

Maria Mynn Porciuncula-Alfonso presents..

Towards Sustainable Landscapes

Guidelines in regulating Aesthetics
and
Environmental Quality of the Landscapes

Towards Sustainable Landscapes

In 2003

I presented my Thesis –

Towards Sustainable Landscapes

Guidelines for regulating Aesthetics
and Environmental Quality of the Landscapes

to a panel of distinguished Architects and Landscape
Architects with Arch Horacio Dimanlig as my Thesis
Adviser to Arch Mary Ann Espina, Arch Cecilia Tence,
Arch Danilo Silvestre, Arch Paolo Alcazaren, Arch Efren
Aurelio, Arch Honorio Palarca and guests Arch Geronimo
Manahan, Ms. Gloria Lava, Arch Geoffrey Cardinal...

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It is intended to be a guideline for local government
officials, environmental advocates and design
professionals to deal with the current

Environmental problems
but particularly in the **Enhancement**
the Philippine Landscapes.

It detailed concepts to alleviate problems in air, water
noise and visual pollution using the most economical
natural living materials

PLANTS

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Greening of our Environment

It is the **restoration, creation**
and maintenance of plant
life
in our towns and cities .

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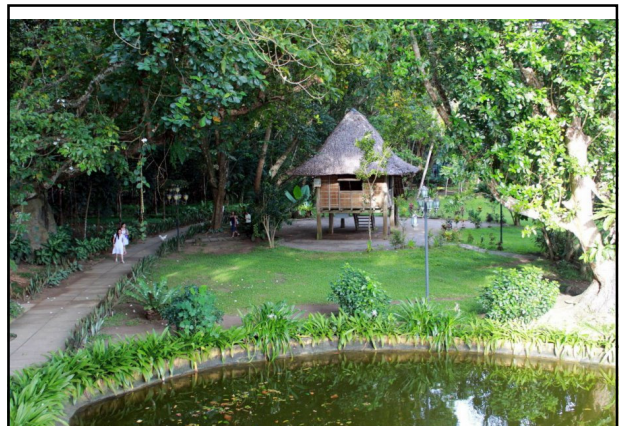
Urban Greening

It is one of strategies to mitigate the human health
consequences of increased temperatures resulting from

Climate Change.

Air temperature within Parks and Plaza especially
with abundant trees and plants are cooler than
other places

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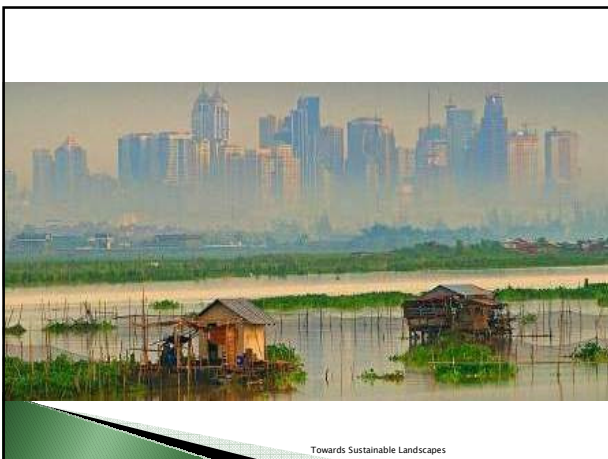
BAHAY KUBO

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But
have we deeply
viewed them
lately?

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And unnoticed Landscape degradation...

Accumulation of Unrelated developments

**Destruction of Natural,
Scenic and Historic Sites**

Overcrowding of Poles and Electric cables

Copied and Franchised Landscapes

Noise, Water, Air and Visual Pollution

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Environmental Disasters and problems

In 2003, Cherry Hill, Bohol Fish Kill, Ormoc Flash Flood, Pagatas Fall

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Globally Earth Summit 1972

The United Nations Conference on the Human Environment (also known as the Stockholm Conference)

It was an international conference convened under United Nations auspices held in Stockholm, Sweden from June 5–16, 1972. It was the UN's first major conference on international environmental issues, and marked a turning point in the development of international environmental politics

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► 1980- Book, World Conservation Strategy

In the Philippines

- 1987- DENR –Philippine Strategy for SD
- 1990- First IPCC report says world has been warming and future warming seems likely.
- 1991- Mt. Pinatubo explodes; Hansen predicts cooling pattern, verifying (by 1995) computer models of aerosol effects.
- Global warming skeptics claim that 20th-century temperature changes followed from solar influences.
- 1992- **Earth Summit in Rio de Janeiro**
- 1992- The Philippine Council for SD
- 1996- The sustainable Development models and systems (SDMS) sub-program of the Integrated Environment management for SD (IEMSD) initiated a project on Capacity Building for sustainable Land Use Planning and Management

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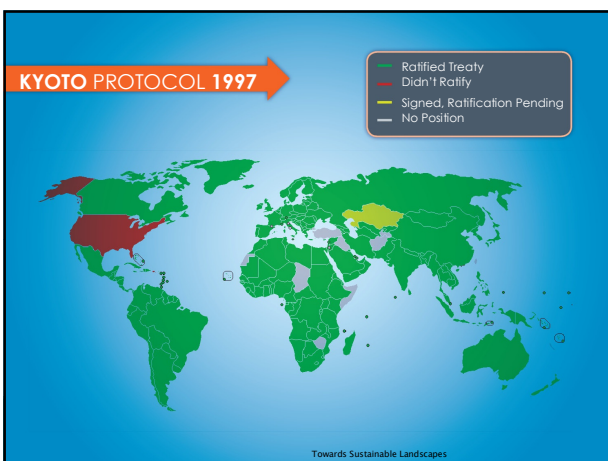
► 1992 Conference in Rio de Janeiro produces UN Framework Convention on **Climate Change**, but US blocks calls for serious action.

- Study of ancient climates reveals climate sensitivity in same range as predicted independently by computer models. Greenland ice cores suggest that great climate changes (at least on a regional scale) can occur in the space of a single decade* of human-caused greenhouse effect warming, declares that serious warming is likely in the coming century.
- Reports of the breaking up of Antarctic ice shelves and other signs of actual current warming in polar regions begin affecting public opinion.
- 1997
Toyota introduces Prius in Japan, first mass-market electric hybrid car; swift progress in large wind turbines and other energy alternatives.
- International conference produces **Kyoto Protocol**, setting targets for industrialized nations to reduce greenhouse gas emissions if enough nations sign onto a treaty (rejected by US Senate in advance). => [International](#)

► 1998 "Super El Niño" causes weather disasters and warmest year on record (approximately matched by 2005, 2007 and 2010). Borehole data confirm extraordinary warming trend.

Qualms about arbitrariness in computer models diminish as teams model ice-age climate and dispense with special adjustments to reproduce current climate. Criticism that satellite measurements show no warming are dismissed by National Academy Panel.

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- 2001 Third IPCC report states baldly that global warming, unprecedented since end of last ice age, is "very likely," with possible severe surprises. Effective end of debate among all but a few scientists
- Bonn meeting, with participation of most countries but not US, develops mechanisms for working towards Kyoto targets. National Academy panel sees a **"paradigm shift"** in scientific recognition of the risk of abrupt climate change (decade-scale). Warming observed in ocean basins; match with computer models gives a clear signature of greenhouse effect warming.

- 2002 Studies find surprisingly strong "global dimming," due to pollution, has retarded arrival of greenhouse warming, but dimming is now decreasing.

- 2003 Numerous observations raise concern that collapse of ice sheets (West Antarctica, Greenland) can raise sea levels faster than most had believed. Deadly summer heat wave in Europe accelerates divergence between European and US public opinion.

► 2004 First major books, movie and art work featuring global warming appear.

- 2005
Kyoto treaty goes into effect, signed by major industrial nations except US. Work to retard emissions accelerates in Japan, Western Europe, US regional governments and corporations.

Hurricane Katrina and other major tropical storms spur debate over impact of global warming on storm intensity.

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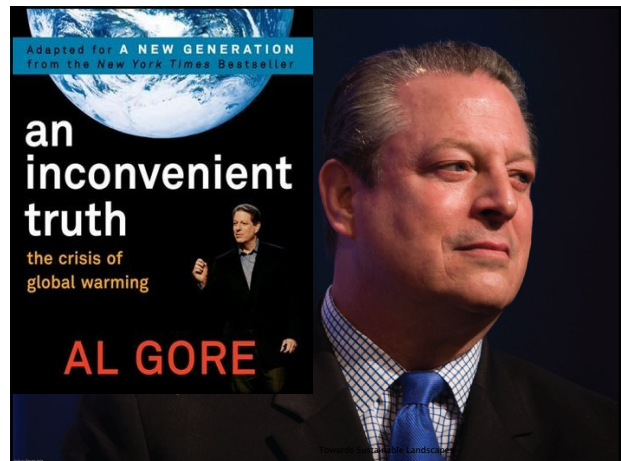
► 2006

In longstanding "hockey stick" controversy, scientists conclude post-1980 global warming was unprecedented for centuries or more. The rise could not be attributed to changes in solar energy.

"An Inconvenient Truth"

- documentary persuades many but sharpens political polarization.

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2007 - Fourth IPCC report

Warns that serious effects of warming have become evident; cost of reducing emissions would be far less than the damage they will cause. Greenland and Antarctic ice sheets and Arctic Ocean sea-ice cover found to be shrinking faster than expected.



► 2009

Many experts warn that **Global Warming is arriving** at a faster and more dangerous pace than anticipated just a few years earlier. Copenhagen conference fails to negotiate binding agreements: end of hopes of avoiding dangerous future climate change.

- Level of **CO2** in the atmosphere reaches **390 ppm** TODAY
350 ppm IDEAL

Mean global temperature (five-year average) is **14.5°C**,
the warmest in hundreds, and probably thousands of years.

REFERENCES

The Discovery of Global Warming December 2011 Timeline (Milestones) Here are gathered in chronological sequence the most important events in the history of climate change science
www.aip.org/history/climate/timeline.htm
butnowyouknow.net/...history/climate-change...

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Locally

Philippine Agenda 21

DILG Clean and Green Programs

Philippine Council for

Galing Pook Awards

[Asian Institute of Management]

ABS-CBN Bantay Kalikasan

And Recently

R.A. 9003, Philippine Ecological Waste Management Act 2000

Clean Air Act 1999

Clean Water Act 2004

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Wednesday, July 20, 2011 [News]

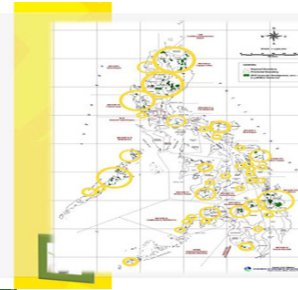
DENR to Implement President Noynoy's National Greening Program – DENR's National Greening Program

- Replanting Philippine Forests in the Fight Against Climate Change



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The NGP hopes to plant some **1.5 Billion trees** covering about 1.5 Million hectares for a period of six (6) years from 2011 to 2016 in lands in the public domain.



Executive Order No. 26
The National Greening Program
Greening the Philippines to make a difference in terms of Human Development, Economic Security and Environmental Security.

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New Landscape Designers embracing environmental values

- **Ian Mcharg**
- **Philip Lewis**
- **Michael Hough**
- **John Lyle**

This aims to change the role of Landscape Architects and its important contributions in building sustainable towns and cities and finding solutions to climate change.

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The role of landscape Architects has changed

- **Ian Mcharg** – The father of sustainable landscape for he was the first to espouse the philosophy of low impact environmentally sound site development
- **Philip Lewis** – An American Landscape Architect and resource analyst, planner and designer who is interested in the environmental qualities and values of both the natural and man-made landscape

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The role of landscape Architects has changed

- **Michael Hough** – In his book, he presented the first integrated philosophy of bringing environmental values into the urban landscape and a strong, well-developed case for biological diversity within urban landscapes.
- **John Lyle** – Author of the book "Regenerative Design for Sustainable Development". He set up the center for Regenerative Studies in California to provide a setting for research, education and demonstration of regenerative technologies

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Thus in embracing and practicing sustainability, the Landscapes will survive in natural harmony with the environment. Sustainable landscapes is an alternative approach in enhancing our lives by having back a

**Comfortable Living
Conditions,
Healthy Sites
and
Lovable Views.**

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Like in landscape planning for

Energy Conservation,

the concept is to minimize the effects of heat and corresponding use of energy consuming climate control systems by improving the microclimate conditions. These require solutions in

***Vegetation,
Site Planning
and
Landscape and Building
Designs.***

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Objectives

Establish guidelines in assessing visual and environmental quality of the landscape

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Objectives

- ▶ **Help in improving our sensitivities in preserving the natural, scenic, historic and cultural landscape**

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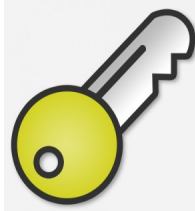
Objectives

- ▶ **Suggest standards for built landscapes and elements**

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Objectives

- ▶ **Recommend solutions to alleviate environmental degradation**
- ▶ **With Plants as the**



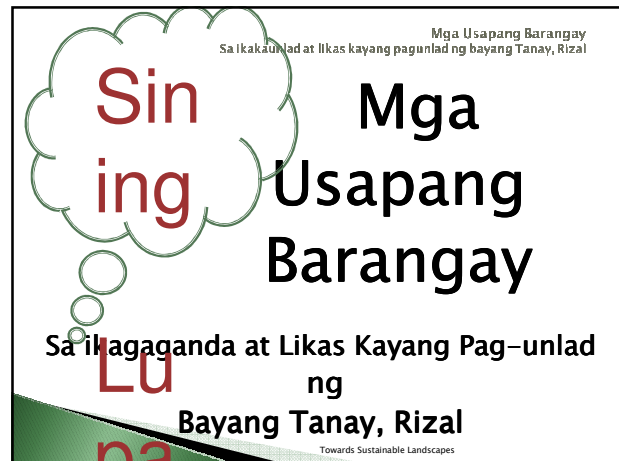
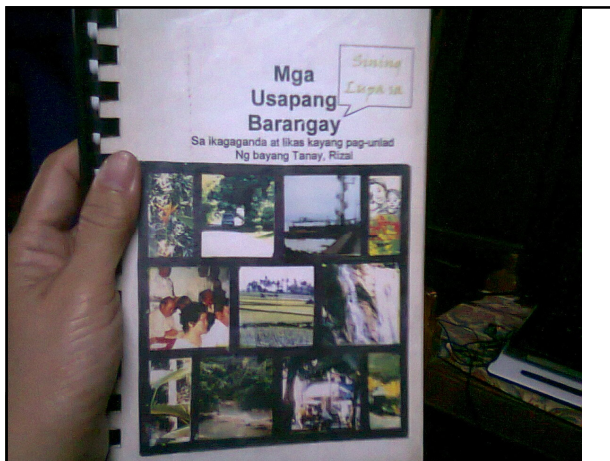
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Objectives

- ▶ **Encourage active participation of the local government especially the Barangay, business sectors and non-government and volunteer organizations in implementation of guidelines thru a**

Handbook

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Handbook in “Tagalog”
providing guidelines for a sustainable, energy efficient and comfortable town environment for use of Local Government Units (Barangay Level)

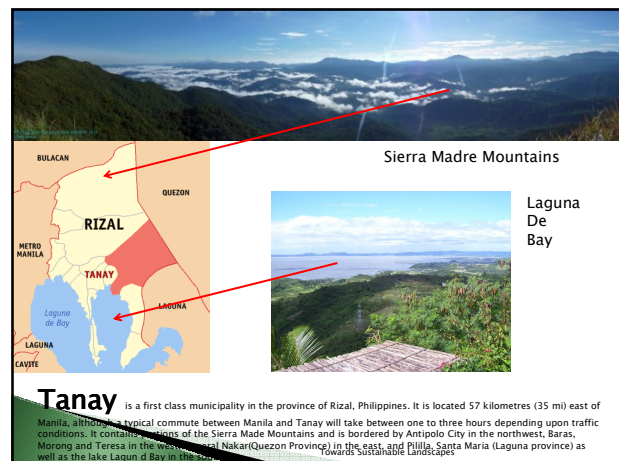
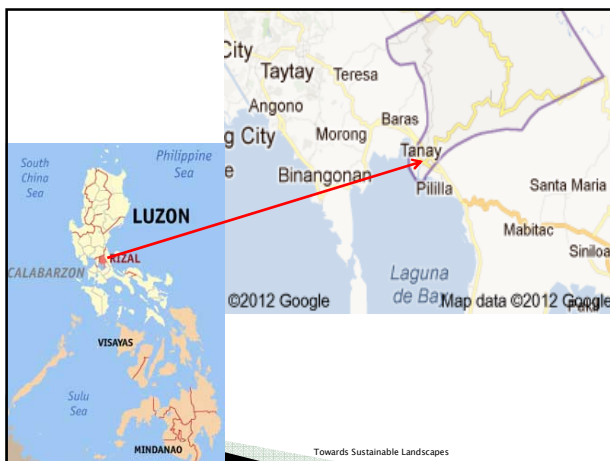
- ▶ **Scenic, Natural and Historic Sites**
- ▶ **Roads and Streets**
- ▶ **Parks and Plazas**
- ▶ **Waterways**
- ▶ **Dumpsites**

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Pilot Site:

In a Barangay in Tanay, Rizal

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Handbook In "Tagalog"

providing guidelines for a sustainable, energy efficient and comfortable town environment for use of Local Government Units (Barangay Level)

Scenic, Natural and Historic Sites

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Pambato ng Tanay

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Mga Usapang Barangay
Sa ikakaunlad at likas kayang pag-unlad ng bayang Tanay, Rizal



Heart and Creamsilk Shampoo Commercial

Daranak Falls

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Mga Usapang Barangay
Sa ikakaunlad at likas kayang pag-unlad ng bayang Tanay, Rizal

Alam mo ba
ang sikat na
ng ating
bayang Tanay

Dahil sa ating
Daranak Falls, lagi
na lang nasa TV
commercials at
pelikula, ganda
ganda, ang linaw
ng tubig, ang dami
pa ring mga
halaman



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Mga Usapang Barangay
Sa ikakaunlad at likas kayang pag-unlad ng bayang Tanay, Rizal

"Ay naku, mali ka diyan, hindi
na ganoon ang Daranak Falls,
malabo na tubig, may putik pa.
Pinuputol ang mga puno sa
paligid at madumi ang
kapaligiran. Bawas bawasan mo
ang pagpapanood ng pelikula,
palabas lang iyon. O halika
pasyalan natin ito at ang ating
poblacion at makikita mo, ang
sinasabi ko"



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Mga Usapang Barangay
Sa ikakaunlad at likas kayang pag-unlad ng bayang Tanay, Rizal

Provide **simple** application of **Visual Analysis**

Inventory/Analysis

Basic resources
Surveys and Maps
Visual Analysis
Environmental Analysis

Priority Targeting

Identification of Best Sites
For Protection, preservation and Development

Recommendation

Mitigation, Proposed Development, Preservation of Sites

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Environmental Impact Assessment

Environmental Compliance Certificate

$$\text{Carrying Capacity} = \frac{\text{Specific area used}}{\text{Average individual standard per area (sm/person)}}$$

Carrying Capacity is the maximum number of individuals that can be accommodated in an area without affecting the state of the environment, the level of satisfaction of the visitor, and the social culture of the host community" A formula by Boullon (1985)

Mga tuntunin upang mapanatili ang imahin ng ating mga lugar:

- ▶ Paglilista ng mga pook na mahalaga
- ▶ Pagusapan ang mga ito sa inyong barangay
- ▶ Mag-ipon ng mga maps, litrato, salaysay
- ▶ Ilista and mga pinakamalalagang lugar
- ▶ Magrekomenda ng mga possibleng pagbabago o pangangalaga dito
- ▶ Comulsulta sa mga NGO o ahensiya ng Gobyerno, kung nangangailangan ng higit na kaalaman.

Some ideas of Michael Hough in his book "Out of Place" he suggest eight (8) design principles in order to pursue a meaningful and effective identity of place":

1. Knowing the place

Recognizing how people use different places to fulfill the practical needs of living will be the medium for distinctive sense of place.

2. Identify through the landscape

We can identify a certain place through its natural features or scenic resources, hence enhancement of these areas will promote the town's landscape.

3. Different places for different people

People differ in their social need. Thus the landscape reflects the cultural and physical aspects of the town, not copied nor similar.

4. Maintaining a sense of history

Historical background is always a part of town's identity especially in our country with a colorful past. Town's provide markers, monuments and buildings to maintain this commendable deed.

some ideas of Michael Hough in his book "Out of Place" he suggest eight (8) design principles in order to pursue a meaningful and effective identity of place":

5. Environmental learning and Direct experience

As Mr. Hough mentioned' An awareness of place can only be enhanced when it becomes a part of every people's everyday lives"

6. Doing little as possible

"Or economy of means, involves the idea that from minimum resources and energy, maximum environmental and social benefits are also available"

7. Sustainability

It is the only ethical and pragmatic alternative to the future health of the landscape. Thus design disciplines must incorporate sustainability in one's work.

8.Starting where it's easiest

This means focusing on things that work and that are achievable. At any one point in time.

Tatlong bagay ba dapat tandaan upang mapanatili at mapaganda natin ang imahin ng ating

- ▶ Igalang ang natatanging katangian ng lugar
- ▶ Panatiliin ang kahalagahan at tunay na diwa ng lugar
- ▶ Pagmasdan ang ugnay-ugnay na elemento ng tanawin.



Parola



Mga Usapang Barangay
Ilkas kayang pagunlad ng bayang Tanay, Rizal

Kagawad, bakit di mo
naireport, me nagtatayo
diyan ng Resort, walang
pahintulot yan at
makasisira pa sa ating
tabing – lawa..



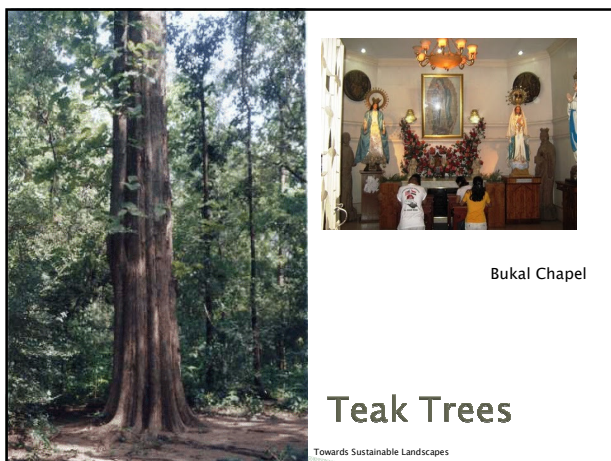
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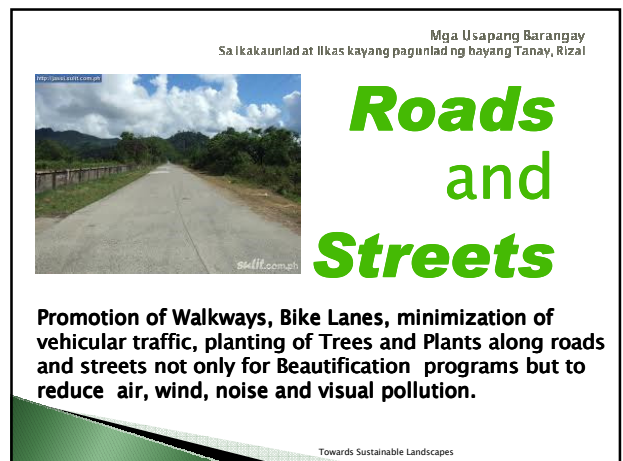
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Bukal Chapel

Teak Trees

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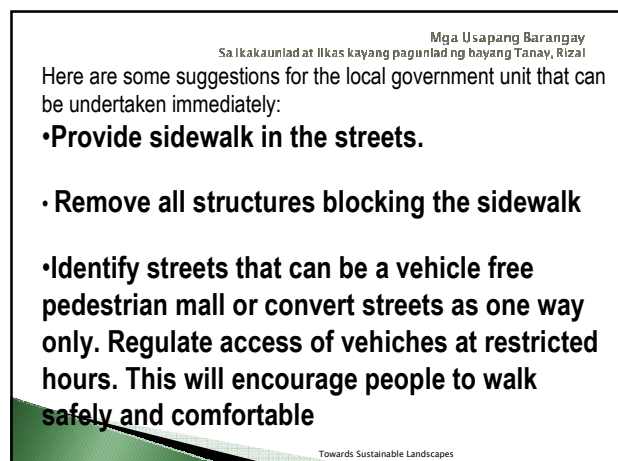
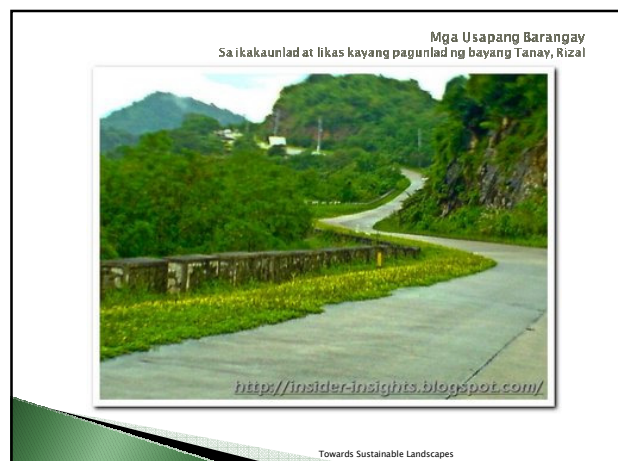
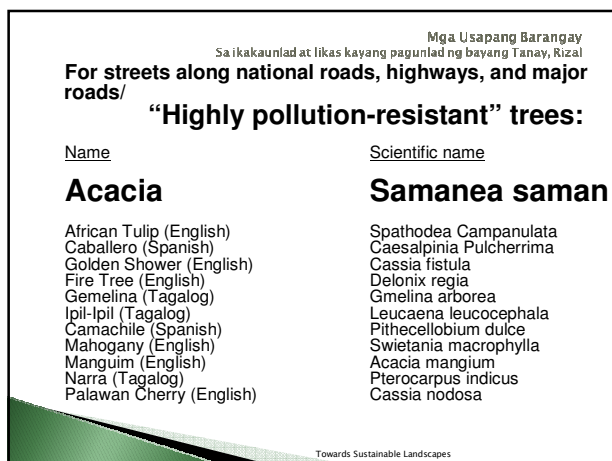
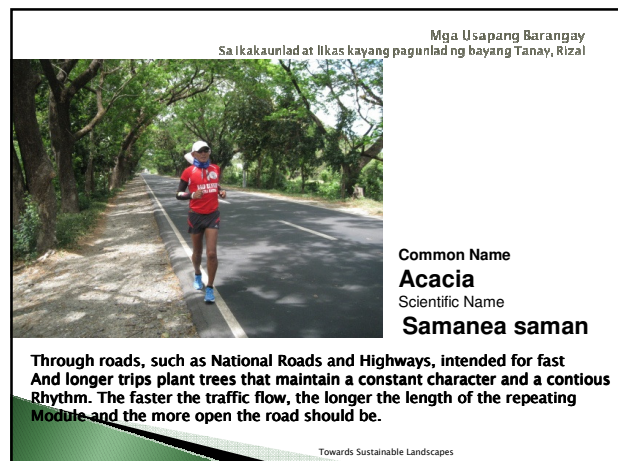


Mga Usapang Barangay
Sa Ikakaunlad at Ilkas kayang pagunlad ng bayang Tanay, Rizal

**Roads
and
Streets**

Promotion of Walkways, Bike Lanes, minimization of
vehicular traffic, planting of Trees and Plants along roads
and streets not only for Beautification programs but to
reduce air, wind, noise and visual pollution.

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Provide bike path ways in streets. We can paint a portion of the street and mark it as Bicycle lane.

•Provide bike path ways in streets. We can paint a portion of the street and mark it as Bicycle lane.

•For new subdivision, encourage developers to provide schools, shops, workplaces and market within the area so people will be less dependent from vehicles. Disallow housing only subdivisions.

Improve the microclimate of roads and streets we can do the following

Through zoning ordinances, require new construction to strictly follow setbacks along roads and streets, provide setbacks at rear side for services and other unsightly activities

Encourage construction of uneven building heights

Plant trees that do not block flow of wind

Plant trees and plants to improve the microclimate of roads and streets and to lessen the noise and air pollution



On local streets where through and fast traffic is discouraged, tree planting should provide shade. We can specify different types of plants and trees with abundant overhead foliage in an uneven spacing clusters



Rizal Monument at Tanay park





Tanay Church Patio
"Puso ng Bayan"

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Mahal, natatandaan
Mo ba nuon tayo dito
sa ilalim ng Akasya?
Madilim at tahimik
noon, kulig-lig lang
Ang narininig natin.



Parks demonstrate dramatically different scales and diversity.

Parks **improve the microclimate** of the area and staying in the park than inside of one's homes will lessen consumption of energy

Parks are more than just a place to stay and relax in, it has an array of

cultural, recreational and entertainment amenities

and most of all

improve the health of the public.

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Parks are important stimulants to economic development and seek amenities that that will attract tourists, local and international

Parks is often influenced by private sectors involvement in park financing and management coupled with increased emphasis on income generating uses to make parks more self sustaining.

Development of Brownfield sites to Urban Parks

Most of all Parks with more Trees and plants will help absorb carbon dioxide.

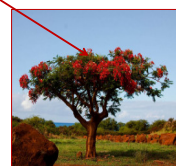
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Name

Acacia
African Tulip (English)
Botong (Tagalog)
Katmon (Tagalog)
Narra (Tagalog)
Dapdap (Tagalog)
Golden Shower (English)
Fire Tree
Mahogany (English)
Alibangbang (Tagalog)
Palawan Cherry

Scientific name

Samanea saman
Spathodea Campanulata
Casuarina equisetifolia
Dillenia philippinensis
Pterocarpus indicus
Erythrina variegata
Cassia Fistula
Delonix regia
Swietenia macrophylla
Pilstigma malabaricum
Cassia nodosa



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Waterways



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Before



Now

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Modern development are unfavorable to our environment.
These resulted to:

Increased water runoff
Increased flash flooding
Degradation of surface water
Polluted water from water runoff
Soil erosion
Forest destruction

•Saving the watershed

Preservation and enhancement of the natural vegetation especially in the mountain area. But prioritize **vegetation that will provide income to upland people.**



Dumagats of Upland Tanay

•Plant Fast growing Trees

The plants below are not only fast growers but

Multi-purpose trees

used as

fuel wood, construction materials, poles, erosion control, medicinal, manufacturing raw materials....

They are source of livelihood of rural people, thus it is beneficial to have better yield.

More trees means more water to hold on trees roots and less water runoff.

For planting in the mountains; fast-growing trees (for harvesting in less than 4 yrs.):

| Name | Scientific name |
|-----------------------|-------------------------|
| Mangium | Acacia mangim |
| Agoho (Tagalog) | Casuarina equisetifolia |
| Eucalyptus | Eucalyptus spp. |
| Madre de Cacao | Gliricidia sepium |
| Yemane (Tagalog) | Gmelina arborea |
| Giant Ipil-ipil | Leucaena leucocephala |
| Paraiso (Tagalog) | Melia azedarach |
| Datiles (Tagalog) | Muntingia calabura |
| Alibangbang (Tagalog) | Pilostigma malabaricum |
| Kamachile (Spanish) | Pithecellobium dulce |
| Bayabas (Tagalog) | Psidium guajava |
| Duhat (Tagalog) | Syzygium cumini |
| Anabiong (Tagalog) | Trema orientalis |
| Raintree (English) | Samanea saman |

Controlling the water runoff In rural areas

Use **Perennial Crops** with permanent roots to hold the soil in place

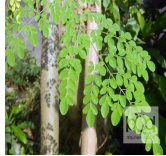
Promotion alley cropping

It is a system of intercropping rows of foodcrops with fast growing trees or shrubs generally practiced in flat to gently rolling topography⁶. **For places with inter-cropping/Food crops and fast-growing trees that can be planted side-by-side:**



For places with inter-cropping/Food crops and fast-growing trees that can be planted side-by-side:

| Name | Scientific name |
|----------------------------|-------------------------|
| Langil (Tagalog) | Albizia lebbek |
| Karikis (Tagalog) | Albizia lebbekoides |
| Akleng Parang (Tagalog) | Albizia procera |
| Alnus (English) | Alnus japonica |
| Neem (English) | Azadirachta indica |
| Kadios (Tagalog) | Cajanus cajan |
| Calliandra (Spanish) | Calliandra calothyrsus |
| Thailand Shower | Cassia siamea |
| Dapdap (Tagalog) | Erythrina orientalis |
| Kakawete (Tagalog) | Gliciridia sepium |
| Yemane (Tagalog) | Gmelina arborea |
| Acid Ipil-ipil | Leucaena diversifolia |
| Malunggay (Tagalog) | Moringa oleifera |
| Kamachile (Spanish) | Pithecellobium dulce |
| Bayabas (Tagalog) | Psidium guajava |
| Katuray (Tagalog) | Sesbana grandiflora |
| Siniguelas (Tagalog) | Spondias purpurea |
| Mahogany (English) | Swietenia macrophylla |
| Duhat (Tagalog) | Syzygium cumini |



Towards Sustainable Landscapes

Site amelioration techniques

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

By plowing along the contours of sloping land,
it is possible to hold water in furrows while it soaks into the soil

Terracing, by carving long steps into the hillsides and using relatively flat surfaces of the steps for growing crops.



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Slowing stream courses

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal



Check Dams



Gabion Dams

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Control Water Chemistry

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

Water coming from agricultural and industrial areas must be controlled effectively at the source before polluted water they produce, enter the waterways.

Less use of agricultural fertilizers and pesticides means cleaner water, better crops.

For large farms, industrial and commercial establishments, they can eliminate the waste water before entering the rivers and shores using waste water treatment plant, a highly recommendable alternative is

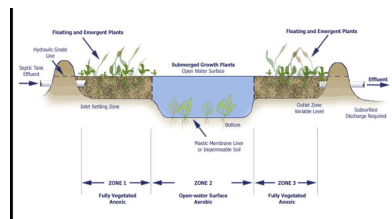
Constructed Wetland.

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Constructed wetland

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

is a passive pond or cell that filters and removes pollutants by routing waste water over substrate of gravel or similar material that supports plants that will filter and absorb pollution, then turning water fit for irrigation and fishes and marine life"



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Here are the best plants for constructed wetland which can be used in the tropical country like ours, are as follows:

Cattails (Typha spp.)

They are vigorous growers capable of thriving under diverse environmental conditions, and are easy to propagate. Rhizomes (a thickened root) can be collected and planted and will produce plants in one growing season. As previously mentioned, cattail species are not likely to extend roots down to a depth greater than 1 foot and are thus not as efficient as bulrush in oxygenating a deeper gravel bed.



Common Reeds (Phragmites australis)

They are tall annual grasses with extensive perennial rhizomatous roots that typically penetrate to a depth of 18 inches. Their height ranges from 6 to 12 feet, with flowers of spikelets in July to October. They are attractive plants, quite lush in experience and provide a good background when height is needed. Reeds have been extensively utilized in the root zone method of wastewater treatment and are very effective in the transfer of oxygen due to the depth of penetration of the roots.



Towards Sustainable Landscapes

- Use of detention and infiltration basins
- Collect rainwater for re-use
- Collect rainwater coming from gutters and downspouts
- Use porous paving for walkways, sidewalks
- Store excess water in cistern

- **Let water flow in swales than concrete**

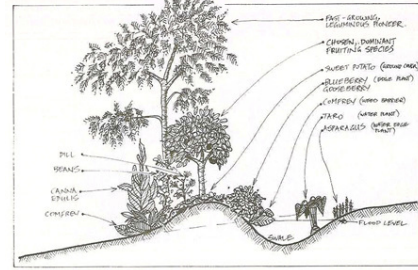


FIGURE 6.4 Trees planted off swale bank to take advantage of wet-season water.

- Let water flow in **swales** than concrete



Paano Dengue?

A cartoon illustration of a mosquito with large, expressive eyes and a long, thin proboscis. It has two long, thin legs visible. The mosquito is positioned in the center of the page, facing forward.



~~Catnip~~



Marigold



Mint



Citronela Kantutay

| <u>Common Name</u> | <u>Scientific name</u> |
|---------------------------|---------------------------|
| Villosa (Spanish) | Acacia villosa |
| Red Calliandra | Calliandra calothyrsus |
| Fireball (English) | Calliandra haematocephala |
| Thailand Shower (English) | Cassia siamea |
| Antsoan dilao (Tagalog) | Cassia spectabilis |
| Fire Tree | Delonix regia |
| Kakawete (Tagalog) | Gliricidia sepium |
| Ipil-ipli (Tagalog) | Leucaena leucocephala |
| Kupang (Tagalog) | Parkia roxburghii |
| Alibangbang (Tagalog) | Ptilostigma malabaricum |
| Gumamela (Tagalog) | Hibiscus rosasinensis |
| Pinya (Tagalog) | Ananas comosus |
| Napier Grass (English) | Penicum maximum |
| Vetiver grass | Vetiveria zizanioides |
| Setaria | Setaria spp. |

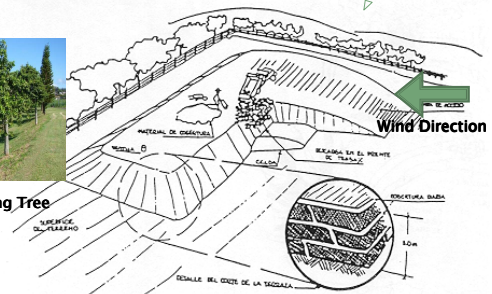




Towards Sustainable Landscapes



Ilang Ilang Tree



Now, most towns have Sanitary landfills as prescribed by law.

Towards Sustainable Landscapes

**Trees for Dumpsites , will provide
Aesthetic Improvement,
Site Barrier and as well as Deodorizer.**

Common Name

Dapdap (Tagalog)
Balite (Tagalog)
Ilang-ilang (Tagalog)
Palosanto (Tagalog)
MacArthur Palm
Bunga de China

Scientific name

Erythrina variegata
Ficus balete
Canganga odorata
Triplaris cumingiana
Ptychosperma macarthurii
Veichia merrillii

From FMS Report, 1993,1995 DENR

Towards Sustainable Landscapes

Reuse

Direct Reuse



UK UK

US US

Eloys

There are goods especially coming from China that can be discarded easily due to its cheap cost. It has they can be disposed during garage sales, buy and sell. Tange swap meets like in Kamuning. It is a good way to reuse things from abroad. Some people will be buying these items, this means **direct reuse**. The advantage of direct reuse is it saves energy in production and transport (by reusing a product rather than making a new look of it).

Towards Sustainable Landscapes

Mechanical Recycling

This means reshaping and remanufacturing of old materials into new form. Some recycable materials are paper, bottles, aluminum steel, plastics rubber, metals and wood.

Broadly speaking recycling:

Conserves natural resouces
Reduces the risk pollution
Reduces the demand of landfill sites

Enables foods to be produced more cheaply by embodying recycled material by using energy from waste.

Towards Sustainable Landscapes

Mechanical Recycling

This means reshaping and remanufacturing of old materials into new form. Some recycable materials are paper, bottles, aluminum steel, plastics rubber, metals and wood.



Towards Sustainable Landscapes

Environmental reassimilation

By letting nature do the work, materials reintegrate into the landscape by its natural process of decomposition. This method depends on the decomposing activity of invisible bacteria and microbes. They are present in composting and natural sewage treatment.



Composting

Towards Sustainable Landscapes

Natural Sewage Treatment

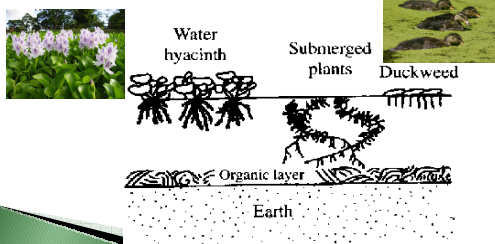
The **wetlands** is a natural sewage treating bodies of water.



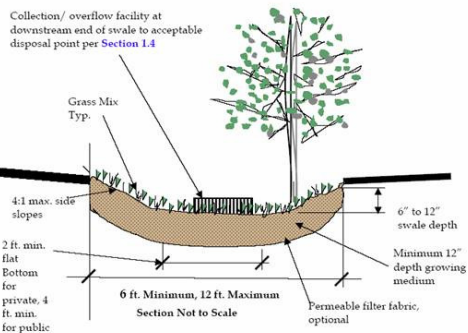
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Natural Sewage Treatment

As the wetlands are disappearing in our rivers and lakes, we look for a new solution, and it is **constructed wetlands** discussed earlier that may help in this matter



Towards Sustainable Landscapes



Towards Sustainable Landscapes



An effective way to solve the waste problem is through **education focused on change in lifestyles and consumption patterns.** These programs in cooperation of the local government must ensure that wastes are reused, recycled and regularly collected.

Towards Sustainable Landscapes

How about Bio Fuels?



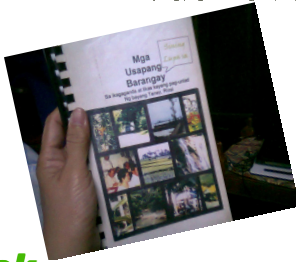
Towards Sustainable Landscapes

Conclusion

I passed my Thesis.



I focused
in my
hometown
Tanay



I have **Hanbook** in Tagalog Dialect, I discussed how an urbanizing town of Tanay—the commercial hub in the eastern Rizal with its valuable resources, farms, mountains, orchards and varied community groups of fishermen, farmers, businessmen, livestock owners, indigenous people dumagats and remontados.... peace loving people, can improve the quality of life through the guidelines on how to plant the right Trees and Plants in the right places and other valuable measures towards Sustainable Landscapes .

**After nine years,
have I done my part
in imparting
these guidelines
to my townmates
?**

No.

**Remember
the
Ondoy Tragedy
in
2009
?**

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal



Towards Sustainable Landscapes



Towards Sustainable Landscapes

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal



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Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

I failed to share my learnings and knowledge. My handbook never been published. I tried once to seek funds from World Bank, but my project was not selected.

Towards Sustainable Landscapes

**At the same time,
our local government needs
a major change in
administration and management
and/or be trained in
good governance.**

There is **huge GAP**
in knowing how to implement
these guidelines in towns and cities...
Thru a simplified easily comprehensible
Handbook
or other worthwhile means
for less literate poor people.

GAGAPIN
ang
simplified easily comprehensible
Handbook

Climate Changes.



**We
Can
Change.**



BUT

Sustainability concepts and issues with us for many years, now, we have to take concerted actions in its

Implementation
to the most affected sector of the society –
the Poor.

An understanding of climate change and the future scenario of our environment will truly help people to have a change of heart.

This may ignite them especially if the

Local Good Government Unit
will assist them in finding them
jobs or more effective a new
source of livelihood.

This should be integrated in the works of the Local Government unit thru the Department of Interior and Local Government. Let us start with a simple, and effective Handbook that should be readily available and understood by all.

Towards Sustainable Landscapes

The growth and Sustainability of
towns and cities
should delve deeply in its

**Development
stage.**

We,
Academicians, Architects,
Professionals understood climate
change and Green principles but
this should be
**shared in the most
effective /easy way to
majority of the people
especially the poor.**

Towards Sustainable Landscapes



After getting my masteral degree in 2003, I started teaching Architecture and Landscape Architecture, now, I am faculty member at the University of Santo Tomas in Manila-College of Architecture.
At UST, we have a 3 semester specialization subject named Specialization in Urban landscape Architecture which I lead. This further my knowledge in the issues and problems pertaining climate change and sustainability. Similar with my thesis, we aim to improve the quality of the environment in by providing lessons in Roof Garden, Vertical landscaping, urban farming, Planting in Containers, Sustainable Landscape designing and constructing geared for the urban Metro Manila.

Towards Sustainable Landscapes



Pointer: 14°16'35.76" N, 120°55'53.14" E

Image © 2007 DigitalGlobe

Streamline 1111111111 100%

Google

Footprint: 2607.0



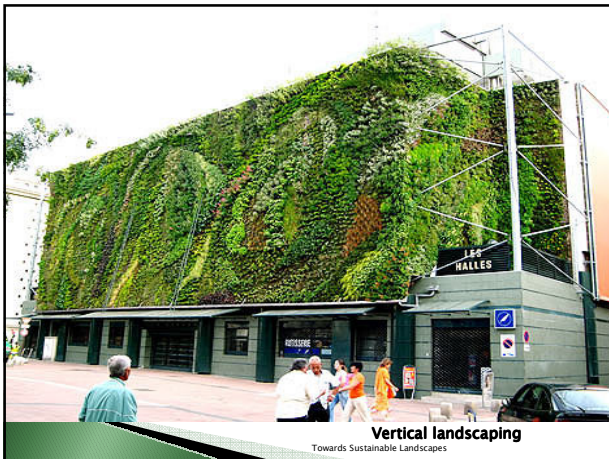
Towards Sustainable Landscapes



Vegetable Garden at Roof



Towards Sustainable Landscapes



Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

In our country, the most crucial issue is to **reduce poverty** of most of our countrymen. They will be the link to help solve climate change and sustainability by **Educating them in the simplest way of these environmental problems.**

This simplest way that will provide them livelihood

Towards Sustainable Landscapes



Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal



Kasoy Tree

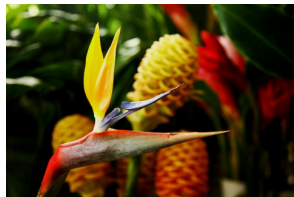
Towards Sustainable Landscapes

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

In my part I will continue this great pursuit
to trully impart the real value of
Plants and Trees
for the betterment
of our
environment.

Towards Sustainable Landscapes

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal



Thank You.

Maria Mynn Porciuncula-Alfonso

Towards Sustainable Landscapes

Mga Usapang Barangay
Sa ikakaunlad at likas kayang pagunlad ng bayang Tanay, Rizal

Sketches of Angela Bea P. Alfonso



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Uploaded by **Earth Tanay** on Sep 26, 2010
Earth Tanay Video by Mc Sicaa Pilipinas

Noel Cabangon's Song on Global Warming
entitled

**"Umuulan Pag Tag-araw,
Umaaraw sa Tag-ulan"**

during the unveiling ceremonies for a commemorative marker at the Parola, Barangay San Isidro, Tanay Rizal jointly organized by the Municipal Government of Tanay and OXFAM in the afternoon of September 26, 2010.

Towards Sustainable Landscapes