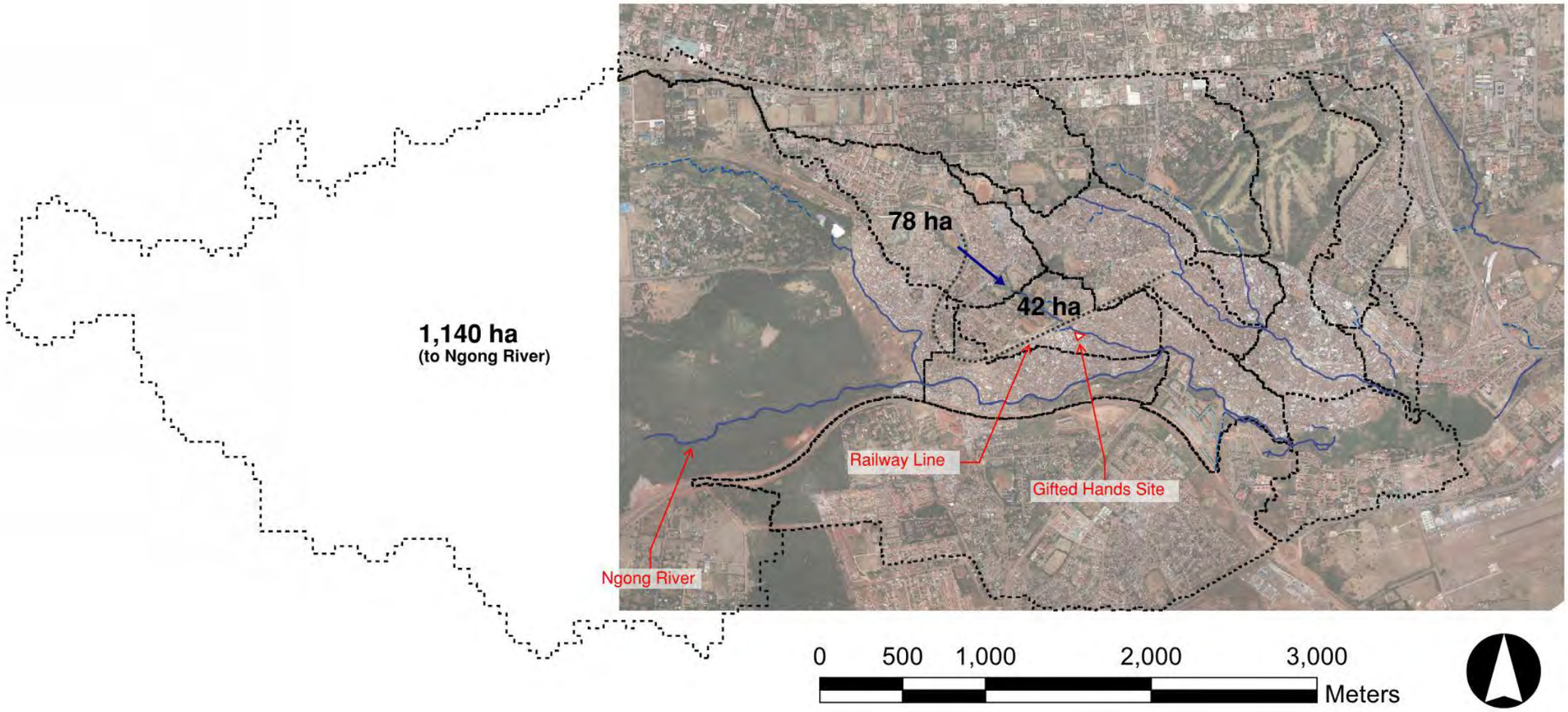
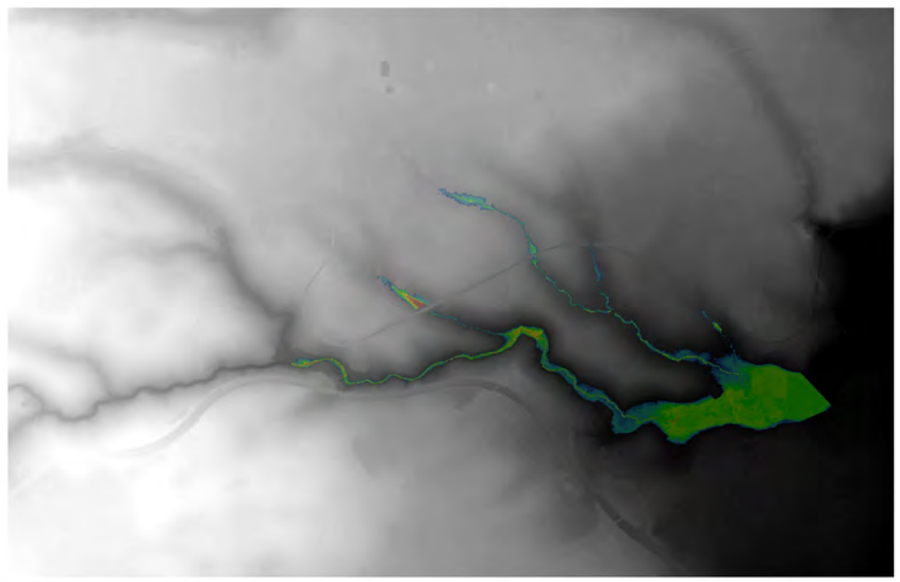
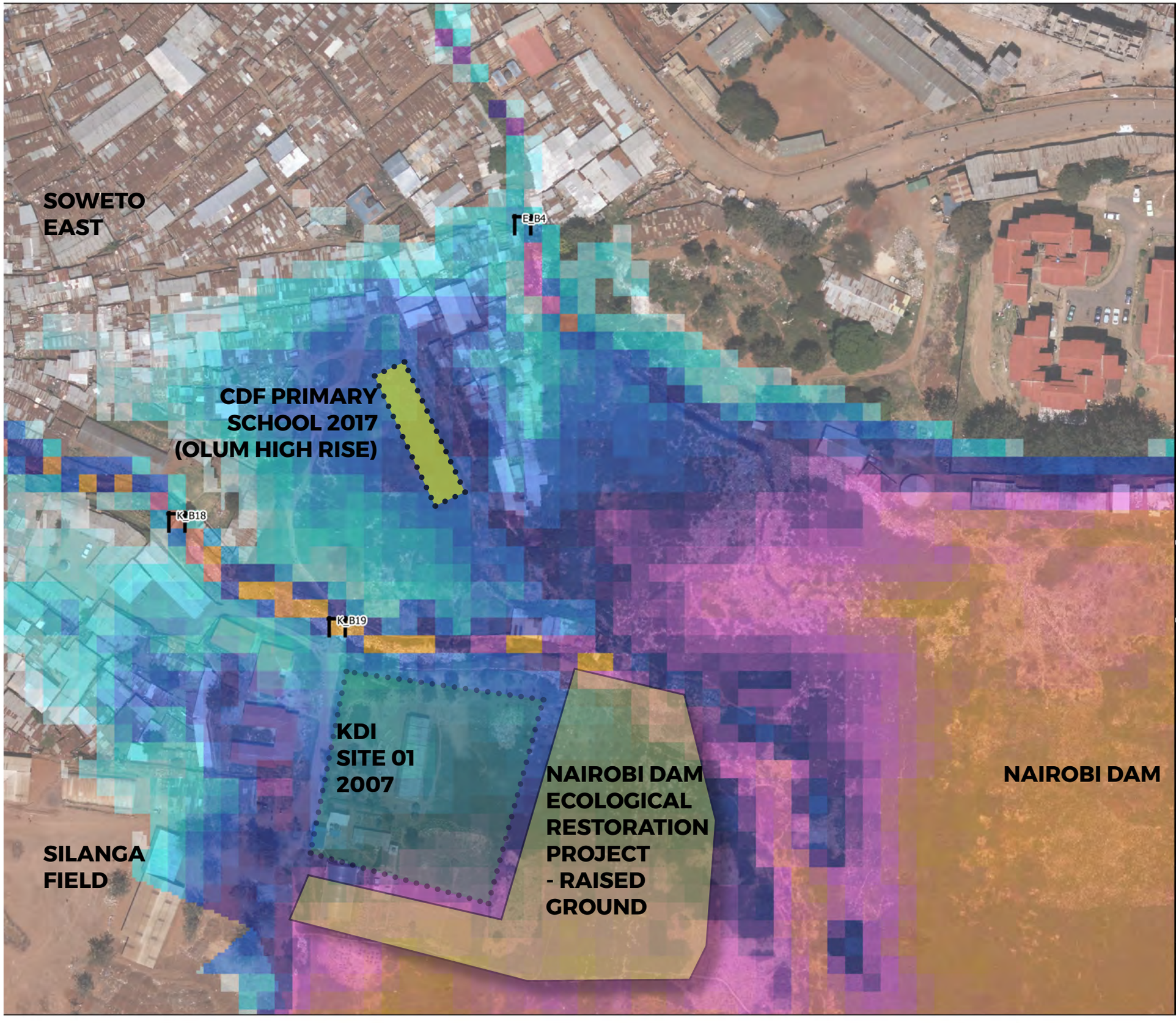
BOUNDARY EXPANSION





Watershed Analysis

Field Verification



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DO NOT SCALE THIS DRAWING

NOTES:
1) The Intensity Duration Rainfall data used for the modelling of Kibera catchments have been extracted from the Rainfall Frequency Atlas of Kenya, Ministry of Water Development, 1978.
2) A 25% increase in rainfall intensities has been applied to allow for climate change (based on IPCC AR5, 2013).
3) Hydraulic model simulation for a 3hr storm event, considered the critical event for Kibera catchment.
4) Model output based on 1D hydraulic modelling.
5) Not all structures shown on map have been represented as hydraulic structure units in the 1D model.
6) Map output based on a 5m LiDAR grid resolution.
7) Aerial imagery and LiDAR data taken in 2015.

KEY

Flood Depth (m)
- <0.10
- 0.10 - 0.20
- 0.20 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- >2.00

Existing Structures
- Bridges
- Culverts

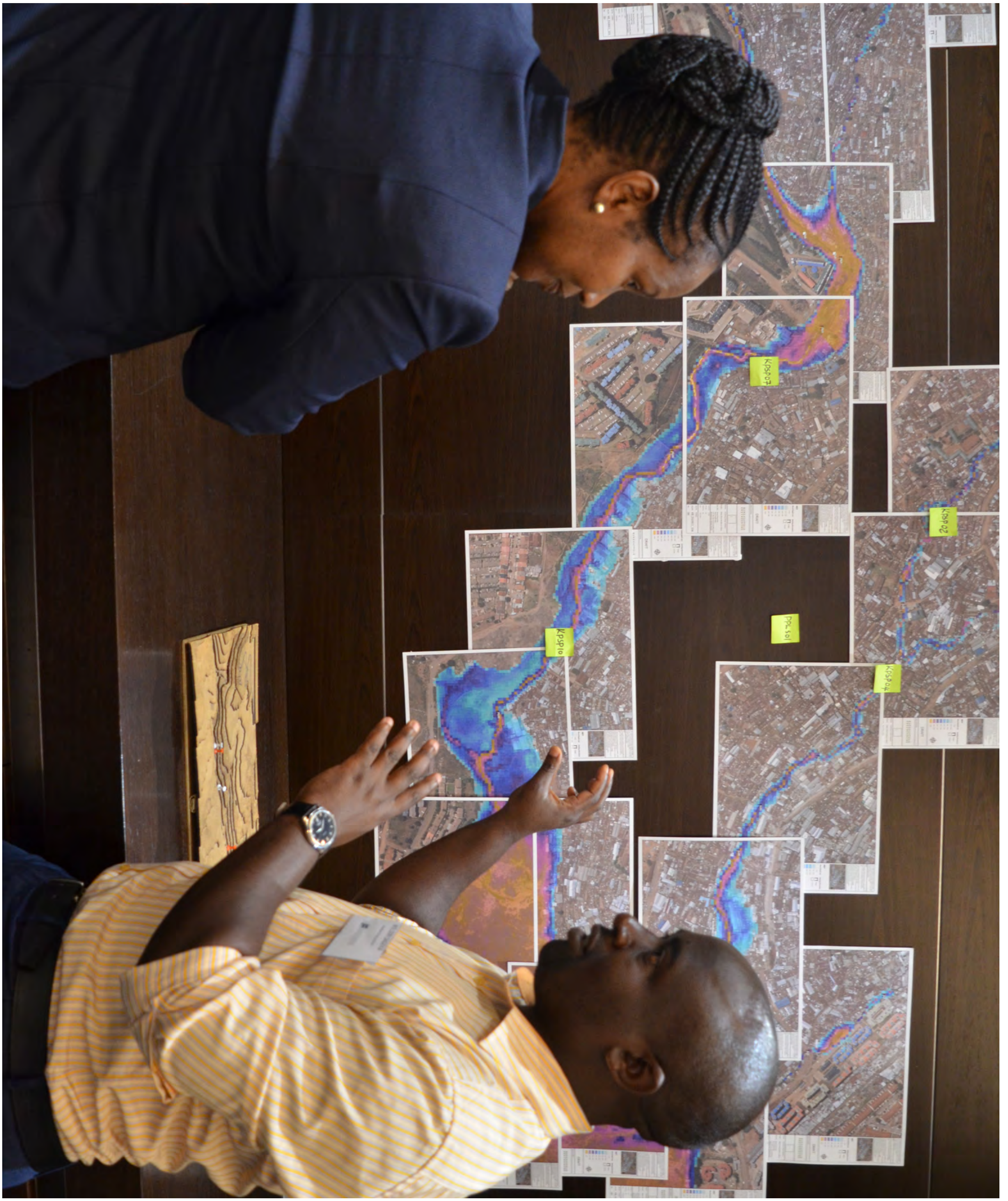
Status of Drawing

BUROHAPPOLD ENGINEERING

Partner	Kounkuey Design Initiative
Project	Urban Flood Resilience, Kibera
Drg Title	Fluvial Flood Risk Flood Depth Map 1 in 100 year event including 25% allowance for Climate Change
Scale @ A3	1:1,000
Drawn by	RG
Checked by	NV
Date	30/11/2016
Job No.	033818
Drg No.	KB_D100CC_124
Rev	00

Nairobi Dam

Watershed Thinking



EJ PLAN ELEMENTS
air quality public facilities food access
physical activity civic engagement housing

SALTON SEA MNGMT PLAN (10 YEAR AND LONG TERM)
water levels dust suppression habitat

STEP 4:
CHANGE POLICY

COUNTY TARGETS
- CVWD
- IID
- AQ board

STATE TARGETS
- CNRA
- EPA
- K. De Leon

STEP 3:
CREATE ADVOCACY TOOLS

MEDIA
- book/newspaper
- toolkit
- poster
- podcast/radio
- portraits
- video/movies

PUBLIC ART
- signage
- murals
- billboards

SCHOOL CURRICULUM

ACTION/ COMMUNITY BUILDING
- "toxic tour"
- volunteer monitoring events
- volunteer planting
- "day at the sea"
- local heroes walk

STEP 2:
BUILD IMMEDIATE COMMUNITY AMENITY

Potential ideas:
cooling center
ecological park
monitors + bus shelters
storefront
community EJ kiosk

COMMUNITY RESOURCE HUB!
[all team]
- education
- storytelling

report back to residents

STEP 1:
INTERPRET + COLLECT DATA

3 YEAR DATA SET
[CIRS, Ryan S.]
- air quality
- economics
- transport
- housing
- etc.

+

SALTON SEA
[KDI, CIRS, S. Club]
- SSMP
- Salton Sea Summit

+

CITIZEN SCIENCE
[KDI, Ryan S.]
- air quality (arduinos, monitors)
- habitat (bird counts, species ID)
- balloon mapping (dust sources, water level)

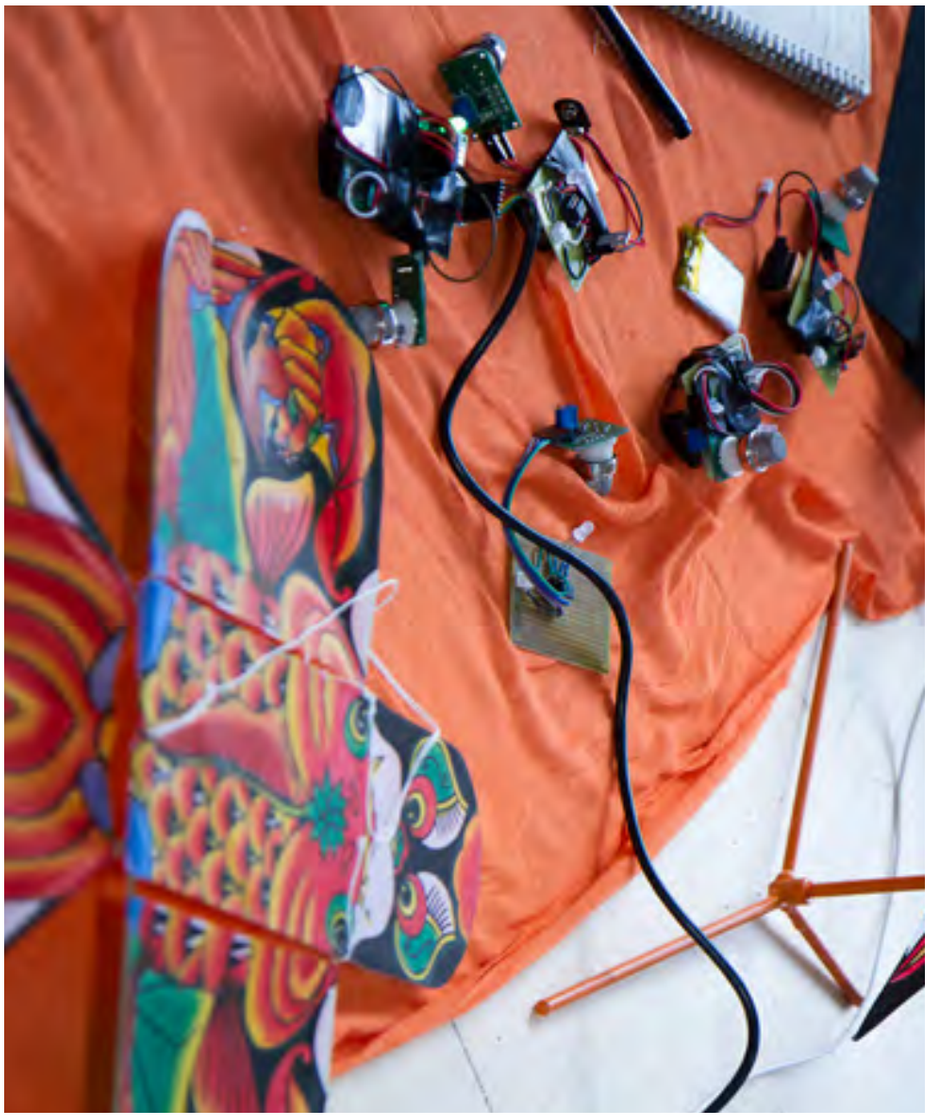
Citizen Science

Citizen Science

The New York Harbor School Billion Oyster Project, Top Left

Louisiana Bucket Brigade, Top Right

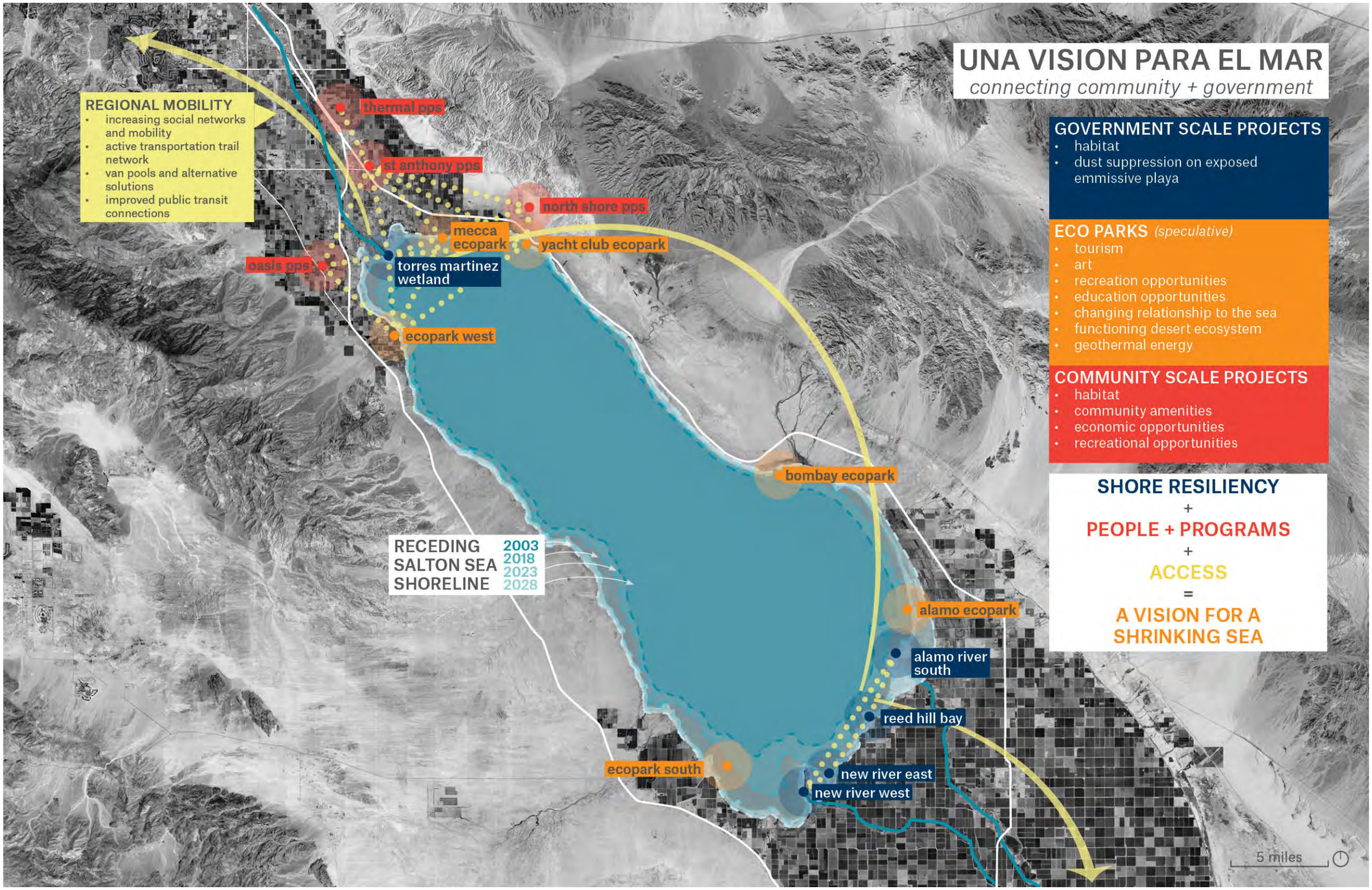
FLOAT, Bottom

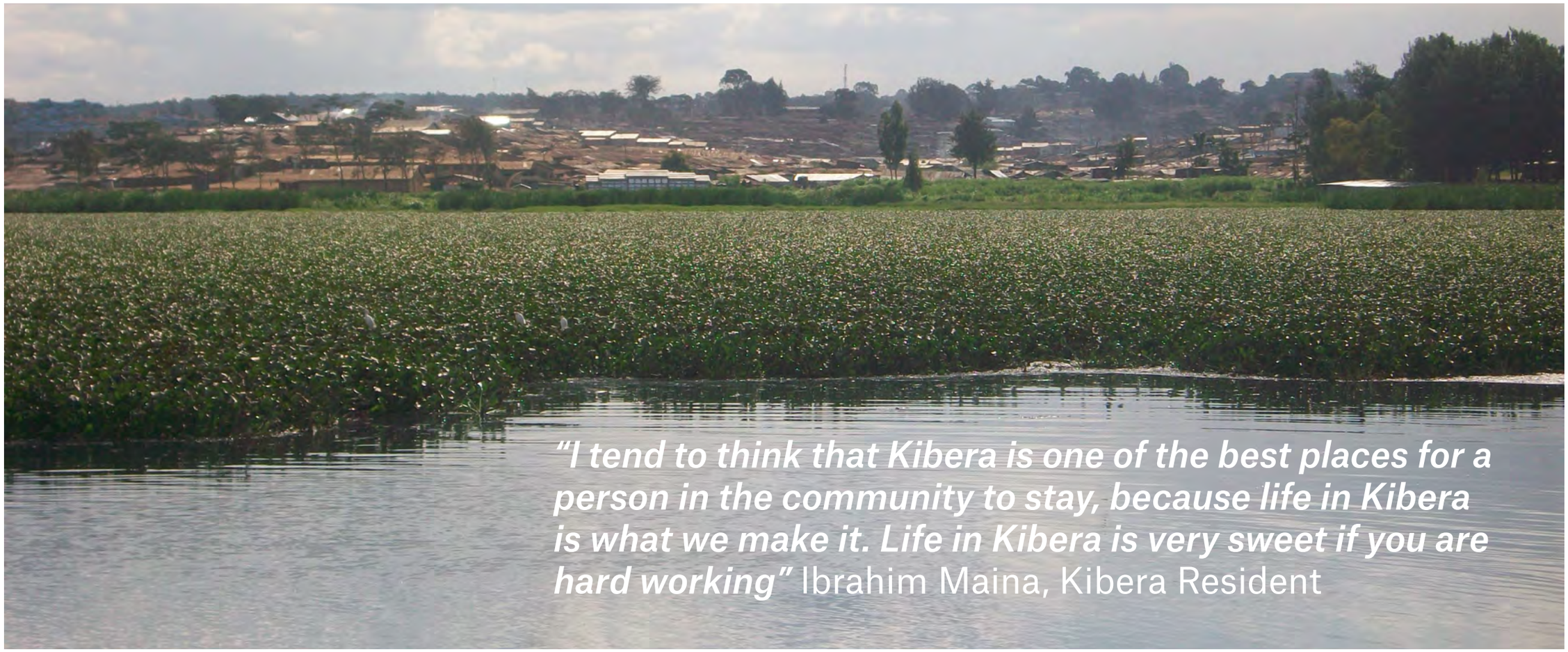


CONCLUSIONS

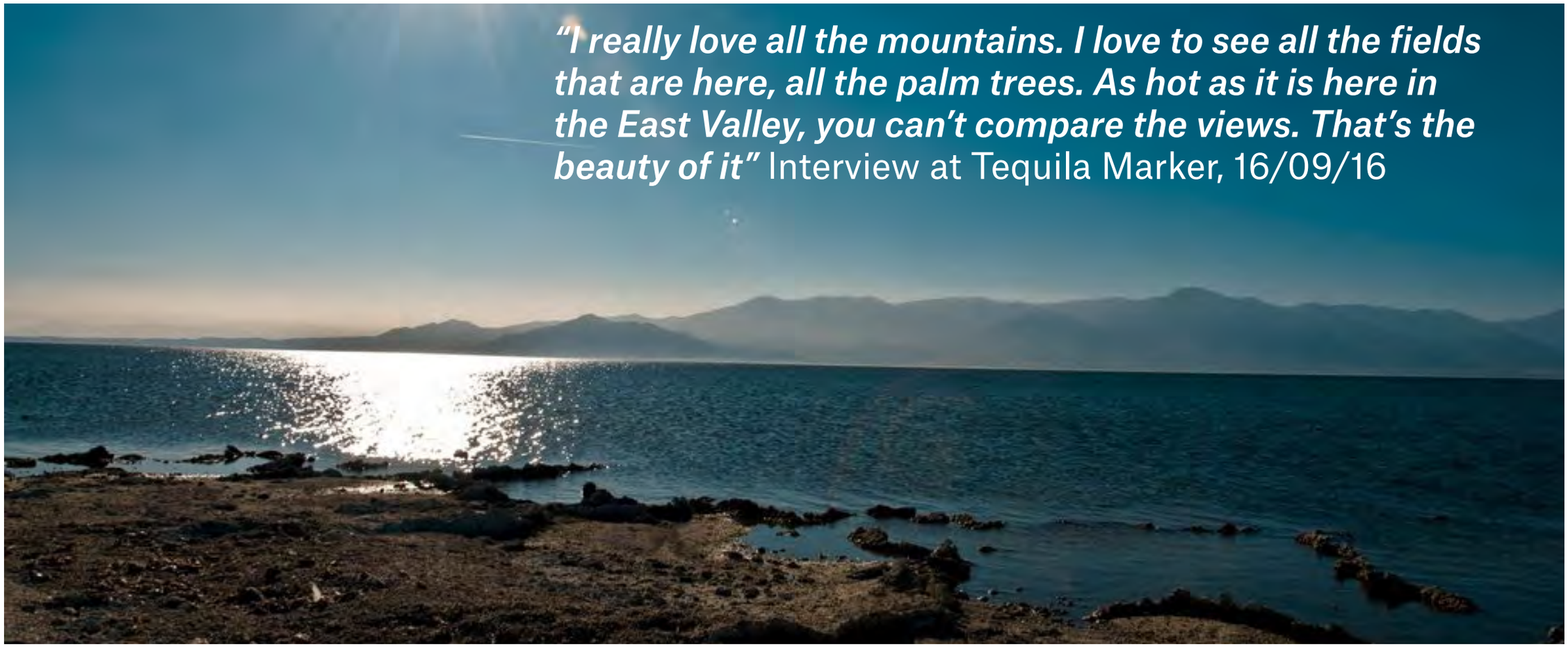
ROAD TO RIVER - NETWORKING PUBLIC SPACE FROM LINDI TO THE DAM

Rivers and Poeple


UNA VISION PARA EL MAR
connecting community + government
REGIONAL MOBILITY
• increasing social networks and mobility
• active transportation trail network
• van pools and alternative solutions
• improved public transit connections
GOVERNMENT SCALE PROJECTS
• habitat
• dust suppression on exposed emmissive playa
ECO PARKS (speculative)
• tourism
• art
• recreation opportunities
• education opportunities
• changing relationship to the sea
• functioning desert ecosystem
• geothermal energy
COMMUNITY SCALE PROJECTS
• habitat
• community amenities
• economic opportunities
• recreational opportunities
SHORE RESILIENCY
+
PEOPLE + PROGRAMS
+
ACCESS
=
A VISION FOR A SHRINKING SEA
thermal pps
st anthony pps
north shore pps
mecca ecopark
yacht club ecopark
oasis pps
torres martinez wetland
ecopark west
bombay ecopark
alamo ecopark
alamo river south
reed hill bay
new river east
new river west
ecopark south
RECEDING SALTON SEA SHORELINE
2003
2018
2023
2028
5 miles



"I tend to think that Kibera is one of the best places for a person in the community to stay, because life in Kibera is what we make it. Life in Kibera is very sweet if you are hard working" Ibrahim Maina, Kibera Resident



"I really love all the mountains. I love to see all the fields that are here, all the palm trees. As hot as it is here in the East Valley, you can't compare the views. That's the beauty of it" Interview at Tequila Marker, 16/09/16

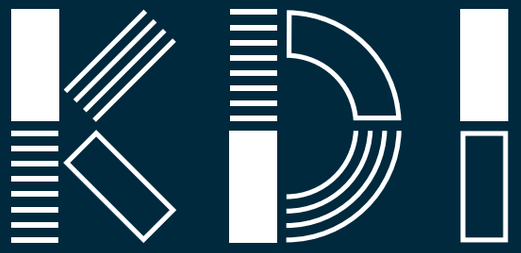
“Intelligent practice builds on the collective wisdom of people and organizations on the ground — those who think locally and act locally — which is then rationalized in ways that make a difference globally... good development practice facilitates emergence, it builds on what we’ve got and with it goes to scale.

Nabeel Hamdi, Small Change: About the Art of Practice and the Limits of Planning in Cities, Earthscan 2013

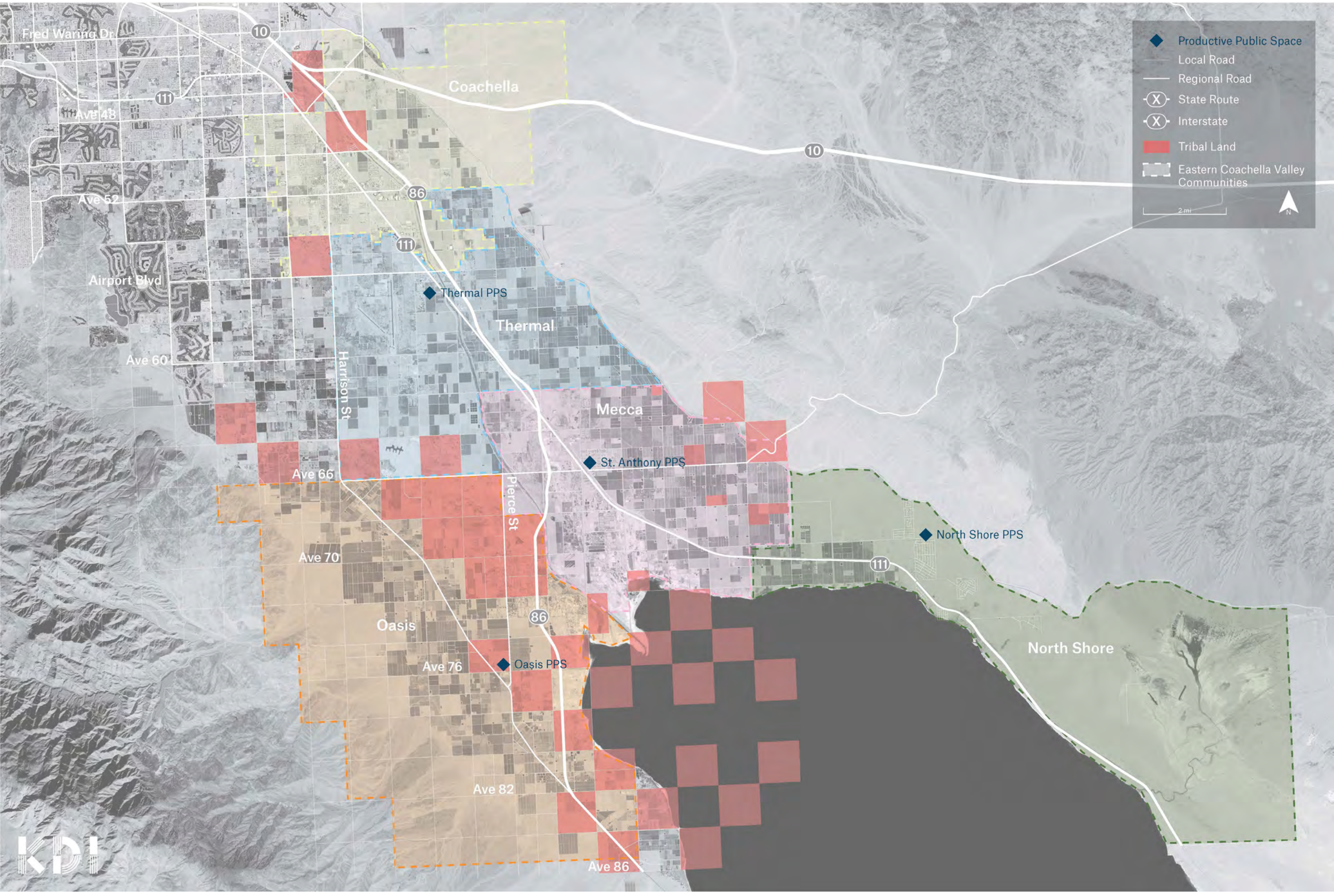
“The world is too big, the intellectual complexity too great. Instead, people who specialize on the North or the South will continue to do so, but should make new efforts to learn from each other, to explore common problems brought on by convergence, and perhaps to develop new theory together”

Maxwell, S. (1998), Comparisons, convergence and connections. IDS Bulletin,

Food for Thought



thank you
asante
gracias
tack


Productive Public Space
Local Road
Regional Road
State Route
Interstate
Tribal Land
Eastern Coachella Valley Communities
2 mi
N
Fred Waring Dr
10
111
Ave 48
Coachella
Ave 52
86
111
Airport Blvd
Thermal PPS
Thermal
Ave 60
Harrison St
Mecca
St. Anthony PPS
Ave 66
Pierce St
North Shore PPS
Ave 70
111
Oasis
86
North Shore
Ave 76
Oasis PPS
Ave 82
Ave 86

Nairobi Dam - JUNE 20th 2017

Nairobi Dam - JUNE 20th 2017

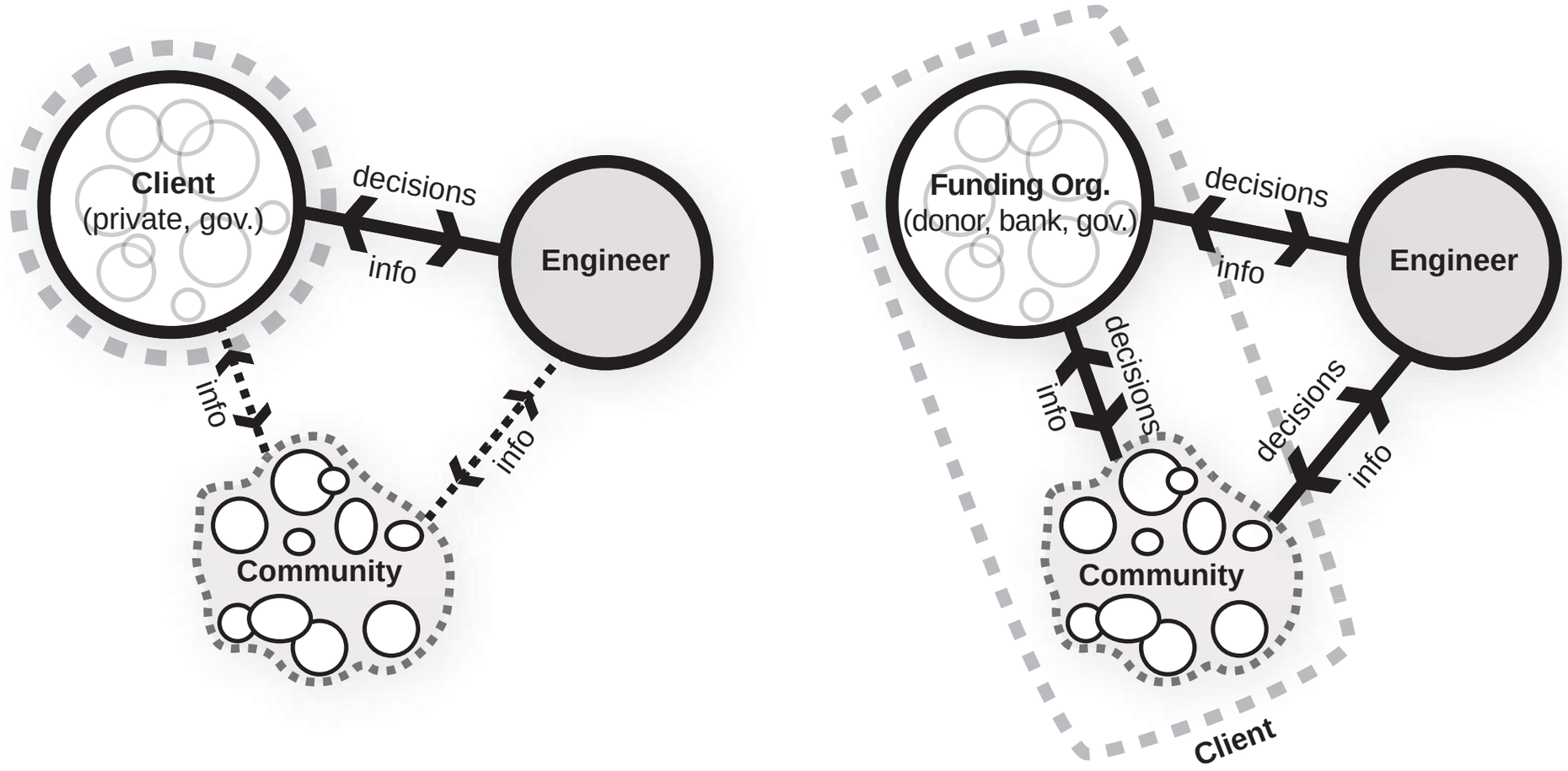


Figure 1. Comparative diagram of simplified/idealised engineer–client relationships in (a) 'traditional' and (b) 'development' contexts

Encroachment

central

province

mathare

kariobangi

kawangware

dandora

nairobi

kibera

mukuru

eastern province

rift valley province

nairobi

major slum

Rivers and People

Slums and Major River Systems of the Nairobi River Basin