Reshape the Crowning Glory of Maasai Mara

MCM Team #2316192

Hanlin Cai (Fuzhou University)

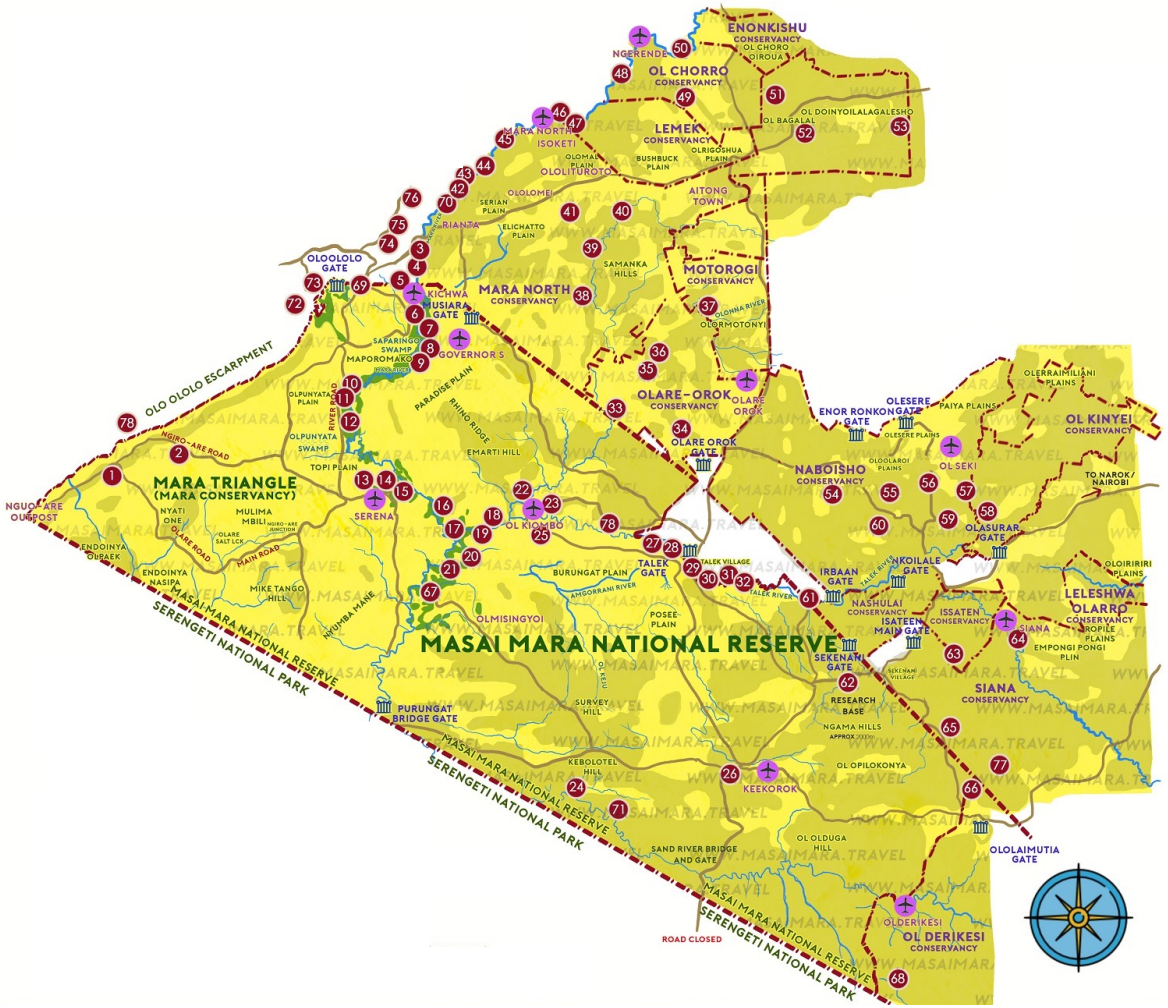


Figure 1 Template

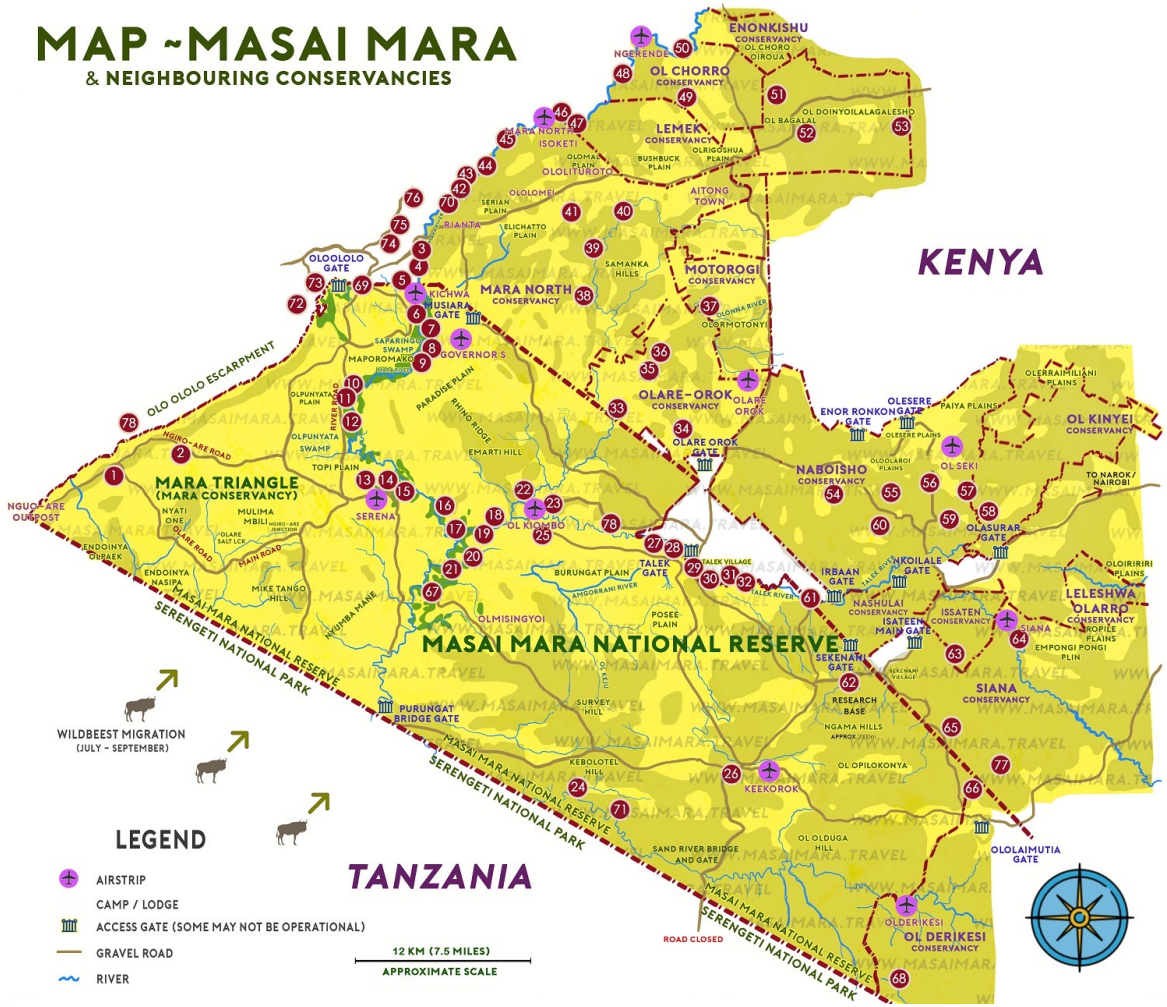


Figure 1 Template


DEFORESTATION
AGRICULTURE
FENCES
SIGNING OF LONG TERM LEASES
Aitong MMWCA HQ
GROWTH OF NEW SETTLEMENTS
FREE MOVEMENT OF CATTLE
To Narok (population 1.2 million)
HUMAN WILDLIFE CONFLICT
NEW ROAD
Talek
Sekenani
OPENING OF NEW WILDLIFE CORRIDORS
Established Conservancies
Proposed Core Area
Agricultural land
Maasai Mara National Reserve
Proposed Conservancies

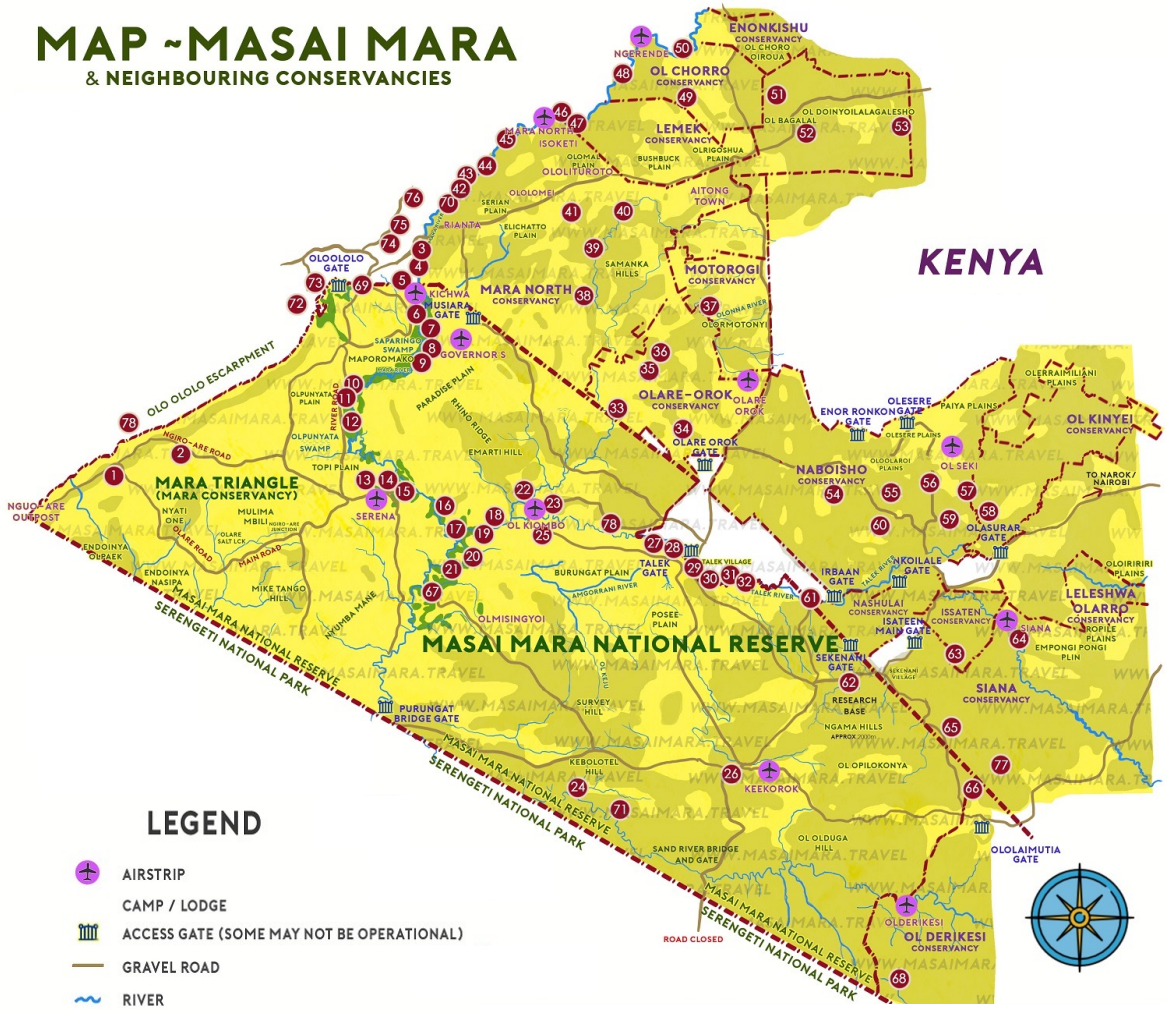

MAP ~MASAI MARA
& NEIGHBOURING CONSERVANCIES
KENYA
ENONKISHU CONSERVANCY
OL CHORRO CONSERVANCY
LEMEK CONSERVANCY
MOTOROGI CONSERVANCY
MARA NORTH CONSERVANCY
OLARE-OROK CONSERVANCY
NABOISHO CONSERVANCY
OL KINYEI CONSERVANCY
MARA TRIANGLE (MARA CONSERVANCY)
MASAI MARA NATIONAL RESERVE
SIANA CONSERVANCY
LELESHWA CONSERVANCY
OL DERIKESI CONSERVANCY
OLO OLOLO ESCARPMENT
SERENGETI NATIONAL PARK
LEGEND
AIRSTRIP
CAMP / LODGE
ACCESS GATE (SOME MAY NOT BE OPERATIONAL)
GRAVEL ROAD
RIVER

Figure 1

Figure 1 Reference

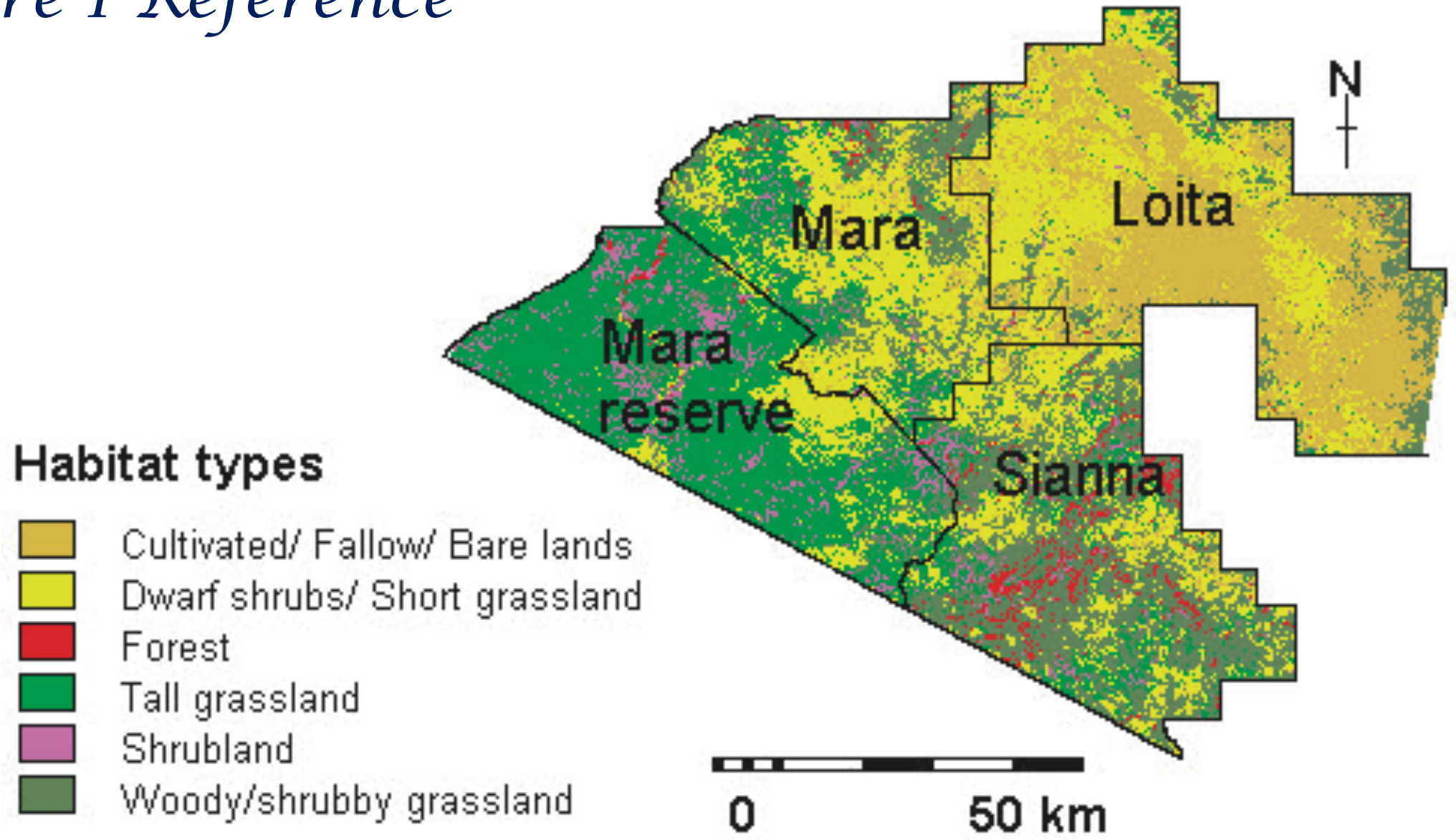
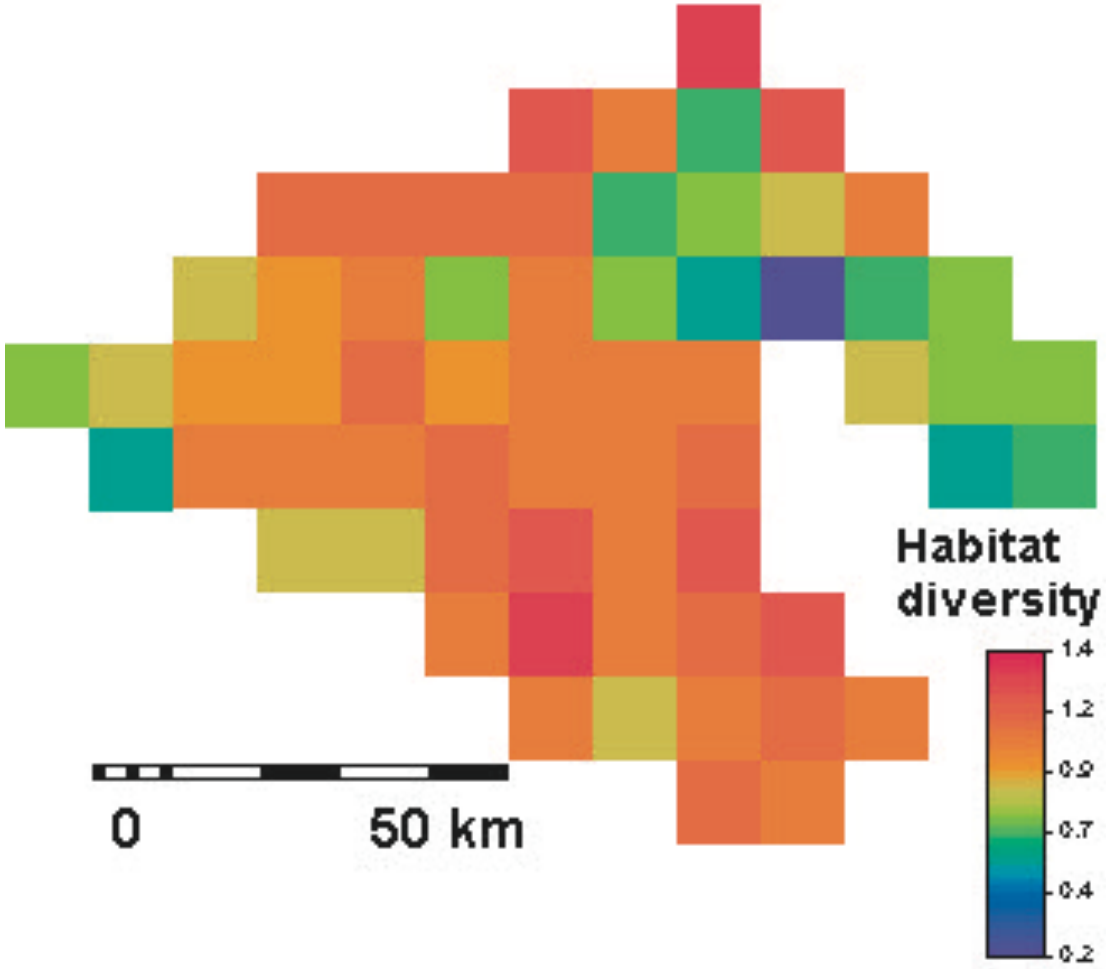
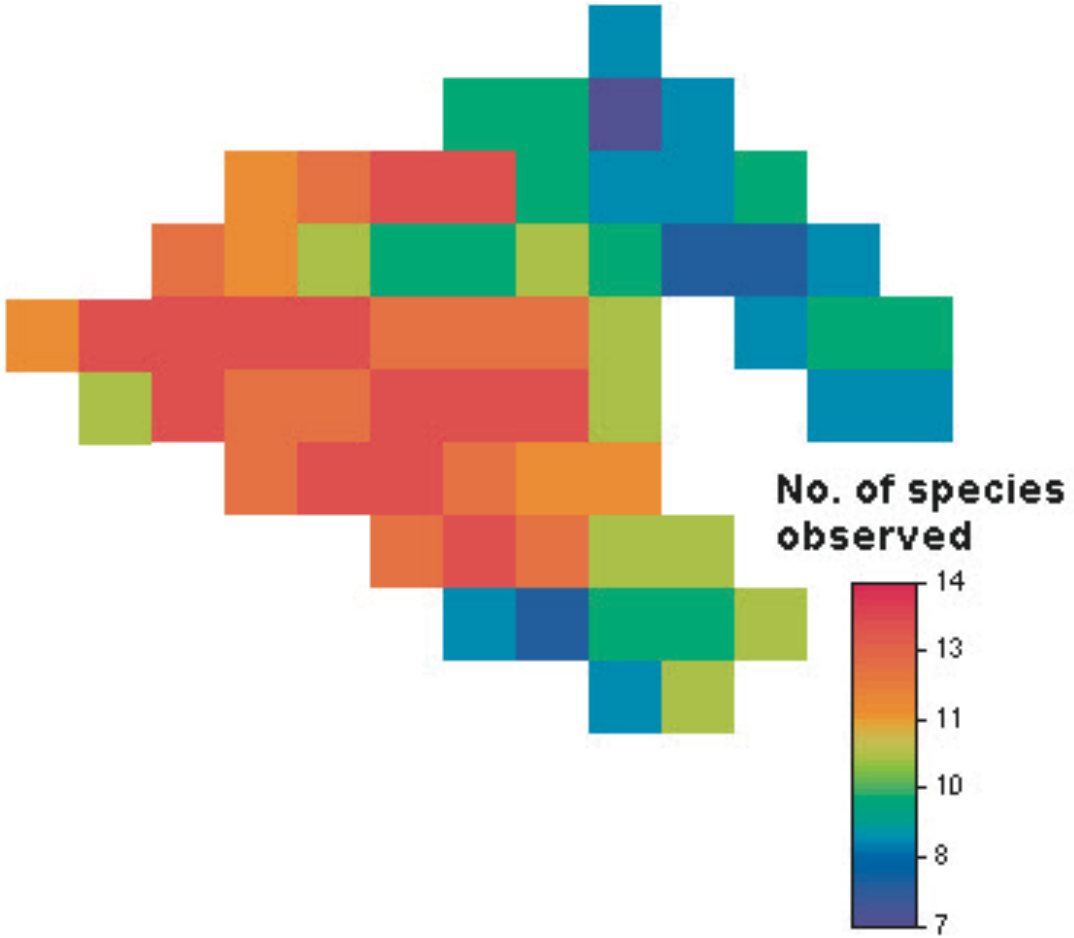


Figure 1 Reference





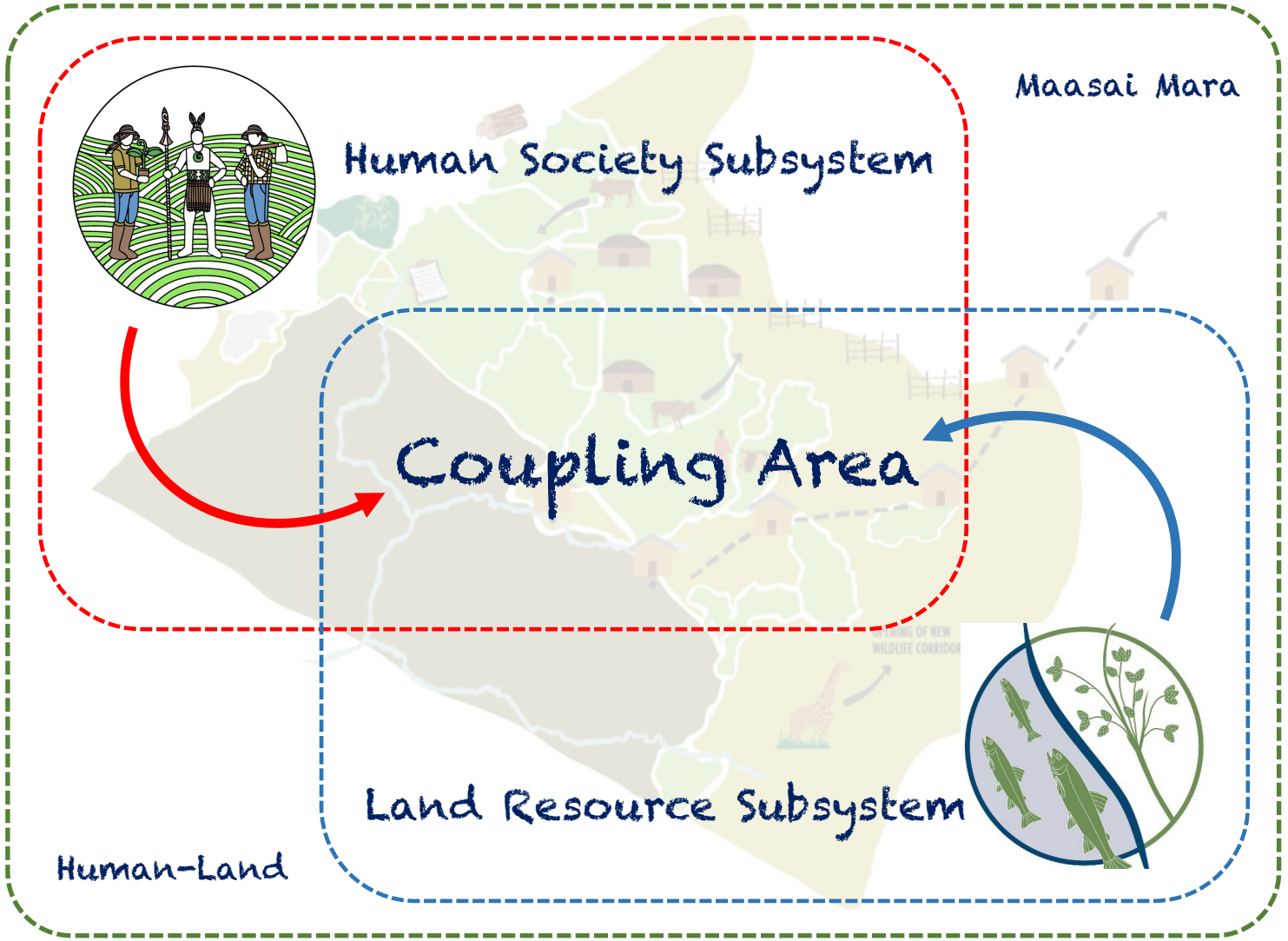

Maasai Mara
Human Society Subsystem
Coupling Area
Land Resource Subsystem
Human-Land

Figure 5

$\alpha_4 = 82.36°$

$\alpha_3 = 56.25°$

$\alpha_1 = 28.66°$

$\alpha_2 = 41.19°$

*Figure 6**

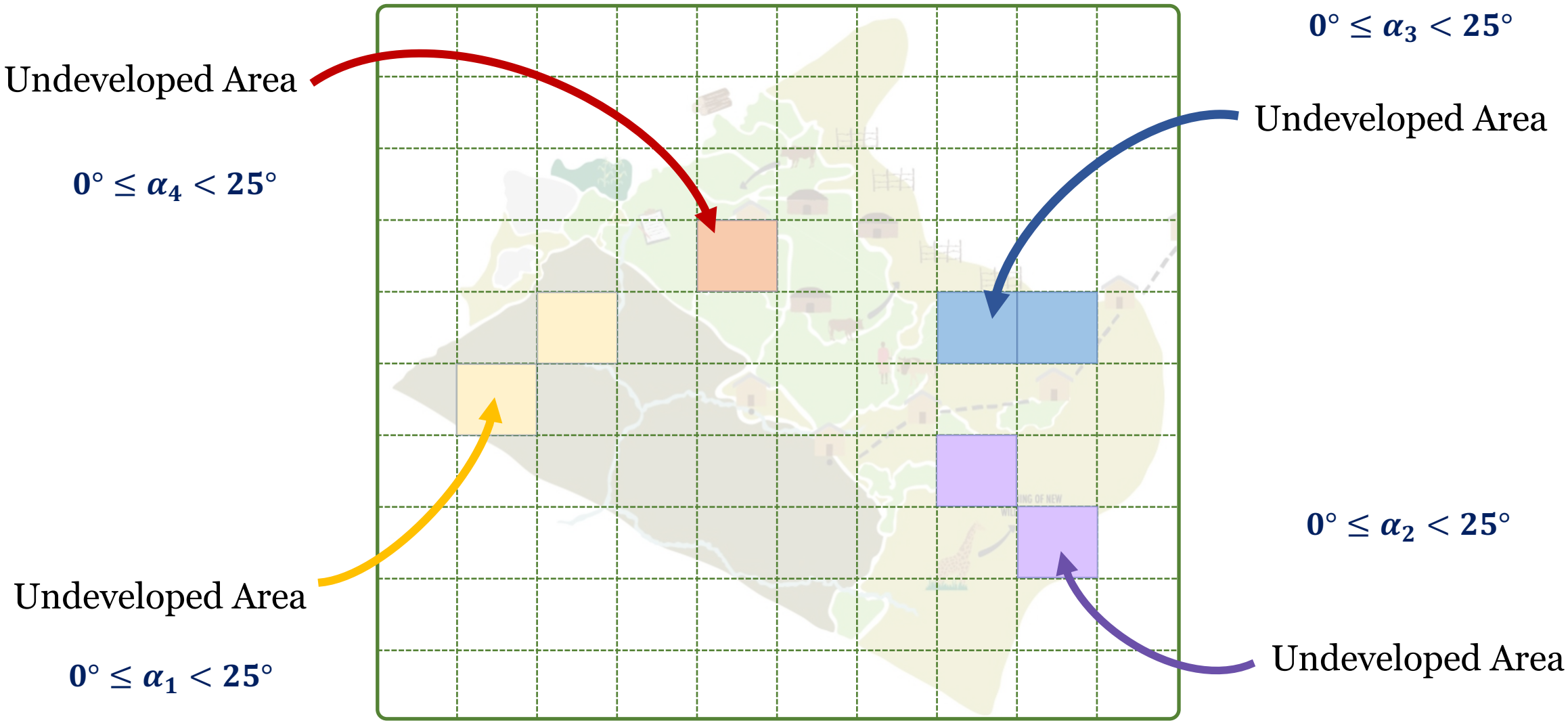
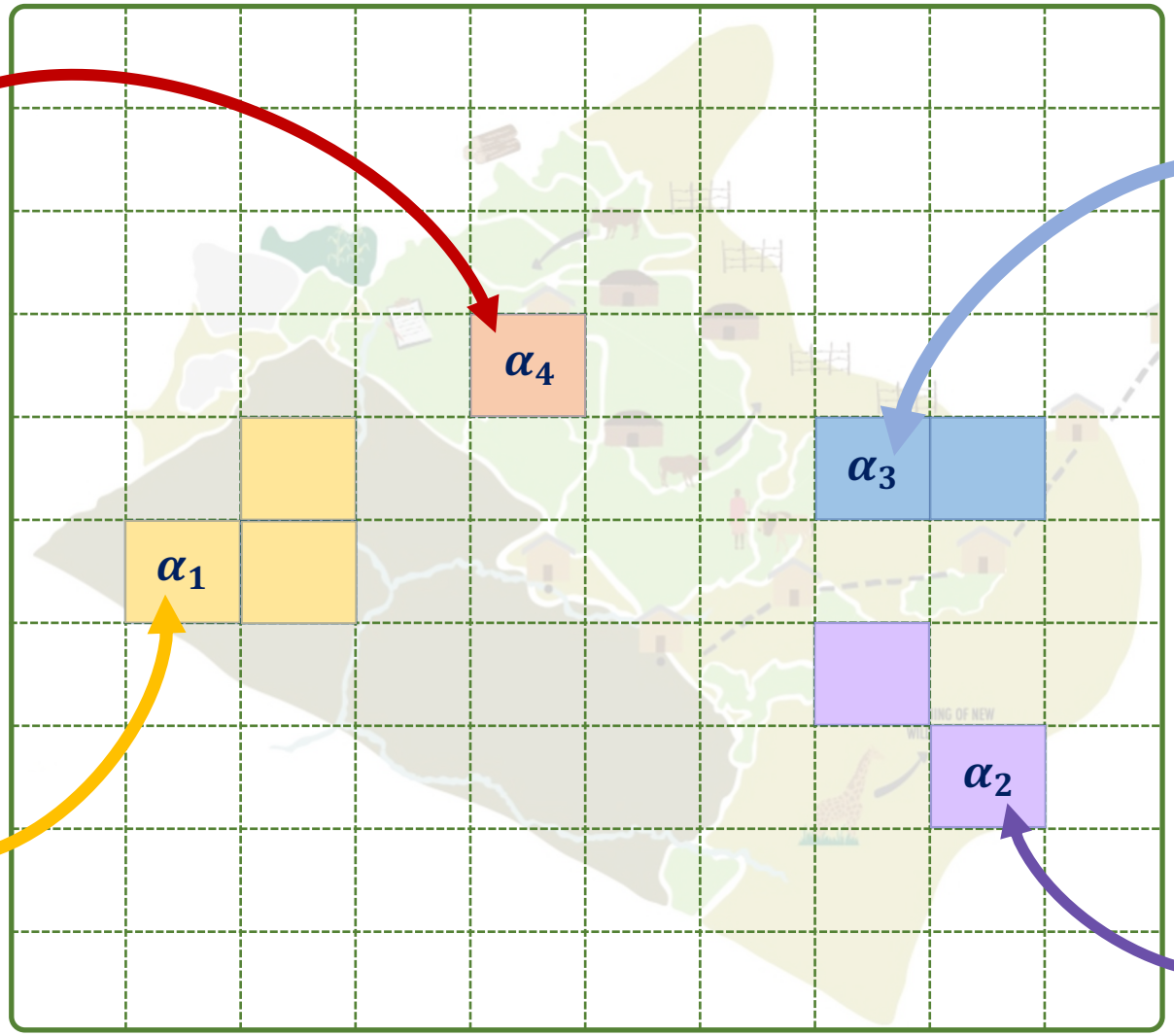

Undeveloped Area
$0° \leq \alpha_4 < 25°$
$0° \leq \alpha_3 < 25°$
Undeveloped Area
Undeveloped Area
$0° \leq \alpha_1 < 25°$
$0° \leq \alpha_2 < 25°$
Undeveloped Area

Figure 6

$65° \leq \alpha_4 < 90°$
Overdeveloped Area



$45° \leq \alpha_3 < 65°$
Coordinated Area

$0° < \alpha_1 < 35°$
Underdeveloped Area

$35° \leq \alpha_2 < 45°$
Transitional Area

Figure 6

Mulima Mbili Area

$\alpha_{test} \approx 20°$

1.5862S

34.370E

$S_g = 76.5625\text{km}^2$

$W_g \approx 8.75\text{km}^2$

Type: Savannah

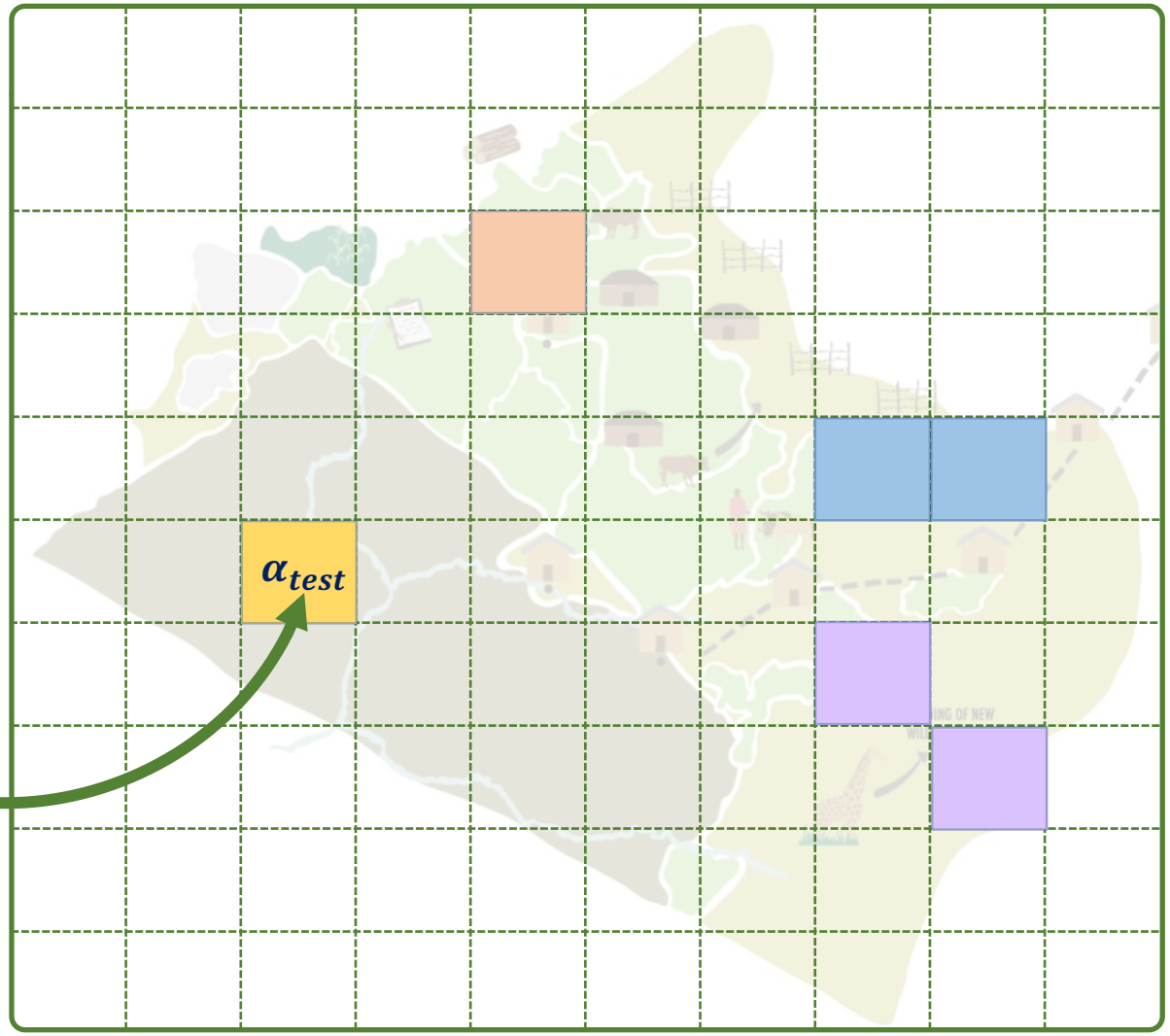


Figure 8

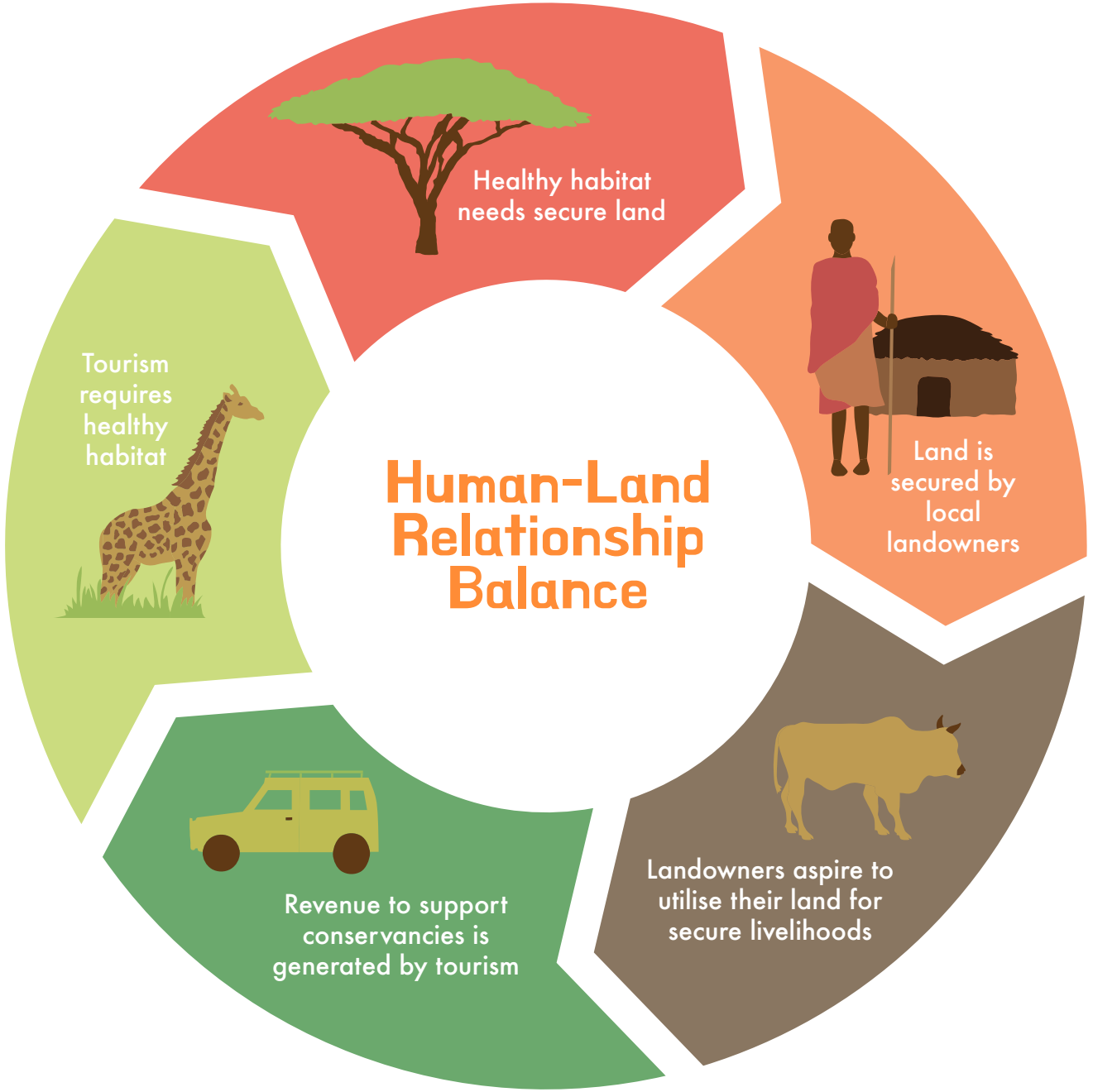

Human-Land Relationship Balance
Healthy habitat needs secure land
Land is secured by local landowners
Landowners aspire to utilise their land for secure livelihoods
Revenue to support conservancies is generated by tourism
Tourism requires healthy habitat

*Figure 2**

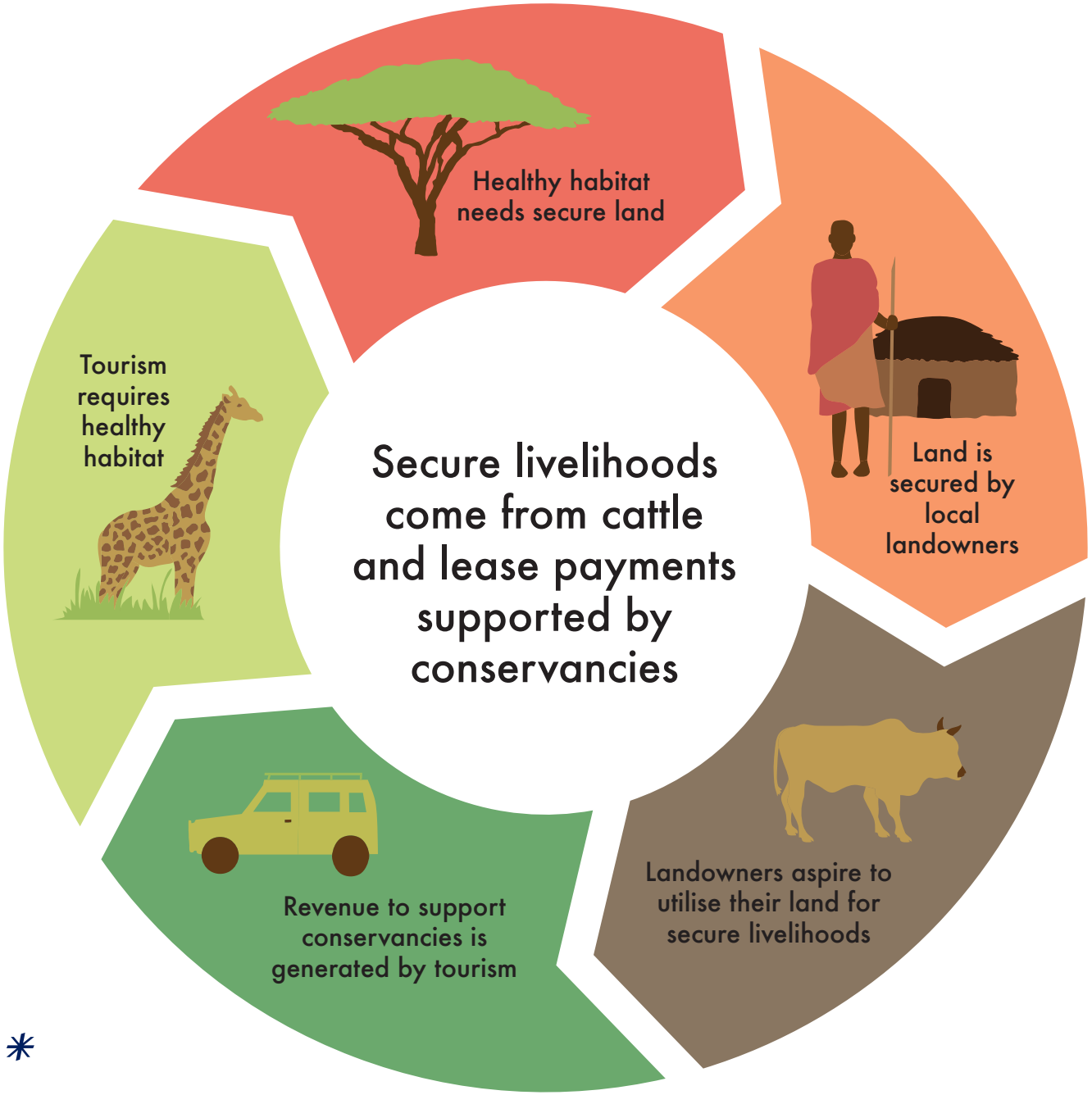

Healthy habitat needs secure land
Land is secured by local landowners
Landowners aspire to utilise their land for secure livelihoods
Revenue to support conservancies is generated by tourism
Tourism requires healthy habitat
Secure livelihoods come from cattle and lease payments supported by conservancies

*Figure 2**

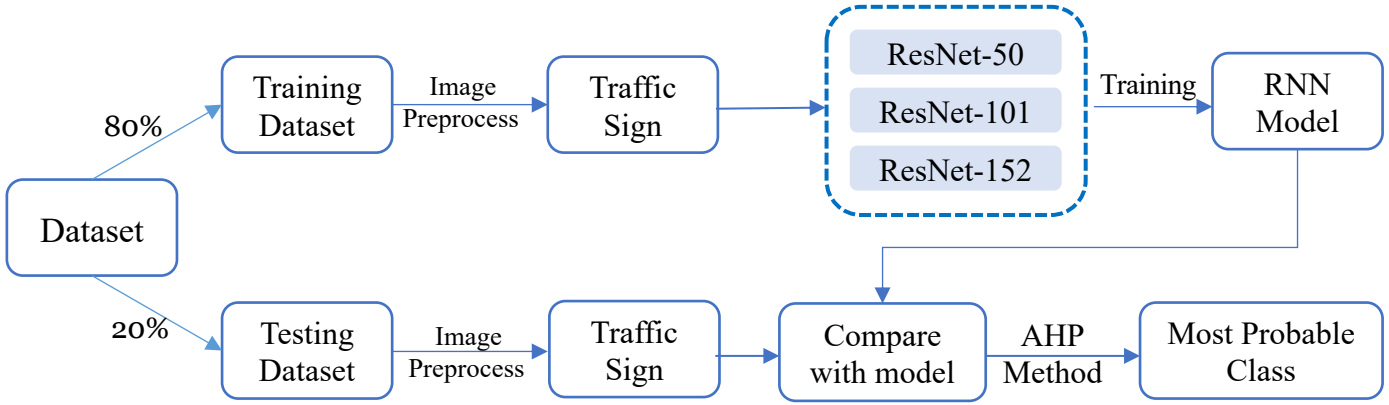


Figure 4 Template

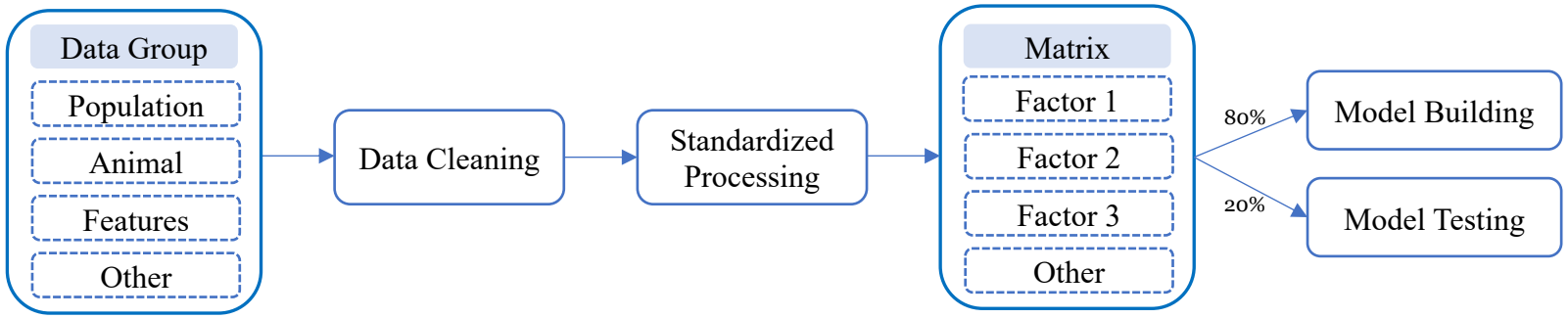

Data Group
Population
Animal
Features
Other
Data Cleaning
Standardized Processing
Matrix
Factor 1
Factor 2
Factor 3
Other
80%
20%
Model Building
Model Testing

Figure 4

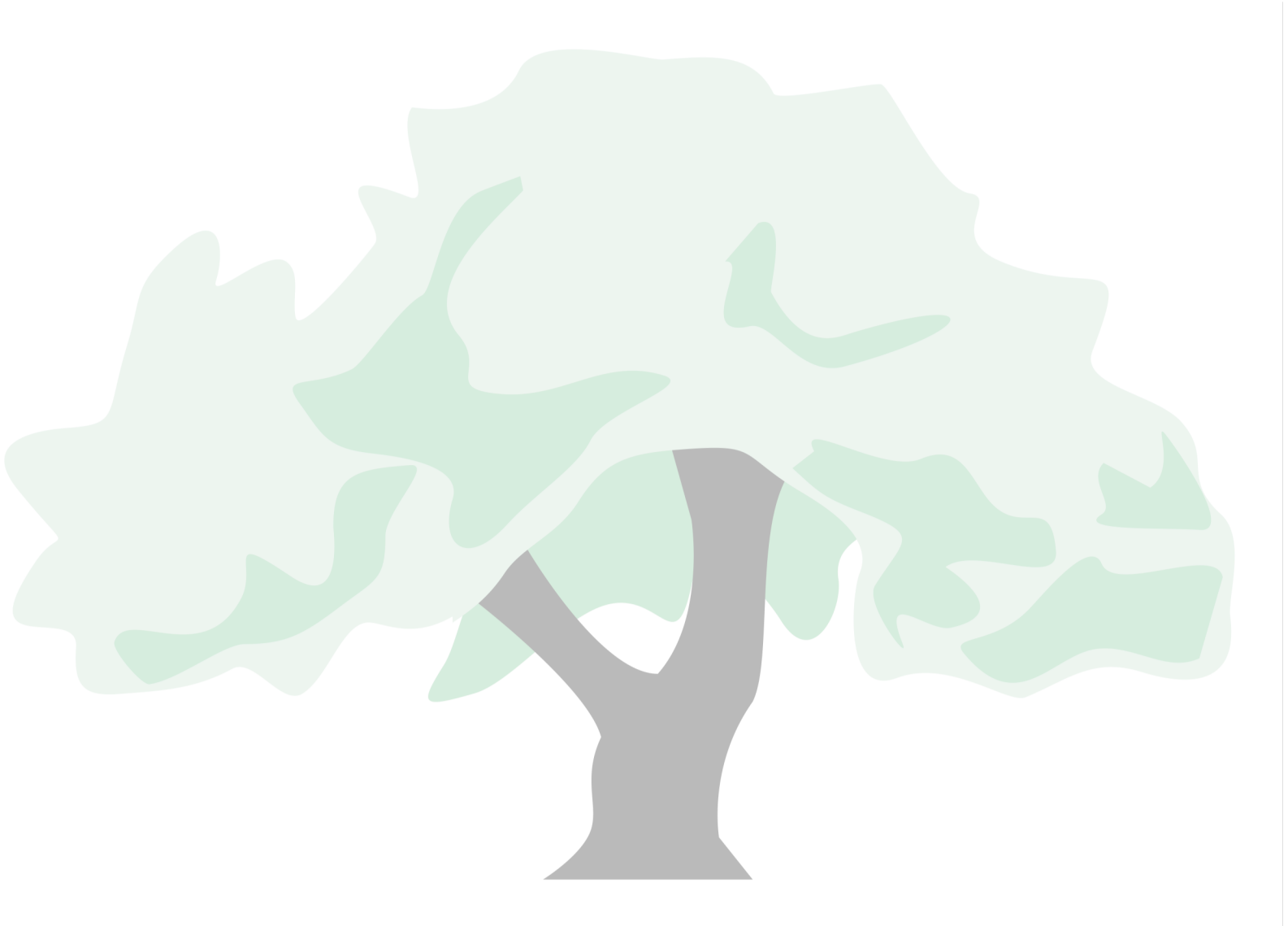


*Figure 7**

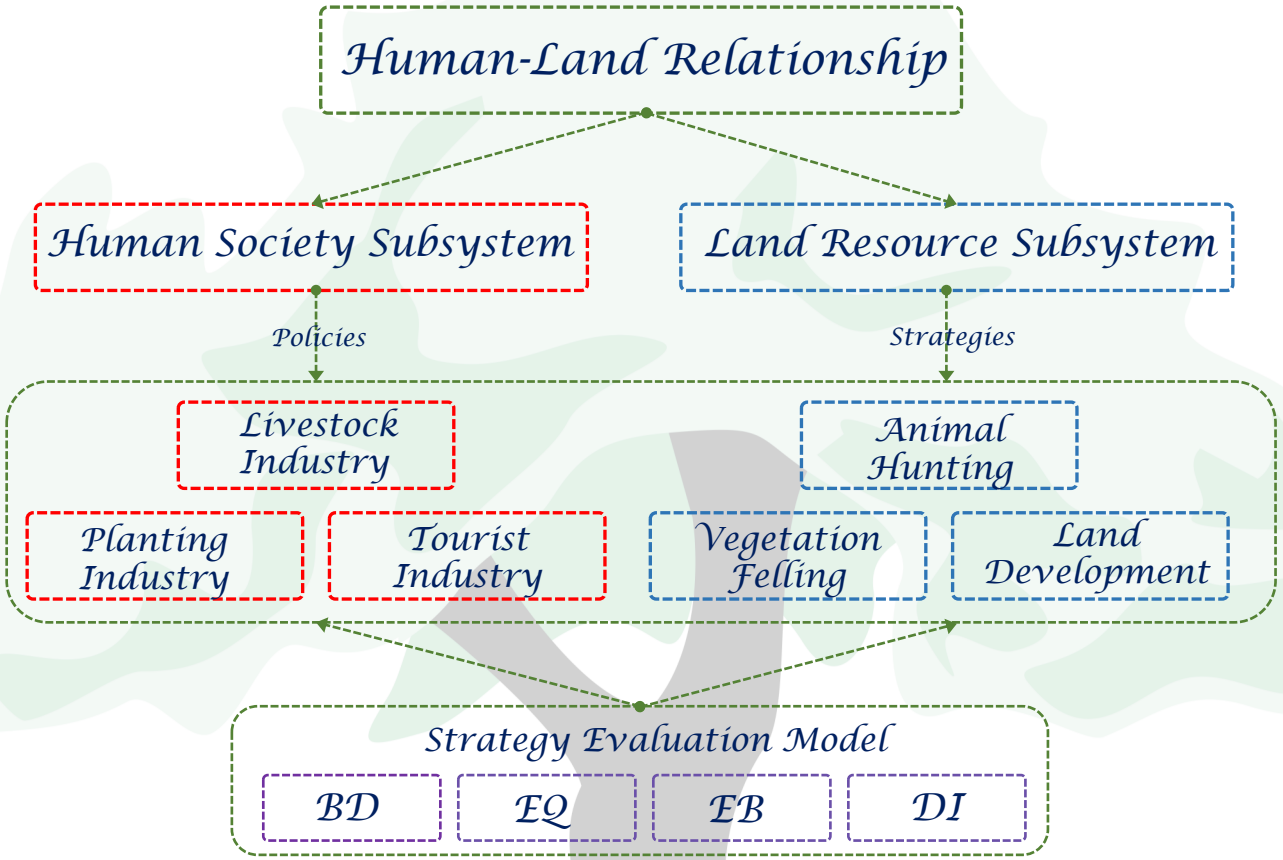
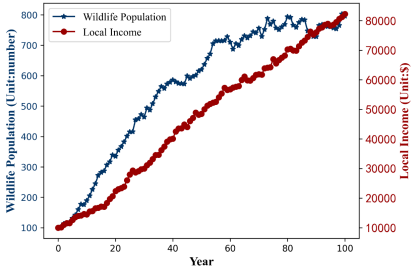
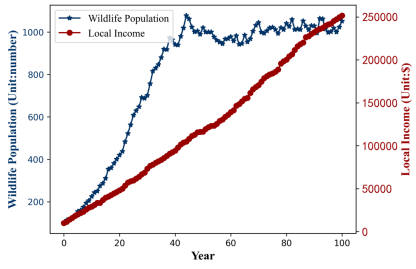

Human-Land Relationship
Human Society Subsystem
Land Resource Subsystem
Policies
Strategies
Livestock Industry
Animal Hunting
Planting Industry
Tourist Industry
Vegetation Felling
Land Development
Strategy Evaluation Model
BD
EQ
EB
DI

Figure 7

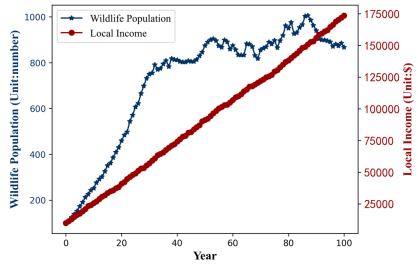
Figure 9(*12)



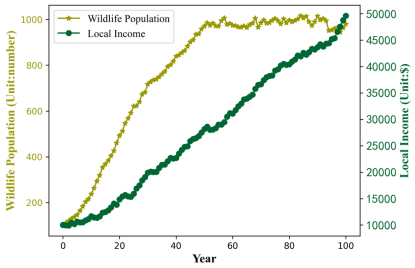
$\alpha = 17°\ (x_1, x_2, x_3)$



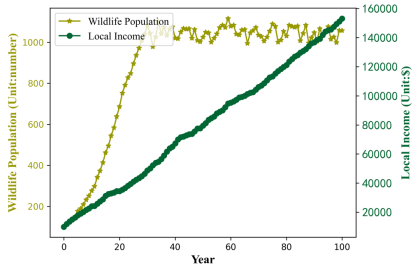
$\alpha = 17°\ (x_1, x_2, x_3, x_4, x_5. x_6)$



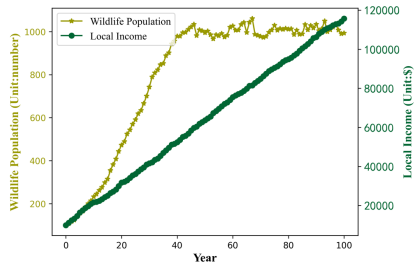
$\alpha = 17°\ (x_4, x_5, x_6)$



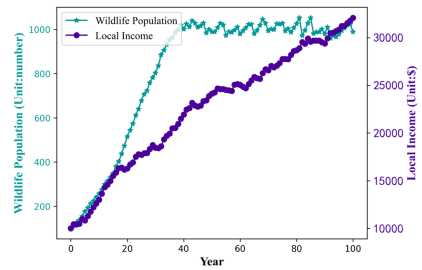
$\alpha = 40°\ (x_1, x_2, x_3)$



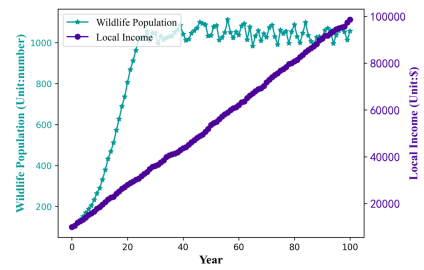
$\alpha = 40°\ (x_1, x_2, x_3, x_4, x_5. x_6)$



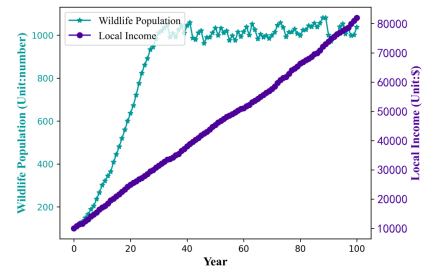
$\alpha = 40°\ (x_4, x_5, x_6)$



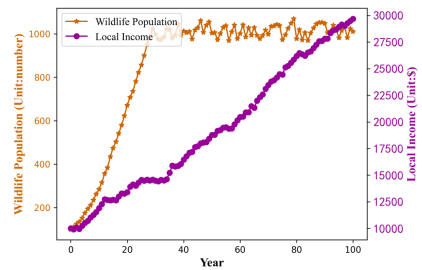
$\alpha = 55°\ (x_1, x_2, x_3)$



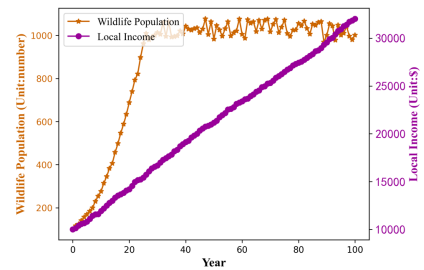
$\alpha = 55°\ (x_1, x_2, x_3, x_4, x_5. x_6)$



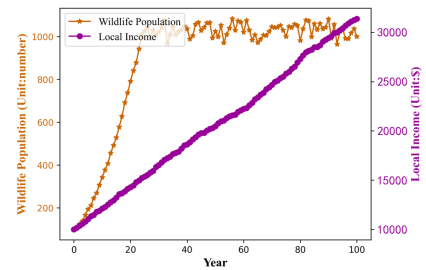
$\alpha = 55°\ (x_4, x_5, x_6)$



$\alpha = 77°\ (x_1, x_2, x_3)$



$\alpha = 77°\ (x_1, x_2, x_3, x_4, x_5. x_6)$



$\alpha = 77°\ (x_4, x_5, x_6)$

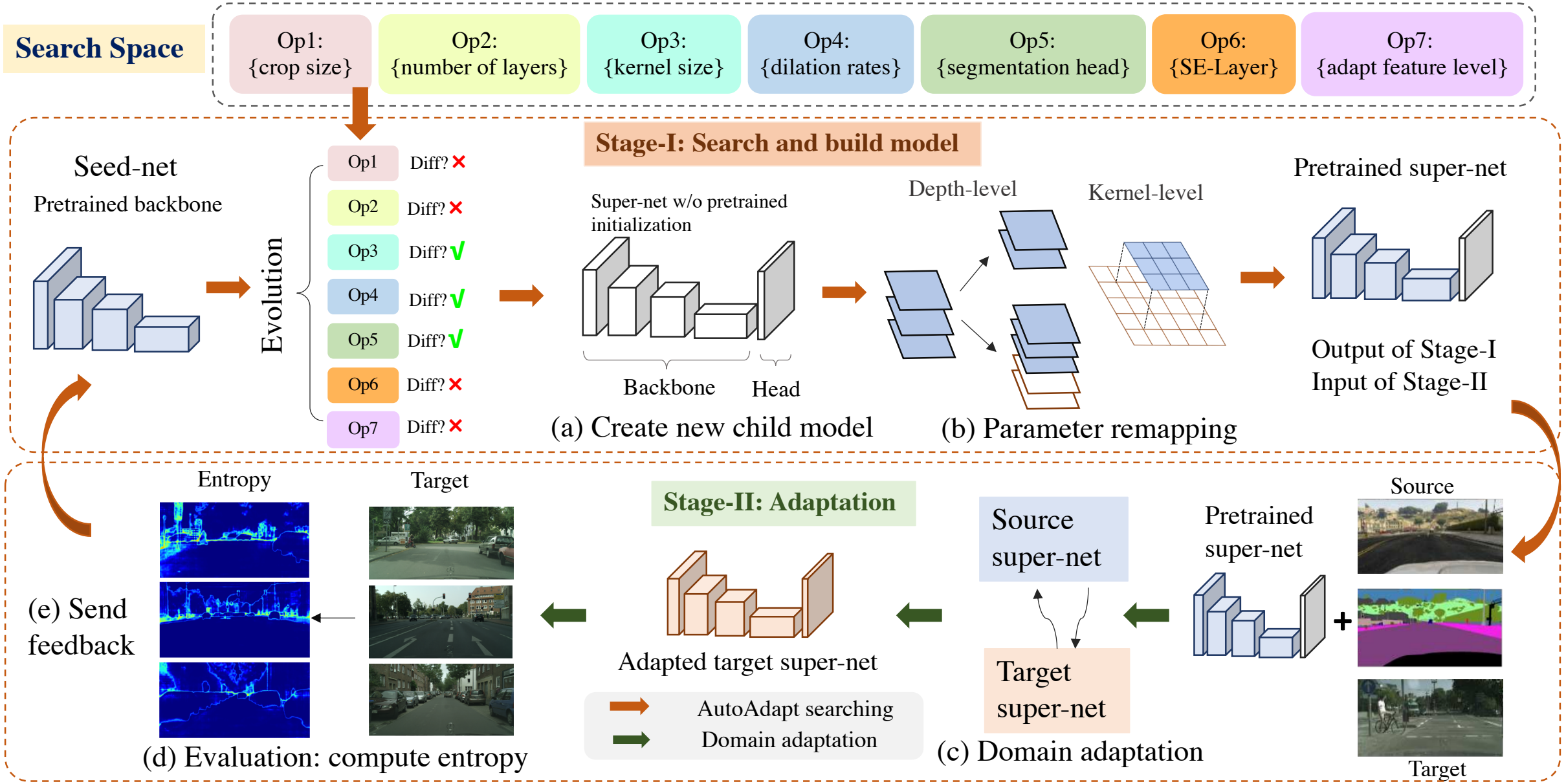


Figure 3 Template

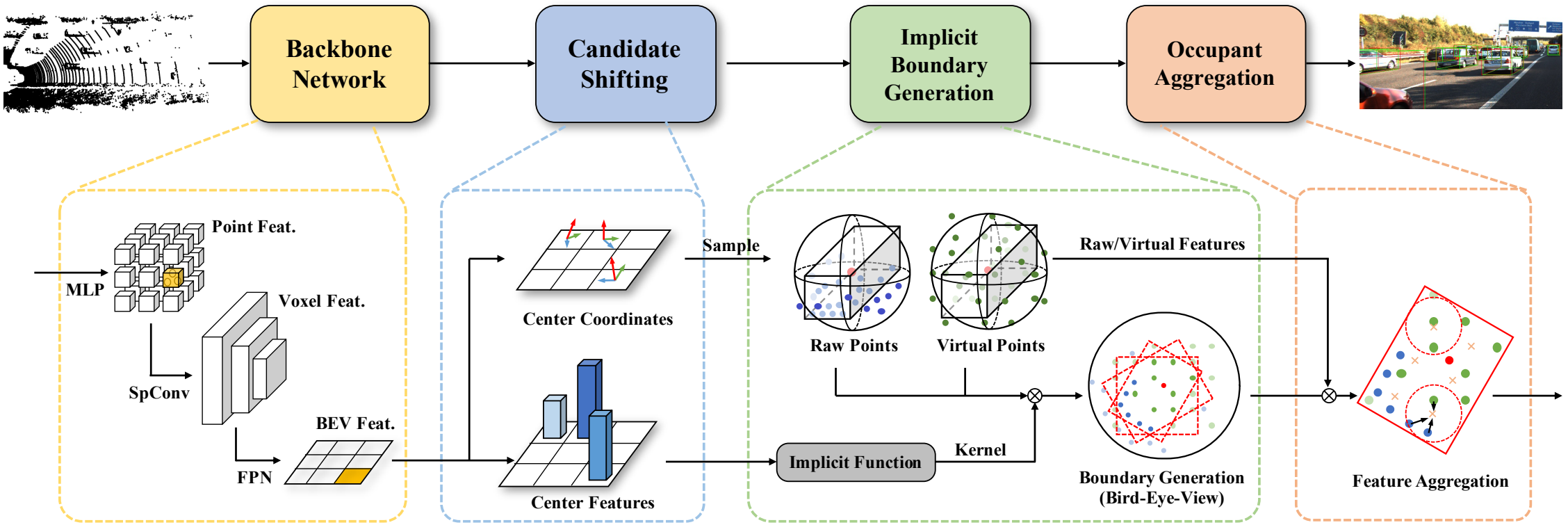


Figure 2 Template

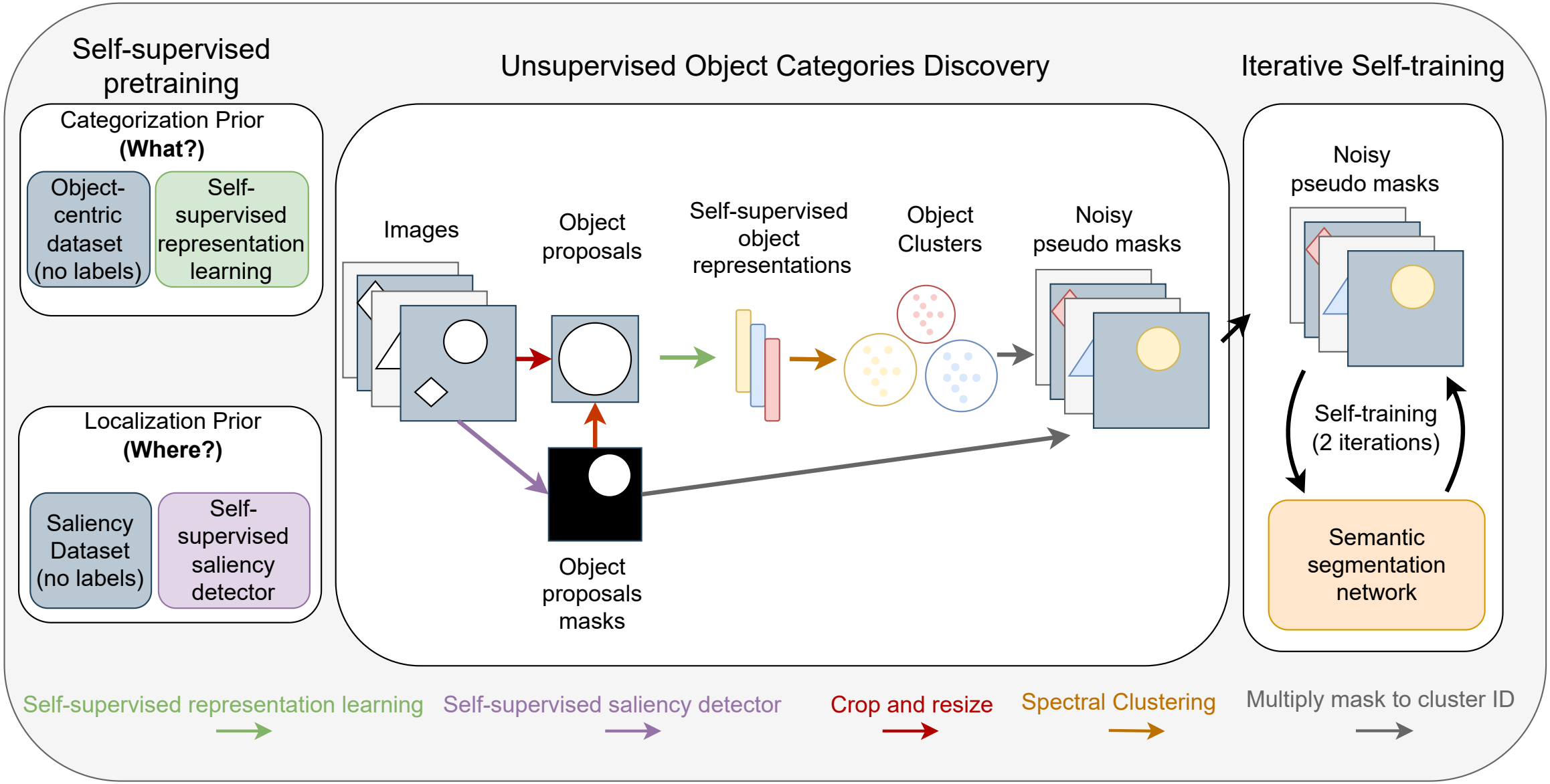


Figure 3 Reference