

Respect of the urban green and the techniques to connect green

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Nature of urban areas has already been lost?

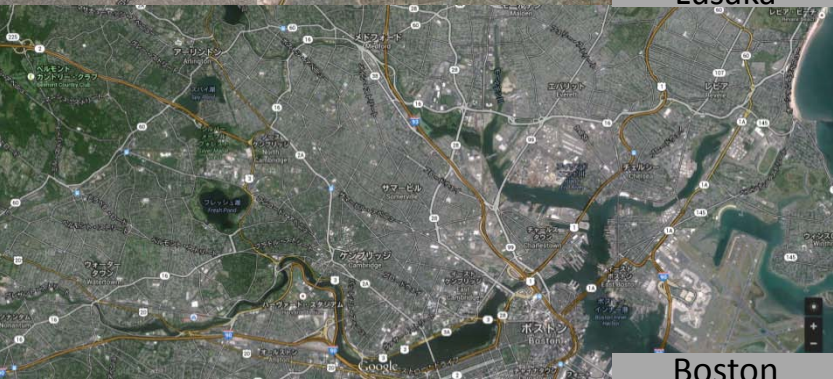
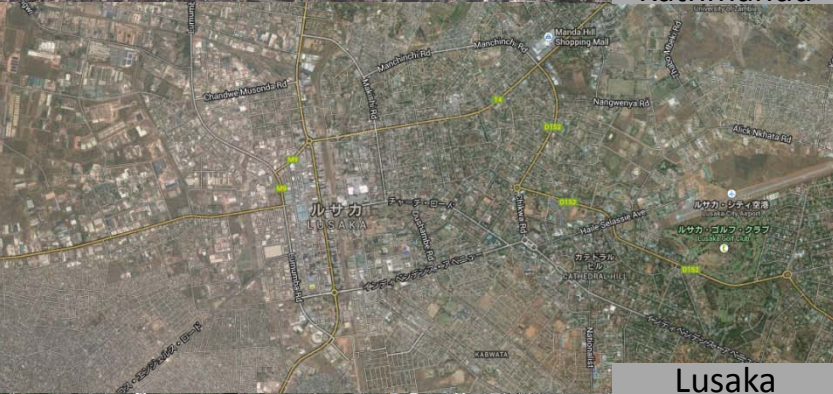
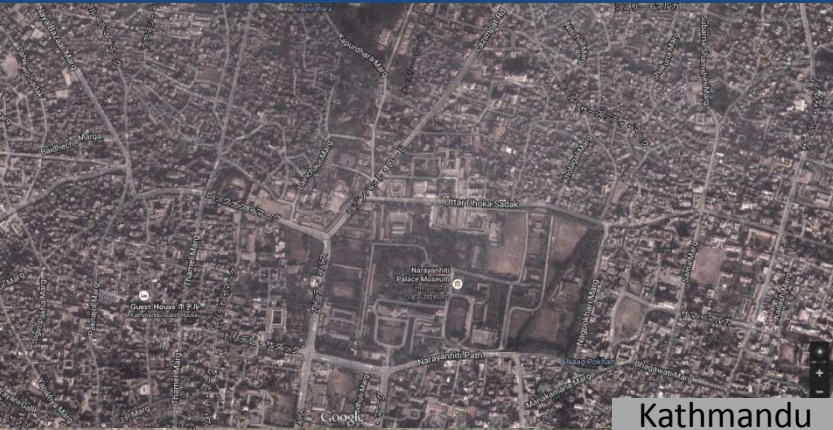
It is difficult to find in newly developed cities in large scale.

But sometimes we can find the small nature like seedlings and saplings of natural tree species.

Especially in historical cities it is easy to find nature kept in their long history.

We need to understand the reason why we can find them in developed spaces.

Some patterns of the development of cities



Many cities developed naturally. On the other hands some cities developed by elaborate city plan.

According to each history the remnant conditions of nature are different mainly by the religious feeling.

In some areas cities developed by closely housing style. These cities destroy a lot of nature on the process of development. There rich nature can be found on surrounding areas of each city.

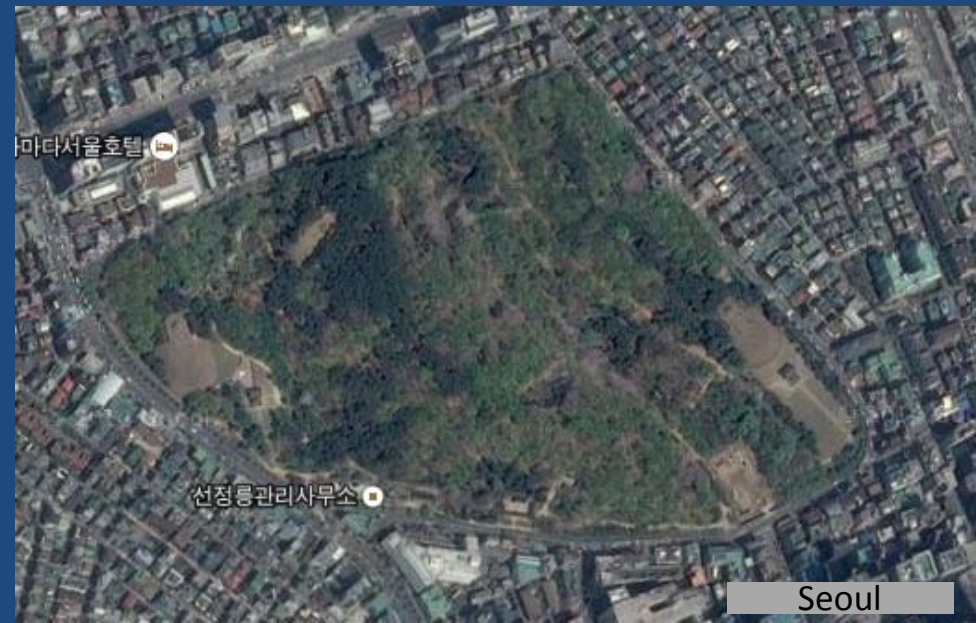
In other areas cities developed in coexistence and coordination with nature inside each city.

Where can we find the rich nature in urban area?

Cities always have religious spaces inside like temples, shrines, emperors' tombs, cemeteries and so on.

These spaces are protected and can be the refuge of natural species and keeping high biodiversity.

However most of them are fragmented and isolated, means the deterioration of nature occurred especially by the loss of supply of next generation.



Importance of the respect of animistic feelings to nature



We have a feeling to respect nature especially to big trees, large rocks, beautiful mountains and so on.

These nature function to heal the human mind and support our healthy daily lives.

Especially in urban areas there are many citizens living under a lot of stress. They require calm lives and hope to relax in nature.



Case of Kyoto, Japan: with very long history as the capital of Japan for more than 1100 years



This historical city was developed by the city plan under the ideology of “Fenshui” under the influence from China.

Still now there are many sacred spaces like temples and shrines and so on.

In addition there were many small sacred spaces of big trees with small shrine and in some cases wearing the taboo-rope on the trunk.

These treatment of big trees are from animistic feelings of Kyoto citizens.

Many trees are cut before grow up big but some lucky trees can survive and can become god.



Deterioration of green in downtown areas of cities by modernization: Case of Kyoto, Japan (Sakamoto 1988)

Sakamoto reported the decrease and deterioration of remnant trees and woodlands in Kyoto city 25 year ago.

Sacred woodlands which had been protected for a long time expecting the function as the core of city green nowadays were deteriorate and reduce in the process of modernization.

In one hundred years of 20th century deteriorated woodlands became very small woods consists of a few trees or an isolated tree.

In some cases all trees were cut down as the traffic obstructs in the city plan.

Even after the research of Sakamoto this tendency does not change, and the number of trees are still decreasing at present.

Discovery of ecological importance of woodlands with long history in UK (Peterken 1992)



Peterken showed the high biodiversity in the coppiced woodlands with the history of continuity for long periods. Concerning to the coppiced woodlands he said that “the coppice fauna and flora still includes many species associated with mature, stable woodland, which appear in the modern landscape as ‘ancient woodland indicators’ ”.



Even in the urban areas the similar tendency can be expected when the sacred spaces have been preserved for long time.

Akasaka's survey (1982) at Hannover: as the example of urban forests in Europe



Akasaka surveyed the transition of the forest of Eilenriede nearby the old Hannover, Germany.

This forest has long history as the financial sources of city economy and the recreation space for citizens and so on.

In the long history urban areas of Hannover has been expanding.

At present urbanized areas and Eilenriede are contact closely with each other.

However the role of this forest is constant and unchanged, and the management of this forest is still be kept for the same purposes by the excellent management.

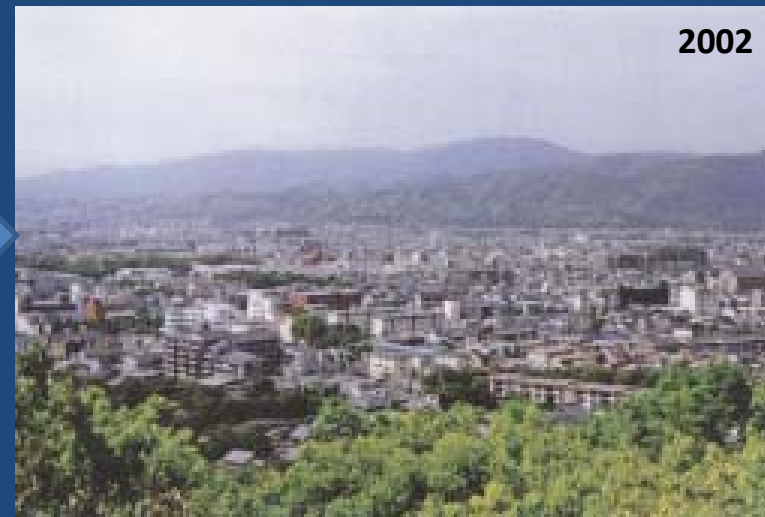
Degradation of connectivity of the urban nature with the surrounding nature

Under the increase of population pressure urban areas continue to expand to urban fringe area.

Urban fringe area has usually functioned as an agricultural area.

In Kyoto by the loss of urban fringe areas caused by unplanned and environmentally damaging urbanization urban areas reached to the surrounding foothills.

Kyoto lost the superior connectivity of old urban areas and surrounding semi-natural spaces.



(Photo by
H. Yamanaka)

Importance of natural corridor like rivers and streams to spread the connectivity with surrounding nature of cities



To recover the degraded nature in urban areas new ideas to connect them and surrounding nature are required.

Most important existence is water flow as natural corridor.

However old superior corridors in urban fringe areas are usually urbanized.

Improvement of quality of these spaces should be considered.

Rivers are also important from the view of the disaster avoidance.

We need to consider the management of the forest on upper stream.



Transition of river landscape of Horikawa, Kyoto from 1955 to 2014 (Photo by H. Yamanaka)



Importance of techniques to keep and to create the connectivity of urban remaining green

To improve the degraded nature in urban areas a few methods can be considered.

1. Reconsideration of city planning to increase the green spaces and biodiversity
2. Creation of new spaces considering to get a network of green
3. Suitable green management to gain high biodiversity
4. Constant efforts to develop the techniques to create rich vegetation
5. Application of present green as the core of networks of urban green
6. Well - management of existence green to keep high quality of green

Roof-top, wall, dead spaces are expected for these greening

Importance to evaluate private greens to keep high biodiversity

In historical cities many private spaces has been kept as gardens and so on for long times in some cases more than 100 years. In these gardens use of many indigenous plant species are found. This is complete contrast to the species planted in public spaces like in parks and streets. These gardens are also keeping rich fauna.



In many cases these gardens were constructed in backyard, means we can find the large secret green spaces consisting of many private gardens connecting each other.



Lack of gap, spaces, vacancy for vegetation in present urban area by too fine city plan

Religiously important trees and woodlands are decreasing by the change of feeling to nature.

The change of feeling from traditional respect for nature to logically clear solution occurred drastically in these several decades.

Modern city plan usually destroys the gaps which is important for indigenous species to regenerate the next young individuals.

How to connect the remaining nature and new plantation: Necessity of knowledge for improvement of biodiversity and of development of technology to follow it

As already showed most of the planted species are not indigenous.
When we consider truly the restoration of nature including the view
of ecosystem we need to reconsider the planting species in city plan.

We also need to discuss with a lot of kinds of stakeholders like
citizens, government and so on.

We should also make an effort to develop the techniques for the
restoration of nature and ecosystems.



New city plan considering the increase of
biodiversity should also be discussed.

In this discussion plantation of
indigenous species is important.

Conclusion

Many citizens understand the importance of green and ecosystem with high biodiversity.

However, conversely, we can't accept the wild animals and insects especially like mosquito, cockroach because they are not our pets in spite that they are also the member of ecosystems.

Especially in tropical areas there are many harmful organisms. We also need to consider the steps to coexist with them using developing techniques.

Even in urban areas of the world we can find the superior nature and we have nature-friendly techniques to solve the problems from the view of culture.

We should not forget the respect to relationship with nature in the urban areas

IN HUMAN SCALE.

