obstacles?
12. What is your view on the local community's readyness for participation in tourism development?

Darien Clary, Project Manager ESSEG/Columbia University:

13. How far would you say that the tourism development in Miches has come?
14. How badly damaged are the marine ecosystems, do you think there is a chance to preserve them through sustainable tourism?
15. What ecosystems do you think are the most valuable and whose protection needs to be strengthened?
16. Is there some particular intervention on land that you think could be of importance for the ecosystems?

Sofia Perazzo, Project Manager Fundación Tropicalia:

17. When do you estimate that Miches will be ready for tourists?
18. Anything in the physical infrastructure you think needs to be changed in order to enhance the tourism experience?

Marcos Barinas, Architect ReCua:

19. How was it to work in this context, what were the difficulties?

DESIGN PANEL 01 RECUA/INTEC

MICHES

FRENTE MARINO DEL MUNICIPIO DE MICHES, REP. DOM.

01.

PROYECTO DE DESARROLLO LOCAL DEL MUNICIPIO DE MICHES

PLAN MAESTRO DE DESARROLLO URBANO

MASTER PLAN

18°59'9.75"N 69° 2'35.23"W

0 50 mts. 100 mts. 150 mts. 200 mts. 250 mts. 300 mts.

LEYENDA:

1. ESTRUCTURA EXISTENTE / RESTAURANTE
2. RECUPERACIÓN PLAYA
3. CALLE URBANA PROPUESTA
4. VOLLEYBALL DE PLAYA / JUNTA DEPORTIVA MUNICIPAL
5. DECK MIRADOR - AREA INSTITUCIONAL
6. NUEVAS EDIFICACIONES PRIVADAS
7. PROGRAMA RECREATIVO
8. ENTRADA ASOCIACIÓN PESCADORES
9. ÁREA MANGLAR / HOTEL
10. ÁREA DE ESTACIONAMIENTO
11. PLAZA
12. RESTAURANTES / USO PÚBLICO
13. PUENTE
14. PARQUE ACUÁTICO
15. ÁREA PROTEGIDA / MANGLAR
16. CENTRO INFORMATIVO - COMERCIAL - ARTESANAL
17. ÁREA PROTEGIDA PUNTILLA

DESIGN PANEL 02 RECUA/INTEC

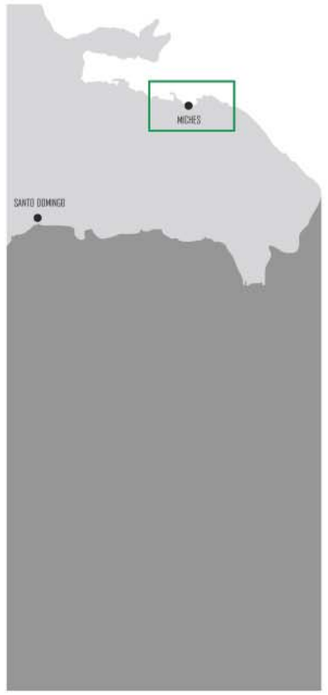
MICHES

FRENTE MARINO DEL MUNICIPIO DE MICHES, REP. DOM.

02.

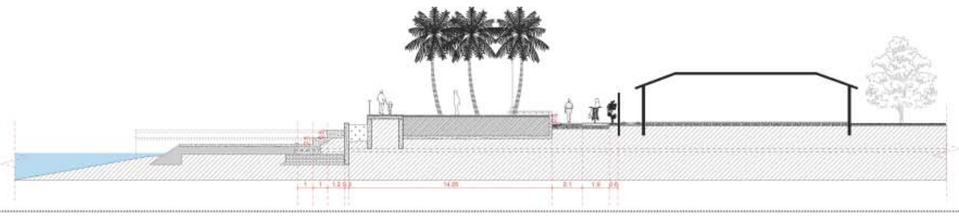
PROYECTO DE DESARROLLO LOCAL DEL
MUNICIPIO DE MICHES

PLAN MAESTRO DE DESARROLLO URBANO



SECCION 1 - ESCALA: 1:200

SECCION 2 - ESCALA: 1:200



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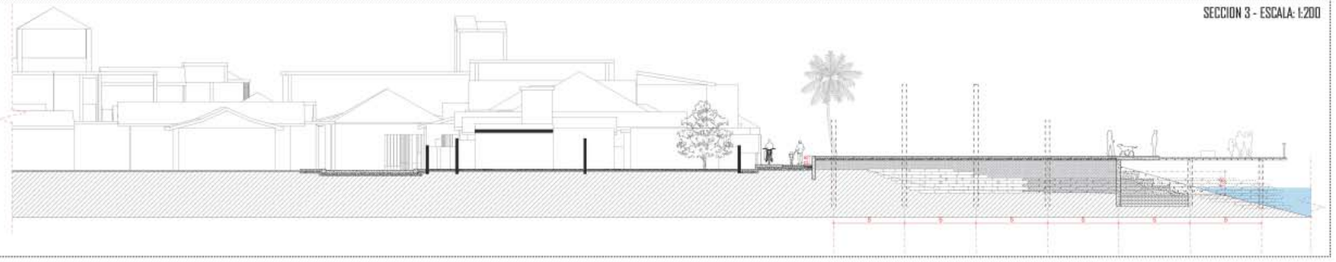

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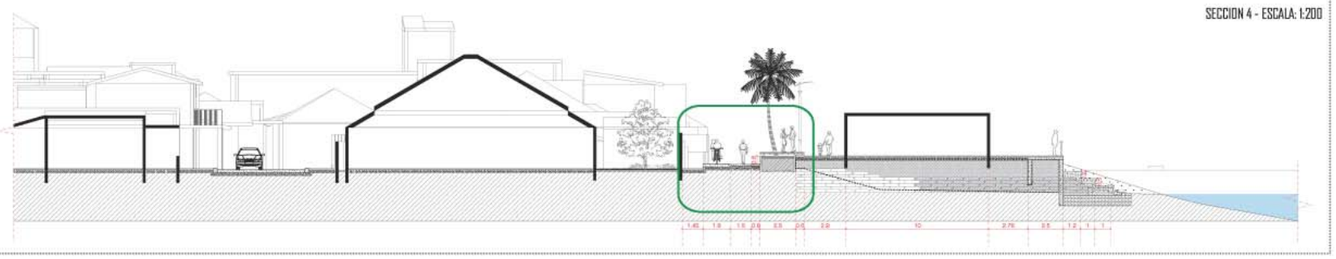
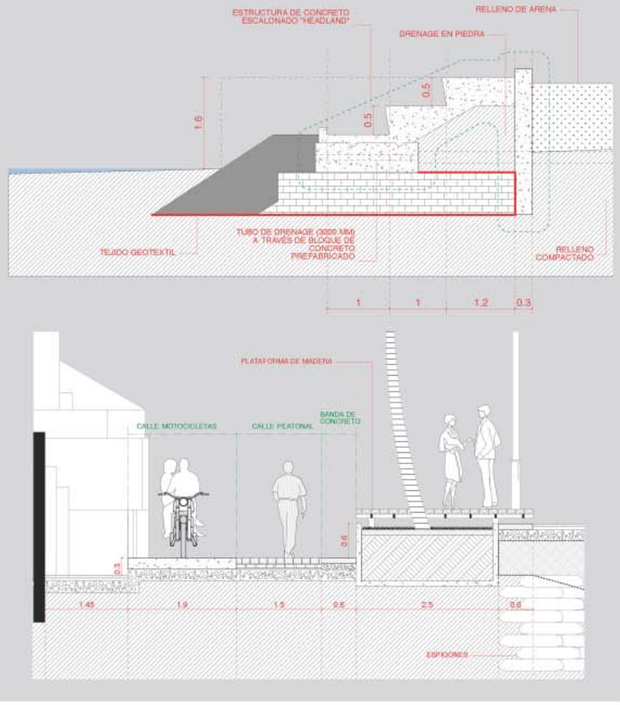


SECCIONES - PROPUESTA

18°59'9.75"N 69° 2'35.23"W

DETALLES / SECCIONES - ESCALA: 1:50



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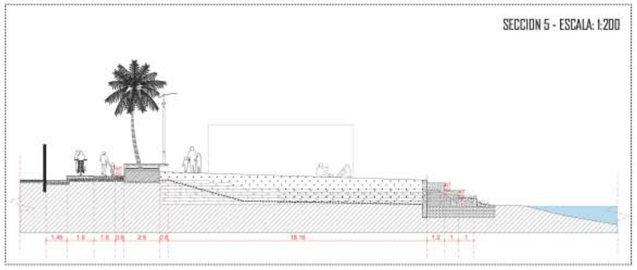


PANELES DE DISEÑO EN ESPAÑOL

ALL INVITED

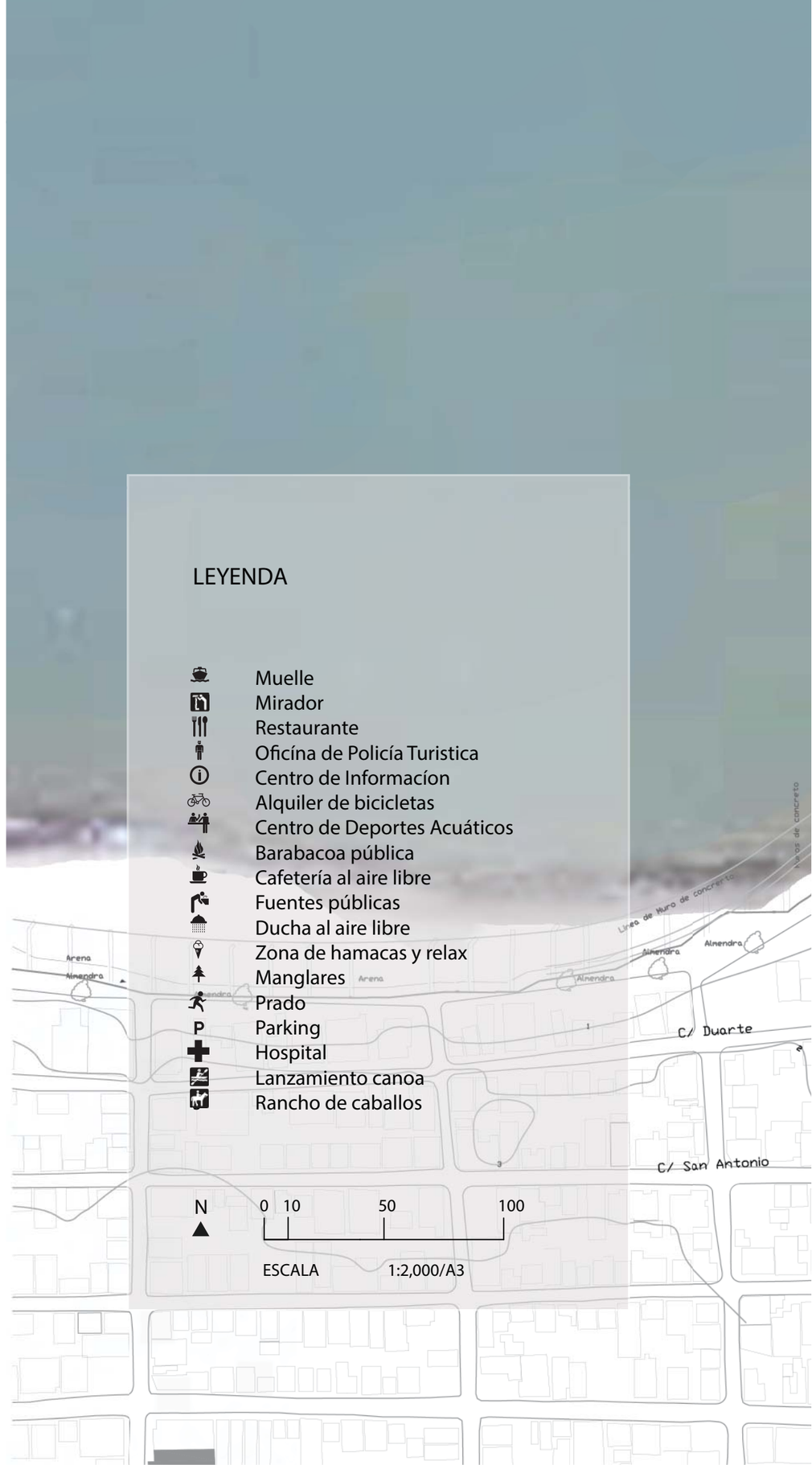
ALL INVITED, o "Todos invitados", es la idea de un parque que ayuda a promover el turismo sostenible en toda la región de Miches. El parque se integra en la estructura urbana y alienta el uso diario por los habitantes de Miches. Además, ALL INVITED es la visión de un parque que aproveche los características que son específicos por Miches, y dónde cada uno se siente invitado, sin importar su origen.

LOS MANGLARES. Miches se encuentra en un entorno único, con muchos ecosistemas de gran valor. Uno de ellos son los bosques de manglares. El parque ofrece a los visitantes una oportunidad única de ver un bosque de manglares de cerca, gracias a muelles flotantes que hace posible visitar el pantano de una manera segura, y que no perturbe la flora y fauna natural.

LOS CORALES. Un parque submarino que da al visitante la oportunidad de bucear y explorar la riqueza de la Bahía de Samaná. Muy cerca, una torre de salvavidas supervisa el arrecife construido y un embarcadero flotante facilita el acceso. Luminarias LED debajo del embarcadero añade un agradable resplandor en la oscuridad. El arrecife ha empotrado luminarias LED que crea un espectacular brillo bajo el agua.

EL SISTEMA VETIVER. La propuesta de diseño incluye un humedal artificial, que forma parte de un Sistema de Drenaje Urbano Sostenible (SUDS). El componente principal del humedal es Vetiver, Chrysopogon zizanioides, un césped no invasivo originaria de la India. A diferencia de la mayoría de las gramíneas, que forman sistemas radiculares con propagacionm horizontal, las raíces de vetiver crecen hacia abajo hasta de 4 metros de profundidad. Esta es una de las cualidades que hace el vetiver especialmente adecuado para la descontaminación de acuiferos, y también para impedir la erosión de suelo. Por eso, el sistema vetiver se utiliza en todos los trópicos por la creación de infraestructura verde.

LA HERENCIA HISTÓRICA. El camino de entrada y la plaza están pavimentadas en tejas de color rojizo, cuya coloración proviene de la tierra tropical. Las tejas rojas son combinadas con hormigón de colores claros para crear patrones de pisos que se refiere al patrimonio histórico de los taínos.



-0,1

+1,0

+2,1

PLAZA

+2,2

MANGLARES

+0,2

HUMEDAL

"JARDÍN DEL EDÉN"

+2,5

PRADO

+3,1

"LOS CORALES"

PARQUE SUBACUÁTICO

-0,5

+0,5

-2,0

-1,2

LAS HAMACAS

+0,5

PRADO

+2,5

"LA PIEDRA"

P

A

A'

C/ San Antonio

Almendro

Cienaga

Mango

RIO LA YEGUADA

Camino a la playa

LA ORILLA DEL RÍO

Ya que la orilla del río del parque está bordeado por los entornos de gran valor e igualmente sensibles, es dejada lo más cercano a su estado natural como sea posible. Embarcaderos flotantes permite el acceso a los manglares sin comprometerlos, y el lanzamiento de canoa proporciona acceso a las aguas arriba del río.

EL JARDÍN DE LA ORATORIA

El Jardín de la Oratoria se concibe como una personificación del paraíso bíblico, un espacio exuberante y contemplativa centrada por un edificio sagrado.

HUMEDALES ARTIFICIALES

Los humedales son de gran valor ecológico, ya que constituyen el refugio y hábitat para numerosas especies. En las zonas urbanas también funcionan para ayudar a retener las aguas pluviales. Al hacer accesible el humedal, también puede ser convertido en un punto de atracción para los turistas. Los letreros de información enseña la vistior sobre la función ecológica del humedal, el sistema de vetiver y todas las diferentes especies que prosperan aquí.

PLAZA SUAVE

Amueblado con asientos fijos y móvil, la plaza blanda es un lugar tanto para los clientes de la cafetería y los bancos del parque de acceso público. La plaza está bordeada por un banco que se mantiene fresco mediante la circulación de agua de los edificios, con lo que forma parte del sistema de drenaje urbano sostenible. El banco es sombrado por la línea de árboles y ofrece un asiento cómodo durante los días calurosos. Los respaldos se colocan en ambas direcciones, de modo que uno puede sentarse frente a la zona de juegos o en la plaza.

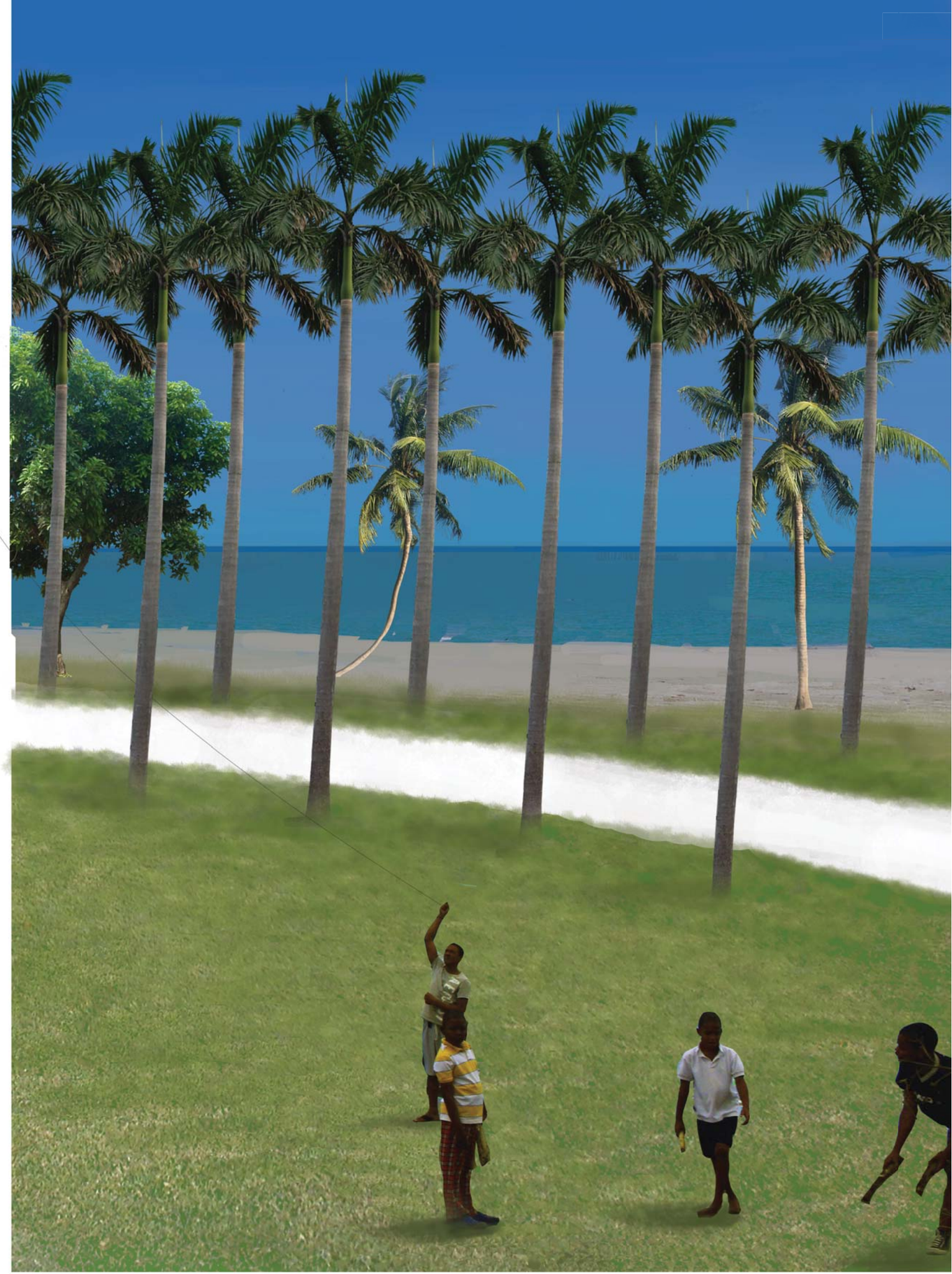
Dentro de los edificios hay servicios que atraerá a la gente, por lo que la plaza sea un lugar animado y atractivo en el corazón del parque. Los servicios incluyen un centro turístico, centro de deportes acuáticos y restaurantes que sirven especialidades locales.

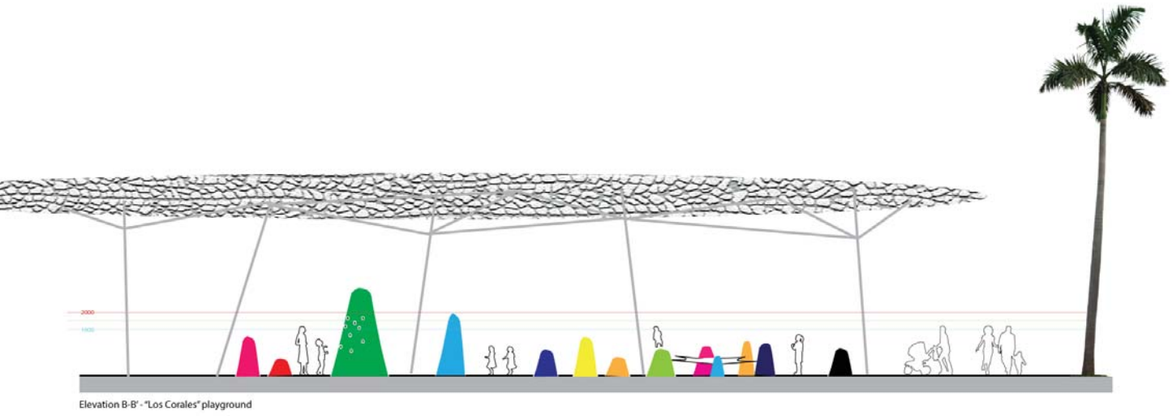
La plaza se preparó por un pavimento permeable, que consiste en una mezcla de diferentes tipos de hierba reforzados por módulos de hormigón, dando la plaza una superficie suave que reduce al mínimo el escurrimiento.

LOS PRADOS

El prado verde no es una característica común de los parques públicos de la República Dominicana, pero son marca comercial de clubes de campo aisladas y complejos hoteleros. En este contexto, los prados retratan un declaración de igualdad y transparencia de acuerdo con la dirección general del desarrollo en Miches. El césped también está formado por una alternativa más sostenible que las alfombras monocultivas ordinarios, ya que está compuesto por una mezcla de hierbas indígenas tolerantes que no requiere mantenimiento constante o cargas de productos químicos para estar presentable. Una gran variedad de especies de pastos bien adaptadas mantendrá infestación de malezas al mínimo y aumentarán significativamente el valor ecológico de los prados. Los prados constituyen una parte importante de la experiencia del parque, añadiendo una impresión robusta y salvaje que invita al tipo de uso por que están destinados.

En conclusión, los prados no sólo están ahí para la decoración, pero son ante todo un espacio para los jóvenes de Miches. Los prados son distanciados de la costa y exentos del tráfico, ofreciendo un espacio seguro para que los niños andan libres, y donde está permitido echar un pedazo de tierra para el área de receptor o lanzar cometas.





Elevation B-B' - "Los Corales" playground

ZONA DE JUEGOS "LOS CORALES"

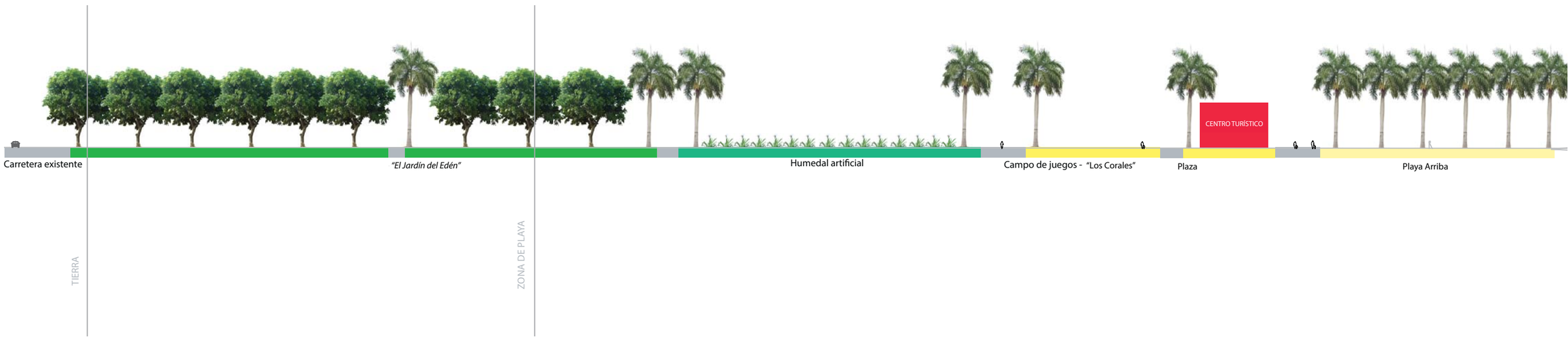
Como Miches tiene un relativamente joven demográfica , el diseño está enfocado a creer espacios para los niños y adolescentes. La zona de juegos está situado en la parte central del parque, compuesto por estilizadas "corales " de hormigón hecho in situ y pintado en varios colores vivos. "Los Corales" se disparan fuera de la arena, creando un gracioso y sólido paisaje de juego.

La zona de juegos tiene tres partes diferentes, cada uno adaptado para diferentes grupos de edad; 0-5 años, 5-10 años y 10 años en adelante. La parte dedicada a los niños más pequeños contiene arena moldeable y esculturas de juego bajo, mientras que la escalada y el equilibrio se haga más difícil en la segunda y tercera parte.

La zona de juegos es la instalación más avanzada en el parque y el diseño con los bloques de hormigón estaba destinado a asegurar su durabilidad, lo que hace que la inversión vale la pena en el largo plazo.

LAS HAMACAS

Hamacas, canoa y barbacoa son palabras que se derivan directamente de los taínos.



MUELLE FLOTANTE Y EMBARCADERO DEL MAR

La torre de vista proporciona un segundo nivel dentro del parque y constituye una atracción que se ve de lejos. También trae un segundo nivel del parque, permitiendo que los visitantes se acercan a los pájaros y el dosel. La experiencia se complementa con paneles informativos que elaboran en las cosas que se ven desde la torre.

Para los visitantes, el muelle es el punto de entrada principal del mar. El muelle flotante da acceso al parque submarino.

PARQUE SUBACUÁTICO

El parque subacuático está compuesto por estructuras de refuerzo que induce el crecimiento del coral. El parque subacuático sirve tanto para fines educativos y recreativos y de ayuda a la economía mediante la protección de la costa. Por otra parte, los arrecifes construidos constituyen un refuerzo importante del hábitat.

Figure 97: ***Sección A-A'.*** *Escala 1:1000.*