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Wild Life Grid Programme

-   A Co-governance Reckoner to mitigate risks
    due to wildlife entering man's habitat

A. Background

There is recent news about how a tigress in Maharashtra was killed due to the trend of it becoming a danger to man. The issue being that many people had been killed by the tigress.

The concern about this incidence brings into picture a concept called Relation Examination of a site (location or region or habitat) to understand what issues can lead to people there being hurt or even losing their lives..The concept introduces the insight that soon man will need to understand the need for SMART Life Path Convergence due to a lack of Relation Examination.

Even in Bengaluru or its outskirts, there have been incidences of snakes, leopards or elephants entering man's habitat where there have been adverse incidences.

(This document will use the term animal to cover animal and reptile)

In most cases the size and whether the animal is an endangered species has determined the action taken by the Forest Department officials as to whether the animal needs to be tranquilized and shifted to a natural environment OR whether the animal needs to be put to sleep.

Lack of regulation in this endeavor will more often lead to the animal being killed or being put to sleep, as the issue of people being affected will drive emotion and expectation to address the problem. Governing authorities have long since tried to prevent man and wildlife encounters but this does not mean planning for what AOEC calls "SMART Life Path Convergence". This was done during AOEC's interactions with resort businesses and tourism departments, to indicate that this issue will become more endangering in the future.

"SMART Life Path Convergence" meaning that a Relation Examination Centre (tool) will identify whether certain life paths of people residing in a site or habitat will become risky or endangering. If the relation examination does identify that life paths could become risky then the Centre plans SMART Life Path Convergence" where this means that the Centre helps people living there or visiting that site to live with convergence with the transformations occurring at that site or habitat

For SMART Life Path Convergence, AOEC proposes that man must maintain an A-Z EACC portfolio that helps design or implement convergence for ecosystems (called Ecosystem Afforestation and Conscious Conservatism (EACC)), where this means that a portfolio of what needs to be conserved at a site or habitat is defined and thereon afforested or conserved to help man live sustainably or in peaceful co-existence with nature. Man has so far afforested trees but will soon need to revise this understanding to afforest ecosystems to protect life.

B. History of protecting life

We have long since read about how certain parts of India were transformed into wildlife sanctuaries or reserved forests, and man was shifted from there or given rules and regulations for activities that cause risky man wildlife encounters.

As a consultancy, AOEC has recently designed a Site Ingenuity framework, where it has highlighted that the solution for many quality of life problems is in configuring sites or habitats, related road systems, important stretches or routes, where we need to examine relation and record different influencers that are positive or negative and are indicative of the risks, threats and accidents possible for people entering or living in such habitats or in using such roads, routes or stretches.

As such governing authorities have known about issues such as wildlife entering man's habitat, and have planned remedial action or taken immediate action to address the issue.

The difference is that AOEC did indicate that Global Warming, Climate Change and lack of a Sphere of Control will affect man, flora and fauna (more specifically endangered species) in many ways. There will be more instances of wildlife entering man's habitat or straying around these sites.

To understand this further, people as such in outskirts or semi-urbanized landscapes are more prone to life threatening situations.

C. Wild Life Grid Programme

Uncontrolled urbanization, occupation and construction have made forests or environments (where animals live or migrate to) a hazard to man. The hazard being that as the **living, feeding and growth patterns of animals** has and will be affected by man's encroachment and climate change, man must design Life Path Convergence to live peacefully or without impact to nature..

What has been the response by governing bodies?

The major response has been complaint redressals, timely shifting of people, killing or tranquilizing wild animals entering man's habitat.

However the nature and type of incidences indicate that this is not enough. As flora and fauna are very important for man, given that we are affected by global warming, climate change, increasing pollution levels and the need to urbanize., this reckoner highlights that there can be a "Wild Life Grid programme".

Some lateral thinking on this issue reminds us that not long back, civic authorities kept track of protected varieties of flora and fauna (endangered species) by tagging them as important, protected and owned by the government.

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Recent changes have led to the lack of enough information about how flora and fauna can impact man ,or how man can impact flora and fauna in habitats, roads, stretches, sidewalks, important locations, where man must co-exist with nature.

The reckoner outlines a proposal to develop a "**Wild Life Grid**" that is designed on the basis of inputs from civic bodies, forest departments in charge of habitats, roads and transportation, builders and developers, migrants, visitors, residents and owners of premises, where flora and fauna may need man to make life paths convergent. The tern grid reflects a configuration that is well defined, manageable, fault tolerant and secure due to resilient systems maintenance.

The **Wild Life Grid** is a framework that is made up of a collection of simple management systems, processes and services that help record, audit or assess, maintain information about animals visiting or migrating to sites or habitats, so as to help identify or intervene to mitigate risks due to man wildlife encounters.

Today people are used to the term Fast Track, so this proposal calls the first component of the Wild Life Grid as the **Wild Life Track**, which includes a **Site or Habitat Health Desk**, a **Sphere of Control Tracker**, a **Configuration System** (based on Sites, Habitats, Critical Path Management routes, Road systems and Public Infrastructure & Other Facilities) and **Emergency Response Services.**

The **Site or Habitat Health Desk is a one-stop interface** to information and services that mitigate risks due to man animal encounters or nature being hostile to man. The Site or Habitat Health Desk is a Help Desk that helps people, wild life conservators, business entities or civic representatives call in to query, or to alert, or to configure information, or to ask for emergency response.

The Site or Habitat Health Desk can be a mobile application that can be downloaded by those interested in this programme, The Health Desk can implement a number of interfaces where some of them can include the following:

a. **Registration** as a grid member (as a site owner, a migrant, a visitor, a resident, a business entity a wildlife conservator, a forest expert or a civic body representative)

b. **Recording of Locations** that need Site or Habitat Health tracking (names and key information of sites, habitats, road systems, routes, stretches, public infrastructure & other facilities that are open to hazards due to man animal encounters or nature turning hostile

c.1 **Configuration of flora and fauna information** (either existing at or seen at a Site, Habitat, Road system, or Public Infrastructure & Other Facilities)

c.2 **Configuration of Sphere of Control information** (for a Site, Habitat, Road system, or Public Infrastructure & Other Facilities), as c.1 is difficult due to India being home to undetermined or yet diverse life forms, where either the agile presence, hostile appearance or migrant behavior cannot be predicted.

d. **Help line for Emergency Response** (that permits a member to call in for help to assess Site or Habitat Health, evaluate Health influencers to thereon plan, revise plans or seek remedial assistance to protect life)

e. **Community Grievances Forum** (that permits members migrants, visitors, conservators, experts, civic authorities raise grievances, complaints and concerns about the risks, threats, accidents or incidences related to animal presence or nature turning hostile)

f. **Experts Reports**, where different experts related to the Global viewpoint on emerging risks due to Climate Change, the Horticulture field, the Forestry department and Civic governance speak out and provide information on the Wild Life Grid in the city or region

For the reader, the whole idea was first tagged with keywords that are meaningful for a team developing the SMART Site model.

D Recording of locations

D.1 Habitat

IMPORTANT DETAILS (Tick as applicable)

Site or Habitat name: **Site or Habitat Id:**

Date of submission: **Time of submission:**

Mapping from:

Mapped till:

Mapping pending:

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D.2 Road systems

IMPORTANT DETAILS (Tick as applicable)

Road system name: **Road system Id:**

Date of submission: **Time of submission:**

Mapping from:

Mapped till:

Mapping pending:

D.3 Public Infrastructure and Other [business or residential] Facilities (PI/F)

IMPORTANT DETAILS (Tick as applicable)

PI/F name: **PI/F Id:**

Date of submission: **Time of submission:**

Mapping from:

Mapped till:

Mapping pending:

Type of PI/F:

COMMON to D.1, D.2 and D.3

Type of road system: Road/Stretch/Route/Ring road

Type of transportation that uses road system: Public transport/Private transport/Pooled transport/Personal transport/Priority transport/Trekkers and other walkers

Added commuting systems: Overhead Metro/Underground Subway/Tram

Current traffic management Health: Acceptable/Other reports/Do not know

Key indicators:

a. Nature of crowd movement or congestion (Rated as important negative influences):

( ) Perennial congestion

( ) Seasonal congestion

( ) Time-based congestion

( ) Incidence specific congestion

( ) Congestion due to other influences

b. Stabilizing aspects (Rated as positive influences, bold items are relevant for this proposal):

( ) Has satellite images

( ) Included in Google maps

( ) Has multiple-lanes

( ) Has reliable traffic signals

( ) Accountable traffic intervention possible at location

( ) Accountable Site or Habitat Health Desk intervention possible at location

( ) Not in close proximity to industries

( ) Not in close proximity to rivers and other rainfall affected water bodies,

( ) Has storm water drains

( ) Not affected by festivities

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( ) No trekking paths or pedestrian sidewalks

( ) No encroachment

( ) No wildlife sightings

( ) No instances of nature turning hostile

( ) No alteration to perimeter or boundary

( ) Not sidelined by trees

( ) No afflicted by dumping of industrial waste

( ) Not afflicted by dumping of public waste

( ) Has a proper sewage system

c. Probable Hazards (Rated as very important negative influences, bold items are relevant for this proposal):

( ) Is an inter-link for other roads or routes etc

( ) Is in close proximity to neighboring states

( ) Is in probable or escalated tension areas

( ) Is a sensitive area (where satellite imagery a threat)

( ) Is in close proximity to where wild life has been or is seen

 ( ) Is in close proximity to an industrial cluster

( ) Is in close proximity to where nature has turned or is turning hostile

 ( ) With curving meanders

( ) Has a steep incline with improper entry or exit

( ) Has underlying dangerous landforms

( ) Is in close proximity to dangerous landforms

( ) Is sidelined by less maintained trees

( ) Is in close proximity to rivers and other rainfall affected water bodies

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( ) Is in close proximity to marshes or swamps

( ) Is part of a bridge or connects to a bridge

( ) No storm water drains

( ) Afflicted by incidences of bottlenecks

( ) Is difficult to manage via surveillance

( ) Is prone to crime (due to lack of surveillance/being a remote location/ lack of traffic signals/lack of lighting)

d. Associated planning and/or restoration programmes

The addressing of problems is either well-planned or not well-planned, where there are selective classifications that can help identify issue levels for the people, or business entities commuting via or operating in that location:

Planned (Rated as positive influences)

( ) Forecast based

( ) In time surveillance based

( ) Site or Habitat Health Desk based

( ) Sphere of Control based

Not well-planned (Rated as very important negative influence)

( ) Only reciprocal (where problems are addressed in a reactive manner)

( ) Only when problems are escalated

( ) Only when mass grievances are reported

( ) Only when emergency response needed

e. Site or Habitat Health Desk advisory for this location (Rated as positive influences, bold items are relevant for this proposal)

() Trees cannot be planted in this region

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() Permission required to plant trees in this region

Details on precautions:

() Vehicle movement not permitted in this region

Details on restrictions:

() Permission required to visit, enter or travel through this region

Details on precautions:

() Stay off this site/habitat/location/road/stretch/route/ring road at particular times

Details on timings:

() Stay off this site/habitat/location/road/stretch/route/ring road in particular months

Details on months:

( ) Recommend moderate utilization whenever possible

( ) Restricted for goods carriers

( ) Restricted for heavy motor vehicles

( ) Restricted for autos

( ) Restricted for 2-wheelers

( ) Restricted for high-fuel-consuming vehicles

( ) Restricted for pollution accelerators

( ) Connects or connected to bad roads or problem afflicted routes

( ) Not to be used by Emergency Response vehicles

( ) Not to be used by Special Needs vehicles

( ) Not to be used by tourists or trekkers

( ) Not to be used by people seeking forest or other resources

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D. Configuration of wild life information (either visiting or seen at Site, at Habitat, along Road system, or near Public Infrastructure & Other Facilities)

Technological advances have made it possible to track commodities, vehicles, people etc. We could use this identification and tracking technology to track wild life in specific locations. The tracking need not be a live signal solution but can include wild life identification details with a Hazards Assessment Report, which can be used by an expert panel to decide the emergency response or next step of action.

<u>**Hazards Assessment Report (this should be a checklist that is easy to understand and use)**</u>

1. Is the location near forests or trails taken by animals when migrating? If yes then this is a hazard as animals will visit this location more often.

2. Is the location drought tolerant? If yes then this is a hazard as animals need sufficient water / food and will visit this location more often when migrating or moving

3. Have any branches fallen from trees at this location? If yes then this is a hazard as herds of elephants may be visiting this location more often when migrating or moving

Are there signs of animals visiting water holes, coverings, shade tolerant plants, grasses? If yes then this is a hazard as wild animals may be visiting this location more often when migrating or moving

4. Have adjacent trees been affected? If yes then this is a hazard as herds of elephants may be visiting this location more often when migrating or moving

5. Have the leaves been eaten or chewed upon? If yes then this is a hazard as herds of elephants or monkeys (a hostile species) may be visiting this location more often when migrating or moving

Are there any visible food consumption or kill patterns? If yes then this is a hazard as wild animals may be visiting this location more often when migrating or moving

6. Have the roots been broken off or injured or damaged by animal movement or attack? If yes then this is a hazard as herds of elephants may be visiting this location more often when migrating or moving

7. Has the presence of man at this location or site been changed recently due to construction activity or by man shifting in or regularly entering this region? If yes then this is a hazard as tigers, leopards or wild cats may start visiting this location more often when seeking food, or when migrating

If the answer is yes to any of the relevant questions, then the location can be a hazard.

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WILLLIFE CONFIGURATION DETAILS (Tick as applicable)

Site or Habitat name: **Site or Habitat System Id:**   **(OR)**

Road System name: **Road System Id:**   **(OR)**

PI/F name: **PI/F Id:**

Life expectations at this location:

Compliance expected at this location:

( ) Unknown

( ) Well developed

( ) Not so well developed

( ) Yet developing

( ) Important for life

( ) Important for future interest

Living experience (maturity) at this location:

( ) Unknown

( ) Well developed

( ) Not so well developed

( ) Yet developing

( ) Important for future interest

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Interventions possible for life paths at this location:

( ) Unknown

( ) Well developed

( ) Not so well developed

( ) Yet developing

( ) Important for life

Wild life-variety or friendly name:

Wild Life Grid Id:

Height (in meters or feet):

Type of species:

Summary of health, temperament or history of interaction with man:

Enclosed picture (if any in mobile friendly formats):

Yes/No

Food chain link (Choose from): Producer / Consumer / Both

Food mostly consumed details:

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(CIZ) Critical Interaction Zone details (also known as a zone outside which man is less prone to attack) - This is important to estimate the endangerment caused by species:

Nature of man's interaction at or around location:

Sensor enabled Fencing or clearances at or around location to secure entry of or attack by wild animals:

Sensor enabled Overhead clearances:

Inspection or Maintenance schedule (tabulation):

Log date: **Log Id:**

Inspection or Maintenance carried out by:

Details of work carried out (to be filled as relevant to the case)

(a) Visual inspection (tick as applicable)

[ ] Hazards Assessment (this checklist can be improved as per CIZ and related conditions)

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(b) Closer inspection by wild life expert (tick as applicable)

[ ] Diagnosis of problems

[ ] Diagnosis of compliance needed

[ ] Wild Life identification and management

[ ] Species specific Hazard Assessment and Surveys

Details:

(c) Preventive maintenance details (tick as applicable)

( ) Adding surveillance systems

( ) Training or Controlling life paths

( ) Eliminating visits, entry or attack by securing location

( ) Removing food consumption patterns that cause risk

( ) Tree pruning or removal (to improve visibility and reduce food supply)

( ) Shrub and vine pruning (to improve visibility and reduce food supply)

( ) Compliance assessment and training

Details:

(d) Restoration details (tick as applicable)

( ) Regulating food and water support systems (after expert evaluation)

( ) Improving shape or silhouette of tree

 ( ) Replanting (at different locations) ground coverings, shade tolerant plants, grasses that are main attractions for animals visiting that location

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(e) Risk mitigation details (tick as applicable)

( ) Reporting and recording wildlife sightings

( ) Submitting video or audio recordings of wildlife behavior

( ) Changing life paths or expectations of people to better mitigation of risk

( ) Changing commuting systems to better mitigation of risk

( ) Enabling improved satellite imagery to better mitigation of risk

( ) Enabling improved detection and surveillance to better mitigation of risk

( ) Creating better clearance structures and secure perimeters to better mitigation of risk

( ) Reporting and recording endangered or unknown flora sightings

( ) Reporting and recording instances of nature turning hostile

( ) Changing landscapes of location to better mitigation of risk

( ) Removing branches or thinning to increase visibility

( ) Guided pruning/cutting/topping (as confined to need)

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Safety advisory (to be filled as relevant to the case):

(a) Dos

(b) Don'ts

(c) Help line responses or communications:

(d) Right options available to help neutralize or tranquilize animal

(e) Remedial alternates to help neutralize or tranquilize animal

(f) No option alternates to help neutralize or tranquilize animal

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(CGF) Community Grievance Forum's Incidences/Complaints details:

CGF Ticket Id: **CGF Ticket date:**

CGF Ticket description:

CGF Ticket status:

CGF Ticket responses:

CGF Ticket Closure details:

E. Toolkit for SMART City proposals, sustainable development and growth

AOEC has different toolkit offerings to help sustainable development and growth. It is reaching out to civic bodies, organizations and educational institutions to promote these insights.

You can ask for more details by calling the consultant on +91 9342867666 or by emailing venkataoec@gmail.com

URL for (1): www.venkataoec.wixsite.com/consciousacts (Climate Change Mitigation and Adaptation)

URL for (2): www.venkataoec.wixsite.com/safercommuting (developing a Risk Management Panel for safer commuting and public infrastructure experiences)

URL for (3): www.venkataoec.wixsite.com/resourcecentre (enabling trade advocacy and a learning centre model to sense & respond to a need for Climate Change Mitigation)