

Zen for the environment



- **The way ahead**
- Increasing population will necessitate more land use or concretization, thus helping people plant and care for plants and trees will become a vital endeavor.
- (1) Building Tree Grids, (2) Designing Zen and Herb gardens and (3) Mitigating risks of tree fall associated with trees in our neighborhoods or locations are all steps towards a Sustainable Future (or Future ready Millennium)

Road System responsiveness

Road Safety Signage editioning needs awareness of the following road system risks

(S) Controlling issues of commuter safety

1. Sudden bends or curves with or without signs, where it is not possible to ensure clear visibility
2. Under repair roads with or without signs
3. Sudden Traffic signals with or without signs
4. Sudden Culverts and Pedestrian crossings with or without signs
5. Sudden Speed breakers with or without signs
6. Sudden descent or ascent with or without effective Vehicle movement signs
7. Lack of SMART Vision enabling signages / exhibits



SMART Vision

Road System responsiveness

Road Safety Signage Editioning needs awareness of the following road system risks

(A) Addressing Road Infrastructure

1. Unmanned Road Medians or missing Bordering Road Barricades with or without signs
2. Road deterioration and potholes
3. Poorly maintained septic systems and manholes
4. Traffic violators and lack of driving norms (where all this highlight the need for driver fitness)
5. Unplanned road-to-road systems with no clear visibility

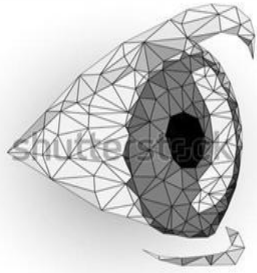
6. Unplanned tree cover sidelining the road system

7. Unmitigated tree fall / branch collapse for the road system

8. Weather forecast related tree fall / branch collapse for the road system



SMART Vision



RESPONSIVE

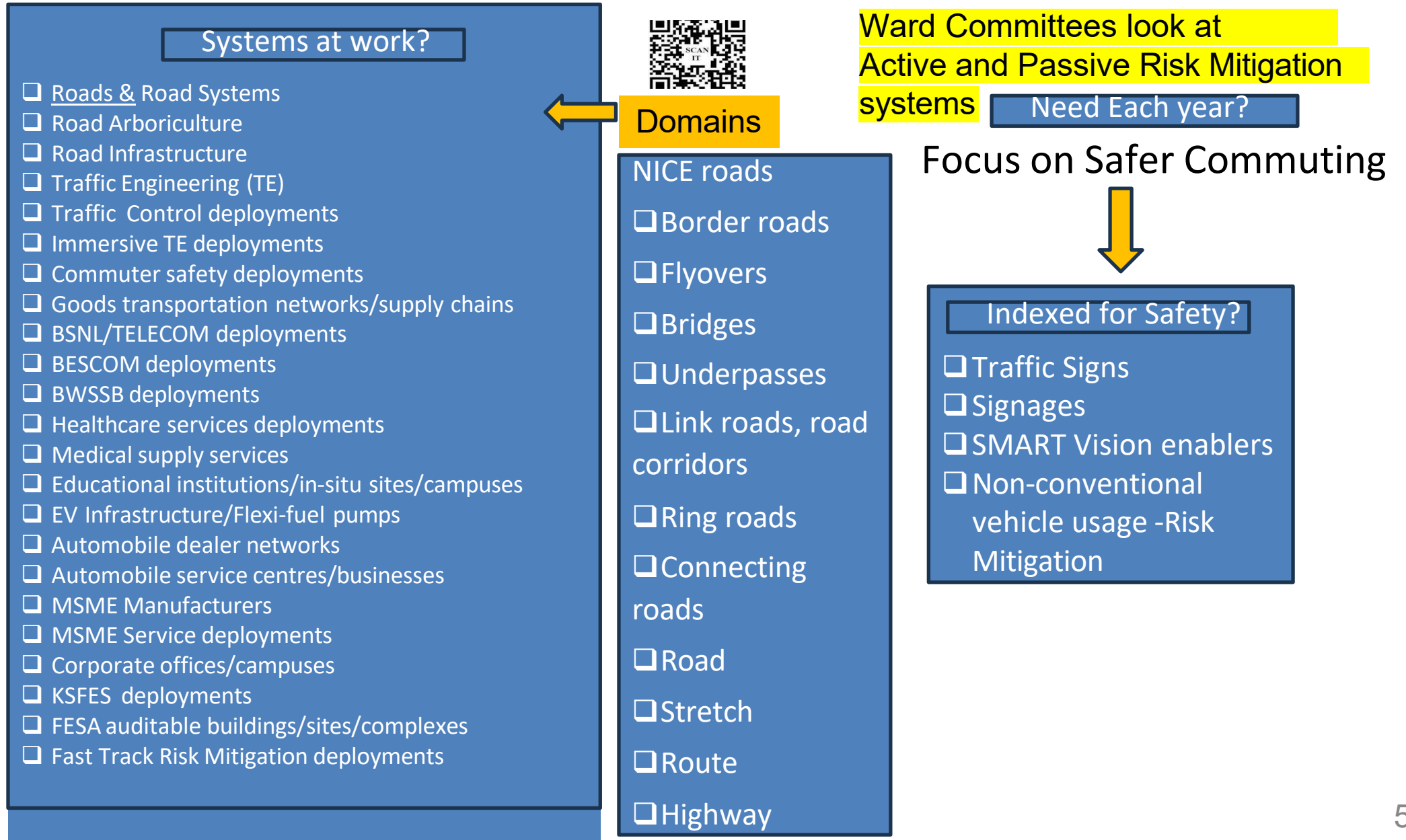


Need for Road Safety

Safer commuting and Evaluations

Expectations of Ward Committees

How do Ward Committees help Road Safety



DRAWING TO LIFE INDIA

**FROM NAMMA
BENGALURU**



Know the need for
Safety and Our
Responsiveness

Know the need Questionnaire

Q1: Does the route need awareness of mandatory traffic signs?

Rating: Yes/ No/ Neutral

Q2: Does the route need awareness of cautionary traffic signs?

Rating: Yes/ No/ Neutral

Q3: Does the route need awareness of danger/alarm/emergency traffic signs? Rating: Yes/ No/ Neutral

Q3.1: Does the route need risk/danger/hazard detailing elements like “Road Arboriculture signages”? Rating: Yes/ No/ Neutral

Know the need Questionnaire

Q4: Does the journey need awareness of drowsy driving?

Rating: Yes/ No/ Neutral

Q5: Does the journey need awareness of night driving or fog afflicted driving? Rating: Yes/ No/ Neutral

Q6.1: Does the route need road system understanding?

Rating: Yes/ No/ Neutral

Q6.2: Does the route need driving conditions responsiveness?

Rating: Yes/ No/ Neutral

Know the need Questionnaire

Q7: Does the journey need a “first aid kit and the training to use it”?

Rating: Yes/ No/ Neutral

Q8: Does the journey need Alpha Assistance Card planning?

Rating: Yes/ No/ Neutral

Q8.1: Does the journey need SMART Vision understanding/assistance? Rating: Yes/ No/ Neutral

Know the need Questionnaire

Q9.1 Does the route need road system understanding?

Rating: Yes/ No/ Neutral

Q9.2 Does the route need driving responsiveness for giving right of way to ambulances, fire & emergency services, unaware people or pedestrians?

Rating: Yes/ Neutral

Q9.3 Does the route experience supply chain movement?

Rating: Yes/ Neutral

DRAWING TO LIFE INDIA

**FROM NAMMA
BENGALURU**



As Value for Safer Road Arboriculture, we look at what any commuter/person interested can improve

Climate Change Mitigation and Adaptation (CCMA)



- **Assessment of the Age of a Tree** (by observation that is based on details available on the Internet)
 1. Count the number of **growth rings** (possible only when the tree is felled or cut). Every year a tree adds a new ring of tissue as its trunk grows outward
 2. Count the number of **tree whorls** (that is the number of largest branch whorls) and add 1 to the number
 3. Measure **diameter of circumference of trunk** at an average man's chest height & **multiply this value by the growth rate** of the species

Climate Change Mitigation and Adaptation (CCMA)



- Assessment of the Age of a Tree (continued)
- 4. Use an **increment borer** (to be done only by an arborist) to **remove a cylindrical portion** of the trunk near the base or below an average man's chest height. This portion can be used to count the growth rings.
- Importantly, care must be taken to help the tree heal or grow unaffected after the use of any method to estimate the age of the tree.

Climate Change Mitigation and Adaptation (CCMA)



- **Assessment of the Age of a Tree (continued)**
- 5. Maintain a Tree Grid that **records the date and time of planting of any sapling or seed** with details that help know more about the plant or tree at any later point in time. This could be used to decide whether the tree should remain at its location or be shifted to a different location or even be put to other use. This may become important in the future when climate change could become more severe leading to alternate cycles of floods and drought, thereby affecting a region's tree cover.

Climate Change Mitigation and Adaptation (CCMA)



- **Tree Hazards Assessment Report (a checklist that is easy to understand and use)**
- 1. Is the tree drought tolerant? If no then this is a hazard as it needs sufficient water and soil enrichment.
- 2. Do many branches arise from one point of the trunk?
- 3. Is the tree sensitive to anything (question is arborist specific)? If yes, then review items 8 to 11.
- 4. Are there large dead branches?

Climate Change Mitigation and Adaptation (CCMA)



- 5. Are there detached large branches hanging from the tree?
- 6. Does the tree have cavities or rotten wood along the trunk or in major branches?
- 7. Are mushrooms present at the base of the tree?
- 8. Are there cracks or splits in the trunks or where the branches are attached?
- 9. Have any branches fallen from the tree?
- 10. Have adjacent trees fallen or died?

Climate Change Mitigation and Adaptation (CCMA)



- 11. Have the leaves developed a premature unusual color or size?
- 12. Have the roots been broken off or injured or damaged by lowering the nearby soil level, or by constructing or repairing pavements or sidewalks, or by digging trenches for telephone cables or sewer systems?
- 13. Has the location or site been changed recently by construction activity or by soil level changes or by installing of lawns or green strips?

Climate Change Mitigation and Adaptation (CCMA)



- 14. After stump removal was the hole filled with top soil before any new plantation? If no then the roots may not be healthy.
- If the answer is yes to any of the relevant questions, then the tree can be a hazard.
- A citizen, entity or civic body interested in registering a tree in the grid, will need to enter the following “Tree identification & configuration details” via a call to the Tree Health Desk, or submission of a hand-filled form, or use of a mobile application.



Need / Value addition

Zen for our environment



SAVE THE EARTH
GO GREEN



Provisioning for a
green environment

Zen for the environment

- Since 1970, Bengaluru's land growth or concretization has increased by 925%, in 2026 the agility is still unregulated.
- The ratio of the number of trees per person has severely dropped leading to an increase in air pollution and climate change trends
- According to a study, every person needs at least 8 trees in a lifetime, whereas there is approximately 1 tree for approximately seven persons
- There is a need to come up with action plans to address this loss of green cover
- This monthly bulletin proposes a programme called "Zen for the environment" to address this problem and its need for risk mitigation

Zen for the environment

- The proposed programme will be more successful if assisted by the GBA/BBMP, Road Arboriculture and Forest Conservation Experts,
- The programme will include the following steps
- 1. **Zen for sites:** Launch a remedial initiative that mandates when builders & construction companies clear land for their construction projects, they should be provided 8 saplings (per flat, office or home constructed at the site in question). It will be a responsibility for a builder or associated owners to plant and care for these saplings in an exercise to make up for any deforestation done.
- **Decision making:** Selecting saplings that are suitable and designing a “handbook” that helps an average person care for and know the health of a tree
- **Deliverable for the Ward committees:** Ready-to-plant saplings and Zen for the environment booklets



Zen for the environment



- **2. Zen for families:** Launch a **lifetime initiative** that mandates when a child is born, a family or new parents should be provided 8 saplings to plant and care for these saplings in an exercise to help the child fight climate change and concretization.
- **Decision making:** Selecting saplings that are suitable and designing a “handbook” that helps an average family care for and know the health of a tree
- **Deliverable for the Ward Committees:** Ready-to-plant saplings and Zen for the environment booklets

Zen for the environment



- **3. Zen for municipal bodies:** Launch a sustainable environment initiative that mandates whenever the municipal body cuts down a tree or reduces its lifetime, it should plant 8 saplings and care for them in an exercise to make our environment sustainable and green.
- **Decision making:** Selecting saplings that are suitable and designing a “handbook” that helps the municipal implement a “Tree Grid” to inventory, track, care for and know the health of trees in select locations
- **Deliverable for the Ward Committees:** Ready-to-plant saplings, “Build a Tree Grid” and “Zen for the environment” booklets

Zen for the environment



PROJECT TREE



- **4. Zen for parks and gardens (lung spaces):** Launch a **rejuvenate the environment initiative** that mandates whenever a municipal body plans for or maintains a park or garden, it should implement the “Tree Grid” in an exercise to conserve and rejuvenate the environment.
- **Decision making:** Recommending saplings of plants, trees, herbs that are suitable for a location and implementing of the “Tree Grid” to inventory, track, care for and know the health of trees in the park or garden
- **Deliverable for the Ward Committees:** Ready-to-plant saplings, “Build a Tree Grid” and “Zen for the environment” booklets

Zen for the environment



- **4. Zen for lakes and ponds (care for our water bodies):** Launch a **nurture me initiative** that mandates whenever a municipal body resurrects or maintains a lake or pond, it should arrange to plant trees on the perimeters of the lake or pond, landscape it and implement the “Tree Grid” in an exercise to protect this resource.
- **Decision making:** Recommending saplings of plants and trees that are suitable for a location and implementing of the “Tree Grid” to inventory, track, care for and know the health of trees in the park or garden
- **Deliverable for the Ward Committees:** Ready-to-plant saplings, “Build a Tree Grid” and “Zen for the environment” booklets

Zen for the environment



- **5. Zen for your kitchen (health and well-being):** Launch a **health for all initiative** that recommends that families should plan to grow a kitchen garden of select herbs if they are interested in growing plants and trees.
- **Decision making:** Recommending saplings of plants and herbs that are suitable for a family & its location and implementing of the “Herb garden accelerator ” to families achieve wellness and even productize if necessary
- **Deliverable for the Ward Committees:** Ready-to-plant saplings, “Grow your Zen or Herb garden” booklets

Zen for the environment



- **6. Zen in your workplace (caring for your workforce or staff):** Launch a **care for your workforce initiative** that recommends that organizations or institutions should plan to grow a Zen garden of select plants, herbs and trees with specific landscaping to bring Zen (inner peace and harmony) into the lives of people at work there.
- **Decision making:** Recommending saplings of plants, herbs and trees that are suitable for a workplace & its location and implementing of the “Zen garden healer ” to help workplaces add soulful and healing influences to their environments
- **Deliverable:** Ready-to-plant saplings, “Grow your Zen garden” booklets

Zen for the environment



- **7. Zen in nature conservation (caring for flowers):** Launch a **care for flowers initiative** that develops methodologies to use dried or discarded flowers that need conscious decision-making for conservation, where the methodologies include a framework that includes a flower species, hybrid or variety into the nature conservation initiative, defines the artwork to use the dried or discarded flower in meritorious & sustainable environment solution finding prizes/awards/medals/certificates/winner cups/etc awarded to students, sustains the species by creating a postage stamp, designs a flashlight view to its evolution and conservation.
- **Decision making:** Recommending flowers of plants, herbs and trees that are helpful to “man, habitats, workplaces, gardens, and associated environments”
- **Deliverable:** Artwork, postage stamp, flashlight view of species/hybrid/variety

Cost Estimate for this Indexed Road Safety Signage

■ Cost Estimate

Indexed for Safety?

- Traffic Signs
- Signages
- SMART Vision enablers
- Non-conventional vehicle usage -Risk Mitigation

Activity Cost Estimate

Incorporation Estimate

Cost Baseline

Solution Budget