READER

Ground Rules for Humanitarian Design

Edited by
Alice Min Soo Chun
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Front cover image: Port-au-Prince, Haiti, 2013. Rebuilt and remaining structures in informal settlements three years after the earthquake. © Damian Fitzsimmons.

Acknowledgements

Ground Rules for Humanitarian Design began as a discussion with students and faculty at Columbia University and became a much larger dialogue with students and faculty at Parsons The New School for Design. The global disasters caused by the 2010 earthquake in Haiti, the 2012 Kamaishi earthquake and tsunami in Japan and the 2013 Typhoon Haiyan in the Philippines had struck a cord in all of us. We could no longer stand by and watch what was happening to the environment, we had to take action. The tides, rifts and storms that had moved oceans and earth had also motivated in us a desire to create ways of deciphering such a complex and multifaceted problem.

We would like to thank Brian McGrath for his mentorship and support for this book and for proposing it on our behalf. He is dedicated to new research in urban ecosystems and is a leader in this field. Many thanks to Cameron Sinclair for the discussion we had about the lessons he had learned while at Architecture for Humanity. Kenneth Frampton was also a great inspiration, and we thank him for taking the time to be interviewed. We are indebted to the authors who contributed to this book and thank them not only for their essays but also for the many hours of work spent writing each essay. This project has taken two years to complete; we are very grateful to Helen Castle and Calver Lezama for their perseverance and patience over the past two years and their commitment to this publication.

Editorial Note

With the exception of one essay (pp 142–4), this book is an anthology of texts created specifically for this publication.

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Introduction
Charcoal seller in Haiti. Because of extensive poverty and the cultural tradition of using charcoal for cooking, trees have been cut down to make charcoal. The effect this has had is extreme land degradation. © Damian Fitzsimmons.
The hillsides of Port-au-Prince, Haiti, are a collage of shelters. The colours act as a codification for the nongovernmental organisations that built them. These plywood structures are called ‘transitional' homes, although none have running water, sanitation or electricity. © Damian Fitzsimmons.
An orphaned girl reading with a SolarPuff, an inflatable solar light invented by Alice Min Soo Chun, designed to replace kerosene lanterns. Two million children die each year because of poor indoor air quality caused by kerosene lanterns. In areas of extreme poverty people spend up to 30 per cent of their income on kerosene to light their world at night. © Damian Fitzsimmons.

Haiti, aerial view of land degradation. Owing to the lack of agriculture, the brown area to the left indicates no ecology. Firewood is used for cooking food and so the poor have cut down all the trees. This leaves the bare land prone to extremely dangerous mudslides and flash flooding. © Alice Min Soo Chun.

MASS Design Group, Housing for Doctors, Butaro, Burera District, Rwanda, 2012. This construction for permanent housing has basic amenities, such as running water, electricity and sanitation. Yet beauty, wonder and design are the principles for Ground Rules. © Iwan Baan.

Part 1

Dilapidated tower block. © Imageplus/Corbis.

Chapter 1

The cover of the seminal work by Victor Papanek, first published in 1971, inspired a generation of designers and activists. © Random House LLC.

DHK Architects and Two Think Architecture, Ahmed Baba Centre, Timbuktu, Mali, 2009. © Iwan Baan.

DHK Architects and Two Think Architecture, Ahmed Baba Centre, Timbuktu, Mali, 2009. Timbuktu's association with ‘a place at the end of the world' is ironic considering that the city was once the main intellectual centre of Islam in Africa. Timbuktu is a city in Mali, born in proximity to the Niger River, at the intersection of 10th-century trans-Saharan trade routes. © Iwan Baan.

Peter Rich Architects. Mapungubwe Interpretation Centre, Mapungubwe National Park, Limpopo, South Africa, 2008–10. Mapungubwe, located on South Africa's northern border with Botswana and

Zimbabwe, prospered between AD 1200 and 1300 by being one of the first places to produce gold. After its fall it remained uninhabited for over 700 years, until its rediscovery in 1933. The society living in what today is a UNESCO World Heritage Site, is thought to have been the most complex in the region, implementing the first class-based social system in southern Africa. © Iwan Baan.

Chapter 2

A Lima *barriada* as seen by Turner and visitors in 1961. © John FC Turner.

Permanent squatter self-building two to five years after site occupation. © John FC Turner.

A workshop fronting a completed ground-floor dwelling with a second floor for the extended family being built 10 to 15 years after site occupation. © John FC Turner.

Carabayllo, Lima, Peru in 2010 is now a fully serviced city district. A main street in the same area of Lima as above, 50 years after the original *barriada* was established. © Kathrin Golda-Pongratz.

Carabayllo, Lima, Peru. The weekend that the squatters invaded and occupied the *barriada* site. © John FC Turner.

A typical slum of rented rooms, originally on land squatted by self-builders in the mid- to late 1940s, photographed in 1960. They represent settlements that have little or no prospects of improvement but are still used by the otherwise homeless, including young migrants, as the only affordable accommodation accessible to unskilled workers. © John FC Turner.

Ciudad Bachue, Bogotá, Colombia

1979. Prefabricated core houses. Already households are assembling building materials for extensions, replacing doors and installing security grilles. © Patrick Wakely.

2008. Roof terrace and third-floor extensions are being added. © John FC Turner (middle), © Patrick Wakely (bottom).

Chinagudili, Visakhapatnum, Andhra Pradesh, India

1989. Pour-flush pit latrines were supplied on each plot. Construction was still largely of temporary materials. © Patrick Wakely.

2009. Chinagudili has developed into a thriving suburb of Visakhapatnam. Photo courtesy of P Rambabu.

Las Guacamayas, Bogotá, Colombia

1977. Within one year several families had extended their houses to include a second floor. © Patrick Wakely.

2009. Barrio Guacamayas has become fully urbanised, with traffic confined to the perimeter roads and pedestrian precincts in the interiors of the blocks. Houses continue to be extended and improved. Guacamayas has its own community website, http//www.barrioguacamayas.com. Photo courtesy of Maria Victoria Echeverri.

Nawagampura, Colombo, Sri Lanka

1986. The uniform roof level was spontaneously maintained in the initial construction stages. © Patrick Wakely.

2009. Nawagampura has become a regular part of the urban fabric of Colombo and is still being developed by its residents. Photo courtesy Kumudu Jayaratne.

Part 2

In areas of extreme poverty land degradation occurs at catastrophic rates. People resort to cutting down trees for fuel and the result is barren brown, naked hillsides. Further erosion occurs when the rainy season activates serial mudslides, resulting in rampant destruction. © Alice Min Soo Chun.

Chapter 3

Miami Beach, Florida USA. Perceptible and imperceptible layers of use and privacy rights, formal and informal. © Jesse M Keenan.

Brasilia, Brazil. An aerial view of the National Congress building and surrounding urban context in Brasilia, planned and developed by Lúcio Costa and Oscar Niemeyer in the 1950s. © Ueslei Marcelino/Reuters/Corbis.

Rio de Janeiro, Brazil. View of the Barcellos neighbourhood and the Rocinha *favela*, one of the largest in the country. © Carlos Cazalis/Corbis.

Port-au-Prince, Haiti. Housing built in the two years following the 2010 earthquake in Zoranger, a rural area north of Port-au-Prince, for the resettlement of displaced persons. © Imani Dixon.

Contextual Orientation of Designer to Property Rights and Actions. © Jesse M Keenan and Mingsze Amanda Chan.

Chapter 4

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Cowper Square with Blast Furnaces and Cowper Stoves. Industrial ruins, scrap or debris are not at all ugly and useless. The basic structures, when possible, can become elements in a landscape. © Christina Panick.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Footbridge, Overhead Railway and Gardens in the Former Storage Bunkers. A new elevated walk follows the former overhead railway and crosses large areas of the park. It allows views into the former storage bunkers, which were gradually developed into gardens. © Michael Latz.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, the new ‘Old Emscher'. An open wastewater canal, the Old Emscher, used to carry untreated sewage to the Rhine. For the new clean-water system, the profile of the old construction was used to avoid contact with the polluted ground all around. The wastewater is now carried within an underground main. © Michael Latz.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Former Cooling Basins. Rainwater gets collected and led through partly open rivulets and the existing overhead pipe system to the new canal. On its way it passes the former cooling basins, which became new biotopes. © Michael Latz.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Wind Wheel on top of the Former Mill Tower. For an oxygenation system, water is pumped from the canal through an Archimedean screw, operated by wind power. The water falls from several points after having made its way through the gardens; here, buried beneath the

‘roof gardens' is polluted demolition waste. © Michael Latz.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Piazza Metallica. The symbol of the transformation is the ‘Piazza Metallica'. The plates had lined casting moulds. Cleaned of ashes and of casting sediments, these cast-iron plates revealed their subtle patterns. In the future, they will show an image of rust and erosion. © Michael Latz.

Latz + Partner, Landscape Park, Duisburg Nord, Ruhr Valley, Germany, 1990–2002, Sintering Park. Recycling is another form of transformation: the soil under this flowering meadow, which lies like a carpet in front of the ruin of the sintering plant, is a product of demolition. © Michael Latz.

Part 3

Detroit, Michigan USA. Community members examine the rubble on the site of the former First Unitarian Church, which was destroyed in a suspicious fire in the summer of 2014. Preservationists, the Unitarian Universalist congregation and community members gathered for a memorial of yet another historic structure lost in the face of external development. © Irene E Brisson.

Chapter 5

Mexico City, Mexico. Stefan Ruiz ©2003.

Food Distribution Centre, Lukole A, Ngara, Tanzania, 2000. One of the food distribution centres at the Lukole Refugee camp. The refugees were from Burundi and Rwanda. Stefan Ruiz ©2000.

Chapter 6

Simeulue Island, Indonesia, March 2005. Interior of a multipurpose tent serving as a temporary hospital for injured Indonesians following an earthquake in the town of Sinabang. © Tarmizy Harva (Rights Managed – Corbis).

Port-au-Prince, Haiti, February 2010. Interior of a multipurpose tent with additional features of screen openings and framed walls. This was a temporary medical tent operated by the International Medical Corps outside the Port-au-Prince General Hospital. © Peter Turnley (Rights Managed – Corbis).

Bir Ayyad, Libya, 2011. A medical worker prepares an emergency medical reception point in an abandoned cafe near a checkpoint. © Anis Mili (Rights Managed – Corbis).

Buranga, Rwanda, October 1994. Dome-shaped temporary structures mark the location of the AmeriCares clinic. © Rick D'Elia (Rights Managed – Corbis).

Port-au-Prince, Haiti, 2010. Treatment for cholera requires particular attention to easily cleaned set-ups to maintain hygienic environments. Here a man is being treated for cholera in Port-au-Prince at a Samaritan's Purse clinic. © Julie Dermansky (Rights Managed – Corbis).

Port-au-Prince, Haiti, 2010. A team erects one of the inflatable tents during the MFH installation. The MFH was built on the football field of high school St Louis de Gonzague in Delmas 31, and was fully operational just 12 days after the 2010 earthquake struck. © Benoit Finck.

Port-au-Prince, Haiti, 2010. The interior of one of the inflatable tents that was used as a hospitalisation

ward in the Médicins Sans Frontière St-Louis Hospital. © Yann Libessart/MSF.

Port-au-Prince, Haiti, 2010. The exterior of the container hospital, Nap Kenbe. This emergency surgery facility provides trauma, orthopaedic and visceral surgery. © Yann Libessart/MSF.

MASS Design Group, Butaro Hospital, Burera District, Rwanda, 2011. In a permanent structure, design is also driven by medical needs. But greater emphasis can be made on circulation, lighting and peripheral spaces, in addition to the main treatment areas. © Iwan Baan.

Part 4

Streets in Makoko, Lagos, Nigeria, 2011. The flooding narrow streets are filled with sewage water for most of the year as the incoming tides run into the walkways. There is no sanitary sewage system. © Alice Min Soo Chun.

Sluice Gate, Ducis, Haiti, 2011. Community-managed irrigation channels bring fresh water to rural croplands in southern Haiti. © Irene E Brisson.

Stilt House in Makoko, Lagos, Nigeria, 2011. Houses in the slum of Makoko are built elevated on stilts to make use of the water in a neighbourhood without land. While water is everywhere, clean water is scarce and sanitation concerns are numerous. © Kimberly Tate.

Chapter 7

Varanasi,Uttar Pradesh, India, 2011. The roof of a flooded building is just visible above the overflowing Ganges. © Elizabeth Parker.

Fatehpur Sikri, Uttar Pradesh, India, 2011. Built by Emperor Akbar in the 16th century, Fatehpur Sikri's design demonstrates a consideration of water remediation, circulation and retention no longer celebrated in much of India's contemporary buildings. © Elizabeth Parker.

New Delhi, Delhi, India, 2011. Residents stand in front of the community toilets they successfully lobbied to control with assistance from a local non-profit organisation. © Elizabeth Parker.

Varanasi, Uttar Pradesh, India, 2011. Daily morning rituals coexist on the Ganges River. © Elizabeth Parker.

Chapter 8

Home Water Treatment and Sanitation Methods. Categories of filtration methods include physical filtration, chemical and heat treatments. Source: CAWST – The Centre for Affordable Water and Sanitation Technology (www.cawst.org).

Filtration: ceramic, porous, membrane filtration.

Heat: including boiling, pasteurisation and UV radiation.

Chemical disinfection.

Flocculant/disinfectant.

Example of Household Water Treatment and Safe Storage technologies.

Examples of Household Water Treatment and Safe Storage technologies.

Part 5

An orphaned girl at the Reveil Matinal Orphanage Foundation (ROMF), in Port-au-Prince, Haiti, does her

homework at night with the SolarPuff. © Damian Fitzsimmons.

The SolarPuff, a patent pending solar inflatable lantern is designed to replace kerosene lanterns for the 1.6 billion people in the world without access to electricity. People in extreme poverty spend up to 30 per cent of their income on kerosene. This lantern is solar powered, adaptable, flat packable and low cost. The SolarPuff is designed to float so that fisherman in Makoko can use it at night instead of candles to attract fish. Fishing is a common trade in Makoko, some fisherman travel for days to the ocean to catch fish. © Alice Min Soo Chun.

In Makoko, Lagos, Nigeria, a cup is filled with kerosene and a string is lit to provide lighting at night. The smoke from this is toxic. The United Nations Development Programme (UNDP) reports two million children die each year because of poor indoor air quality. © Alice Min Soo Chun.

Chapter 9

Höweler + Yoon Architecture, LLP, *Hover*, New Orleans, Louisiana, USA, 2007, view from below. LED lighting embedded in the canopy fabric is powered by a solar-charged battery. © Höweler + Yoon Architecture, LLP.

Höweler + Yoon Architecture, LLP, *Windscreen*, Cambridge, Massachusetts, USA, 2012. Shifting gusts of wind spun 220 individual micro wind turbines to light up LEDs across the screen. © Höweler + Yoon Architecture, LLP.

Höweler + Yoon Architecture, LLP, *Windscreen*, Cambridge, Massachusetts, USA, 2012. The installation harnessed wind power beneath MIT's

Green Building to create a dynamic pattern of light across an array of micro wind turbines. © Höweler + Yoon Architecture, LLP.

Chapter 10

NLÉ, Makoko Floating School, Makoko, Lagos, Nigeria, 2013. The school is a prototype floating structure, built for the historic water community of Makoko and located on the lagoon, at the heart of Nigeria's largest city, Lagos. As a pilot project, it has taken an innovative approach to address the community's social and physical needs in view of the impact of climate change and a rapidly urbanising African context. Its main aims are to generate a sustainable, ecological, alternative building system and urban water culture for the teeming population of Africa's coastal regions. © Iwan Baan.

NLÉ, Makoko Floating School, Makoko, Lagos, Nigeria, 2013. © Iwan Baan.

NLÉ, Makoko Floating School, Makoko, Lagos, Nigeria, 2013. School Classroom. © Iwan Baan.

Part 6

MASS Design Group, Umubano Primary School, Kigali, Rwanda, 2011. This building uses local materials, such as brick and bamboo. The process of training local people in construction skills creates jobs and is almost more important than the actual building. This acts as a humanitarian design strategy for the long-term resilience of the local community. © Iwan Baan.

Peter Rich Architects, Mapungubwe Interpretation Centre, Mapungubwe National Park, Limpopo, South Africa, 2008–10. Local materials and indigenous plants are used in the construction of buildings using

traditional methods. Mapungubwe is located on South Africa's northern border with Botswana and Zimbabwe. The society living in what is today a UNESCO World Heritage Site, is thought to have been the most complex in the region, implementing the first class-based social system in southern Africa. © Iwan Baan.

Chapter 11

Banana fibres are extremely strong and naturally antimicrobial. This woven pattern integrates leftover suede strands and banana fibre into a floor covering. © Alice Min Soo Chun.

Coconut fibre is plentiful in sub-Saharan Africa. Its many uses range from mattresses to landslide mitigation on barren hillsides. This is an agricultural waste product that is already found locally in the markets of Lagos, Nigeria, for skin exfoliation. © Alice Min Soo Chun.

Wood Mills, Makoko, Lagos, Nigeria, 2011. Wood is the common material for building the houses on stilts in Makoko. Wood logs are brought in by waterways from other regions. In the background is a sea of floating logs. © Alice Min Soo Chun.

Peter Rich Architects, Mapungubwe Interpretation Centre, Mapungubwe National Park, Limpopo, South Africa, 2008–10. Mapungubwe is located on South Africa's northern border with Botswana and Zimbabwe. These exhibition and learning spaces take the form of 10 free-form vaults, the largest of which spans 47½ feet (14.5 metres), and a number of regular barrel vaults and domes, which are arranged in a triangular layout linked together by ramped walkways. The vaulting method used relies on fast-

setting gypsum mortar and earth tiles. Low environmental impact is achieved by employing local labour and materials. © Iwan Baan.

This section shows the rhizome root system of the bamboo plant, which is extremely useful for deterring soil erosion. This root system combined with vetiver, shown on the right side of the section, combines both vertical and horizontal root systems similar to a biaxial weave, to create a strong natural root textile. © Alice Min Soo Chun.

Coconut shell bathroom tiles are extremely hard and naturally waterproof. This material looks and feels like stone. © Alice Min Soo Chun.

This material, ECOVATIVE, is made from fungal mycelium and agricultural waste. This is a completely natural alternative to polystyrene or Styrofoam. Styrofoam is one of the least sustainable materials, it emits toxic fumes during manufacture, will never decompose and cannot be recycled. © Alice Min Soo Chun.

The pattern for a stone wall demonstrates culturally significant building skills, where no mortar is used. A system of miniature stone chips fills the in-between spaces where mortar would have been. A local skill and material replaces cement for the interstitial binder. © Alice Min Soo Chun.

Paper brick sections. New non toxic bio-plastic binders enable paper to be moulded into strong durable bricks, interlocking connections make mortar obsolete. © Alice Min Soo Chun.

Recycled bike tyre inner tubes, repurposed to be floor- or wallcovering material. © Alice Min Soo Chun.

Makoko, Lagos, Nigeria, 2011. A boy walks the streets, as waste and sewage overflow in a sea of littered piles of plastic waste. © Alice Min Soo Chun.

Wall panels made from recycled blue jeans. Artisans craft and press layers of partial blue jeans together to make a patchwork topography of blue jean details. © Alice Min Soo Chun.

Chapter 12

Map of all homes in County Limerick, 2009. © Merritt Bucholz.

Map of the road network in County Limerick, 2009. © Merritt Bucholz.

Part 7

Ronda, Spain. Housing settlements dating from the Middle Ages perch on cliff faces. The diversity of solutions to shelter and housing developed by people around the world is at least equal to the diversity of landscapes encountered, formed by constraints of space, geology, economics and politics. © Irene E Brisson.

Chapter 13

Stanton Court, Brooklyn, New York City, New York, USA. © Gans studio.

Area Map: the courts along Sheepshead Bay, identified in red, have bungalows along internal pedestrian mews without access to the street except through passages at each end. © Gans studio.

Section through Stanton Court. Raised bungalows edge the new boardwalk that runs along the mews and connects to the street. (Drawing by Sean Gold.) © Gans studio.

Rendering of Stanton Court where the entire site beneath the raised houses and boardwalk becomes a water management landscape. (Drawing by Cristina Zubillaga.) © Gans studio.

View of Attached Bungalows. By eliminating narrow side yards, the court gains property for shared water gardens, shown here, accessed by a stair leading from the boardwalk. (Drawing by Sean Gold.) © Gans studio.

Master Plan. Greenways along each mews and new water gardens on court lots are either acquired by the City or assembled by residents to improve water management. All subsurface drainage leads to the larger landscape at the coastal edge, which also serves as a storm buffer. © Gans studio.

Webers Court, Brooklyn, New York City, New York, USA. © Gans studio.

Section through Webers Court from the street to the coastline with a habitat skirt storm buffer. (Drawing by Rosamund Palmer.) © Gans studio.

Chapter 14

Rendering, reCOVER, house exterior courtyard. © Anselmo G Canfora.

Breathe House floor plan. © Anselmo G Canfora.

Water collection: roof rain-harvesting system. © Anselmo G Canfora.

Solar Study: overhangs and screens to reduce solar heat gain. © Anselmo G Canfora.

St Marc, Haiti, 2012. Volunteers, students and community members work on the assembly of the Breathe House. © Anselmo G Canfora.

Charlottesville, Virginia, USA. reCOVER prototype monitored for energy performance. © Anselmo G Canfora.

Charlottesville, Virginia, USA. Student-assembled reCOVER prototype house on north terrace of Campbell Hall. © Anselmo G Canfora.

Building elements and construction order. © Anselmo G Canfora.

Composite wall panel components and assembly. © Anselmo G Canfora.

Part 8

Jacmel, Haiti, 2013. Architecture students from Bowling Green State University, Ohio, meet with the community school board for a design workshop. © Irene E Brisson.

Chapter 16

Medersa Cherratine, Fez, Morocco, February 2011. A student and tutor group from l'Ecole Nationale d'Architecture de Fès and the School of Architecture, University of Limerick (SAUL), Ireland, listening to a lecture in the Medersa Cherratine, an 11th-century *madrasa* in the centre of Fez's old city. © Abdelghani Tayyibi.

Place Jemaa el-Fna, Marrakesh, March 2013. Plan showing the occupation of the ground by people at the edges of the souk, which borders one side of the square. © Sarah Mannion.

Place Jemaa el-Fna, Marrakesh, March 2013. A plan drawing showing the pattern of movement of people, cars and animals through the Place Jemaa el-Fna. © Georgy Daly.

Place Jemaa el-Fna, Marrakesh, March 2013. A model collage drawing by year three (2013) student Sarah Mannion proposing a shelter around the edges of the market area of the Place Jemaa el-Fna. © Sarah Mannion.

Building Site, Fez, Morocco, February 2011. Young man carving a geometric pattern by hand on door panelling for a UNESCO restoration project urban site. © Grainne Hassett.

Tafza, a Berber village south of Marrakesh, March 2013. Students from l'Ecole Nationale d'Architecture De Rabat and the School of Architecture, University of Limerick (SAUL), Ireland, talking with village women, mapping stories of the soft infrastructure of the village. © Grainne Hassett.

Place Jemaa el-Fna, Marrakesh, March 2013. A timeline drawing by year three (2013) Erasmus student Anna Bokodi shows the time lapse occupation of the Place Jemaa el-Fna by different peoples. © Anna Bokodi.

Place Jemaa el-Fna, Marrakesh, March 2013. Plan of the occupation of the ground by people, cars and animals, showing the many encampments of the Place Jemaa el-Fna. © Georgy Daly.

Place Jemaa el-Fna, Marrakesh, March 2013. Plan of the occupation of the ground by people, cars and animals, showing the many encampments of the Place Jemaa el-Fna. © Georgy Daly.

Chapter 17

Delmas 32, Haiti, 2011. A post-earthquake view of Delmas 32, a dense neighbourhood situated on either side of a steep ravine in the centre of Port-au-Prince. © Addly Célestin/SODADE.

View along Rue Delmas 32, primary transportation artery through the neighbourhood. © Addly Célestin/SODADE.

Displaced persons camp along the ravine in Delmas 32. © Addly Célestin/SODADE.

The first step in the planning process involved the collection and compilation of official cartographic data with community focus group feedback. © Addly Célestin/SODADE.

Working groups developed maps and lists of current community resources and unmet needs. © Addly Célestin/SODADE.

An initial focus group engaged a variety of local stakeholders in a discussion of perceived community needs. © Addly Célestin/SODADE.

Group representative presenting resultant community map. © Addly Célestin/SODADE.

Synthesising neighbourhood maps and perceived subregions. © Addly Célestin/SODADE.

Schematic Map of the Community Vision. The map identifies major development types in relationship to primary and secondary transportation routes and environmental features. © Addly Célestin/SODADE.

Part 9

Ducis, Haiti, 2012. Local leaders, urban planners and women's association representatives use satellite maps to discuss and locate community development priorities. © Irene E Brisson.

Chapter 18

Georges H Baussan, National Palace, Port-au-Prince, Haiti, 2011. The palace is an example of neoclassical

architecture executed by a French-trained Haitian architect in the early 20th century. © Irene E Brisson.

Zorange Housing, Port-au-Prince, Haiti, 2013. Housing development from the late 20th century in Zorange exemplifies government design executed outside of existing organic developments. © Irene E Brisson.

Katherine Dunham Cultural Center, Port-au-Prince, Haiti, 2014. Recently opened, the cultural centre hybridises vernacular forms reminiscent of thatching styles with contemporary architectural forms. © Irene E Brisson.

Hotel Oloffson, Port-au-Prince, Haiti, 2012. The hotel is an example of the French colonial gingerbread style, which was adopted by Haitian architects and builders. © Irene E Brisson.

Ducis, Haiti, 2012. In this community planning meeting local stakeholders, local professional architects and American design students discuss a master plan strategy from at least three different points of view. © Irene E Brisson.